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FOREWORD

As we continue the exploration of the complexities of Social Sciences, this second volume of the conference proceedings builds on the interdisciplinary themes introduced in volume 1. With its focus on societal transformations, education, and cultural dynamics, this volume **highlights the evolving role of Social Sciences in addressing global challenges and fostering a deeper understanding of human behavior, societal structures, and cultural exchange.**

The section on *Sociology, Social Work, and Digital Societies* extends the discourse on social adaptation and inclusivity in a rapidly digitalizing world. Studies on aggression in online environments, integration of socially excluded groups, and the influence of modern mass media demonstrate how digital transformations shape social interactions and collective behavior. Contributions addressing the role of social networks in relationships and the experiences of specific communities, such as families with children with disabilities and the Ukrainian diaspora, provide valuable insights into the interconnectedness of societal and technological shifts.

In *Education and Digital Learning Innovations*, the focus is on reshaping learning experiences to meet the demands of a knowledge-driven, technology-centric world. Research on digital rights, innovative teaching methods, and the integration of artificial intelligence in education emphasizes the importance of equipping learners with skills and resilience for an ever-evolving global landscape. Studies on project-based learning and non-formal education resources offer fresh perspectives on fostering creativity, critical thinking, and sustainability awareness among students.

Cultural Studies and Globalization bridges the gap between tradition and modernity, highlighting the ongoing negotiation of identities and values in a globalized world. From exploring ideological currents and orthodoxy in postwar America to examining artistic and environmental narratives, these studies underscore the power of culture as both a reflection of societal change and a catalyst for dialogue and innovation.

The section on *Media, Communications, and Misinformation in the Digital Age* continues the critical examination of the role of media in shaping public discourse and perception. Studies on cyberbullying, flexible working schemes in journalism, and the cultural implications of TikTok highlight the challenges and opportunities presented by digital platforms in fostering connectivity, inclusivity, and critical media literacy.

Finally, *Human Geography and Demography* provides a spatial perspective on human activity and its environmental impacts. Contributions on emigration patterns, urbanization, and green space management offer actionable insights into addressing the challenges of sustainability and resilience in a rapidly changing world.

This volume captures the dynamic interplay of tradition, innovation, and transformation that defines the Social Sciences today. **By drawing on diverse methodologies and perspectives, these contributions illuminate the critical role of Social Sciences in navigating the complexities of contemporary society and shaping pathways to a more inclusive, sustainable future.**

We extend our heartfelt gratitude to the authors, reviewers, and organizers whose dedication and expertise have made this publication possible. Your contributions inspire meaningful dialogue, foster interdisciplinary collaboration, and pave the way for impactful solutions to the challenges of our time.

May this volume serve as both a **reflection of current scholarship and a call to action for continued innovation, exploration, and engagement in the vital field of Social Sciences.**

Sincerely,

Prof. Dr. habil Art OJARS SPARITIS

Editor-in-Chief

Social Sciences Conference Proceedings ISCSS 2024

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SECTION SOCIOLOGY, SOCIAL WORK, AND

DIGITAL SOCIETIES

AGGRESSION AND COMMUNICATION IN THE ONLINE ENVIROMENT

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ABSTRACT

As the saying goes, it is difficult to live in a community without being influenced by it. Daily interaction with others is inevitable. Communicating with different people can be pleasant or it can lead to conflicts and tensions.

In this text, we will address one aspect of communication - aggressive behavior. Do we often experience aggression from others or do we show it ourselves? How can we manage harmful behavior that can have negative and even destructive consequences?

Aggression is an essential component of human nature. It plays an important role in the formation of personality, being as crucial as love. Self-control, which sometimes requires some form of internal confrontation, can become a source of energy and motivate important skills such as determination, self-education, and discipline. Aggressiveness in a positive form can contribute to success in various aspects of life, as long as it is managed responsibly. It is important not to eliminate this aspect of the personality, but to learn how to channel it constructively, both for our benefit and for the benefit of those around us.

Keywords: communication, aggression, behavior, self-control

INTRODUCTION

The problem of violence in various forms, such as aggression, abuse and mistreatment, is a social issue faced by most contemporary communities. The repeated presence of violent behaviours within educational institutions is all the more alarming as they should be places where students can enjoy education, positive role models and safety, being institutions with an essential function in the socialization process.

Violence in the school environment, although it has been observed for a long time, has become the subject of serious concerns only in recent decades, attracting the attention of scientists, official institutions and social assistance agencies. Studying this phenomenon faces numerous obstacles, and accurately assessing its magnitude remains an extremely difficult task even today.

The media is paying increasing attention to violence, contributing to increasing public interest in the phenomenon of violence in schools. In Romania, various governmental and non-governmental organizations have tried to address this problem, but getting an overview of it is a difficult task.

Violence is a serious problem facing today's societies. It can be expressed through aggression, abuse or mistreatment and is closely related to human behaviour and the social environment in which we live. Recent research has highlighted the diversity of forms of violence, whether we are talking about interpersonal, collective or self-directed interactions. The interpretation of violence as an act involving the direct use of physical or mental force has become increasingly widespread. According to Ludwig Wittgenstein [1], violence can be the result of specific social contexts, penetrating various state and social structures in an obvious or latent form. Johan Galtung [2] defines violence as a deterioration of basic human needs, affecting the quality of life and people's ability to fulfil their potential. Even the threat of violence can be considered a violent act.

The increased interest in school violence emerged especially after the Utrecht Conference in 1997. Defining violence as a social phenomenon and school violence as a specific form of it is an ongoing process, supported by research and public awareness [3].

School rape, included in the European project on everyday violence, has been defined by the World Health Organization (WHO, 2002) as any intentional action that involves force or power against others and that can cause physical, psychological or material damage [4].

Olweus [5] and Debarbieux [6] have given various definitions of violence reflecting the complexity of the phenomenon and the diversity of its manifestations in society. It is essential to understand and address issues of violence, including those in the school environment, in order to promote a safe and healthy environment for all members of society.

The approach to violence in the school environment generates broad and passionate debates on the definition and concept of violence. In addition, three important aspects are taken into account:

- No school can deny the existence of violence, even if some are more concerned about this problem than others;
- The prevention of these phenomena is related to the ability of each institution to organize and design its educational actions appropriately;
- The school cannot and should not face these violent phenomena alone; It is important to work with local partners to address these issues together.

The school, through its mission, must guarantee the physical, mental and moral security of the students. In order to prevent and counteract violent behaviours in the school environment, it is necessary to understand the concept of violence, identify the causes and develop effective measures to combat and prevent it.

This paper focuses on the phenomenon of violence in schools, trying to highlight various aspects related to the factors, particularities and dynamics of different forms of violence. The focus is on the analysis of the evolution and quantitative and qualitative changes in the manifestations of school violence.

MATERIALS AND METHODS

The aims of this study are: to analyse the extent of violence, to identify incidents of aggression in the school environment, to identify the factors that contribute to school

violence, to develop a strategy for preventing and countering this phenomenon. In order to carry out this study, two types of approaches were used: one of a qualitative nature and another of a quantitative nature.

Our documentary analysis [7] consisted of examining national and international normative acts, statistics, typologies and relevant concepts.

We applied questionnaires to teachers and students, in order to assess the extent of violence. The questions addressed to the teachers concerned various aspects such as: the age of the respondents, their field of teaching, the types of violence observed, their frequency, the causes identified within the institution, the measures to prevent and combat the phenomenon. The questions addressed to the students focused on the places where they were exposed to violence, how they react in conflict situations, the ways in which they express their dissatisfaction, as well as their involvement in conflicts that ended violently.

Focus group sessions and individual interviews were geared towards parents. The topics addressed during the group discussions included: the level of safety offered by the school, the prevalence of violence in the vicinity of the educational institution, the relationship of parents with the school, the causes of violence between students, between students and teachers.

The individual interviews were conducted with representatives of the local authorities (local councillors, police) and addressed the same topics as the group discussions.

The case studies involved individual interviews with four students with violent behaviours, selected by the teacher. Interviews with students with manifestations of violence focused on aspects such as family environment, previous experiences of physical or verbal abuse, inappropriate treatment, and the personal characteristics of each student interviewed.

Population under investigation: The questionnaire survey was conducted on a representative sample of 60 teachers and 140 students of the school. Group interviews with parents were conducted within the school, 15 interviews involving 32 subjects.

RESULTS

Results of the survey by questionnaire / students:

1. Have you ever been involved in a situation of physical aggression? Most of the students interviewed said that they had been victims of physical violence at least once in the school environment; the analysis of the data revealed that fewer girls were safe from physical aggression compared to boys. The data suggests that the space around the school could be a place where physical violence against students occurs frequently.

2. Have you ever experienced negative feelings because of nicknames or offensive words? Most of the participants admitted that they were emotionally affected by offensive nicknames and words. From this it can be deduced that the most common form of violence between students is verbal, followed by bullying from peers.

3. Have you ever reacted ironically or refused to cooperate with your teachers or classmates? Irony is the most common reaction of students in relation to teachers and

colleagues, followed by the refusal to participate in work tasks. A very small minority of students resorted to insults.

4. How would you respond in a conflict situation that could escalate to violence? Most students would avoid getting involved in conflict situations that could lead to violence, and only a few would try to smooth out the conflict.

5. How do you express your dissatisfaction when something doesn't suit you? The students interviewed demonstrated skills in managing conflict situations, with 61% of girls and 40% of boys stating that they express their point of view without creating scandal. Only one subject admitted to reacting verbally or physically violently when he was not satisfied with something at school.

6. Have you been involved in conflicts that degenerated into physical violence at school? 57% of boys and 48% of girls admitted to being involved in conflicts that escalated to physical violence.

Results of the survey by questionnaire / teachers

The questionnaire addressed to teachers contains questions (most of them) with answers of their choice (closed) and only two items with open answers. The questions in the teacher questionnaire mainly contain predetermined answer variants, with only two questions requiring detailed answers. The answers regarding discipline at school are distributed as follows: analysing the results comparatively, differences in the perception of the state of discipline in school between men and women are observed: 65% of female teachers consider it to be good, while only 50% of men classify it as average. The form of verbal violence from students is unanimously considered the most common form of aggressive behaviour to which they are exposed, followed by lack of supervision from parents and physical violence from students. Emotional abuse by students and some teachers was ranked lowest, while other forms of violence, such as drug use or suicide attempts, were not mentioned at all.

Regarding the manifestation of aggressiveness in the teacher-student relationship, the answers are presented as follows:

- a- the teacher can develop an aggressive behaviour towards the student through his way of conduct;
- b- the student, through his manifestations, can cause adverse reactions from the teacher;
- c- both

All the investigated teachers believe that they can maintain discipline in the classroom through dialogue, personal example and correct behaviour towards all students.

Regarding the identification of the factors that lead to the manifestation of violence in the school studied, a hierarchy of possible causes was outlined: the adoption of behaviours in the social environment and in the media by students, children left under the supervision of other people, differences in temperament between students, parental negligence, lack of education in the family, tendency to be rebellious, alcohol consumption. Opinions on the pace of action to prevent violence in schools differ between female and male teachers, reflected in a graph as follows:

Female teachers: 45% believe that measures are sometimes taken; 30% think it happens rarely.

Male teachers: 60% perceive the frequency of taking measurements, indicating a lack of communication between the surveyed subjects.

The hierarchy of disciplinary measures applied in school is presented as follows: the most common measures are verbal warning and lowering the grade for conduct. The proposals to combat violence in school made by teachers are: careful supervision of students with problems, involvement of teachers, police and local councillors, application of appropriate punishments to those involved, consultation of specialists such as psychologists, social workers, collaboration with the police, church and family, addressing the topic of violence in school classes in order to make students aware of the consequences of different forms of violence, improving communication between all parties involved.

Results of group interviews with parents

During the group dialogues with the families, the reasons behind the aggressive behaviour of the students, the level of safety in the school, the violence in the educational environment and the collaboration of parents with the educational institution were analysed. Some parents have identified the poverty of some families as the main cause of violence, while others have suggested that some students' hostile attitudes towards classmates and teachers come from privileged backgrounds, similar to other findings [8]. There are situations when students are exposed to violent behaviours at home, under the influence of an aggressive parent, and children imitate such models. Some parents have also associated violence with the negative influence of the students' group of friends. Inadequate education of children has been cited as another cause of violence. Parents also stressed that their going abroad and leaving their children in the care of grandparents or other relatives can contribute to their aggressive behaviour at school. Another topic discussed was the control that children have over the media content they consume. Parents have recognized the difficulty of monitoring children's viewing of TV programs. As for security, only a few parents indicated that their children do not feel safe at school, noticing that sometimes strangers enter the institution. They mentioned that if children feel protected in school, the risk of violence outside it is higher. The relationship between parents and the school is perceived as acceptable, but the lack of involvement of teachers in conflict management has been criticised. In order to prevent violence and increase security, parents want to hire an authorized security guard during class hours and a fairer approach between students.

Police interview

From the authorities' reports, multiple requests regarding conflict management have been resolved. The school works with the police to intervene when necessary. According to the interviewed police officer, the main reasons for students' aggressiveness are: imitation of aggressive behaviours learned in the family environment, adoption of models of conduct promoted among students, which encourage imposition on others, attracted by attention through provocative attitudes, demonstration of status by force.

The most common incidents occur during breaks and after classes. Also, some graduates of the school create problems for teachers during classes because their entry into the institution is not supervised. They often remain unidentified by the authorities,

and intervention becomes difficult, as the circumstances of the incident are not always clarified. Minor acts of indiscipline, ignored or not sanctioned, can lead to major incidents. According to the statements of the police officer, the measures that should be taken to reduce violence in schools include: the elaboration of legal regulations by the ministries, valid at the level of the entire education system, ensuring permanent security by security agents, maintaining regular contact with the law enforcement agencies.

Interviews with local council members

Violence in schools has become a major problem lately, and the opinion of local councillors is that this is a phenomenon that risks growing. Those interviewed admit that they are not very involved in school life, but say that the main causes of students' aggressive behaviour are: family problems; broken families, precarious material situation, entourage (affiliation to a group implies discussing, dressing, behaving similarly to the members of the group to which you belong), as Gotea has shown in a previous study [9].

They believe that teachers are involved in settling conflicts, but recommend psychological assistance from a school psychologist. They also said that they would approve in the local council the hiring of a security guard at the school to prevent violent incidents.

DISCUSSION

During discussions with parents, the causes of violent behaviour among students, the level of security in the school, school violence and collaboration between parents and the educational institution were explored. Some families attribute poverty as the main reason for violence, while others believe that the provocative attitudes of some students from privileged families contribute to this phenomenon. Children can learn violent behaviours at home, where a parent usually exhibits such behaviours, which the child then imitates. Another aspect highlighted by parents is the negative influence of the group of friends on their children's behaviours. Lack of proper education is also considered a cause of violence. Parents mentioned that their going abroad and leaving their children in the care of other family members is a major cause of aggressive behaviours at school. Another topic discussed was the monitoring of the media content to which children are exposed. Parents recognize the difficulty of supervising the TV program watched by children. As far as school safety is concerned, only a few parents consider that their children feel safe, because sometimes strangers enter the school premises. They believe that the risk of violent incidents is higher outside of school. Parents criticize the reduced involvement of teachers in conflict resolution. To prevent school violence and increase security, parents want to hire a licensed security guard during class hours and a fairer approach to students.

From the information provided by the police, multiple requests for conflict resolution were resolved. The school collaborates with the authorities whenever necessary. According to the police interview, the main causes of students' aggression include aggressive models learned in the family, promoting dominant behaviours among students and attracting attention through provocative attitudes. Common incidents occur during breaks or after classes. Some graduates create problems for teachers because their access to the school is not monitored. The police are having difficulty identifying them and applying appropriate measures. Unsanctioned minor acts can escalate into major

incidents. To reduce school violence, the police suggest clear regulations, the constant presence of officers and close collaboration with them.

Interventions at the relational level:

a) Family: informing parents about the services available at school for the prevention of school violence and improving parent-child relations (counseling, mediation); involving specialized staff (school counselors, psychologists) in these activities. Collaboration between the school and the families of students with violent behavior or who have been involved in acts of violence, in all stages of assistance (information, establishment of a common intervention plan, monitoring of reported cases); organization of school meetings, home visits, extracurricular programs with the participation of students, parents and teachers [10].

b) School: Inclusion on the agenda of formal school meetings (Board of Directors, Teachers' Council, Students' Council, Parents' Committee) of topics related to school violence, in order to raise awareness of the phenomenon and analyze the forms, actors and causes of violence at the level of the institution. Developing coherent prevention and intervention strategies, based on the assessment of the existing situation and included in the institutional development plan; Revision of the school's internal regulations, adapting them to the specific context of the institution, consulting all school actors (students, teachers, parents) in defining and applying it [11]

At the curricular level: debates in counselling and orientation classes about situations of school violence and encouraging students to express their opinions and possible solutions, using topics relevant to violence from different school subjects to raise awareness and develop a critical attitude of students towards school violence, organizing extracurricular programs and activities to combat school violence (e.g.: anti-violence week, games, competitions, meetings with specialists), teacher training on violence (forms, causes, prevention, legislation) through local training activities.

At the community level: raising community awareness of school violence, initiating prevention programs with financial and logistical support from local authorities, developing partnerships between the school and other local institutions for the safety of pupils and creating a safe environment [12]

At the social level: introducing optional subjects focused on violence prevention in the school curriculum, stimulating public research and debate on school violence and promoting successful examples in preventing and combating this phenomenon [13].

CONCLUSIONS

Studies conducted in the field of education have revealed that violence is the most common deviant behaviour encountered in the school environment from a statistical point of view. Media sources, research, and official data highlight a significant increase in this phenomenon over the past three decades in various countries around the world. If in the past the predominant was violence from teachers towards students, today there is a trend of increasing violence between students or from students to teachers.

Given the alarming data from other countries, as well as the increasing number of cases publicized in Romania, we believe that it is imperative to intensify our efforts in researching this phenomenon. We also believe that authorities should impose some new

curriculum in order to enhance already existing knowledge on these subjects that become increasingly prevalent among people nowadays. There are some tries to grasp this problem but they are not enough or continuous. Nevertheless, we strongly believe and agree that this matter should be of utmost importance in order to guide future generations towards better behaviour and to adopt a better stance in front of this issue.

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ASPECTS OF INTEGRATION OF SOCIALLY EXCLUDED GROUPS IN LATVIA

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ABSTRACT

The goal of the European Union is to reduce the risk of poverty and social exclusion. The risk of social exclusion involves various risk factors that adversely affect family life as well as everyday needs. Indirect discrimination also leads to social exclusion. In essence, social exclusion represents multidimensional marginalization that does not contribute to social integration policies aimed at creating an integrated and socially active society. French sociologist Emile Durkheim has already stressed that the inclusion and union of individuals are essential to maintaining social cohesion and preventing social exclusion. He also stressed the importance of social solidarity, which is linked to shared values, beliefs and norms in society and which can help to prevent social exclusion and promote social integration, and described the evolution of society from mechanical solidarity to organic solidarity.

Social exclusion is a complex social and political problem, which is governed legally at the national and local levels, as there are socially excluded groups also in rural areas.

The legislative framework was summarised using document analysis. A qualitative research approach was used to explore the manifestations of social exclusion and identify recommendations to address them. The research involved 11 semi-structured interviews with representatives of organisations working on the problems and integration of socially excluded groups. The research aims to identify the problems of and solutions to social exclusion in rural areas.

The research has concluded that there are enough projects and programmes promoting wellbeing and social protection, yet the projects do not achieve the desired results in most cases. Based on the idea of social solidarity, today's society is more likely to cooperate, which indicates a more cohesive society and a willingness to seek help from responsible organisations.

Keywords: social exclusion, social inclusion, integration

INTRODUCTION

Today, social exclusion is mainly viewed as a process of why a person is excluded from society rather than as a specific condition. Socially excluded people have limited access to education, job opportunities, health care and other basic needs. Socially excluded people are contrasted with the dominant society. Statistics indicate that among EU Member States, **Latvia has one of the highest risks of poverty and social exclusion**. More than a quarter of the population in Latvia, specifically 26.2%, live below the poverty

line, which means that it is difficult for them to meet their daily needs [1]. Therefore, it is essential to continue taking various measures to reduce the risk of social exclusion because there are also groups of residents who are not ready to seek help from the municipality, i.e. there are residents who are exposed to social exclusion but do not want to deal with it with another person's help [2]. Risk groups subject to social exclusion do not necessarily mean that the majority of the population belonging to a particular risk group cannot provide for themselves and it is difficult for them to integrate into society. It is a segment of the social group that might be subject to exclusion, but it does not apply to the entire group because some of them live better than most of the group and have not experienced exclusion. However, it is important to identify the risk groups that are most exposed to social problems in Latvia. To identify the problems of and solutions to social exclusion in rural areas, the following specific research tasks were set: to analyse the theoretical aspects of various risk groups subject to social exclusion and to identify potential solutions to reducing social exclusion in rural areas.

MATERIALS AND METHODS

Each period features some specific processes, which are researched to be included in new concepts and theories, which in turn are incorporated into various theoretical paradigms that analyse the developments in society from different perspectives. Social exclusion is a new concept in social science that has drawn the attention of many sociologists, economists as well as social work and policy researchers. To analyse the theoretical aspects of various risk groups subject to social exclusion, the present research reviewed theoretical paradigms and analysed previous research studies. Document analysis was applied to examine the relevant legal framework, selecting the following concepts to focus on: social exclusion, social inclusion and integration. An analysis of documents (strategies, laws and research papers) available publicly gives an idea of the urgency of the research problem. A case study was conducted and the qualitative research approach was applied to examine the manifestations of social exclusion in one of the rural areas in Latvia – Kuldīga municipality – and develop recommendations for a solution. Kuldīga municipality consists of 20 administrative units. The area of the territory is 2499.9 km² and, according to the data from the Official Statistics Portal, 27190 residents are currently registered there. The residents are represented by the decision-making body of the municipality – the council –, which is responsible for the policies and administration of the municipality and functions in accordance with the Local Government Law [3]. As part of the research, 11 semi-structured interviews were conducted with representatives from the Kuldīga municipal agency Social Service, the Kuldīga branch of the Kurzeme Committee of the non-governmental organization Latvian Red Cross, the Long-Term Social Care Department of the Kuldīga Hospital, the Kuldīga branch of the Liepāja Society for the Blind, the Kuldīga Youth Association Cactus, the society “Mamma mammai fonds”, the society Kuldīga Senior School as well as with the Kuldīga Main Library. The qualitative research approach was applied to get a more detailed view of the institutions about social exclusion, as well as the ways it could be reduced.

DISCUSSION AND RESULTS

Simple societies are based on mechanical solidarity, with self-sufficient people being united to others by close personal ties and traditions (e.g. family and religion). Besides, in such societies, people have much fewer opportunities in their lives. In contrast, modern

society is based on organic solidarity, with people being connected by their reliance on others through the division of labour [4]. In today's society, it is important to prevent discrimination and intolerance, as well as to respect and appreciate each individual, regardless of the characteristics, e.g. nationality, race, gender, sexual orientation, religious beliefs, political beliefs, culture or social status. In his idea of stigmatization as a basis for devaluing and discriminating individuals, sociologist Erving Goffman has distinguished three main types of stigma: the stigma associated with mental illness, the stigma associated with a physical deformity and the stigma associated with identification with a particular race, ethnicity, religion, ideology etc. [5].

Social exclusion could also be viewed through multidimensional marginalization, which includes social, economic, cultural as well as political aspects. Marginalization is a process of social exclusion, with individuals or groups being excluded from society and having no access to resources, opportunities and power. This could lead to stigma, discrimination and prejudice, which can further exacerbate social exclusion and inequality [6]. Economic marginalization means that people do not have the same opportunities as others to contribute to and benefit from the economy. Cultural marginalization refers to an individual or group being isolated from dominant cultures and values. Political marginalization means that some social groups are unable to democratically participate in the decision-making process. For example, sociologist Émile Durkheim believed that the inclusion and union of individuals is essential to maintain social cohesion and prevent social exclusion. He also emphasized the importance of social solidarity, which pertains to society's common values, beliefs and norms, and which can help to prevent social exclusion and promote social integration [7]. Sociologist Hilary Silver has identified and defined **three distinct theoretical and political perspectives** for developing the concept of social exclusion. The **solidarity paradigm** focuses on societal solidarity and the way society can promote social cohesion and reduce inequality. The **specialization paradigm** indicates that each individual chooses what s/he wants to achieve in life and what social group to join. The **monopoly paradigm** focuses on the role of social status and how it could be improved [8]. Brian Berry suggests that social exclusion, even if voluntary, should be reduced in the sense that there should be opportunities for social inclusion [9].

Social exclusion is a complex social and political problem that can emerge affected by various factors. To limit social exclusion, **various laws are passed and measures are taken** to improve the situation in the country. The **Law on Social Services and Social Assistance** aims to ensure that everyone has the right to access social services and that those most in need are given priority and provided with the services. The law also assigns responsibility to social service providers as well as specifies rules that need to be observed to ensure proper quality and transparency. The law contributes to social cohesion and provides support for people to improve their quality of life and integration into society [10]. The Cabinet has passed the **Regulations regarding the Receipt of Social Services and Social Assistance** so that a person can receive social assistance at the place of residence at an institution of long-term social care or social rehabilitation [11]. The Cabinet has adopted the **Guidelines on Social Protection and Labour Market Policy** for 2021-2027 that provide for stable and adequate financial support, an accessible social service system, workplaces that would be inclusive and of high quality for every potential employee, as well as a system of legal support provided by the state, which allows all residents to receive legal support equally and ensure balanced and fair treatment of

individuals involved in legal proceedings. The guidelines are aimed at contributing to social inclusion, which involves the reduction of income inequality and poverty, the development of an accessible social service and legal support system adapted to the needs of individuals, as well as the promotion of a high level of employment in a quality working environment [12]. The Cabinet Regulations regarding the Population Groups at Risk of Social Exclusion Risk and Procedures for Granting, Registration and Supervision of the Status of a Social Enterprise require social enterprises to be transparent and meet strict monitoring requirements. Social enterprises need to improve living conditions and prevent social exclusion, especially for those most at risk [13].

At the local level, social assistance is granted by municipalities to support low-income households by guaranteeing a minimum income threshold, covering some housing costs as well as other urgent expenses and providing assistance in a crisis [14].

Every year, the Central Statistical Bureau of Latvia conducts a survey on incomes and living conditions to collect data on financial and social deprivation. The data allow the progress in achieving the goals of the EU and the Member States in reducing social exclusion to be determined.

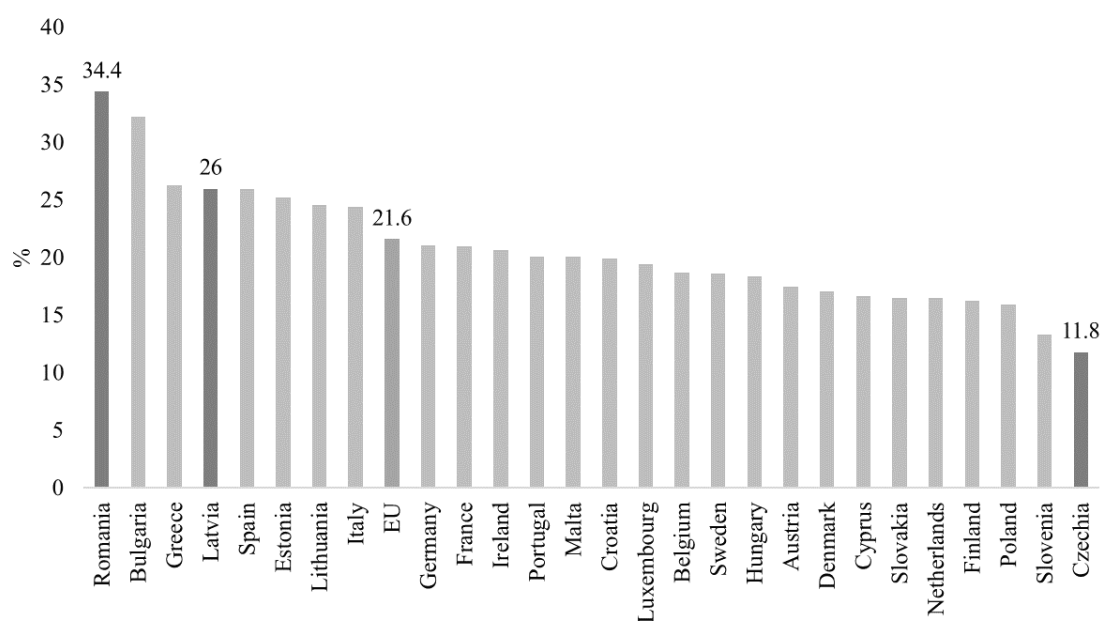


Fig.1. People at risk of poverty or social exclusion in 2022 (% of total population)

Source: People at risk of poverty or social exclusion in 2022 [15]

Among the EU Member States, a high risk of poverty and social exclusion is reported in Latvia. An annual report on the policy aimed at reducing poverty and social exclusion shows that the top needs of recipients of the guaranteed minimum income benefit are to improve their health condition (55%), find permanent jobs (42%) or casual work (27%), provide themselves and other family members with food daily (39%), as well as improve the housing situation (39%), which is not an insignificant basic need. After reviewing the research studies on social exclusion conducted in Latvia, the authors identified various categories of social risks (Fig. 2).

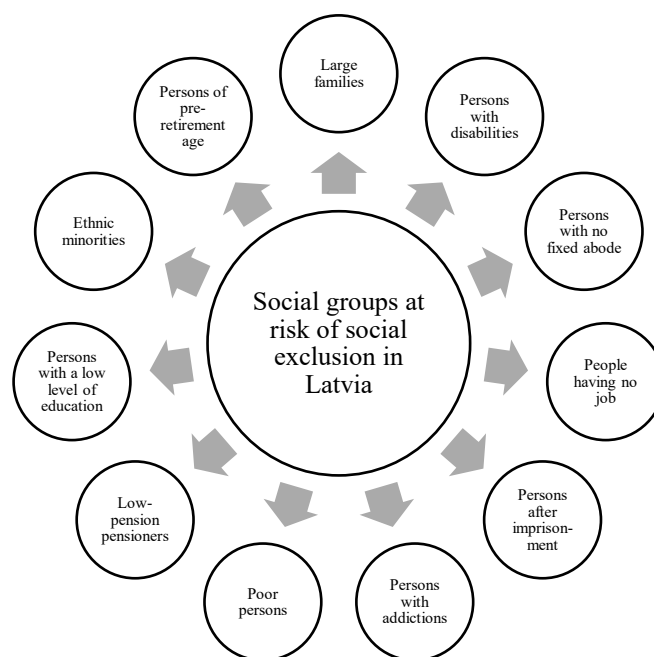


Fig.2. Social groups at risk of social exclusion in Latvia

Source: developed by the authors based on an analysis of scientific publications.

As shown in Figure 2, the factors in social exclusion can be both **individual**, e.g. a low level of education, disability, poverty, alcoholism, drug addiction, loneliness, unemployment, family and relationship problems and other personal circumstances, and **structural**, e.g. economic, social and cultural systems that could be discriminatory against certain social groups. **Social inclusion** is necessary for certain social groups to lead a full life. Social inclusion is a process whose main objective is to provide opportunities and resources to people at risk of poverty and social exclusion so that they can participate fully in the economic, social and cultural life of society.

As part of the interviews, opinions on the current level of prosperity were identified in Kuldīga municipality. It could be concluded that most of the respondents believed that the level of prosperity in Kuldīga municipality was average and it did not differ from that in other municipalities in Latvia. An opinion was that “...after the COVID-19 pandemic and now, considering the events in Ukraine, I feel that the level of poverty among families with children has increased”. According to the respondents, the level of prosperity in Kuldīga municipality was stagnant, and it would be necessary to change it in the future, especially since it is important to increase the level of prosperity in parishes so that the residents continue to live in their current places of residence.

The representatives of organizations and associations had different answers about the causes of social exclusion in the municipality. The causes could be identified as **objective** (no jobs, ageism, accidents) and **subjective** (laziness, unwillingness to get involved, unwillingness to learn, a lack of digital skills). An analysis of the answers about the objective factors in social exclusion in Kuldīga municipality revealed that one of the most important factors was a lack of jobs both in the city and in the parishes. “The level of employment and prosperity was definitely much lower in the parishes than in the city”. One of the respondents claimed that ageism affected social exclusion and contributed to

the unequal treatment of individuals due to age. It is important to encourage residents to get involved in the activities of associations as well as to convince them to seek help from the social service and other organizations that are responsible for improving the financial wellbeing of residents. However, the respondents mainly emphasized the subjective factors. To reduce the manifestations of social exclusion, residents also need digital skills. "...part of the population has very poor digital skills, which prevents them from equal access to various services, and in the library, we observe the need of seniors for socialization". One of the respondents pointed out that it was a complex problem, but granting benefits in the long term can negatively affect the desire to work for a wage: "It seems that there are many factors, for example, the unwillingness of people to work. Something must be done about the duration of social benefits...". Some people do not want to integrate into society and mainly prefer to look for people who are the same as themselves, thus degrading themselves. "Unfortunately, it is characteristic of modern society to create its own socialization "bubbles", which leads to the fact that these people come into contact more with people like themselves and often end up in a degrading environment". It could be concluded that **the majority of the population needs to be helped to participate in community activities**, it is necessary to cooperate with such people so that they become socially active and trustful, and different levels are involved here (Fig. 3).



Fig.3. Levels of dealing with social exclusion problems

Source: developed by the authors based on the research results.

It is important to understand the ways various socially excluded groups show solidarity and integrate into society. A respondent stated: "The fact that the non-governmental sector provides essential support for the social service is important; for example, in Kuldīga, seniors are most active and we have a senior school and the association "Rumbiņa", which both educates seniors and holds various events for them, and this helps. We also have the association Kurzeme Wellbeing and Mental Development Agency, and they seem to be not so active daily, but they implement European Union projects just for people – both adults with mental disorders and children with functional disorders –, and various classes are held there". This means that people are ready to learn and develop themselves so that they are not subject to social exclusion. Several respondents pointed out that **cooperation was important**: "Various institutions should actively cooperate, the national and local governments should provide more funding for

inclusive activities and training, and a more flexible approach needs to be applied. Various projects work very well in this regard...”. Another key factor is **accessibility for the blind and persons with functional disabilities, and the heads of parish administrations must consider** prioritizing the needs of the younger generation so that the young people are not exposed to social isolation as well. The support provided by others is also important, as “Kuldīga residents are very “proud” – they do not complain about their problems, they are afraid to accept help, they want to deal with it themselves because others need more help”.

To reduce social exclusion in society, it is necessary to take integrated actions in several areas. An analysis of the case of Kuldīga municipality revealed that the actions taken were thought out and structured. However, the respondents emphasized that the actions should represent a horizontal policy, with representatives from various fields being involved to implement projects and provide opportunities – jobs for young people, pre-retired persons and part-time employment for other groups subject to social exclusion.

CONCLUSION

1. Among the EU Member States, Latvia has one of the highest risks of social exclusion. The most vulnerable to social exclusion are seniors, families with children who do not have enough income, as well as people with functional impairments. There are enough projects and programmes that contribute to welfare and social protection, yet the desired result is often not achieved by the projects.
2. An analysis of the situation from the perspective of organizations and associations revealed that in rural areas, local and national government support was essential to reduce social exclusion and encourage residents to develop themselves and participate in various activities, thus integrating into society.
3. The standard of living and social wellbeing largely depend on the initiative and motivation of any resident. Many socially excluded residents are not interested in improving their current social status and willingly exclude themselves from society. Social exclusion might be inherited from generation to generation if the perception of life is not changed and there is no desire to make life better.
4. Solidarity can contribute to social growth and development. To successfully implement various measures to reduce social exclusion, it would be necessary for organizations responsible for social wellbeing to unite and cooperate with each other.

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COMMUNICATION MODELS IN THE NON-GOVERNMENTAL ORGANIZATIONS

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ABSTRACT

The challenges of the last years have shown that the survival of non-governmental organizations depends on their ability to communicate and to be seen and heard by stakeholders and the general public. This paper describes the results of an exploratory qualitative research, whose main objective was to identify the methods of communication and promotion applied by non-governmental organizations in the social services sector and their implications. The research was carried out in the period 2021-2023, on a number of 23 non-governmental organizations accredited by the Romanian Government, from Brasov County, Romania. Data collection was done through semi-structured interviews, with people from the management structures of the non-governmental organizations. The results of the research show that those non-governmental organizations with communication and social marketing departments have a long-term vision of the organization, create and follow clear communication strategies with visibility for both stakeholders and the general public, that give them stability and sustainability while non-governmental organizations that don't have a communication department and don't have constant external communication activities, don't have a long-term vision of the organization and work, rather, on survival rather than development and continuity. This research highlights the importance of developing an effective communication strategy within the management of non-governmental organizations, which will provide them with visibility, predictability and long-term sustainability.

Keywords: Non-governmental Organizations, Stakeholders, Strategic Communication Models, Sustainability

INTRODUCTION

Non-governmental or non-profit organizations (abbreviated: NGOs) have proven over the time, the extremely important role they play in society, being increasingly visible through their involvement in raising awareness and sensitizing citizens to what is happening around them, for the well-being of the community [1].

The last years have brought new challenges for NGOs in Romania, especially in terms of funding who generated the need to make themselves known in the community. This can only be achieved through external communication with stakeholders and the general public. Communication seems to be the key to success for NGOs. Joslin and Müller [2] show that there are significant positive associations between the communication of the projects that NGOs have, their performance, personal commitment and social networks. Unfortunately, as shown by other recent studies done in other countries [3], most NGOs

ignore the power of social marketing strategies and use traditional methods of fundraising and promotion., which can lead to the failure of NGO programs [4].

THEORETICAL FRAMEWORK

The strategies and methods of external communication that NGOs approach are defining for the development and implementation of the programs they want to carry out [5]. NGO communication is multidimensional and strategic, it is a combination of different disciplines that, taken together, provide a powerful and comprehensive set of models, methods and tools to maximize results in accordance with organizational strategy [6, 7]. Being strategic means: long-term vision, building alliances, goal- and action-oriented approaches, setting priorities, logical consistency in unfolding elements of the strategy step-by-step, managing activities, budgets and human resources systematically [8]. An effective communication plan helps the NGO to tailor its message to specific stakeholder audiences and to determine which channels and tools it can use to communicate efficiently with them, including more creative and innovative media practices [9]. A successful communication plan impacts all aspects of an NGO, from engaging professionals, fundraising, recruiting volunteers, to influencing opinion makers and stakeholders [10].

The explanatory theories of NGO communication focus on participatory communication, results driven communication and multi-channelled communication strategies [5]. To these is added the theory of uses and gratifications developed by [11].

At the center of participatory communication is dialogue, in which all involved actors can participate: people, groups, collectives, institutions, stakeholders so that people feel involved in the decision-making process related to NGO projects [4, 12]. Participatory communication is based on results-oriented communication and studies show that it is effective for improving and developing the services offered by NGOs [13], but also for finding solutions to various situations [14].

The theory of uses and gratifications developed by Katz, Blumler, and Gurevitch [11] comes with the perspective in which the communication strategy is a rational choice between several alternatives, in order to maximize the gratification obtained. This means that users choose communication channels as long as they provide sufficient satisfaction. When a communication channel is no longer effective, it is abandoned, looking for other channels that bring current gratifications.

A modern model of communication involves the approach of a multi-channelled communication strategy. Communication on multiple channels and with multiple voices is considered more useful for the performance and success of projects carried out by NGOs and higher communication effectiveness is achieved when multiple channels have been considered [5].

Multi-channelled communication strategy also leads to the success of programs by enabling the rapid achievement of program objectives through the autonomous participation of all stakeholders, which resulted from creating a dynamic, two-way

exchange of information and ideas due to the integration of multiple communication channels [15].

Considering the diversity of external communication models that NGOs can approach, the current research aimed to identify which external communication model apply the NGOs in Brasov, Romania, the communication strategies and methods use by these organizations and what are the implications generated by the adoption of a certain communication model.

METHODOLOGICAL FRAMEWORK

The present study presents an exploratory qualitative research, whose main objective was to identify the communication and promotion models of NGOs in the social services sector and their implications. The research was carried out in Brasov county, Romania and the data were collected in the period 2021-2023. Data collection was done through semi-structured interviews, with people from the management structures of the non-governmental organizations.

The theoretical sampling and the snowball technique were used, the sample being made up of 23 non-governmental organizations, out of a total of 31, selected from the map of social services in Brasov County (Map of social services in Brasov County). For data collection, the interview guide was used, which was structured first on themes, then on additional questions, where more data were needed.

The 23 participants in the study were told about the aim of the research and all participants gave their written consent for their answers to be used for scientific purposes.

During data collection, the data were entered into the Nvivo 14 software, performing a primary analysis to identify the maximum number of subjects necessary for the research. The data relating to the content of the interviews were processed and analyzed. In analyzing the collected data, thematic coding was used, focusing on the communication and promotion models used by NGOs. The 23 conversations lasted between 40 and 70 minutes, resulting in around 900 minutes of analyzable data. When theoretical saturation was reached, the data collection process was interrupted and followed by the thematic analysis and interpretation of the obtained information.

RESULTS AND DISCUSSIONS

NGOs approach external communication with stakeholders and the general public differently. From the analysis of the data of this study, 3 categories of NGOs with different communication strategies were identified, which, of course, also influence the methods of communication and promotion: NGOs with a marketing department and communication strategies; NGOs without a marketing and communication department, but which use different models of external communication and NGOs that do not have a communication department and no external communication models.

It is observed that the organizations that have a communication and social marketing department have a holistic approach, with well-defined strategies and long-term objectives. Only 3 of the NGOs in the present study have such a department, being large

organizations with several social programs and having offices in several areas of the country, two of the organizations having offices at the international level as well. These organizations are well known to the stakeholders and the general public, having social programs with visibility and thus, they also have financial support from them.

The communication models of NGOs in the first category involve a 360-degree approach, they apply, strategically, at the same time, in addition to classic communication activities, such as: grassroots campaigns, media appearances, events, website, social networks, and innovative methods for the social field, taken from the social marketing area: information-education-awareness campaigns, community mobilization through crowdfunding events, direct-debit, cause-related marketing: *On the social marketing side, we had quite a few collaborations that opened up new horizons for us, through which we managed to attract certain funds, as were several of our projects: Those who are users of the Up Romania application can donate certain amounts in the form of a voucher to the organization; Revolut users in Romania have the opportunity to make a single donation or to choose for recurring donations - weekly or monthly, directly from the application to the organization; every year we have a period when the people from Douglas Romania launch a fundraiser through which 10 lei (n.a.: Romanian currency) of the value of a certain product bought from them goes to the organization (NGO - medical and social services).*

These 360 degree strategies, which are carried out permanently, ensure these organizations a continuous, long-term development, not only on the fundraising side of the present activities, but also development and diversification of services adapted to the needs of the beneficiaries. Even more, these organizations have ideas for the development of these methods of communication with stakeholders: *Maybe in the future it would be good to think of a way for the employer to donate and also notify its employees about the NGO to which the company has donated the 20%, and they can donate the 3.5%, thus we would target larger companies that could bring more funds (NGO - social services).*

Data analysis shows that the organizations that have a communication and social marketing department adopt the perspective of participatory communication that takes into account the evolution of society, from all points of view, but especially in the media area, adapting their communication strategies constantly according to the changes that occur. The communication models adopted by these organizations are focused on achieving results that lead to the development of the organization and its sustainability in the long and very long term. For these organizations, every external communication method is important, even if some are less effective than others: *In the 30 years of activity, our organization has constantly developed communication and fundraising mechanisms. Each promotion mechanism contributes and has an impact at some point. (NGO – social and educational services).*

This participative communication model was effective even in times of crisis, such as the Covid pandemic. Although from the point of view of fundraising, all NGOs suffered, during the pandemic there was more interest and involvement from the general public: *With the pandemic we were a little scared because we were used to live sports events, the pandemic locked us in the house and then we had to come up with solutions to this and we realized that we had a challenge more on a mental level, that we didn't*

know what was going to happen. The support came tremendously from people from all over the country, so that at the last running event - - the "Run for them" cross - we had representatives from every county in the country (NGO - medical and social services).

From the data analysis, we find that NGOs with communication models and strategies have the following characteristics: they are large NGOs, with many employees, they have offices in several cities, have several social programs, they have communication and social marketing department, they have communication strategies, are innovative in terms of communication strategies, follow the perspective of participatory communication and multi-channeled communication strategy, all external communication channels are used, depending on the target audience to which the information is intended to reach.

The second category of NGOs includes organizations that do not have a communication department but have their own promotion and fundraising activities to support the current social services they offer to their beneficiaries. In general, there are organizations with a small number of employees, who, in addition to the rest of the responsibilities they have in the organization, also carry out these external communication activities. It is also observed that these organizations do not have well-organized strategies for the sustainability of the organization. Rather, they are punctual activities, in order to be able to carry out various projects of the organization for short periods of time. These communication activities are mainly to raise funds for their ongoing activities and projects or for the next period of time.

However, despite having few employees and no clear communication strategy, these organizations are quite active on the stakeholder communication side, always looking for easy ways to get known but not involving expenses from the organization: *We are always looking for free opportunities to get help. For example, we were chosen to participate in CreateAthon Romania, an event where we benefited from consulting, a new image, a promotion strategy and a brand new website (NGO - Educational Services).* Although the need to have a specialist or a department in these NGOs is felt quite strongly, the resignation of these organizations to function without a specialized communication can be observed and they prefer not to hire a specialist, considering that they can function as organizations, still with the methods he applies at the moment.

We can observe that these NGOs that do not have a communication and social marketing department, but still have intense and innovative communication and promotion activities, follow the theory of utility and gratification, choosing their communication channels with stakeholders and the general public depending on how much satisfaction and gratification they get. When a communication channel no longer seems efficient, they give up on it and try other channels that bring them immediate gratification. This is another factor that distinguishes them from the first category of NGOs, which keep all types of communication channels, regardless of whether they are effective or not at the time. What is noteworthy is the fact that these organizations without communication specialists are always looking for innovative methods to make themselves known and promote themselves in the community. Even if they give up some communication channels, they are quite open to try new communication channels that may seem much more effective than others, such as story-telling: *We have a project in which our beneficiaries present their life story and we film and post it. The plan with*

this project is to release a book to sell in bookstores and hopefully be a form of funding (NGO - educational services).

From the data analysis, we observe that NGOs from the second category have the following characteristics: they are medium/small NGOs that address the beneficiaries of only one community, they have one or two social programs, they do not have a department or a person employed on the social marketing and communication side, they do not have communication strategies, they follow the perspective of the theory of utility and immediate gratification, they often change communication channels with stakeholders depending on their efficiency, they have innovative, punctual promotional activities that ensure their sustainability in the short or medium term.

The third category of NGOs are organizations that do not have a communication department and do not have communication strategies with stakeholders and the general public. These organizations are more likely to function in survival mode, acting sporadically, when a funding opportunity appears, through projects for specific periods, specific sponsorships for certain activities or donations from individuals who find out about the organization through their personal network: *Our organization it is not very well known in the community, although we have a few partnerships. But the community does not know what we do or with which category of beneficiaries we work (NGO - immigrant integration services).* These organizations prefer the traditional type of communication, by organizing events, sponsorships and donations, word-of-mouth communication. The communication channels of these organizations are the websites, mass-media and Facebook.

From the data analysis, we observe that NGOs from the third category have the following characteristics: they are small NGOs that address the beneficiaries of a single community, they run only one social program, they do not have a department or a person employed on the social marketing and communication side, they do not have strategies or external communication or promotion activities, acting periodically and punctually when they want to obtain project financing. Practically, for these organizations, the idea of external communication does not exist. All actions that could generate communication focus, in fact, on obtaining funds to continue the organization's activity.

CONCLUSION

The current study started from the following questions: what are the external communication models in the NGOs in Braşov, Romania, what are the communication strategies and methods used by these organizations and what are the implications generated by the adoption of a certain communication model?

The conclusions of this study show us that the external communication model chosen by NGOs is largely dependent on the existence of a communication and marketing department in the organization. We can observe that NGOs with communication and marketing departments prefer participatory communication strategies in parallel with multichanneled communication, to ensure long-term visibility and to create and follow clear communication strategies that confers stability and sustainability, while NGOs that

do not have a communication strategy act according to the theory of utility and gratification, they do not have a clear long-term vision and act more on survival mode.

Communication seems to be the key to success for NGOs. It is essential that the NGO perceives and includes communication as a strategic management function. Adopting a coherent approach to external communication is the best way to overcome the complexity of everyday problems and difficulties, but also of emergency situations, such as the Covid 19 pandemic and has the role of protecting organizational independence.

In order to have a more complete picture of the external communication of NGOs, the data of the current research can be completed with the collection of more data of organizations from other cities, for allowing comparisons and understand the types of communication chosen by NGOs, the constraints and the implications that these choices can have.

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CRITICAL COMPETENCIES OF POLICE OFFICERS IN THE CONTEXT OF DIGITAL TRANSFORMATION

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ABSTRACT

The digital transformation requires new knowledge and skills of police officers, thus the competences necessary for the usage of smart, innovative technologies become critical. It is important to ensure that these technologies are integrated into the security policy to effectively fight crime and to ensure the highest standards of respect for citizens' fundamental rights and freedoms. However, there is a lack of information on what competencies are necessary for the qualified usage of innovative technologies of today's police officers. The lack of research in this area poses challenges to the entire system of professional development for police officers, and at the same time to the state and its citizens due to the possible improper performance of duties while seeking to ensure public security. The aim of the article is to investigate the competencies of police officers that are critical important in the context of digital transformation. The scientific literature and legal acts analysis as well as expert interview were used to achieve this purpose. It was investigated that in the context of digital transformation, the most important competencies for police officers are information and communication technologies knowledge, data analysis and interpretation, strategic, critical thinking, and teamwork. The identified competencies of police officers necessary for work with smart, innovative technologies in practice can contribute to the training process of police officers and at the same time ensuring the public security in the country.

Keywords: Competences, Digital Transformation, Police Officers, Public Security

INTRODUCTION

European Union aims to improve the competitiveness of Europe in the global digital economy. However, there is a risk that advanced technologies may be a subject of manipulation for the purposes of terrorism, organized crime, drug trafficking and human trafficking, all of which pose a direct threat to citizens and European life. In the Communication of the European Commission of 2020 regarding the EU Security Union Strategy (2020) there is emphasized that technological development and emerging threats must enable law enforcement authorities to access new tools and develop alternative investigative techniques. The digital transformation requires new knowledge and skills of police officers: they must learn to work with constantly evolving innovative technologies, to apply the law properly without violating citizens' rights and freedoms. Consequently, the competences of police officers needed for the usage of smart, innovative technologies become critically important, and at the same time the importance of improving their qualification is highlighted.

However, there is a lack of information on what competencies are necessary to work with innovative technologies, and whether the knowledge and skills of today's police officers are sufficient in the context of digital transformation. There is a lack of scientific research on this topic. The researchers mostly focus on the development of competencies of police officers in general [1-2], but do not consider the challenges of digital transformation. [3] emphasizes the challenges of the fourth industrial revolution but suggests focusing only on the experience of higher education. Other authors [4-6] highlight the importance of lifelong learning for police officers, but do not emphasise the competencies required for police officers in the context of digital transformation. Thus, there is a lack of complex investigation assessing the competencies of police officers required for work with innovative technologies. Insufficient research in this area poses challenges to the entire system of professional development of police officers, and at the same time to the state and its citizens due to the possible improper performance of duties while seeking to ensure public security.

The aim of the article is to investigate the competencies of police officers that are critical important in the context of digital transformation.

The scientific literature analysis as well as expert interview were used to achieve this purpose.

THEORETICAL BACKGROUND

Today the police are more and more relying on digital, innovative technologies. Scientists emphasize the use of innovative technologies in cities and society [7] and indicate that police activities must adapt to the digitalized world [8]. The use of digital methods is combined with traditional police activities [9]. It is important to ensure that artificial intelligence, big data and high-performance computer systems are integrated into the policy activities to effectively fight crime and to ensure the highest standards of respect for citizens' fundamental rights and freedoms [10]. Scientists [11] also recognise the importance of developing the professional competences of police officers in universities and colleges and emphasize the impact of social transformation on their professional competences [12], since these competences are closely related to public order and public security.

Thus, changes in society forced the police organizations to switch to digital technologies and at the same time to transform and constantly improve the professional competencies. [13] suggested a public security police training course development system that includes the knowledge about technological innovations in police work. The main EU-level agencies involved in the activities of professional development for police officers are the EU European Union Agency for Law Enforcement Training (CEPOL) and the EU Law Enforcement Agency (EUROPOL). They provide training on a variety of topics, most recently, there has been paid great attention to cybercrime. However, CEPOL's trainings are targeted more at senior police officers. Though, trainings for police officers are mostly held at the national level. In Lithuania, the main institutions engaged in professional development activities for police officers are the Lithuanian Police School and the Lithuanian Police Forensic Science Centre.

The professional competence of the police is the basis that helps to constantly increase people's sense of security and satisfaction in the field of public safety. In this way, sustainable relations are established between the police and the public [14]. Thus, the

appropriate competencies of police officers for using constantly evolving digital technologies are becoming critical.

METHODOLOGY

To identify and analyse police officers' competencies required for the qualified usage of digital technologies and to assess the current situation in Lithuania the interviews of experts were conducted. According to scientists [15], the questions in expert interview should be asked flexibly, not necessarily in sequence, but according to the situation of the conversation, the clarification questions can also be used here.

The analysis of the scientific literature provided preconditions for the formulation of general questions for the experts: 1) What innovative digital technologies do you use in your work? What functions do you use them for? 2) Do innovative digital technologies help and how do they help to ensure public order and public safety? 3) What competencies and skills do police officers need to work with innovative digital technologies? 4) Are you provided with the necessary knowledge to work with innovative digital technologies and how often are courses and trainings organized for working with these technologies? 5) What competencies and skills or information do today's police officers lack to use innovative digital technologies competently?

For the investigation purposes, experts - police officers working in police departments with digital technologies and having at least 2 years of practical work experience were selected. Considering these criteria, 5 experts were selected for the interview. An expert interview was conducted in 2024. To preserve the confidentiality of the experts, they were randomly coded: E1, E2, E3, E4 and E5. **Table 1** shows the description of these experts' work experience and position.

Table 1. Description of experts

Expert	Description
E1	Police officer with 2 years of practical work experience, working as a specialist in the police department.
E2	A police officer with 2 years of practical work experience, working as an investigator of the Response Division of the police station.
E3	A police officer with 18 years of practical work experience, working as a specialist in the subdivision of the Traffic Police Department.
E4	A police officer with 23 years of practical work experience working as an investigator of the Serious and Organized Crime Investigation Division of the Lithuanian Criminal Police Bureau.
E5	A police officer with 6 years of practical work experience, working as an investigator in the Response Board Division of the police station.

While performing the investigation, the ethical principles of the interview were observed. All the experts participated in the interview voluntarily, they knew who was conducting the study and what the purpose of this study was; knowing this, they agreed to participate in the investigation. The principles of free will, personal self-determination, anonymity were ensured.

RESULTS

The expert interview was performed, and the following results were gained.

Q1. What innovative digital technologies do you use in your work? What functions do you use them for? Experts indicated that they use laptops with databases, electronic registers, cyber security systems and programs, as well as smartphones, drones, 3D scanners, crime light (lights for finding traces), BlueStar and other forensic equipment. **Expert E1:** *Smartphones, computers (databases and applications), in-car vehicle scanning devices. We use these technologies to check persons and their vehicles.* **Expert E5:** *We use various innovative technologies, such as electronic data scanning devices for traffic checks, cyber security systems, as well as modern communication and information transfer tools in operational activities, electronic registers, video surveillance systems and special data analysis tools.* However, some experts questioned the innovativeness of the technologies used in their work. **Expert E4:** *For criminal intelligence, classified police systems and equipment are used, but I wouldn't call them completely innovative. It is possible that other boards use more modern technology, but I do not have such information.* **Expert E3:** *We use little innovative technology in our work. The latest technologies are currently being used - mobile stationary speed meters PoliScan FM955. Their innovation is such that they can measure a large flow of vehicles and record their speed at the same time. The received information is processed without the help of a person, and the Protocol of Administrative Offenses is generated in the real field and sent to the owner of the vehicle for speeding <...> In the future, it is promised to use even greater assistance of drones in the traffic police.* Experts also listed smart technologies that ensure traffic safety, such as contactless alcohol detectors, mobile speed meters "TruCAM", with which police officers manually record the speed of a moving vehicle, and if the speed limit is exceeded, the officer may not even stop the vehicle, because administrative the non-violation report is immediately automatically generated in the Administrative Violations Register and sent by e-mail to the vehicle owner, and the police officer only has to add the footage to the Administrative Violations file.

Q2. Do innovative digital technologies help and how do they help to ensure public order and public safety? Experts pointed out that innovative technologies help to perform daily work better, to achieve quick and better results, because of which public order and public security are better ensured. **Expert E1:** *Yes, it helps. Innovative technologies facilitate daily work and help to achieve a better work result, to ensure public order and security, personal rights and freedoms.* **Expert E3:** *Thanks to new technologies, work is more automated and processed with the help of computers, so less human resources are needed, work goes faster, and work results are obtained faster. Cameras, digitization systems, and drones help ensure public order and public security. With the help of drones, officers can search for persons in almost all territories, and using them, an accurate and detailed plan of a traffic accident can be created at the scene of a traffic accident. With the help of a drone, officers can monitor the crowd, individual persons during mass events.* Some of the experts pointed out some disadvantages due to the use of innovative technologies. **Expert E2:** *<...> On the other hand, if technical problems suddenly occur, for example, some necessary registry becomes unavailable due to a planned update, we are left without any tools. We have to draw up the protocol, but the registry does not work, there are obstacles, both in qualifying it and in drawing up <...>.* The experts also emphasized the importance of

the rights and freedoms of individuals, personal data protection and privacy when working with digital technologies. **Expert E5:** *The innovative digital technologies can help the police improve public order and security and ensure compliance with the law. However, it is important to ensure that technology is used in accordance with individual rights and freedoms and privacy standards. The potential abuses and violations of personal privacy must be controlled.* **Expert E3:** *<...> Of course, due to the protection of personal data, the work is more difficult in some aspects, because human privacy must be protected.*

Q3. What competencies and skills do police officers need to work with innovative digital technologies? After carrying out interviews with experts, it became clear that information technologies knowledge, communication, networking, strategic/critical thinking, teamwork competencies are needed. **Expert E1:** *Technological knowledge and understanding, problem solving skills, analytical skills, communication skills, ability to communicate clearly and effectively with technology specialists, managers.* The experts also emphasized that to work with digital technologies, police officers need the competencies of creativity, responsibility, understanding, efficiency, and ethical decision-making. **Expert E4:** *Creativity, responsibility, systemic, strategic and critical thinking, information and communication skills, networking and teamwork skills, continuous improvement.* **Expert E5:** *Police officers need a range of competencies and abilities to work effectively with innovative technologies, including an understanding of data analytics, security measures and ethics and human rights principles.* Conflict management and ethical decision-making abilities, human personality recognition abilities and skills are also very important. **Expert E4:** *<...> I would additionally attribute the following to the officers of public police units: conflict management and ethical decision-making abilities, the ability to recognize a personality and to provide necessary help for him/her.*

Q4. Are you provided with the necessary knowledge to work with innovative digital technologies and how often are courses and trainings organized for working with these technologies? Some of the experts indicated that they are provided with the necessary knowledge to work with innovative technologies as needed. **Expert E4:** *<...> yes, once a year according to personal needs determined at that time.* **Expert E5:** *Police officers can participate in various trainings and courses to master and use the latest technology. These trainings are organized as needed.* Others emphasized that they learn to use digital technologies in their practical work: **Expert E1:** *No, I learn all the information in practice or from my colleagues who have returned from trainings and courses;* **Expert E2:** *<....> courses are organized quite rarely, usually the information is passed on by colleagues who attended the courses, and upon their return they introduce others.* Some experts indicated that trainings and courses could be organized more often, as this would give them more knowledge and allow them to constantly improve and adapt themselves to new digital technologies. **Expert E3:** *Yes, there are trainings, introducing new speed measurement systems, etc., but there could be more trainings.*

Q5. What competencies and skills or information do today's police officers lack to use innovative digital technologies competently? Experts emphasized that they lack information technology usage rules, data analysis and interpretation skills. **Expert E2:** *Knowledge of IT usage rules, patience, consistency. When new officers come to work in police, these technologies are a novelty for them, because in civilian life, databases are*

not available, so they must learn everything. A minimal computer education is acquired by oneself using digital technologies, but it is not enough. Expert E1: <...> technological knowledge, analytical skills. They also indicated that there is a lack of training for the use of technological equipment, knowledge to work with more innovative technologies. Expert E3: There should be more training with information technology, computers, etc., since quite a few officers are of retirement age, and digital innovative technologies appeared not too long ago, thus older officers should be given more training on modern information technology. Experts also emphasized the importance of legal competences and understanding of individual rights and freedoms. Expert E5: Today's police officers may lack certain competencies and abilities to use the latest technology effectively and legally. This may include skills in data analysis and interpretation, training in the use of technological equipment, and an understanding of the importance of individual rights and freedoms.

DISCUSSION

Analysing the results of the expert interviews, it became clear that all the experts who participated in the interviews use digital innovative technologies in their work. It is in line with [8], who points out that police must adapt to the digitized world. Moreover, the use of the innovative digital technologies in cities to ensure public order and public security is also of the main importance [7]. So, it can be assumed that, over time, all police units will be equipped with the innovative digital technologies that allow timely, efficient, professional and fast provision of public order and security.

Experts pointed out that innovative technologies help to implement police functions in a more professional and efficient manner, to achieve quick and better results, because of which public order and public safety are better ensured, at the same time it is important not to violate individual rights and freedoms. This requires the professional competence of police officers. This is in line with [14], who points out, that the professional competence of the police is the basis, thanks to which people's sense of security and satisfaction is constantly increasing, and sustainable relations between the police and the public are established in the field of public security.

The experts also emphasized that it is important for them to get the knowledge and skills needed to work with innovative technologies on time. In addition, experts wished that trainings and courses could be organized more often, as this would provide them with more knowledge and allow them to constantly improve and adapt to new technologies and changes. Thus, the need to develop professional competences of police officers are in line with [11], who emphasized the importance of developing police professionalism competence in universities and colleges, pointing out that police officers need high professional abilities and with [13], who suggested a public security police training course development system that includes the knowledge about technological innovations in police work. Thus, improving the competences of police officers needed to work with innovative technologies should be a priority area in the context of digital transformation.

CONCLUSION

Digital transformation requires new knowledge and skills of police officers, so they must learn to work with constantly improving technologies, properly apply laws without violating the rights and freedoms of citizens. In the context of digital transformation, to

adapt to constantly changing global events, police officers must be enabled to use innovative technologies and constantly improve their professional competences.

During expert interviews, it was established that all police officers use innovative digital technologies in their work. The use of innovative technologies helps them to perform daily duties better, to achieve quick and better results, because of which public order and public security are better ensured. It was established that in the context of digital transformation, the most important competences for police officers are information and communication technologies, data analysis and interpretation, strategic, critical thinking, and teamwork.

The gained new knowledge regarding the competencies of police officers required in the context of digital transformation can stimulate further research in this area and contribute to the development of this scientific field. From the practical point of view identification of police officers' competencies necessary for the qualified usage of innovative digital technologies and the improvement of these competencies can contribute to ensuring public security in Lithuania and the European Union.

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DIGITALIZATION AND ENERGY EFFICIENCY: LITHUANIA IN THE CONTEXT OF EU

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ABSTRACT

To tackle climate change, the European Union has set objectives of low-carbon energy transition and carbon-neutral society creation by 2050. The EU Member States should implement GHG emissions reduction targets through improved energy efficiency and use of the renewables. Digital technologies can help to accelerate this. The digitalization of the energy system is a policy priority and is linked to the European Green Deal and the Digital Decade Policy Programme 2030. Lithuania supports EU ambition to achieve net-zero GHG emissions and become climate-neutral by 2050. The aim of the article is to evaluate the relations between digitalization and energy efficiency and to identify the position of Lithuania in the context of EU. Scientific literature analysis and statistical data analysis methods were used for this purpose. The data of Digital Economy and Society Index were used for digitalization indicators and Eurostat data were collected for energy efficiency indicators. Significant correlations between digitalization and energy efficiency indicators of EU countries were calculated. The position of Lithuania among other EU countries was evaluated. Lithuania ranks above EU average in digital public services and integration of digital technologies; however, it performs poorly in environment related technologies and in terms of energy efficiency. The findings of this research can be relevant for both Lithuanian and EU authorities from the practical point of view in promoting cooperation between digital and energy stakeholders, shaping policy, steering digitalization in a way that maximizes the benefits for entire energy system.

Keywords: Energy Efficiency, Digitalization, Digital Technologies

INTRODUCTION

The EU Member States are subject to mandatory GHG emission reduction targets for transport, households, agriculture, waste management, land use and forestry. Digital Europe Programme (2021-2027) [1] seeks to boost investments in supercomputing, artificial intelligence, cybersecurity, advanced digital skills, and ensuring a wide use of digital technologies across the economy and society. The connectivity benefits of digitalisation allow digital technologies to both to increase the efficiency of the entire energy system and the end-use efficiency that has a complex impact on GHG emissions reduction. Thus, the digitalisation of the energy system is a policy priority and is linked to the European Green Deal and the Digital Decade Policy Programme 2030.

Lithuania has drawn up a National Energy and Climate Action Plan for the period 2021–2030 [2] in pursuit of the goals set by the United Nations 2030 Agenda for Sustainable Development, the Paris Agreement, the EU's 2030 climate and energy framework.

According to the plan, Lithuania's energy sector by 2050 will produce 80% of its energy from clean sources, supply consumers with energy safely and competitively. However, these targets and policy priorities are very challenging because of the current situation of Lithuania and the research on the topic is of the highest importance. It is extremely important to determine the relations between digitalization and energy efficiency and to identify the position of Lithuania in the context of EU for finding the areas to improve and steering digitalization in a way what maximises benefits for the entire energy system.

In international area the interest of the topic is growing. One part of researchers highlights the positive digitalization impact: the application of digital technology can be considered as an efficient way of tackling dynamic environmental problems, such as air pollution, GHG emissions and climate change [3]; energy systems become more integrated, intelligent, effective, reliable, and sustainable [4]. Other researchers [5-6] highlight the negative impact as the usage of digital technologies significantly increase energy consumption that is not fully compensated by efficiency gains. The research on the topic in Lithuania is limited. Researchers mostly focus on different sectors: wood manufacturing [7], household [8], railway [9]. But there is a lack of the assessment of digital technologies impact on energy efficiency on the country level.

The aim of the article is to evaluate the relations between digitalization and energy efficiency and to identify the position of Lithuania in the context of EU. This evaluation enables identification of the main strengths and weaknesses of the country in terms of digitalization and energy efficiency and could work as a tool for adequate country's strategic proposals.

Scientific literature analysis as well as statistical data analysis were used for the investigation. Data analysis was performed using SPSS software.

METHODOLOGY

To evaluate relations between digitalization and energy efficiency and to identify the position of Lithuania in the context of EU the following steps were performed: 1) selection of indicators presenting digitalization and energy efficiency; 2) correlation analysis for the assessment of relations between selected indicators; 3) cluster analysis for identification of the position of Lithuania among the EU countries.

Selecting indicators. European Innovation Scoreboard [10] calculates Innovation performance index that provides a comparative assessment of the research and innovation performance of EU Member States, neighbouring European countries and global competitors, it also provides sub-index of Digitalization, that includes 1) Broadband penetration and 2) Individuals with above basic overall digital skills. European Innovation Scoreboard also calculates Environmental sustainability sub-index that includes environment-related technologies.

The other important indicator is Digital Economy and Society Index (DESI) calculated based on OECD guidelines [11]. DESI summarises relevant indicators on Europe's digital performance and tracks the evolution of EU Member States towards digital transition [12]. DESI index has 4 sub-indexes: Human capital (Internet user skills and advanced digital skills), Connectivity (Fixed broadband take-up, fixed broadband coverage, mobile broadband and broadband prices), Integration of digital technology (Business digitalisation and e-commerce) and Digital public services (e-Government). Indicators expressed in different units are normalised according to the min-max method. DESI index

and its subindexes were selected as the digitalization indicators for this investigation as it covers all digitalization areas and gives a full picture of the situation in each country.

As for energy efficiency, the indicator Energy Intensity, is widely used in scientific literature [7, 13]. It is Eurostat indicator that is measured as Gross available energy divided by Gross domestic product. The other Eurostat indicator is Energy productivity that measures the amount of economic output that is produced per unit of gross available energy. This indicator is part of the EU Sustainable Development Goals indicators set. And is used to monitor progress towards affordable and clean energy and ensuring sustainable consumption and production patterns, which are embedded in the European Commission's Priorities under the European Green Deal [14]. These two energy efficiency indicators were selected for the investigation.

The data of digitalization and energy efficiency indicators were collected from Eurostat for the 27 EU Member States over the period 2017–2022.

The primary data analysis was made, and it was detected that Ireland and Denmark have intercepts in the data because of extremely high (good) indicators values and Bulgaria has intercepts because of extremely low performance. These countries were excluded from further investigation. **Table 1** provides the descriptive statistics of digitalization and energy efficiency indicators for the whole period of the rest 24 EU Member States.

Table 1. Descriptive Statistics of 24 EU Member States

	Minimum	Maximum	Mean	Std. Deviation
DESI	19,40	67,37	41,9538	9,87849
Connectivity	3,17	17,53	9,2900	3,03335
Digital Public Services	1,85	22,79	14,1571	4,18562
Human Capital	6,87	17,63	11,2676	2,15454
Integration of Digital Technology	2,68	14,06	7,2392	2,32836
Energy Intensity	68,04	328,79	159,2525	54,08875
Energy Productivity	3,04	14,70	7,0387	2,37490

Correlation Analysis. Literature analysis [4] highlights the positive effects of digitalization as energy systems become more integrated, intelligent, effective, reliable, and sustainable, thus it is expected that digitalization can accelerate energy efficiency on county level. Correlation analysis was made to test if there are significant relations between digitalization and energy efficiency and what is the strength of these relations. The countries having intercepts (Ireland, Denmark, Bulgaria) were excluded from this investigation and the annual data of the rest 24 EU Member states during the period of 2017-2022 were used for calculations.

Cluster Analysis. To identify the position of Lithuania in the context of EU according to digitalization and energy efficiency cluster analysis was made. Classification countries to different groups and comparing their indicators can help reveal which areas are especially weak or strong and thus should be the subject of attention for policymakers.

As the number of groups of the countries was not determined in advance, hierarchical cluster analysis methods were chosen for the investigation. Hierarchical cluster analysis was performed following these main steps: 1) selecting objects to analyse, 2) defining a

set of variables, 3) calculating distance measures, 4) grouping selected objects based on linkage rule, 5) creating dendrogram, 6) analysing results.

Following the steps of cluster analysis, 27 EU Member States were selected for the investigation. DESI index was selected for digitalization and Energy Productivity indicator was selected as energy efficiency criteria. The last available Eurostat data (2022 year) was used for calculations, min-max method was used for normalization of indicators. Following the scientific literature [15] of countries classification, Squared Euclidean distance and Ward's amalgamation rule that is designed to optimize the minimum variance within clusters was selected for investigation. The dendrogram, which indicates what level of similarity any two clusters were joined and shows classification of objects was created. The analysis of classification results enables to group countries according to their similarities in terms of digitalization and energy efficiency and to compare them inside the class and within different classes.

RESULTS

Following the methodology of correlation analysis described above, the intercepts were excluded, and Pearson correlation coefficients were calculated between digitalization and energy efficiency indicators.

Table 2. Correlation analysis results

Indicators		DESI	Connectivity	Digital Public Services	Human Capital	Integration of Digital Technology
Energy Intensity	Pearson Correlation	-,222**	-,250**	-,059	-,216**	-,309**
	Sig. (2-tailed)	,008	,003	,482	,009	,000
Energy Productivity	Pearson Correlation	,299**	,307**	,170*	,272**	,309**
	Sig. (2-tailed)	,000	,000	,042	,001	,000

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

If was found that Energy Intensity has weak but significant negative correlations at 0.01 level with the total DESI index and its sub-indexes: Connectivity, Human Capital, Integration of Digital Technology. There is no significant correlation between Energy Intensity and Digital Public Services. Also, Energy Productivity has weak but significant positive correlations at 0.01 level with the total DESI index and its sub-indexes: Connectivity, Human Capital, Integration of Digital Technology and significant positive correlation at 0.05 level with Digital Public Services. The both energy efficiency indicators (Energy Intensity and Energy Productivity) are highly correlated to each other ($r=-0.942$; $p<0.01$).

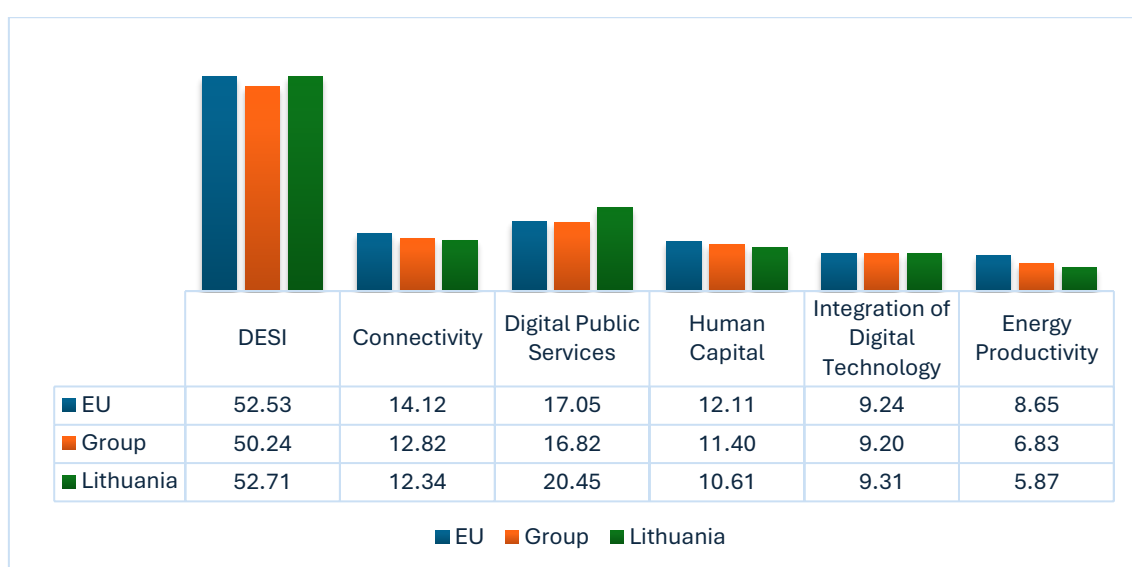
Next, following the methodology of cluster analysis described above, 27 EU Member States were classified according to their digitalization and energy efficiency indicators as it is shown in **Table 3**.

Table 3. Classification results

		DIGITALIZATION level		
		Low	Average	High
ENERGY EFFICIENCY level	High		Luxembourg Italy Austria France Germany	Ireland Denmark Netherlands Sweden Spain Finland
	Low	Hungary Slovakia Poland Greece Bulgaria Romania	Cyprus Portugal Belgium Slovenia Lithuania Croatia Latvia Czechia	Malta Estonia

Lithuania, together with Cyprus, Portugal, Belgium, Slovenia, Croatia, Latvia and Czechia, was classified to the group of countries, having average digitalization performance but relatively low energy efficiency while comparing to other countries.

The comparison of Lithuanian, its group average and EU average indicators for the year 2022 is provided in **Figure 1**.

**Fig 1. Comparison of indicators**

Also, the increase level of DESI index and Energy Productivity indicator was calculated for the period from 2017 to 2022. Lithuania had the 45% increase rate for DESI that was lower than countries group average (48%) and EU average (51%). However, Lithuanian Energy Productivity increase rate (28%) was higher than countries group average (21%) and EU average (21%).

DISCUSSION

The research results revealed that there are significant correlations between digitalization and energy efficiency indicators. These results are in line with the statements of researchers who highlight the positive digitalization relation to energy efficiency [3-4, 12]. Thus, countries with better digitalization performance are expected to be more advanced in energy efficiency and, because of more integrated, intelligent, effective, reliable, and sustainable energy systems, better in tackling dynamic environmental problems, such as air pollution, GHG emissions and climate change.

Cluster analysis enabled to classify all EU Member States to 5 different groups according to their performance in digitalization and energy efficiency areas. Lithuania was classified to the group of countries having average digitalization performance but relatively low energy efficiency. Lithuania performs better than EU average and its group average in total DESI index, that corresponds to overall digitalization level of the country. Lithuania also ranks above EU and group average in digital public services and integration of digital technologies. These results are in line with European Innovation Scoreboard (2022) [10], where Lithuania is ranked as one of the four Moderate innovators performing in digitalization above the EU average.

Despite Lithuanian Energy Productivity increase rate (28%) in the period of 2017-2022 was higher than its group average (21%) and EU average (21%), Lithuania still performs poorly in terms of Energy Productivity. According to European Innovation Scoreboard (2022) [10], Lithuania also performs below EU average in environmental sustainability, especially in the field of environment related technologies. Moreover, Lithuania had the highest greenhouse gas emissions intensity of energy consumption among the EU countries in 2021. According to Eurostat, Lithuania had the largest increase (82.9 %) in EU in electricity prices for non-household consumers for the second half of 2022 compared to the same semester of 2021 [14]. Thus, energy efficiency is the weak area in Lithuania that need to be improved.

Cluster analysis revealed that there is the other group of countries (Germany, France, Austria, Italy, Luxembourg) having the same level of digitalization but much better performing in energy efficiency. Thus, Lithuania can follow their good practice and try to find more effective ways for steering digitalization to maximize benefits to the whole energy system of the country. The full participation of digital and energy stakeholders as well as policy makes are required here. Coming back to the National Energy and Climate Action Plan for the period 2021–2030 of Lithuania [2], it is to conclude, that the whole complex of the instruments and activities shall be implemented to achieve its goals.

CONCLUSION

Due to digitalization, energy systems are expected to become more integrated, intelligent, effective, reliable, and sustainable and the application of digital technologies can help to fight against air pollution and climate change. Thus, it is important to determine relations between country's digitalization and energy efficiency.

Digital Economy and Society index and its sub-indexes were chosen as digitalization indicators as they provide the full view of country's digitalization system. As for energy efficiency, both indicators Energy Intensity that is widely used in scientific literature as well as Energy Productivity that is part of the EU Sustainable Development Goals indicators set, were chosen for investigation. Energy Intensity had weak but significant negative correlations with the total DESI index and its sub-indexes: Connectivity, Human

Capital, Integration of Digital Technology. There was no significant correlation between Energy Intensity and Digital Public Services. Moreover, Energy Productivity had weak but significant positive correlations with the total DESI index and all its sub-indexes.

Classification of countries to different groups according to their digitalization and energy efficiency indicators was used to compare countries to each other and within the group, this comparison enabled to identify strong and weak areas of the country's policy. It was determined that Lithuania ranks above EU average in digital public services and integration of digital technologies; however, it performs poorly in environment related technologies and in terms of energy productivity. Cluster analysis helped to reveal that energy efficiency is especially weak area in Lithuania, and it should be the subject of attention for policymakers. Thus, the insights of this research can be relevant for both Lithuanian and EU authorities for steering digitalization in a way that maximises the benefits for the entire energy system.

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ELECTRIC ENERGY IN THE EARLY MODERN HOME: THE CASE OF ITALY XIX-XX CENTURIES

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ABSTRACT

This paper aims to afford the issue of the role of energy in the early modern home and the relations between energy transition and social consumer behavior in Italy between the XIX and XX centuries. While the history of electric energy has been exploited by economic historians within the fields of studies on the industrial revolution, less attention was paid to the effects of energy transition on households and on their material culture. At the beginning the use of electricity in civil life was above all light, as a symbol of modernity, but Italians in the 1920s still had a deep distrust towards electric tools, electricity was still synonymous of danger. The prices of household appliances were high and their frequent use represented a considerable increase in the domestic expenses. The spread in the use electricity, promoted in other countries by more prosperous income situations, was still minimal in Italy and was considered expression of a model of late economic growth. Only later the mysterious energy, which inspired the writings of Jules Verne, progressively integrated into civil life, becoming an asset irreplaceable.

Keywords: electric energy, modernity, social factors.

INTRODUCTION

This paper aims to afford the issue of the role of electric energy in the early modern home and the relations between energy transition and social consumer behavior in Italy between the XIX and XX centuries. While the history of electric energy has been exploited by economic historians within the fields of studies on the industrial revolution, less attention was paid to the effects of energy transition on households and on their material culture. At the beginning the use of electricity in civil life was above all light, a symbol of modernity. The first impact of the electrical industry on the habits of the communities was followed by a slow and progressive adaptation to its daily use.

MATERIALS

The sources of this research were the Archives of ENEL in Naples, which keep all the documents of the ancient electric companies, together with scientific books and Journals.

THE ORIGINS: TECHNOLOGICAL AND SOCIAL IMPACT

The electricity spread all over thanks to its portability. The distribution system was massive, through the construction of power stations¹. The progress of the projects of urban and rural lighting led, during the 1920s, to great changes in the morphological structures of the territory: like the layouts of urban furnishings or the expropriation of large portions of large estates for the construction of the power plants². Electric energy was important for evaluating the power of the factories.

From the second half of 1927 the electric companies promoted new uses of electric energy, to increase production. They started to produce the first household appliances and the electric energy was applied to economic sectors, such as agriculture, in order to raise their productivity through the introduction of advanced techniques and new machinery.

The introduction of electricity shaped the territory, big changes took place in the urban furnishings, typical figures and rituals of the everyday life disappeared, like the evening lighting of street lamps, replaced by new rituals and figures, like the subscription of contracts for the supply of electric energy, the monthly arrival of the electricity bill, the meter reader and so on. Even the basic home furnishings underwent deep changes with the introduction of new symbolic objects of modernity: lamps, switches, electrical sockets, plugs, meters and other accessories, whose diffusion and acquisition was initially limited to a wealthy social class of consumers with a higher purchasing capacity.

Social factors influenced the domestic consumption of electricity in Italy in those years: the different levels of income and the consequent differences in lifestyles stimulated its diffusion even further and also the most deprived social classes tried to acquire the new electric technologies to fill gaps and distances. Today electric energy is an integral aspect of our life and we talk about it in terms of energy saving and alternative sources of energy, but at the beginning it represented a shocking event, that deeply affected the habits of the population, causing substantial changes in its life. The use of electricity was applied to a widest range of activities, like the telegraph, the telephone, the radio and the cinema. of the early Twentieth century.

Electric energy played a leading role in economic development, its introduction caused a redistribution of the industrial activities, emancipating the plants from locations strictly linked to the traditional energy sources and contributing to urban development and to modernization of the household. The electric lighting of houses and streets, the introduction of the electric tramways, the first in Milan, Florence and Rome and of the “electric catacombs”³, as the subways were called at the beginning, brought the effects of this important scientific discovery within everyone's reach⁴. From a

¹ «L'Illustrazione ENEL», a. XXV (ott.-nov.1988), n. 6-7, p. 23.

² M. G. RIENZO, *Water Management and Dam Construction in the Italian South*, in: AA.VV. (a cura di): C. Joanaz de Melo, E. Vaz, L. M. Costa Pinto, *Environmental History in the Making*. vol. 2, p. 73 -94, Springer International Publishing, Switzerland, 2017, ISBN: 978-3-319-41137-8, doi: 10.1007/978-3-319-41139-2.

³ A. Beltran, P.A. Carré, *La fée et la servante.. La société Française face à l'électricité (XIX-XX siècle)*, Berlin, Paris, 1991.

⁴ N. Elias, *La civiltà delle buone maniere*, Il Mulino, Bologna 1982, p. 7.

seductive luxury item, electricity slowly turned into a permanent and accessible one, that affected the mass consumer society, changing environments and their perception and inducing changes in daily habits.

The important role of electricity in social life brought substantial changes, illuminating the everyday life and consequently lengthening the days. Meanwhile, scientific research and new technology produced sensational innovations and practical applications that would soon become commonplace. The evolution of science changed deeply the society⁵. The debut of electricity into civil life, aroused enthusiasm and amazement for this mysterious energy full of promises⁶.

Light had always played a central role in the home, in the past family life was organized around the fire⁷. Electric lighting in homes was more comfortable and useful than other lighting systems and offered wider possibilities of use, as well as guaranteeing greater light's intensity and the possibility of distributing it everywhere. Electricity was used to light exhibition pavilions or museums, street lights, shows of "sons et lumières", that pleasantly attracted the aesthetic sense of the people⁸.

ELECTRICITY AND CONSUMERS

The uses of electricity for domestic consumption in Italy didn't follow a univocal distribution scheme. Towards the end of the 1920s, the increase in energy production prompted the main companies to implement tariff policies and advertising campaigns, to achieve a greater balance between production and consumption⁹. The first exhibitions of electrical appliances were organized to illustrate the advantages of them and advise the potential buyers. Despite the pressures for the widespread use of electricity, in Italy strong distrust towards electric applications and high costs of energy kept the public away from the complete acquisition of new technologies.

The contractual fees for the public lighting of small municipalities oscillated, in the mid-1940s, between 5,000 and 10,000 lire, as shown by the example of some municipalities in Campania: in the province of Benevento: lire 5.688 in Fragnito Monforte, lire 6.742 in Fragnito l'Abate, lire 4.157 in Campolattaro, lire 9.474 a Pescolanzano. A meter was therefore supplied in any home at a monthly rental price. In the specific case of a 1912 contract of the General Lighting Society (SGI), based in Naples, electricity was supplied at the price of lire 0.80 per kilowatt hour, reduced to lire 0.75 for those subscribers who used it on average for more than 100 hours in a month and further reduced to lire 0.70 for those who used it for over 175 hours. The

⁵ J. Drulhon, *Jean-Baptiste Dumas (1800-1884) : La vie d'un chimiste dans les allées de la science et du pouvoir*, Hermann, Parigi, 2011; J. B. Dumas, J. V. Audouin, A. Brongniart, *Annales des sciences naturelles*, 1833, Facsimile Publisher, 2015.

⁶ A. Beltran, P.A. Carré, *La fee et la servante* cit., p. 34; M. Girouard, *The Victorian Country House*, Yale University Press, New Haven and London 1979, pp. 305 sgg.

⁷ M. Savoy, *Du cirque au salon: introduction de l'éclairage électrique a Lausanne (JSSI-1921)*, in «Cahiers Internationaux d'Histoire Economique et Sociale», n. 19, p. 354.

⁸ E. B RYNJOLFSSON, A. MCAFEE, *LA MACCHINA E LA FOLLA. COME DOMINARE IL NOSTRO FUTURO DIGITALE*, MILANO, FELTRINELLI, 2020; F. BRAUDEL, *LA DINAMICA DEL CAPITALISMO*, BOLOGNA, IL MULINO, 1988; GÉRARD JORLAND, *LES PARADOXES DU CAPITAL*, PARIS, ODILE JACOB, 1995.

⁹ A. Bandini Buri, *L'elettricità nella vita e nell'industria*, Vallardi, Milano 1957.

payment was made at the end of the month and, if it was not satisfied within ten days following the notice given by the company, the company was entitled to suspend the supply and to be reimbursed for expenses.

At the beginning of the 1910s, in a middle class home, the expenses for domestic lighting represented about the 30% of the monthly home expenses and the high cost shows how prohibitive was the access to electricity by less wealthy people. Italy wasn't yet able to afford luxury lighting, in contrast with what was happening in United States.

The consumption of lamps in Italy was 0.38 lamps per inhabitant annually and the energy for lighting, for private use, was approximately 13 kWh per inhabitant. Even the open lighting of the Scala Theater in Milan on solemn days was just 150 lux (where lux stands for unity of luminous flux) compared to solar lighting of about 100,000 lux. In the United States, in the same period the values of energy consumption, and the average lighting per inhabitant, obviously increased tenfold compared to Italy.

ELECTRIC ENERGY IN THE EARLY MODERN HOME

New objects gradually were proposed in the home furnishings: light bulbs, switches, electrical sockets, telephone plugs and others symbol-accessories that became part of everyday life. Throughout the 1920s the power companies strove to demonstrate how much more comfortable a rationally lit home was, pointing out the suggestions for an optimal use of electricity for domestic lighting and in particular for the kitchen lighting.

The electric company Osram, in 1925, created a *Vademecum* for lighting the house, in which proposed, with detailed illustrations, different types of lighting for any room¹⁰. The recommended solution was the installation of a few lamps with high luminous intensity: rich but not dazzling, this was the basis of all good lighting in the home. Electric lamps with clear glass could bother the eyes, so the lamps should be protected within a frosted or opal glass case. Obviously, the Osram proposed the Nitra Opale lamps, which, while giving a very white light, provided a soft and pleasant lighting, without harsh shadows. Later this problem would be solved with the use of fluorescent lamps. A normal bedroom needed a suspension no. 25 with a clear 75 W Osram Nitra lamp, while a modest bedroom only needed a no. 28 with a semi-frosted 60 W Osram Nitra lamp. Even a worker's home kitchen was different from a "normal" kitchen by its lower lighting¹¹.

The campaign for better lighting was a priority, aiming to increase the consumption of users and to attract new users, while the campaign for other electrical applications was addressed to a narrow range of consumers with a higher purchasing capacity. Despite the lighting was mostly widespread in all countries, in Italy, even at the beginning of the Thirties, the consumption of electricity for lighting was modest and not very accessible to the most part of the population. This is supported by the comparison of statistical data on the average annual consumption for private homes which in Italy was 70-80 kWh, against 180 in Switzerland and 250-300 in the United

¹⁰ *Vademecum per l'illuminazione della casa*, Osram, 1925.

¹¹ *Ibidem*.

States¹². The electricity industry had also resorted to proposals for facilitating payments to solve the problem of intensifying consumption, hoping to reconcile market and public needs¹³.

Electricity gradually spread, influencing industry and domestic life. Starting from the second half of 1927, in a phase of contraction of the consumptions, efforts were made to promote new uses of electricity through the diffusion of the first electric household appliances, coolers, electric ranges, irons, water heaters, fans. The accessibility of electrical accessories to a broader category of users threatened order and widened social hierarchies and disparities in consumption standards.

Unlike countries such as the United States or Germany, where the development of electrical applications for domestic use was an established reality, Italy, in the first decades of the XX century, was still far from a common use of electrical appliances, despite a widespread system of advertising¹⁴. The electrification of domestic services was decisive in the design of the home, the architects created luminous panels and other extravagant lighting systems in the most prestigious homes but, in particular, it was in the electrified kitchen the revolution of the modern home.

Economic and extra-economic causes determined Italian delay. The average Italian of the 1920s still had a deep distrust towards electric tools, electricity was still synonymous of danger. The prices of household appliances were high and their frequent use represented a considerable increase in the average consumption of electricity. The advertisements about household appliances that would relieve the domestic fatigue of the housewife and contribute to making life more comfortable and beautiful were still of little value in Italy¹⁵.

Between the end of the 1920s and the beginning of the 1930s, the promotion and diffusion of the use of electrical applications for the home was underway, which included both the oddest appliances such as foot warmers, perfume burners or glue warmers, and those of greater utility: irons, kettles, hairdryers, electric oven, radiators, electric welders and, of course, sewing machines that supplanted the old and dear mechanical ones. Electrical applications to domestic services, aimed to improve living conditions while respecting the economic convenience of the population, only spread in Italy around the mid-1950s¹⁶. Only Fiat had assembled refrigerators under license from Westinghouse since 1938. The energy transition in the electricity field occurred in Italy later than in Western countries and its diffusion was slow and initially not accessible to the majority of the population. The distribution and application of electricity, favored in other countries by more prosperous income situations, were still minimal in Italy and was associated with the general limitations of a model of late economic growth.

¹² Archivio Storico della Società meridionale di elettricità (d'ora in poi A.ENEL-NA), *Serie Utenti, Pratica 016032*, fasc. 01.06.00.32a.

¹³ A. ENEL -NA, Società generale per l'illuminazione, *Inventario 1893-6*.

¹⁴ C. Clerici, *La Campagna per una Migliore Illuminazione*, Edison, Spezia 1924.

¹⁵ G. Motta, *L'industria elettrica e l'economia nazionale*, in «L'Energia Elettrica», vol. X, dicembre 1933, fasc. XII; M. Lesti, *La propaganda delle Società distributrici di energia elettrica*, in «L'Energia Elettrica», luglio 1928.

¹⁶ U. Pittaluga, *Come s'incoraggia l'acquisto delle applicazioni elettriche per la casa*, in «L'Energia Elettrica», vol. IV, maggio 1927, fase. V.

From the newspapers or from the letters of our emigrants in other countries it was possible to receive evidence of a technologically more developed lifestyle, in which the use of new technologies in the electrical field was widespread in the various spheres of civil life¹⁷. While other therefore, we were already witnessing the maximum diffusion of domestic appliances of the first generation, in Italy, particularly in rural areas or small towns, life was still marked by the rituals of lighting the oil lamps for street lighting and the tremulous glow of the rare light bulbs coming from the homes of the wealthiest still the suspicion that it was some kind of diabolical magic.

Only at the end of the Second World War, therefore, did Italy enter the economic-political system which had its driving force in the United States, while maintaining a subordinate position¹⁸. While on the international market the use of electric stoves, fryers, blenders, slicers, coffee grinders, together with the most perfected models of vacuum cleaners, polishers and dishwashers was already rampant, washing machines, water heaters and refrigerators began to spread here.

The attenuation of a rigid class structure, urbanization and outsourcing, the emergence of general needs for improvement in living conditions, meant that the diffusion of electrical technologies gave way to wider needs for changes in lifestyles within society. The home of the urban middle class of the 1940s in Italy was similar to that of the United States and England in the 1920s, it consisted of a four-bedroom apartment and services in which the installed power was of 3 kW, taking into account the different applications: lighting, radiators, kitchen, water heater, iron, washing machine, refrigerator, etc.¹⁹

The use of household appliances was also influenced by extra-economic reasons, this is the case, for example, of the electric razor which, although already widespread in Europe during the 1940s, did not receive excessive approval in Italy where the traditional ritual of shaving at the barber shops was one of the most deeply rooted and ancient rituals. The late emergence in Italy of a middle class limited the initial spread of household appliances, while most people continued to use low-cost domestic staff which allowed them, however, to maintain a more than comfortable lifestyle²⁰.

CONCLUSION

Social factors influenced the domestic consumption of electricity in those years: the different levels of income and the consequent differences in lifestyles²¹. These social

¹⁷ L. Weaver, *The House and its Equipment*, London 1928; C.G. Holme, *Decorative Art*, London-New York, 1934

¹⁸ A.ENEL-NA, *Società per lo Sviluppo delle Applicazioni Elettriche, Assemblee*, 1931 – 1940.

¹⁹ *Catalogo Generale delle Applicazioni Elettriche in vendita agli utenti a contatore della Sigien*, Napoli 1928.

²⁰ «L'Industria Elettrica», Sez. informazioni, gennaio 1915.

²¹ E. Belloni, *Autoveicoli ad accumulatori*, in «L'Energia Elettrica», dicembre 1925, fasc. XII, pp. 1231-2; *Gli automobili elettrici ad accumulatori*, in «L'Energia Elettrica», vol. I, ottobre 1924, fasc. I, p. 98.

²¹ G. Cuccoli, *Il problema tramviario nel centro della città di Milano*, in «L'Energia Elettrica», vol. III, luglio 1926, fasc. VII, p. 585.

and cultural discriminations among users stimulated its diffusion even further and also the most deprived social classes tried to acquire new technologies to fill social gaps and distances and this aspect assumed substantial significance in the diffusion of electricity in civil life. The energy transition to the electric energy occurred in Italy later than in other Western countries and its diffusion was slow and initially not accessible to the majority of the population. Its distribution and application, favored in other countries by more prosperous income situations, was still minimal in Italy, at the beginning, and was associated with the general limitations of a model of late economic growth.

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EMBRACING DIFFERENCES: A SOCIOLOGICAL JOURNEY INTO AUTISM

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ABSTRACT

This work investigates autism through a sociological lens, emphasizing the need to understand and embrace neurodiversity in contemporary society. Exploring micro-sociological theories, the study highlights the significant impact of daily interactions and stigmatization on individuals with autism, focusing on how these experiences shape social identity. The paper evaluates traditional approaches that interpret autism in terms of deficiencies, promoting a perspective that values the individual experiences of autistic people. Utilizing phenomenological methods, it proposes a reevaluation of the concepts of 'normality' and 'empathy,' aiming to facilitate a more inclusive society. The analysis of the literature reveals how sociology, through its epistemological tools, contributes essentially to understanding autism and pushes the boundaries of current knowledge. By integrating principles of symbolic interaction and solidarity, the study shows how sociological approaches can offer answers to interdisciplinary challenges and improve the day-to-day life experiences of people on the autism spectrum. In conclusion, the paper calls for deep reflection on how society can recognize and value differences, paving the way for authentic acceptance of human diversity.

Keywords: neurodiversity, stigmatization, social identity, symbolic interactionism, phenomenology

INTRODUCTION

Context and Importance of Studying Autism from a Sociological Perspective

Studying autism from a sociological perspective offers valuable insights into social interactions and enriches sociological theories. This approach informs our understanding of humanity and the social world, benefiting both the discipline and individuals on the spectrum. Sociology can explore the social construction of disorders and differences, highlighting the tangible consequences of inequity. The field should integrate insights from humanities, disability studies, critical autism studies, psychiatry, psychology, neurology, and biomedical technologies to address gaps in the literature. Overcoming disciplinary boundaries and valuing diverse expertise is crucial for advancing knowledge. The sociology of autism must include voices of researchers, individuals on the spectrum, and their caregivers. Social justice for those on the spectrum is essential. Increased autism diagnoses have empowered parents to access information and build supportive communities through technological advances, enhancing advocacy for autism and neurodiversity.

Sociological Perspectives in the Study of Autism

Applying a sociological perspective to the study of autism, though rarely explored, can provide valuable insights into integrating autism into social interactions. Doug Maynard highlights that sociology can show how autism is rooted in social interactions [1]. Alexander Durig suggests that the theory of mind can serve as a "bridge" for developing a microsociological theory of autism. Durig's logical inference theory posits that communication difficulties in autism arise from a greater reliance on deductive logic rather than inductive logic, leading to challenges in diverse contexts and the appearance of lacking a theory of mind.

Milton criticizes the theory of mind for reducing autism to a brain dysfunction, ignoring the social and cultural dimensions of the condition [3]. He argues that myths about "mindblindness" and lack of empathy stigmatize autistic individuals, and suggests that differences in perception and communication are due to distinct socialization styles, with neurotypicals struggling to understand and empathize with these styles. Milton's "double empathy problem" asserts that communication challenges between autistic and neurotypical individuals are bidirectional[4].

Self-Development in Social Psychology and Symbolic Interactionism

Both social psychology and symbolic interactionism (SI) offer distinct perspectives on self-development. SI posits that while genetics and biology are foundational, the self emerges from social processes. Unlike social psychology, SI uses social constructionism to explore self-development, focusing on the inseparability of the self and the social, and prioritizing the "social act" over the self itself [5].

Early social psychologists viewed self-development as crucial for socialization, while modern psychology and neuroscience link self-experience to neuroanatomical processes, often reducing the self to brain regions and deviances . Medical approaches have sought to correct perceived deficits in autistic individuals with limited success. SI emphasizes theoretically guided empirical research to avoid narrowing human nature into caricatures and aims to create a better world [6].

The distinction between sociological and psychological social psychology can be confusing, Thoits notes that psychologists often overlook sociological theoretical processes, such as relational dynamics, normative expectations, and power dynamics, focusing instead on interventionist cognitive mechanisms [7]. Cognitive psychology, dominating mind studies, influences the theory of mind but neglects social status and relationships. In contrast, SI examines the structural relationship between actors and their environment, generalized expectations, and norms, focusing on mutual influences between the individual and society [8].

Psychologists have extensively studied symbolic interactionism processes like role-taking and impression management. Sociologists, however, do not focus on unique psychological concepts but rather on status characteristics and relationships [9]. Social psychology integrates sociological and psychological concepts, each illuminating different aspects of social phenomena. Psychological studies on autism often emphasize child development and cognitive deficits, while sociologists focus on adult socialization, gender roles, and normative learning.

Psychological studies use brain imaging and experimental conditions to explore cognitive processes, while SI views the self as a social process influenced by context, self-efficacy, and self-esteem. SI challenges deficit notions by prioritizing social contexts and autistic experiences of self, focusing on social interpretations rather than expert analysis.

Stigmatization and Social Impact

Stigmatization significantly impacts individuals with autism and their families, leading to negative attitudes and discriminatory behaviors. Disabilities Rights California explains it involves rejection and avoidance of perceived differences [10], while Ahmedani highlights that it creates barriers to opportunities due to perceived inferiority. An autism diagnosis often results in lifelong stigmatization, affecting social interactions and employment. Even undiagnosed individuals may face stigma due to autism characteristics [11].

Goffman describes stigmatization as a "deeply discrediting attribute" that reduces a person's social standing [12]. The process involves perceiving a stigmatizing mark and interacting based on this perception. Zajicek and Koski identify six components: labeling, stereotyping, separation, loss of status, discrimination, and the use of power, all contributing to exclusion [13]. Misconceptions and stereotypes about autism exacerbate stigmatization, which can arise from labeling and behavior, with behavior having a greater impact. Stafford and Scott note that stigmatization occurs when behavior does not meet social expectations, relevant for individuals with autism [14].

Stigmatization leads to severe consequences such as employment difficulties, limited healthcare access, relationship problems, and decreased self-esteem. It is common across various disabilities and medical conditions, including autism. Autism, often a hidden disability, becomes evident through specific behaviors, contributing to stigmatization. Misconceptions about behavior and physical abilities increase social exclusion [15]. Children with ASD often face peer rejection and social isolation, affecting their families as well. Studies by Swaim and Morgan and Campbell et al. showed negative peer reactions to children with ASD. Those with Asperger syndrome report high levels of stigmatization, with behaviors linked to autism increasing social exclusion [16].

Neurodiversity and "Normality"

Neurodiversity recognizes neurological conditions as normal human variations. Emerging in the 1990s, this movement advocates for autistic individuals' self-representation and views neurological differences as similar to gender, sexual orientation, or ethnicity. Proponents aim to reduce stigmatization by framing autism as a positive identity [17]. Autism, a neurological developmental disorder, was first described by Leo Kanner in 1943, but the term was introduced earlier by Eugen Bleuler in 1910 for schizophrenia. Hans Asperger also identified a related condition in children with high intelligence but social challenges [18].

The terminology around autism was initially confusing, including terms like "childhood schizophrenia" and "early infantile psychosis" [19]. By the 1960s, autism was recognized as a distinct syndrome. Since 2013, various forms of autism have been categorized under Autism Spectrum Disorder (ASD) in the DSM-V [35], characterized by communication deficits and repetitive behaviors [35]. The ICD-10 classifies autism under "Pervasive Developmental Disorders" [20]. Autism ranges from severe forms to

milder forms like Asperger syndrome, with genetic factors playing a significant role in its variability. Studies suggest up to 90% of autism variability is genetic, involving 350-400 different loci, with some mutations linked to parental age [21].

Judy Singer, who coined "neurodiversity," argued for recognizing neurologically different individuals as a distinct political category. The term suggests that autism, as a natural neurological variant, should be respected similarly to skin color or sexual orientation [22]. Neurodiversity advocates view neurobiological diversity as normal rather than deviant. Tony Attwood introduced "neurotypical" to describe non-autistic people [23].

The Neurodiversity Movement

The neurodiversity movement argues that standards of normality and functionality often conflict with human dignity and self-fulfillment, serving political, ideological, religious, or economic purposes instead. What is labeled as mental illness varies across cultures and times, and what is considered dysfunctional depends on social and historical contexts. For individuals, these conditions can be integral to their worldview and contribute positively to their lifestyles [24].

The movement criticizes the tendency to pathologize challenging social conditions, favoring objective categories and standard treatments over ambiguous and open narratives. This approach supports the functional management of human lives, influenced by social, political, and economic trends [25]. It addresses the modern dichotomy between scientific views of our biological nature and our capacity for self-determination, highlighting the difficulty in connecting functional, scientific perspectives with personal self-experience.

In modern debates, most doctors view autism as a genetically determined disorder with biochemical and neurological consequences. However, critics argue that autism is socially constructed and imposed on natural genetic and neurological variations. This raises questions about how notions of nature and normality relate to each other in the context of human beings [26].

Autistic Individuals' Strategies for Managing Stigmatization

Autism is a stigmatized identity that can often be hidden, leading autistic individuals to face stereotypes, prejudices, and discrimination. Han, Scior, Avramides, and Crane conducted a systematic review of 27 studies, examining perceptions, experiences, and coping strategies related to the stigmatization of autistic individuals [27]. Autistic individuals are aware of societal stereotypes and discrimination, experiencing stigmatization in community, school, and workplace settings. This awareness can lead to internalized stigma, negatively impacting mental health.

Quantitative studies using the Internalised Stigma of Mental Illness (ISMI) inventory show that internalized stigma in autistic individuals is lower than in those with other mental disorders. However, qualitative narratives reveal negative self-assessment and internalization of social stereotypes. The negative impact on mental health is significant, leading to increased psychological stress [28].

To cope with stigmatization, autistic individuals use various strategies, such as hiding, camouflaging, selective disclosure, self-advocacy, and positive reframing. The

effectiveness of these strategies varies. Camouflaging can be successful but exhausting and harmful, while disclosure and self-advocacy can promote authenticity but also increase exposure to stigmatization. Support is needed to help individuals develop a positive autistic identity and manage disclosure effectively [29].

CONCLUSION

This article is important for understanding and recognizing autism from a sociological perspective, with the potential to bring significant benefits to both the scientific community and individuals on the autism spectrum.

A central point of the analysis presented in the article is the critique of the traditional model of interpreting autism, which focuses predominantly on deficits and anomalies. A new conceptual framework based on neurodiversity is proposed, appreciating autism as a natural variation of the human condition and not as a pathology requiring correction. This paradigm shift is essential for reducing stigmatization and promoting authentic acceptance of human diversity.

The article highlights the crucial role of social interactions and stigmatization in shaping the social identity of autistic individuals. It emphasizes that stigmatization, through labeling, stereotyping, and social exclusion, has devastating effects on the lives of autistic individuals, affecting their mental health, employment opportunities, and interpersonal relationships.

To address these issues, the importance of adopting sociological intervention strategies based on solidarity and symbolic interactionism is highlighted, which can contribute to improving the daily experiences of autistic individuals. A reevaluation of the concepts of "normality" and "empathy" is proposed to create a more inclusive and equitable society.

The article emphasizes the necessity of interdisciplinary collaboration to advance the understanding of autism. Integrating the sociological perspective with disciplines such as psychology, neurology, and biomedical sciences is recommended to develop a holistic and nuanced understanding of autism. Sociology can make a valuable contribution to identifying and overcoming social barriers and promoting the rights of autistic individuals.

Another crucial aspect addressed is the importance of self-representation and self-advocacy within the neurodiversity movement. Autistic individuals must be actively involved in discussions and decisions that affect them to ensure that their perspectives and needs are adequately considered.

In conclusion, the article calls for deep reflection on how society can recognize and value differences, paving the way for authentic acceptance of human diversity. It is essential to adopt an approach based on empathy and respect, promoting equitable social integration and improving the quality of life for autistic individuals. The article highlights the need to transcend disciplinary boundaries and collaborate to build a more inclusive and just society for all.

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FORMING AND DEVELOPING ROMANTIC RELATIONSHIPS. THE ROLE OF INDIVIDUAL PERCEPTIONS AND SOCIAL NETWORKS SUPPORT

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ABSTRACT

Couples, like individuals, are experiencing social acceptance or rejection during different stages of their relational life. In addition, intimate couples can benefit of the tangible and emotional support that they are likely to need, especially when confronted by stress. Social networks create both opportunities and constraints for people in terms of accessing and using resources in the process of forming and developing a romantic relationship. The study examines the role of personal first impressions and feedbacks given by social networks' members during the development of couple relationships, from the perspectives of partners. In this study, the social networks paradigm was used to explore the role of social network in forming and developing a romantic relationship. A qualitative study was conducted in Romania, using semi-structured interviews. The analysis indicates the following themes: the context of the first meeting; subjective perceptions resulting from the first and subsequent meetings; social actors involved in the courtship period, qualities noted in the potential partner (perceived offer); favorable elements to the marriage decision. Findings extend our understanding of the ways that couples form and manage their intimate relationships in a social context. Interventions targeting couples may benefit from addressing their social contexts as well.

Keywords: Intimate relationships, Social networks, Romantic partner selection, Dating

INTRODUCTION

Romantic relationships often play a significant role in individuals' lives, building buffers against stress, resulting in greater subjective well-being, physical health, and longevity [1]. In an interactional perspective, relationships are defined as an ongoing set of interactions between two people [2]. Romantic relationships are that type of connections which are based on emotional and physical attraction, potentially leading to long-term intimate relationships [3]. Overall, the romantic relationships can provide emotional support, increase feelings of security and belonging, and contribute to overall life satisfaction. [4].

Couples are inherently connected to and influenced by their broader social environment. They do not exist in a vacuum; instead, they are deeply intertwined with various external factors and social dynamics. Forming, maintaining and developing a romantic relationship does not only involve the romantic partners themselves, but also a network of people who may provide information and support [5]. A couple's relationship is continuously shaped by the people and circumstances surrounding them. For example, the stability of intimate relationship is directly linked to the social environment, which influences the demise or the continuance of a specific close relationship. Diane Felmlee

[6] has identified two main processes by which social networks are expected to facilitate stability: approval/support and network embeddedness. Conversely, these factors can also undermine pair stability through disapproval/lack of support and the presence of alternative companionship.

Social networks are intricate structures composed of connections and relationships between individuals or organizations. These connections can arise from various sources such as kinship, friendship, shared interests, professional affiliations, geographical proximity, and other factors [7]. In today's world where various communication platforms have been developed, the concept of social network is often confused and used in a limiting way as a synonym for social network sites (SNSs), like Facebook. In this paper, we will use the sociological understanding of social network - a structure of relationships linking nodes/social actors, or the sets of actors and the ties among them [8]; this definition includes both offline and online social connections of an individual.

Social networks, reflecting the links and interactions within human society, have significant implications across various disciplines such as psychology, sociology, social work, economics, medicine, politics, education, and so on. These networks play a crucial role in shaping how people interact, form relationships, form opinions, how people share information, and access opportunities, highlighting their critical role in social dynamics and organizational structures [9]. Social networks are significantly impacting both individual and group behaviour. They have profound effects on various aspects of human life, from personal relationships to professional opportunities, demonstrating their importance in understanding social structures and behaviours. Social networks serve as a context in which the social capital is manifested in three main forms: obligations and expectations, information channels, and social norms [10]; these networks shape how couples' partners interact with each other and with others, ultimately affecting their relationship dynamics and outcomes [11].

Various types of informal social support are available for individuals to receive from their network' members: economic support (money transfers, loans); products as gifts (furniture, clothes, food etc.); agreements related to inheritances, the inheritance of some goods; practical support (looking after children, help to domestic chores); emotional and moral support (discussions, listening, giving advice); accommodation (living under the same roof temporarily or permanently) [12]. Overall, social networks, comprising both close and peripheral ties, play a crucial role in providing emotional and practical support, which enhances relationship satisfaction and stability. The idea that couples with fewer social ties receive less support and approval for their relationship is well-supported by research in social psychology and sociology [13]. Approval and support from family and friends have been linked to higher relationship satisfaction and stability, as these social ties offer both emotional support and practical assistance during challenging times; network members' approval of a romantic relationship is a strong predictor of its quality and stability [14]. On the other hand, perceived interference may serve to alienate spouses not only from the potential benefits of their shared network but also from each other. In other words, social networks provide essential validation and resources that bolster relationships. Conversely, the less support women received from their own social network, the more likely the relationship was to break up and the sooner this happened [15].

When looking for a compatible life partner, there are several aspects to consider that can help develop a healthy and lasting relationship. Compatibility in a relationship is not just limited to physical attraction; it extends to shared interests, values, goals, and visions of life. A popular early theory of romantic relationship development, called Stimulus-Value-Role Theory, was proposed by Bernard Murstein [16]. He proposed that couples advance through three distinct stages in the process of mate selection. In the stimulus stage, potential partners notice each other's physical appearance, behaviour, and other external attributes. They also assess their own traits to determine how appealing they might be to the other person. Based on this self-evaluation and comparison, they gauge the likelihood that their attraction will be mutual and that future interactions will be rewarding. If the outcome of this assessment is positive, they move to the next stage. In the value stage, the partners evaluate their compatibility in terms of values and attitudes. This evaluation helps them further determine the potential benefits and rewards of the relationship. In the final role stage, the partners assess each other's suitability for various roles, such as spouse and parent.

During the present study we have focus on the first stage presented in Murstein' theory in order to identify and describe the content of the first impression about the potential partner and the other' main characteristics which piqued her/his interest. We have also analysed the role of network' members in forming and developing the couple relationship, during different stages of premarital life.

MATERIALS AND METHODS

The present study is part of a wider qualitative, explanatory-descriptive research, which aimed to identify the premarital and marital factors that influence the quality and stability of marital life, and how these variables interact.

To gather detailed information, we opted for the interview method due to its ability to provide direct and interactive access to human subjectivity and the inner experiences of the participants. We conducted individual, semi-structured, face-to-face interviews, which were audio recorded, transcribed into text, and analysed using traditional coding techniques with "pencil and paper," as well as the data analysis software NVivo 11. Additionally, we employed participatory, uncontrolled, hidden observation during the interviews and in other everyday interaction contexts. The data collected through this method was compiled into observation notes for further synthesis.

We used the convenience sampling technique, selecting participants who varied in socio-demographic backgrounds. We interviewed well-known individuals who demonstrated a high willingness to share personal information. The sample of the present qualitative research is composed of 15 married people, 6 men and 9 women, 4 subjects from Braşov County and 11 from other counties, 5 from the urban environment and 10 from the rural environment, with a marital longevity between 2 and 37 years.

The interviews were conducted in accordance with research ethics. Participants were informed about the research objectives and assured that their data would remain confidential. All materials collected from them were coded to ensure their anonymity.

After collecting the initial data, we began the process of data analysis to interpret the findings. We employed the case-oriented analysis strategy [17], which involved coding the materials and developing a unique analytical model for each topic. These models

were then compared with one another to identify a characteristic pattern across all the analysed cases. Our approach to working with the texts was to code the material in order to create categories and develop theories [18].

RESULTS

During the open coding of the interview transcripts, we have identified the following categories related to the formation of the couple: the context of the first meeting; subjective perceptions resulting from the first and subsequent meetings; social actors involved during the courtship period, qualities noted in the potential partner (the perceived offer), and favorable elements for the marriage decision.

The context of the first meeting indicated by the interviewed persons is: at work, at school, in a bar/club, at parties, on the street, on trips. It seems that those from rural areas mention that they have met their life partner mainly in adolescence, at the discotheque, in the neighborhood, at school, at the parties with mutual friends, and on public events in the local community.

Subjective perceptions resulting from the first and subsequent meetings:

According to the data collected from those interviewed, the first impression produced by the other, who later became a life partner, can be positive ("I saw a handsome man with blue eyes, black hair and a tall and confident posture"), negative ("I found a very, I don't know how to say..., unpleasant person"), ambivalent ("...a very beautiful, smart, ambitious, but also stubborn woman") or indifferent ("At first we weren't attracted to each other, he was a romantic player"). The predominant perception mentioned by the interviewees is the positive one, both by women and by men. In the case of the subjects in this study, the first impression generating indifference, mixed feelings or even rejection seems to be rather exceptions.

Potential partner's characteristics: Among the elements that represented the basis in the formation of the first impression, both women and men recall physical features (general appearance, posture, eye color, hair color, height), personality traits (such as diligence, steadfastness, reliability, perseverance, supportiveness, with faith, friendly, smart, common sense, responsibility, respect, with a sense of humor, shyness, sincerity, politeness, diplomacy, openness, full of life).

After subsequent meetings, the impression on the potential partner is strengthened in the case of perceived positive traits. In the case of a negative first impression it can change substantially ("a few days later, an old acquaintance of mine, a colleague of hers, had invited me there, I went, and then I saw the same lady being very calm, very serene this time"). The previous data was nuanced and supplemented with new information ("he started to show a side, which I was looking for a lot in a man, the caring"), especially about potential partner's manifested behaviors (i.e. he/she shows affection, empathy, care, supportiveness, protection) or with the awareness of own behavior patterns that can interfere with the formation of a couple relationship ("I didn't want to meet him anymore... and I remembered the words of my friend, who told me that I don't have patience with boys, that immediately if I see something and I don't like it, I end the interactions").

In the view of the interviewed people, the **members of the social network have an important role** in establishing the first meetings and also in challenging/encouraging to take the first steps. Ways for potential couple partners to meet are: to be introduced by

members of each other's networks ("an old acquaintance of mine, a colleague of hers, had invited me there... [to her work place]"), a bet with a close person ("together with my cousin we made a bet who will ride the motorcycle first with him. We both waited for him in front of the high school to ask him to take us for a ride on his motorcycle, but when he appeared, I and she got into a fight and he intervened between us") or encouraging the initiative to take the first steps ("Encouraged by my friends, I approached the girl and, with my heart pounding, I invited her to dance").

Potential romantic partners may share common network members, which also contributes to the process of getting to know each other by the fact that they have various opportunities to constantly interact. ("we had a common friends circle and that helps a lot, there were many occasions to be together even when the relationship was in its early stages").

The continuation of the process of forming the couple is also influenced by the feedback provided especially by the friends and parents of the two potential couple partners. In the case of friends, the respondents mentioned only reactions of approval and support of the couple's relationship. Instead, the feedback received from the parents after meeting him/her was more diverse. Thus, there are reactions in which traces of doubt regarding ethnicity can be found ("my wife is Hungarian, I am Romanian, and immediately the first reaction of both my parents and hers was of surprise, but they accepted quite quickly and they really have a very good relationship so I get along very well with my in-laws and so does she...") or age ("the initial question of my mom was - my dear, isn't she a little young? - that I looked so childish, especially the way I was dressed"). Also, parental feedback can take the form of open approval and acceptance ("my mother, when she first met my girlfriend face to face, she hugged her receiving her with such warmth"), either of momentary rejection ("our parents didn't agree with our relationship at first, but along the way they changed their minds") or permanent hostility ("my mother-in-law did not support us at all, she was the only one who was against our relationship. She couldn't stand me at all, even more, she incited her son to beat me and leave me."). The negative feedback received from parents regarding the incipient couple relationship is rather found in the case of interviewees from rural areas.

Also, the interviewees illustrated the role of social actors (friends, parents, and brother/sister) in supporting the continuation of the relationship as a couple. They offer the advice to give the partner another chance ("I didn't want to meet him anymore and my girlfriend asked me a lot, please from the bottom of my heart give this boy a chance, go out with him again, you never know... maybe") or by advising him/her to take the proper action to maintain the relationship ("everyone advised him that it was very good that he met me and that he should see what he have to do to keep me").

Favorable elements for the marriage decision mentioned by the interviewees are: the perceived axiological compatibility ("the fact that we held and hold the same values"), love, trust, the feeling that he/she is the chosen person ("I think it's also that feeling when you know you have to be with that someone"), the evolution of the relationship ("we started getting along well and then he asked me to be his wife"), the education received from parents ("my mother told me this: think carefully about who you marry because you will not spend a week, a month, a year; this is for life and then I understood what I have to do") and the appreciation of the couple's relationship by some members

of the social network ("you made an amazing choice, he says, I don't know if you would have searched all over Brasov to find a better girl than this").

DISCUSSION

In this paper, we have identified and describe the content of the first impression about a potential partner and his/her main characteristics which piqued interest. The first impression was predominantly embodied in a positive evaluation of the potential romantic partner, but ambivalent opinions, indifference or even negative evaluations were also mentioned by the respondents. Among the main aspects perceived at the first meetings, we can mention the following: physical appearance, desirable character traits, confident attitude, future plans, a pleasant feeling associated with the presence of that person, and the expressed interest. These results are similar to other studies [19]

This study also examined the role of network' members in forming and developing the couple relationship. Friends, school or work colleagues have a significant role in the first meetings by establishing the meeting or encouraging the initiative to take the first steps. Then they can represent a context of constant interactions between the two potential partners, in which to deepen the mutual acquaintance process. Acceptance and support from both family and friends encouraged couples to continue their relationship in a healthy way. These results bolster up previous findings in the social network support literature: Social networks influence the outcome of the relationship, from the perspective of network members [20]. Network support has long been believed to have tremendous influence on romantic relationships [6]. The most important source of support for young families is represented by far by parents or by in-laws; brothers and sisters have also an important role; the extended family plays a minor part in offering support; friends, neighbours and other people (schoolmates, fellow workers and so on) have a slightly more active role than the people from the extended family [12].

The results show that during the premarital stages, couples interact with and are affected by families of origin dynamics. The relationships with each partner's family network can influence their relationship, either through support, expectations, or conflicts.

The friendship networks is also an important source for approval or disapproval of a romantic relationship. Friends play a role in shaping attitudes and behaviours within the relationship, offering support or creating pressures based on their views and interactions.

Furthermore couples interact with and are affected by cultural and societal norms during the courtship period ("work colleagues said: God helped you to go to your home and have children, you too become a normal person"). Social expectations and cultural backgrounds can impact how a couple navigates their relationship, affecting their roles, behaviours, and interactions.

The data collected and analysed showed that the opportunity to meet a potential partner is also connected with work and socialising environments. Professional and social settings can contribute opportunities, and lifestyle choices that affect the relationship development. And on a mezzo level, access to community resources and support systems influence the stability and quality of the relationship, providing help or creating challenges.

CONCLUSION

Quality decisions regarding choosing a partner do not only mean gathering enough information about the other, but also perceiving and evaluating them accurately. Partners are not isolated in this process from making decisions regarding their life as a couple, marriage, married life, but are also influenced by what those around them think about their choices, especially by the opinion of "significant others".

In conclusion, our findings provide strong support for the argument that parents and friends still have a significant role in influencing romantic relationships in the Romania today. In fact, individuals in this society remain part of an extended social network that apparently affects even the most intimate of their relationships, as Sprecher & Felmlee [15] have also showed in their analyses.

Due to the fact that the present study used a relatively small and homogeneous sample, it remains to be seen to what extent the processes of the couple's "courting" period are influenced by social networks, in various cultures, socio-economic classes, religions, ethnicities, etc. For example, are social network influences stronger or different within multigenerational families or for couples strongly integrated in an extended kinship network? It can also be analysed if the occurrence of some life events affects the subjective evaluation of the partner and the relationship, the decision to marry and the short or long-term marital success or failure.

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**“HOW DO I CONSTRUCT MY IDENTITY AS AN ARTIST?”
THE USE OF STORYTELLING IN ARTIST’S ENDEAVOURS
DURING A GLOBAL PANDEMIC**

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ABSTRACT

During the COVID-19 pandemic, the arts played an important role for people while coping during lockdown and other severe social restrictions. This presentation introduces a work in progress, where the researcher conducts a self-observation of herself as an artist by constructing a brand personality through storytelling on social media. Data consisted of weekly YouTube videos during a 20-week period, followed with diary entries and self-reflections and reactions of followers (YouTube, Instagram and Facebook). Each episode had a specific theme where I intertwined stories from my own childhood, background and surroundings, values, and world views with timelapse videos of the creative process of working on a painting (from the beginning to the end). Furthermore, during the period, the total of three art exhibitions were promoted with good results. Primary findings indicate that the videos and the narrative evolved from the traditional documentary style to the sharper, almost TikTok like formats, where the emphasis on the timelapse of the creative process seemed to be the element that the followers preferred (as well as the researcher). The narrative part of the study helped the artist to gain footing in identifying her inner core as an artist; to go straight to the roots and work through her childhood trauma and reconciliation. As previously indicated, this is a work in progress and during this presentation, the audience will get an insight into the narrative and creative process of the artist.

Keywords: branding, fine arts, artist identity, sociology of arts, storytelling in arts

INTRODUCTION

Childhood aspirations regarding the future can vary significantly among individuals; however, some of these aspirations endure the filters imposed during adolescence and adulthood, despite the individual ultimately embarking on a different life path. I am one such example—born to farmers and raised in rural Iceland as the youngest of six siblings from modest beginnings. My parents and grandparents experienced poverty during the early to mid-20th century. As a child, I was fortunate to have opportunities at school to nurture my artistic interests; nevertheless, growing up in a farming community, the pursuit of an artistic career was deemed an unreliable means of supporting a family. Consequently, I attended university, earned degrees, and eventually became a professor in the social sciences. Nevertheless, my enduring passion for music and the arts led me to specialize in arts sociology and cultural management, with the

artist within me—although long neglected—yearning to assert herself and seek validation.

In the lead-up to the pandemic, I faced several health challenges. In February 2019, I reached a personal breaking point after a decade characterized by excessive work and an unhealthy work-life balance, resulting in burnout, an eight-month sick leave, and my resignation from the position of Dean of two faculties: Social Sciences and Law at Bifröst University. The preceding ten years had also proven challenging for my institution, compelling every key employee to exert themselves to maintain stability. The confluence of these pressures was overwhelming. However, crises often present opportunities for change if one is perceptive and willing to embrace them, which, for me, signified a chance to restore my health and potentially rekindle my passion for work.

This situation necessitated therapeutic intervention and a profound level of self-reflection on fundamental questions: ‘Who am I? What do I wish to accomplish in my life? How can I cultivate a happier and more fulfilling existence? How can I achieve a better work-life balance?’ These inquiries are common among individuals navigating transitional periods in their lives. My introspection led me to re-examine a hidden, somewhat neglected aspect of my life: Sigrun, the artist. Furthermore, I recognized that my neglect of this artistic identity had not enhanced my well-being; rather, it held the potential key to my health and overall fulfillment.

Subsequently, the global pandemic struck in February 2020, causing the world to come to a standstill. Social restrictions had pervasive effects on individuals in various ways—both beneficial and detrimental. Many businesses closed, cultural events were canceled, and institutions were compelled to adapt their services in accordance with health guidelines issued by the government. Numerous studies have been conducted on the immediate impacts of COVID-19, particularly concerning the consequences of social restrictions, and research is ongoing. The arts played a significant role in providing solace to individuals grappling with these restrictions. Events transitioned to online platforms, and many people revisited old hobbies or embarked on new endeavors, often involving artistic pursuits such as fine arts, crafts, music, poetry, fiction writing, photography, and other activities that did not necessitate social interaction.

In my case, I redirected my focus to my art, which had remained largely dormant for years while I busied myself raising my children, completing my PhD, and establishing my career in academia—all while managing health issues. Factors that inhibited my pursuit of a career as an artist (and deterred me from applying to art school) included not only a lack of confidence in my abilities but also the absence of role models and, to a certain extent, negative perceptions of artists within my small rural community in Iceland. Additionally, I had internalized the myth that an artist is solely defined as someone who possesses skill in portraiture, a belief which challenged my self-perception.

In terms of formal art education, I participated in art classes for two years in secondary school, where I serendipitously attended an initial session, subsequently realizing that this was not only an enjoyable endeavor but also one I could further develop.

Thus, the question arises: How can I, an individual from modest origins, with little to no network or connections within the Icelandic art scene and limited formal education in the arts, construct and develop my identity as an artist?

This project aims to explore the process of creating a brand personality as an artist through the promotion of my art and creative endeavors via storytelling on social media

Constructing an artist's identity through branding

The concept of branding is extensively utilized in marketing and retail, and it is increasingly relevant to the fields of arts and culture. Fundamentally, a brand is defined as a name or logo that serves as a recognized signal to consumers, distinguishing a product from comparable offerings within the market [1]. A brand simplifies consumer decision-making by conveying promises of quality and trust, while also encapsulating the totality of the consumer experience, including intangible attributes [9]. When a brand evolves into a consumer icon, it transitions into the realm of “brand as personality” [17]. The concept of brand personality comprises clusters of attributes such as sophistication, tranquility, and passion [2] [3]. This raises the question: how do artists engage with the concept of branding to promote their artistic endeavors? Frequently, marketing and business practices are perceived negatively by artists, many of whom regard commercial considerations as detrimental to their artistic integrity. Notably, this perception has not been extensively examined, which warrants critical exploration.

Conversely, marketing and branding can glean valuable insights from art history. The fine arts have long been intertwined with the forces of branding and identity construction. Historically, artists have endeavored to integrate themselves into artistic communities and markets, often navigating the art economy as individuals or under the auspices of affluent and influential patrons. In this context, artists typically aspire to make their work resonate with an appreciative audience, facilitating recognition of the distinctiveness of their creations. To achieve these objectives, artists engage with various stakeholders and constituencies to cultivate a compelling and vivid identity that fosters purchase intent and brand loyalty [14].

To attain success, artists must consider three critical domains: A) The market, B) The cultural context, and C) The competitive landscape. This understanding enables the development of robust personal brands [14] [15]. According to Fournier et al. [7], brands attain significance and emerge as cultural forces when their meanings resonate on one or more of three distinct levels: personal, cultural, and organizational. The cultural and organizational dimensions of resonance will be the primary focus of this paper. Cultural resonance encapsulates the extent to which asserted brand meanings reflect, reinforce, and shape interpretations within the collective social space, thereby linking consumers through mutually understood language and shared experiences [14].

Historically, artists have inadvertently employed personal branding as a means of self-promotion, and in contemporary discourse, personal branding is acknowledged as a crucial skill for emerging artists. The celebrated Spanish artist, Pablo Picasso, articulated this sentiment when he stated:

But success is an important thing! It has often been said that an artist should work for himself, for the love of art, and scorn success. It's a false idea. An artist needs success. Not only in order to live, but primarily so that he can realize his work. But where is it written that success must always go to those who flatter the public taste? For myself, I wanted to prove that success can be obtained without compromise, even in opposition to all of the prevailing doctrines (Pablo Picasso, in [5]).

The potency of Picasso's personal brand derived from his acumen in understanding and managing five critical forces for success: the corporation (art market), distributors, customers, competitors, and the broader environmental context. Throughout his career, Picasso collaborated closely with dealers to establish his career trajectory, develop a nuanced understanding of the competitive landscape, and devise effective promotional strategies for his oeuvre. Moreover, his personal persona, charisma, and even aspects of his private life became integral to his brand identity [14]. Andy Warhol also exemplified a formidable personal brand characterized by a signature style and a prominent position within the artist elite of New York in the late 20th century.

Kubacki & Croft [11] investigated artists' attitudes toward the marketing and business dimensions of the art scene in the UK and Poland. Their findings revealed "at best, an ambivalence towards marketing, and at worst, a general antipathy towards the whole notion of art-as-business" ([14], p. 335). In certain instances, artists equate branding with marketing, which they often perceive as synonymous with aggressive and invasive sales tactics. Consequently, they find self-promotion to be a challenging endeavor [10]. Given that artists are predominantly self-employed, they function as their own leaders [12].

Personal branding is a strategic approach that artists can utilize to differentiate themselves from their competitors. The construction of a personal brand is fundamentally grounded in three primary steps: A) **Groundwork**—This involves understanding how the artist is perceived by others, particularly by their peers and the art community, as well as how the artist desires to be perceived [10] [6]. B) **Self-definition**—This step concerns how the artist articulates their unique personality and distinctive qualities. A crucial question in this regard is: How am I unique? [18]. C) **Awareness of Personal Values and Advantages**—Building upon the previous steps, the artist must identify their position within the broader social context and how their art embodies these values [4].

Storytelling—defined as the act of narrating a story to an audience—serves as a valuable tool for artists to highlight their core values and individual characteristics, which are inherently competitive in the art market. This form of expression is an ancient art form, recognized across numerous cultures throughout history, whether delivered orally or in written form. Persona-focused storytelling is vital for the development of a brand persona [8]. In essence, stories constitute a fundamental aspect of society, providing a powerful means of connection among individuals, groups, and communities, whether through the narration of small or large events [13].

With the advent of social media, the medium for storytelling has become virtually limitless—offering individuals and groups the opportunity to share their narratives with anyone connected to the internet. In many instances, social media platforms are supplanting traditional media; however, they demand continuous engagement and updates. Thus, artists utilizing social media must be diligent and proactive if they intend to cultivate a meaningful connection with their followers [16].

The theoretical contribution of this exploration is to investigate the process by which an individual who is not well-acquainted with the social media landscape, lacks affiliation with any elite artistic circles, possesses no formal qualifications in fine arts, and is otherwise perceived as an 'ordinary person' can successfully establish a noteworthy personal brand.

MATERIALS AND METHODS

This project aimed to explore various methods of developing an artist's identity through storytelling during the global pandemic. I already had an established online platform for my art, accessible at www.kindart.is, which included a website, an online store, and social media accounts on Facebook (facebook.com/KindArt.is), YouTube (youtube.com/@kindartgalleryiceland2982), and Instagram (instagram.com/kindart.is/).

During the Autumn Semester of 2021, I produced a weekly episode for my YouTube channel, where I recorded my painting sessions and integrated storytelling into the content. Each episode focused on a specific theme, demonstrating the painting process through time-lapse video while intertwining narratives from my life, particularly my childhood, family history, and significant events. These videos were made available in both English and Icelandic.

For each episode, I prepared a manuscript that outlined the narrative structure as follows: A) an introduction and welcoming message, B) the historical narrative or an introduction to the topic, C) a brief summary, and D) a time-lapse of the creative painting process for the week. After publication, I composed reflections on both my artistic work and the storytelling itself. Additionally, I created short reels that showcased the painting process, which were posted on Facebook and Instagram, linking to my online store and utilizing them as promotional tools. The content of the YouTube episodes, along with the written reflections, was subsequently analyzed using thematic coding analysis.

RESULTS

Shortly before the onset of the pandemic, while navigating personal health challenges as previously discussed, I redirected my focus toward my long-held childhood aspiration of becoming a 'real' artist. In 2007, I created my first painting of a sheep. Growing up on a sheep farm, where my parents raised sheep, these animals—along with cats—were among my favorites during my upbringing. In 1982, our farm faced a case of scrapie, leading to the diagnosis of only one sheep; however, due to stringent regulations regarding livestock diseases, all the sheep on our farm had to be euthanized. This period was profoundly difficult for my family, leaving a lasting emotional scar. Nonetheless, this event marked the beginning of a new chapter in my creative journey. In response to the crisis, I resolved to return to the fundamentals of my artistic practice and allow the artist within me to flourish after a prolonged period of neglect.

My initial sheep painting consequently became the logo for my online store, which I branded as 'KindArt.' The term 'KindArt' encompasses multiple meanings: in Icelandic, "kind" refers to a female sheep; in German, it denotes youth; and in English, the interpretation is self-evident. The interplay of these three elements generates a rich tapestry indicative of Icelandic nature. This logo was subsequently employed across all my social media platforms and served as the foundation for my online store.

This storytelling approach led to substantial content creation, which was essential for me to reach my 'core' and establish my identity as an artist. Fundamental questions emerged during this process: Who am I, and how do I differentiate myself from other artists? Can I legitimately refer to myself as an artist?

During the manuscript development process, I compiled a list of potential topics to address in my content creation. The primary storytelling themes were as follows:

1. **Childhood and Family:** As the youngest of six children raised on a traditional Icelandic farm within a multigenerational household, I possessed numerous stories from my upbringing, including distinct characteristics of the old Icelandic farming community that may appear peculiar to the younger generation (see episode 7).
2. **My Love of Animals:** I contemplated sensitive topics such as the scrapie incident in 1982 (see episode 4) and explored why the young girl from the countryside (myself) was reluctant to eat her friends (see episode 3).
3. **Icelandic Nature and Environment:** Specific attention was given to the landscape surrounding my family's farm in South Iceland.
4. **Influencers and Role Models:** Episodes 10 and 11 addressed the significant influences and role models in my life, including my parents, grandparents, and great-grandparents (see episodes 6 and 9).
5. **Personal Quirks:** I examined my own traits—such as being clumsy, having no filter, and being an absent-minded bookworm—along with my values and life goals, my unwavering affection for cats and Crocs shoes, and my aversion to conventional fashion.

The season concluded with several Christmas special episodes, in which I decorated my home and discussed Icelandic Christmas traditions (see episodes 14 and 15). Reflecting on my life turned out to be a therapeutic process, particularly as I delved into the histories of my parents, grandparents, and great-grandparents, which illuminated the hardships they endured prior to the era of modern technology and transportation. This exploration provided valuable insights into the notion of potential hereditary trauma within my family.

The content creation of the YouTube episodes significantly aided me in discovering my 'inner core' and positively influenced my identity as an artist. Moreover, as the content evolved, I increasingly concentrated on producing short time-lapse reels to engage viewers. In the introductory section, the wording of the research question is particularly intentional: How can I—an individual from a humble background, with minimal networking connections within the Icelandic art scene and limited formal education in the arts—develop and construct my identity as an artist?

This research question highlights a considerable degree of insecurity that likely resonates with other individuals in similar circumstances. While a comprehensive discussion of this topic would extend beyond the scope of this text, it presents substantial potential for future scholarly exploration, particularly regarding Bourdieu's concept of cultural capital and how role models (and cultural background) can significantly influence an individual's future career choices.

What, then, constitutes my inner core, and how has this process facilitated my creative endeavors? Ultimately, I found encouragement and inspiration from reflecting on my roots, childhood, ancestry, and the rural environment of my upbringing, enabling me to accept aspects of myself that I may have previously considered embarrassing or unattainable (especially my quirks). The essence of my brand is to embrace my identity as the countryside girl I truly am—a figure I have grappled with in the past, now

recognized as a strength and not a weakness - and is it necessary to be heavily involved in the Icelandic cultural scene in the city centre of Reykjavík? Time will only tell.

DISCUSSION

The research question articulated in this paper is as follows: How can I—an individual from a humble background, with limited connections to the Icelandic art scene and minimal formal education in the arts—develop and construct my identity as an artist?

While there may be inherent tensions between the realms of culture and art on one hand, and marketing and business on the other, artists can adopt tools and methods from the latter to their advantage. As previously noted, artists have historically employed various branding strategies—often unconsciously—to promote themselves and establish a presence within the art community they assimilate into. This is particularly relevant in terms of identifying what distinguishes them from their peers and competitors [1] [9].

During the developmental phase of my brand, certain aspects of my personality, including my identity as a countryside girl and my characterization as a quirky, awkward bookworm, influenced the brand's persona. The attributes associated with the Icelandic sheep—tough yet somewhat naïve—also informed the personality of my brand. The wordplay embedded in "KindArt" (which conveys meanings such as kind, sheepish, and somewhat naïve) is reflected both in my artistic works and in my approach to content creation for the YouTube channel, thus revitalizing the brand as a distinct "personality" [17] [2] [3].

In this endeavor, I constructed a personal brand that foregrounds my unique traits, while simultaneously developing a signature style and confidently embracing my self-perceived idiosyncrasies—attributes that are anticipated to assist me in future promotional efforts [10]. The storytelling element was vital in this context, as it facilitated the identification of the brand persona [8] and allowed me to utilize my life narratives to forge connections with potential followers in the online community, who could eventually become customers.

Nonetheless, this journey presented multiple challenges. Like many artists, I encountered difficulties in promoting myself and my art, in part due to a persistent sense of having limited agency as an artist. At times, I even hesitate to label myself a 'real artist.' This sentiment aligns with insights from existing research and literature [8] [13] [16].

CONCLUSION

Where do I go from here? Preliminary findings indicate that revisiting my roots, history, and cultural background was integral to the creation of my brand persona and my identity as an artist. The narrative component of this study has facilitated my understanding of my inner core as an artist, enabling me to address and work through various childhood issues, traumas, and processes of reconciliation.

The videos and narratives evolved from a traditional documentary style to sharper, almost TikTok-like formats, with an emphasis on the time-lapse segments of the

creative process, which appear to resonate most with my followers. Consequently, there is a need for increased focus on effective communication with the online community. Engaging with potential followers and leveraging the internet and social media as a marketing tool should be approached in a more strategic and concentrated manner.

The theoretical contribution of this paper lies in exploring methodologies for individuals, such as myself, to establish their identities and reputations as artists. This investigation is particularly relevant for those who have not been immersed in the realm of social media, lack affiliation with any elite artistic circles, possess no formal qualifications in fine arts, and consider themselves to be 'ordinary' individuals without any 'extraordinary' attributes.

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INFLUENCE OF MODERN MASS MEDIA ON MORAL AND SOCIAL COGNITION: HOW KREMLIN'S PROPAGANDA BECAME ONE OF THE MAIN CAUSES OF THE RUSSIA-UKRAINE WAR, 2014-2024

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ABSTRACT

Propaganda was historically a neutral term used by playwrights in ancient Greece to describe the promotion of political and religious beliefs. In the 19th century, with the rise of the press, cinema, and radio, propaganda became a tool for shaping opinions and behaviours, often biased, misleading, or false, to promote specific agendas. In the early 20th century, especially in Europe, propaganda was employed by dictatorial regimes—Nazism, Fascism, and Communism—for building popular consensus and political repression; it's still widely used nowadays for the same reasons by current autocratic regimes around the world.

The main purpose of this article is to demonstrate how Kremlin propaganda utilizes modern mass communication methods and technologies to influence the social and moral cognition of Russian society, thereby sustaining and continuing the 10-year-long war against Ukraine, which is currently in progress. This study also shows how Russian propaganda is one of the main causes of the war itself. Because to start a war, it is necessary to first secure the consent of one's own people, who must accept, support, and justify the invasion of another country. In this context, the propaganda of the Kremlin political regime plays a crucial role.

Well-thought-out Kremlin propaganda has constantly incited different fears in individuals through using persuasive neurolinguistic techniques: in information texts, in social networks, and especially on TV; by doing so over the past 20 years has turned at least 80% of Russian society into people who exist in a parallel reality and seem to have no critical thinking.

The social and moral impacts of propaganda are analyzed through various research methods, aiming to determine if and how the Kremlin propaganda can be effectively countered. The paper's results suggest communicative and social tools that could change public opinion in Russia and spread the truth about the war. However, this would only be possible after the end of the and the transition of the Kremlin dictatorial regime to a democratic one. Future research may focus on identifying the best strategies to achieve this goal for potential implementation.

Keywords: Russian-Ukrainian war 2014-2024, Russian propaganda, manipulation of information, influence of the social cognition, change of public opinion.

INTRODUCTION

Over the past 6,000 years, countless wars have scarred civilizations, with Europe's history particularly marked by conflict. Yet, for many in the modern Western world, the horrors of war seem distant. Since the end of World War II in 1945, Europe has been spared large-scale conflict for nearly 80 years, after paying a steep price in lives, economic devastation, and suffering. Although European nations have engaged in global conflicts, geographical distance has often made civilians perceive war as a remote threat, unlikely to reach their own soil. This changed dramatically with the onset of the Russia-Ukraine conflict in 2014, marked by Russia's annexation of Crimea and its involvement in the Donetsk and Luhansk regions. Russia's large-scale invasion of Ukraine on February 24, 2022, has brought war back to the heart Europe, with global geopolitical and economic consequences. The current war is not only fought with conventional weapons but also on the information front. This article examines Kremlin propaganda as a critical factor in the conflict. To initiate a war, it is essential to secure public consent, which is largely obtained through propagandistic means.

In the ancient world, propaganda was a neutral means of promoting religious and political beliefs. However, its connotation became pejorative in the 19th century as it became a political tool. The rise of mass media in the 20th century, including newspapers and radio, brought about a new era of propaganda. Scholars like Harold Lasswell, in "Propaganda Technique in World War" (1927), defined propaganda broadly as the deliberate expression of opinions or actions intended to influence others for predetermined ends, often through psychological manipulation [1 p.23]. This manipulation particularly affects group dynamics, as discussed by Sigmund Freud his phenomenon in "Group Psychology and the Analysis of the Ego" (1921), where he examined how individual behavior transforms within a crowd [2]. Edward Bernays, a pioneer in this field, in his book "Propaganda" (1928), explored how a small elite could control the masses using manipulation technique [3].

For dictatorial regimes, propaganda became an essential tool. Lenin's 1902 pamphlet "What Is to Be Done?" laid the foundation for Soviet propaganda, which aimed to indoctrinate educated individuals using historical and scientific arguments [4]. The early 20th century's motion picture industry provided a potent tool for propaganda, particularly in totalitarian states. In "Mein Kampf" (1925) Hitler espoused his propaganda theory, which provided a powerful basis for his rise to power in 1933, he declared: *"people will believe anything, provided they are told it often enough and emphatically enough, and that contradicts are either silenced or smothered in calumny"* [5 p.31]. The 1930s and 1940s were the "golden age of propaganda," as seen in Nazi Germany under Joseph Goebbels, who used films to garner support for territorial expansion and war efforts. Propaganda has been a hallmark of authoritarian regimes, from Mussolini's Italy to Franco's Spain, and notably, the Soviet Union.

Baruch A. Hazan's "Soviet Propaganda: A Case Study of the Middle East Conflict" (1976) provides a detailed account of Soviet propaganda mechanisms: the Department of Propaganda controlled messaging, ensuring that all media aligned with political goals [6]. After the Soviet Union's collapse in 1991, Russia did not transition to a free and democratic society. Instead, the current Kremlin regime has increasingly mirrored Stalinist methods. Today, Kremlin propaganda continues to play a crucial role in justifying political and military actions, using a blend of Soviet and Nazi techniques,

modernized by new media and technology. The Kremlin employs skilled journalists, PR experts, and IT specialists to maintain control over Russian citizens' perceptions.

METHODS AND MATERIALS

A mixed-methods approach was employed to assess the strength and effectiveness of Kremlin propaganda, combining quantitative and qualitative research methods with descriptive and analytical approaches to explore various aspects of the phenomenon.

- **Media Sources:** Propagandistic articles, Russian television programs, and repeated news broadcasts were analyzed as primary sources to examine Kremlin messaging. This provided insight into the content, structure, and themes of the propaganda.
- **Interviews:** Qualitative analysis was conducted on approximately 1,500 video interviews by Ukrainian journalist Volodymyr Zolkin with captured Russian soldiers and their families (March 2022 to July 2024). These interviews helped identify patterns of influence and the personal impact of Kremlin propaganda on Russian citizens.
- **Statistical Data:** Quantitative analysis was based on data from Russian and international statistical agencies, as well as existing research papers from credible Western sources. This data was used to evaluate the reach and impact of Kremlin propaganda across Russian society.

Kremlin's Propaganda: Organizational Strategies and Operational Tactics

The primary objective of this article is to demonstrate how Kremlin's propaganda has been instrumental in shaping public opinion, thereby becoming a significant cause of the Russian-Ukrainian war.

The use of manipulation in politics is not a new concept; philosophers like Isocrates, Plato, and Aristotle taught the art of persuasion while also warning against logical fallacies and deceptive arguments. In contemporary mass media, especially in Russia, there has been a noticeable shift where substantial communication is often dismissed as naive, while the manipulation of information is increasingly accepted. Over the past 15 years circa, the influence of mass media and information manipulation in Russia has grown significantly. For instance, media investments by the Russian government nearly doubled from approximately 60 billion rubles in 2011 to 115 billion rubles in 2022, as detailed in the article "Coining Lies: Kremlin Spends 1.5 Billion per Year to Spread Disinformation and Propaganda" (2022) written by analysts Aleksandra Michałowska-Kubś and Jakub Kubś [7].

In recent years, the Russian Federation has shut down all the very few media outlets that previously opposed the Kremlin, consolidating a unified narrative across newspapers, television, and social media. The Kremlin employs Soviet-era propaganda techniques enhanced with modern methods, often depicting Ukraine as the "common enemy" to unify public opinion. Since November 2013, anti-Ukrainian propaganda has intensified, especially on television, where Russians are exposed several times a day to key narratives such as "*Ukraine's borders are artificial*," "*Ukrainian society is divided*," "*Ukrainian institutions are dysfunctional*," "*Ukraine is a failed state*," and "*It doesn't deserve to exist*" [8].

Propaganda is particularly effective when it resonates with the existing beliefs and mindset of the masses. In Russia, anti-Ukrainian propaganda aligns well with deep-seated imperialist ambitions and a historical desire to punish the "runaway colony" (Ukraine, which until 1991 was partly under Russian rule for nearly 350 years). Over the years, Kremlin propaganda has become more assertive and unchallenged, culminating in the full-scale invasion of Ukraine. This propaganda effort aims to mislead and deceive the Russian populace, using fear as its primary tool of persuasion. The Kremlin capitalizes on a long-standing collective fear of foreigners, a sentiment rooted in Russia's historical isolation and limited interaction with other cultures. According to the Federal State Statistics Service (Rosstat) around 72% of Russian citizens (approximately 100 million people) have never travelled abroad nor left their regions [9]. They rely exclusively on Russian television for information about the outside world. This isolation facilitates the instillation of the notion of "foreign enemies of the homeland", purportedly intent on invading and destroying Russia, with Ukraine and the West often implicated. Many Russians firmly believe in this myth, along with other myths propagated by the Kremlin, which are intensively used as a tool to control public perception.

American scholar Renee Hobbs, in her work "Mind over Media: Propaganda Education for a Digital Age" (2020), identifies four characteristic design features of many forms of contemporary propaganda:

- a. **Evokes strong emotion**
- b. **Appeals to audience needs**
- c. **Simplifies information and ideas**
- d. **Attacks opponents** [10 p.5]

The Kremlin propaganda employs these strategies with notable success. Russian patriotism, heavily promoted through this propaganda, is redefined not as love for one's country but as profound hatred for the "enemies of the homeland", including Ukraine and the so-called "decadent West". This term, a relic from the Soviet era, is still widely used in Russia to refer generically to Western countries led by the USA and NATO. According to this narrative, these "enemies" are blamed for the poor economic conditions of the average Russian citizen and are alleged to be plotting a military attack on "Mother Russia" to destroy it. The idea of attacking a vast country of 17 million square kilometres with a population of 144 million, which possesses nuclear weapons, is implausible. Yet, it is futile to seek rational logic in the beliefs propagated among the Russian populace. This situation reflects Everett Dean Martin's observation: "*Propaganda is turning us into puppets. We are moved by hidden threads that the propagandist manipulates,*" as discussed in his 1929 debate with Edward Bernays, titled "Are We Victims of Propaganda, Our Invisible Masters"[11].

Different authors, such as Brown (1963) [12], Smith (1989) [13], have attempted to develop comprehensive lists of propaganda techniques, each time expanding on previous registers. The Kremlin propaganda utilizes a sophisticated blend of traditional rhetorical strategies and modern communication techniques, including falsehoods, omissions, distortions, and suggestions, often incorporating logical errors. Some of the primary techniques used include:

- **Dehumanization:** This technique strips individuals of human traits, portraying them as objects or animals. It fosters fear, hatred, and lowers moral inhibitions, justifying violence. It can enable inhumane acts like torture by disrupting social cognition, as the neural networks that typically respond to others fail to engage.
- **Big Lie:** A method of extreme distortion of truth rooted in fear, this technique leverages the human instinct for self-preservation. For instance, Russian media falsely claim that "biolabs in Ukraine develop biological weapons with US support" and that "NATO plans to attack Russia."
- **Stereotyping:** This technique depicts entire groups under a single, demonized label. Russian media often refer to resisting Ukrainians as "Banderovtsy," portraying them as nationalists—a term linked to Stepan Bandera (1909-1959), leader of the Organization of Ukrainian Nationalists (OUN-B).
- **Bandwagon:** This technique encourages people to join a cause because "many others" have done so, exploiting the human desire to belong and avoid feeling isolated. Russian propagandists often fabricate "opinion polls" to create the illusion of mass support for Kremlin policies.
- **Multiple Standards:** Double standards are employed to justify actions, such as conflating Ukrainian nationalism with Nazism to legitimize violence under the pretext of "denazification", while simultaneously glorifying Russian nationalism.
- **Newspeak:** This refers to the creation of a new, controlled language following the enactment of a law in March 2022 criminalizing the dissemination of "false information" about the Russian military. This law enforces the use of specific terms to describe the war in Ukraine, replacing words with euphemisms. Examples include:
 - "Claps" instead of "Explosions"
 - "Hard landing" instead of "Air crash"
 - "Negative surfacing" instead of "Flooding"
 - "Liberation of territories" instead of "Seizing territories"
 - "Saving civilian people" instead of "Killing civilians".[14].

Orwell shivers nervously in his coffin because his dystopian fiction "Nineteen Eighty-Four" (1949) proved prophetic in detail. Orwell illustrated how a "*functional language of a totalitarian superstate shapes and distorts thought*"[15 pp.336-359]. Today's use of **Newspeak** in Russian media, with terms like "*special military operation*" instead of "war," exemplifies this power. If direct terms such as "*plane crash*," "*explosion*," or "*economic collapse*" were used, their negative connotations might lead the Russian public to better understand the true impact of the war.

Propaganda primarily targets people's emotions and uses extra-linguistic elements to shape perception. The limbic system, which processes emotions, responds more to images than to words. Propaganda employs slogans and symbols that, through repetition, can trigger specific emotional responses. Recently, Kremlin's propaganda had repurposed symbols such as the red Soviet flag and the black-orange St. George ribbon, a military symbol used since 2005. The letter 'Z', initially used to mark Russian military vehicles during the large-scale aggression in Ukraine, has become a symbol of the new political ideology known as **Ruscism**. This ideology combines nationalism, authoritarianism, and expansionism with historical and cultural revivalism, reflecting past fascist ideas of state

control, national supremacy, and militaristic expansion. A detailed description of the peculiarities of **Ruscism** as a new version of totalitarianism—including the creation of a totalitarian party, the formation of a broad totalitarian movement, and the development of a totalitarian doctrine—can be found in Oleksandr Romanyuk's (2022) article, "Ruscism as a New Version of Totalitarianism".[16]

Transforming Public Consciousness: The Long-Term Effects of Kremlin Media Strategies

In the 1940s, Carl Hovland and a team of psychologists at Yale University began scientifically studying persuasive communication. Their research aimed to understand scientifically how and why persuasion works, rather than, rather than merely codifying the art of persuasion. The findings revealed that individuals who are fearful are more receptive to messages than those who remain calm and rational. However, for fear to be an effective persuasive tool, it must not induce panic, as panic can lead to unpredictable behaviour [17].

Kremlin propaganda has adeptly applied these findings for several years, utilizing rapid, continuous, and repetitive messaging techniques broadcast through multiple Russian and some Western mass media outlets. Special attention is given to neurolinguistic techniques, with TV programs using controlled, calm voices and repetitive, hypnotic language to create a persuasive atmosphere. This propaganda seems to penetrate deeply, affecting individuals regardless of their education, culture, or knowledge level.

Russian politicians have frequently repeated the narratives they crafted, eventually believing them—a phenomenon known as self-induction. Sergey Lavrov, Russia's Foreign Minister, has repeatedly stated in official settings that "*Russia did not attack Ukraine*". Dmitry Medvedev, former president, often expresses extreme anti-Western sentiments, openly voicing his hatred for the West and his desire to "*do everything to make them disappear*". Similarly, Leonid Slutsky, leader of the LDPR, called for unity with the slogan "*One Country, One President, One Victory*", echoing Hitler's infamous rhetoric [18]. Russian government officials, politicians, commentators, and the media consistently spread falsehoods, particularly about the war in Ukraine, which they call a "special military operation." This ongoing deceit contributes to a broader pattern of disinformation and denial.

The main, obvious, and important result of the Kremlin propaganda is the broad Russian public consensus that justifies and sustains the war initiated by Russia in Ukraine in 2014. Russian society is roughly divided into three groups: approximately 35% are staunch ultra-nationalists who support the Kremlin and the war; about 50% are largely indifferent to political issues, including warfare. After years of extensive brainwashing, they have been reduced from an autocratic regime to a passive mass of subservient individuals, largely echoing official narratives without independent thought. Their resigned acceptance and mutual consent contribute to the continuation of the war. Meanwhile, around 12% oppose the war but remain silent due to fear of repression, especially considering laws criminalizing "false information" about the military. Only about 3% of the population, or around 4,5 million people have left Russia 2022-2024; some of them with anti-war positions, representing the most vocal dissidents. These data, drawn from

various Russian [19] and Western sources [20, 21] highlight the limited extent of organized opposition to war within Russian society, aside from initial protests by a few thousand young people in March 2022 that were quickly suppressed.

Russian mass media, supported by repetitive broadcasts and talk shows on Russian TV, illustrates the profound impact of Kremlin messaging. Ukrainian journalist Volodymyr Zolkin's YouTube interviews reveal that about 80% of the Russian population has absorbed these propagandistic narratives, significantly shaping their convictions [22]. Many Russians strongly believe that Ukrainians are deliberately bombing their own cities, while Russian soldiers are depicted as saviours protecting civilians from alleged Ukrainian nationalists' intent on harming their own people.

The massacre in Bucha (March 2022), where bodies of civilians with their hands tied were discovered, is widely dismissed by Russian media as part of a theatrical staging or, if acknowledged at all, blamed on Ukrainian forces, with the assertion that "*Russian soldiers never shoot unarmed people*". Similarly, the bombings of the Mariupol maternity hospital and the Drama Theater—where, in March 2022, 600 civilians, mainly women and children, died in a Russian intentional airstrike—are downplayed or claimed to be fake news. When these events are not outright denied, they are instead portrayed as actions perpetrated by Ukrainians themselves to frame the Russians. The denial of documented atrocities, including civilian attacks in Kyiv, Kramatorsk, Kremenchug, Vinnytsia, Dnipro, Odessa, and Kharkiv between 2022 and 2024, reflects a widespread reluctance among many Russians to confront the reality. The Russian Defence Ministry claims only military targets are hit, while state media portrays Russian forces as protectors of Ukrainian civilians. This narrative distorts the truth, cynically casting aggressors as defenders.

A tragic and horrifying consequence of the Kremlin propaganda is the war crimes committed largely by Russian authorities and armed forces. As of July 2024, official statistics reported by the website war.ukraine.ua, in partnership with the Ministry of Foreign Affairs of Ukraine, document 136,000 war crimes [23]. These include deliberate attacks on civilians and indiscriminate assaults in densely populated areas, damaging homes, hospitals, schools, kindergartens, nuclear power plants, historic buildings, and churches. By July 2024, over 22,594 civilians had been injured, 11,284 had been killed—including 564 children—and 1,487 had been severely injured, although the actual numbers are likely much higher. In several areas occupied by Russian troops, massacres have occurred, including acts of torture, mutilation, rape, looting, and intentional killings of civilians. These acts are not inherent to warfare but rather reflect the persistent and deliberate choices of Russian soldiers and their officers. Anti-Ukrainian propaganda has undoubtedly influenced these cruel and inhumane behaviours, leading to severe moral degradation.

The Russian missile attack on Ukraine's largest children's cancer hospital on July 8, 2024, killed two people and injured fifty others. Observing the mood on social media, there was neither "repentance" nor regret among the Russian masses. Instead, there was sheer joy and pride over the successful "launch". Andrei Perla, a columnist for the Russian website of Tsargrad TV, further inflamed the situation by publishing an article titled "*A Children's Hospital in Kiev Is Not an Accident; It's Time to Recognize That and Stop Being Afraid,*"

where he declares, *"We must take into account -simply and scarily: there are no people on that side. Not one person. Our missiles don't kill people. There is not one person there. Un-humans are there"* [24]. This disturbing rhetoric highlights the deep unethical issues present in the Kremlin's propaganda, where the dehumanization of perceived enemies has become a common narrative, severely impacting societal values and empathy. Moral mechanisms are simply destroyed; they no longer function in Russian society.

CONCLUSIONS

The effectiveness of the Kremlin propaganda highlights a troubling aspect of modern warfare: the profound influence of information manipulation on public perception, which can obscure the truth. Over many years, a sustained campaign of anti-Western, particularly anti-Ukrainian, propaganda has shaped the collective mindset of Russian society. Substantial evidence demonstrates how Kremlin-crafted propaganda has impacted the moral and social cognition of Russian citizens, affecting their views on the war and the value of human life.

Techniques such as the **Big Lie** and the **Dehumanization** of enemies have been extensively employed, fostering hatred toward Ukraine and justifying the ongoing war. This propaganda has cultivated a pervasive ideology in which many Russians, including those who are not ultra-radical Z-patriots or staunch supporters of the current regime, deeply believe that Russia has a right to conduct this "saint war" against Western dominance. They perceive the conflict not as a war against Ukraine—considered by them as part of Russia due to "historical reasons"—but as a struggle against Western liberal democratic values, which have long been treated in Russia as fundamentally threatening and malevolent to Russian interests and identity.

To effectively counter the Kremlin propaganda machine, it is crucial to explore potential solutions and strategies, including communicative and social tools that could change public opinion in Russia and spread the truth about the war. Unfortunately, such efforts may only be realized after the end of the war and the transition from the Kremlin's dictatorial regime to a democratic one. Although few historical precedents directly match the current situation, examining past efforts—such as post-World War II strategies to build alliances with the German population—can offer valuable insights for countering the state propaganda of a totalitarian regime.

Potential Future Solutions Include:

- **Legal Reforms:** Change laws to decriminalize false information and restore freedom to political prisoners, providing them and Russian political dissidents a platform to voice their opinions.
- **Independent Media:** Create and support independent media outlets that provide accurate information and counter previous totalitarian propaganda narratives, fostering critical perspectives.
- **Television Broadcasting:** Utilize television, a favoured medium in Russia, to broadcast direct eyewitness accounts from survivors of war crimes committed by Russian soldiers. Regularly air documentaries, 24 hours a day, such as the 2024

Oscar-winning "**20 Days in Mariupol**", which offers real testimonies of Russian aggression [25]. This will help the Russian populace understand their role and collective responsibility in the war. Additionally, produce more documentaries and testimonials to offer a broader and more comprehensive perspective on the realities of the conflict.

- **Education and Disinformation Initiatives:** Build on the counter-disinformation projects and initiatives activated between 2014 and 2024. For instance, the Hybrid CoE research titled "How Ukraine Fights Russian Disinformation: Beehive vs. Mammoth" by Jakub Kalenský and Roman Osadchuk (January 2024) offers valuable insights [26]. Implement educational programs aimed at improving media literacy and critical thinking skills to empower individuals to recognize and resist propaganda effectively.
- **Support Civil Society:** Involve civil society and the private sector, along with organizations and experts in mass media communication channels, to effectively expose and counter propaganda, thereby enhancing the dissemination of truthful information.

While these strategies may currently appear overly optimistic, they provide a crucial roadmap for fostering a more informed and critically engaged society. Future research and international collaboration are essential to identify and implement the most effective methods for countering Kremlin propaganda and promoting democratic and humanistic values within Russian society, with the hope of achieving significant progress in the near future.

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LEAN SOLUTIONS IN CASE MANAGEMENT IN SOCIAL WORK

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ABSTRACT

The transition to the market economy and the recalibration of budgets, financial independency and the transfer of responsibility to the local level in the management of social work budgets have caused concerns for the rational spending of money intended for these activities. We are still very far from managing these budgets fairly and efficiently, but the direction is very clear: the money will be little and must be used efficiently. The health and economic crisis that followed should lead to efficiency in the first phase and then to effectiveness and sustainability in the second. This requires a series of abrupt changes, which are difficult to achieve, both due to factors internal and external to the institutions. Their organization, the very high level of bureaucracy, poor staff performance, corruption and political interference in the administration turned good intentions into bad habits and inefficiency. Social services lack the contents and strategies to achieve quality, the elements that determine whether a service is considered quality or not are missing. There are control institutions, but they are ineffective because they cannot enforce quality assurance. They don't have tools and don't understand how to get results. The aim of this paper is to explore the deficiencies in social care case management, highlighting how these issues diminish the effectiveness of services and the well-being of beneficiaries. To achieve the purpose of the article, three focus groups were conducted with social case managers. The research underscores the importance of high-quality case management, which encompasses timeliness, effectiveness, client-centeredness, safety, and equity. The study also examines the potential of Lean management principles to improve efficiency in social work by eliminating waste and focusing on value creation. The barriers that stand between case management service providers and their beneficiaries identified in this research can be removed by setting quality targets, organizing employees according to modern human resources system models, and institutional reorganization. The control of the variation of the processes cannot be done with a management based on functions, where the decisions, approvals, allocation of resources "walk" from one department to another, reaching that in the end, the beneficiary receives mediocre solutions or solutions that cost a lot. The current yield is negative, the institutions consuming huge resources to obtain results without much value. Our approach may not bring about the immediate changes we desire in this field, but it lays the groundwork for viable long-term solutions that can enhance the quality of services and improve the performance of social welfare institutions in the future.

Keywords: lean management; sociological research, social work, case management

INTRODUCTION

Quality in social care case management encompasses several dimensions, including timeliness, effectiveness, client-centeredness, safety and equity. "Measuring quality involves monitoring based on (quantitative/qualitative) indicators that can refer to: the human, financial and material resources used by the supplier in providing the service, or to the process of providing the service (the relationship between the characteristics of the service, the activities carried out, the relationship between supplier and beneficiary) and the results obtained" [1]. High-quality case management ensures that beneficiaries receive timely interventions tailored to their specific needs, which in turn supports positive outcomes and client well-being.

Unfortunately, human resources in the sphere of social services do not rise to the level that society needs, being of poor quality, especially in rural areas, where employees in this field are insufficiently qualified, poorly remunerated and most often appointed and politically controlled. Frequent high-level changes in ministries, agencies and directorates have led to the absence of a strategic vision in this sphere, with most actions and policies being incoherent and inconsistent [2]. These things should change in order to improve the service quality.

The professional experience of over 20 years in the field of social services of one of the authors of this paper leads us to affirm that the social services system, be it private or public, is plagued by inefficiencies, with immense resources being consumed without corresponding improvements in service quality. Although there is a legal framework, developed social work services, faculties that train social workers, we have a faulty social case management, we spend exorbitant amounts to ensure a minimum of quality, and the beneficiaries receive so little quality in the services delivered to them. The added value that should reach the beneficiaries is dissipated in the "production processes" because the route that such a process follows wanders within institutions, then from one institution to another. Metaphorically, it's like a car sitting in the garage, consuming fuel to run without going anywhere.

Lean management is a systematic method for waste minimization within a manufacturing system without sacrificing productivity. Originating from the Toyota Production System, lean management focuses on value creation and continuous improvement. Lean management, often referred to simply as "lean," is a philosophy and a set of tools aimed at the continuous improvement of processes by eliminating waste and enhancing value [3]. Lean management is built on five core principles as defined by Womack and Jones in 1996: precisely specify value by specific product; identify value stream for each product; make value flow without interruptions; let the customer pull value from the producer; pursue perfection [4]. Therefore, it is crucial to understand what the customer values and is willing to pay for.

In Lean management value is defined from the perspective of the end customer. Value stream mapping involves identifying all stages of the value creation process and distinguishing between value-added and non-value-added activities. The goal is to eliminate waste. At the same time, work processes must be organized in a way that minimizes waiting time and blockages, ensuring that the production process flows smoothly without interruptions or delays. Establishing pull ensures that work is done based on customer demand rather than forecasts, reducing overproduction and inventory costs. In any process, perfection must be pursued, continuous improvement (Kaizen)

being a basic principle of lean management. Organizations strive for perfection by consistently improving processes and eliminating waste. For example, Toyota's implementation of lean principles allowed it to produce higher quality cars at lower costs, setting a benchmark for the automotive industry [5]. Lean management is applied today in various fields of activity. Lean principles have been successfully applied in healthcare to improve patient care and operational efficiency. For instance, Virginia Mason Medical Center in Seattle used lean methods to reduce patient waiting times and improve the quality of care [6]. In the service industry, lean management helps in streamlining processes and improving customer satisfaction. For example, a bank using lean principles might reduce the time it takes to process loan applications, thereby enhancing customer experience and operational efficiency [7].

The Lean methodology is sought and applied for the immediate benefits it brings, and in services it is observable that Lean is implemented mainly to reduce delivery time, in our case it would be case resolution time. However, we have not found concrete research in the literature that specifically focuses on the application of Lean to social case management, except one. A child welfare agency in the United States implemented lean management principles to address inefficiencies in their service delivery. By mapping their value stream, they identified bottlenecks in case processing and administrative tasks. Implementing lean techniques, such as standardizing forms and processes, reduced case handling time and allowed social workers to spend more time on direct client interaction [8]. Social services organizations can decrease waiting times and increase beneficiaries' satisfaction by creating a more streamlined appointment scheduling system and reducing unnecessary paperwork.

Case management in social work is a collaborative process designed to plan, seek, support and monitor services and resources on behalf of beneficiaries. The purpose of case management is to enhance the well-being and independence of beneficiaries through personalized support and access to a variety of services and resources. It is also a process of planning, seeking, promoting and monitoring services from various social services or health care organizations and staff on behalf of a client. The process allows social workers to collaborate both within and across organizations, enhancing their ability to provide comprehensive care to clients through professional teamwork. This collaborative approach broadens the range of services available and addresses issues such as service fragmentation, staff turnover, and insufficient coordination between providers [9].

The client-centered approach indicates that effective case management prioritizes the involvement of beneficiaries in decision-making processes. Research indicates that when beneficiaries are actively involved, they are more likely to be satisfied with services and achieve better outcomes [10]. Individualized care requires the customization of services to meet the specific needs of beneficiaries. Individualized care plans that take into account beneficiaries' unique circumstances and preferences have been shown to increase the effectiveness of case management [11].

Interdisciplinary collaboration (team approach) between various professionals, including social workers, health care providers, and educators, is crucial for comprehensive case management. Effective teamwork ensures that all aspects of a client's needs are addressed [12]. Clear communication and coordination among team members prevents fragmentation and duplication of services, leading to more efficient

and effective service delivery [13]. Training and professional development involves two sub-dimensions: continuing education and supervision because social workers involved in case management must engage in continuous professional development to stay abreast of best practices and emerging trends. Training in cultural competence, trauma-informed care, and new intervention techniques is especially important [14]. Regular supervision and support from experienced professionals help case managers navigate complex cases and maintain high standards of care [15].

The aim of this paper is to explore the deficiencies in social care case management, highlighting how these issues diminish the effectiveness of services and the well-being of beneficiaries. The study also examines the potential of Lean management principles to improve efficiency in social work by eliminating waste and focusing on value creation. The study emphasizes the need for a shift towards Lean methodologies in social services, which have proven effective in other sectors such as healthcare and manufacturing.

MATERIALS AND METHODS

We used the focus group to determine the depth, diversity and consequences of poor case management. We chose this qualitative research technique because we find it appropriate for collection of detailed information about the experiences, perceptions and needs of stakeholders. Assessing perceptions and attitudes is important as it allows for a detailed exploration of perceptions and attitudes towards case management services, providing a clear picture of strengths and areas for improvement.

Between March and April 2024, we conducted three focus group sessions involving a total of 25 participants. Two sessions were held with case managers from DGASPC and DAS Braşov, with 9 participants each. The third session was held with 7 case managers at DGASPC Covasna, the county neighboring Brasov County. These two counties were selected for convenience.

The interview guide used in the focus groups was semi-structured and aimed at exploring the following aspects: the professional skills of those present, their perceptions of professional training needs (qualifications and specializations), and the level of cooperation between professionals from the same institution or partner services (school, authorities, health or insurance system).

RESULTS

The research revealed significant deficiencies in case management, and the quality of the services offered is often insufficient or has consequences that affect the life and development of the beneficiaries, children or adults, some with disabilities.

Participants reported a significant lack of external supervision, poor or negative feedback from beneficiaries, and almost no feedback from collaborators. Over the past four years, none of the participants attended any training sessions in the field conducted by specialists outside their own institutions. Continuous training sessions were primarily carried out with other categories of staff, especially with those from the residential environment. A unanimous concern among participants was the lack of material and financial resources necessary for effective case management. These included limitations

in funding for social case visits, transportation to partner institutions, and transport subscriptions. An unanticipated issue raised was the lack of attention to safety, security, and health at work. Case managers expressed feeling unsafe when required to travel to rural areas or marginalized communities.

The research identified several factors that have a significant influence in the transfer of added value from the provider of social services to their beneficiaries. A first series of factors are those of an institutional nature, namely funding sources, funding planning and expenditure estimates that do not have a rigorously substantiated basis, but also human resource management and the level of bureaucratization of the activity. The financial forecasts are made after analyzes of the institutions from previous years and not according to the actual financing needs of the respective service. Insufficient funding can restrict the resources available for case management services, limiting the scope and quality of support that can be provided. Inadequate skill levels of staff in social work services, particularly in case management, can lead to heavy workloads for social workers, making it difficult to ensure timely and complete case management. Also, cumbersome bureaucratic processes and administrative hurdles can slow down the case management process, affecting the efficiency and responsiveness of services. Excessive paperwork and bureaucratic requirements can divert social workers' time and attention from directly caring for beneficiaries. Ineffective communication and coordination between different service providers can result in fragmented and disjointed care for beneficiaries. Privacy regulations and privacy concerns can prevent effective information sharing between professionals involved in case management.

Another set of factors that influence negatively social services is related to beneficiaries. They may resist engagement with case management services or fail to follow through on referrals, which can impede progress and positive outcomes. Moreover, cultural and language barriers between social workers and beneficiaries can create challenges in understanding and meeting the needs of diverse populations.

Institutional barriers, sets of procedures that cannot be respected, faulty communication, lack of control on a hierarchical line, but also the understanding of the problems from the perspective of the beneficiaries, make the participants give an average of 6.5 points out of 10, to the services in the field of case management. The findings suggest that the current state of case management in social services is far from ideal, with numerous obstacles at individual, organizational, and systemic levels. These challenges must be addressed to improve the quality and efficiency of services, ensuring that resources are effectively used to enhance the well-being of beneficiaries.

DISCUSSION

The findings from our research reveal significant deficiencies in social work case management, including inadequate supervision, insufficient resources, bureaucratic inefficiencies, and communication barriers. These challenges diminish the quality of services provided and negatively impact the well-being of beneficiaries. The research highlights the importance of client-centered, well-coordinated and adequately resourced case management. Applying Lean management principles could help address these issues by enhancing value in social work processes. Below, we discuss how Lean principles can be applied to improve case management in social work.

Quality in social care case management encompasses several dimensions, including timeliness, effectiveness, client-centeredness, safety and equity. High-quality case management ensures that beneficiaries receive timely interventions tailored to their specific needs, which in turn supports positive outcomes and client well-being. Social work organizations should engage directly with beneficiaries to understand their needs, challenges, and goals. By specifying value precisely, social services can focus on delivering outcomes that truly matter to the clients, such as improved well-being, increased independence, and enhanced quality of life.

To achieve quality in case management, analyzing the causes that determine a poor quality delivered to the beneficiaries of these services should start from the organization of these services, from the management level and the vision-mission binomial, together with the policies and objectives. The conversion of objectives into results (the achievement of quality) is then done through managerial processes – sequences of activities that produce the desired results. Identifying the value stream involves mapping out each step of the case management process to distinguish between value-added and non-value-added activities. In our study, excessive paperwork, bureaucratic hurdles, and ineffective communication were identified as non-value-added activities that consume resources without contributing to positive outcomes. By identifying these inefficiencies, social work organizations can streamline their processes, eliminate waste, and focus on activities that directly enhance client outcomes, such as timely interventions, personalized care, and effective coordination among service providers.

In social work, the flow of value can be disrupted by bureaucratic processes, inadequate resources, and communication breakdowns. Social work organizations need to ensure that case management processes are seamless and efficient. This can be achieved by reducing bureaucratic requirements, simplifying administrative tasks, and improving communication channels between service providers. For instance, implementing standardized procedures and reducing unnecessary paperwork can help social workers spend more time on direct client care rather than administrative duties. Additionally, enhancing coordination among different service providers can prevent delays and ensure that beneficiaries receive continuous, uninterrupted support.

Moreover, it is important to respond to client demands rather than pushing services that may not be needed or valued by the beneficiaries. By allowing beneficiaries to "pull" services based on their needs and preferences, social work organizations can ensure that interventions are more relevant and effective.

Pursuing perfection in social work involves continuously improving processes to eliminate waste and enhance value. This principle aligns with the concept of continuous improvement (Kaizen) in Lean management. Social work organizations should regularly assess their case management processes, gather feedback from beneficiaries and practitioners, and make necessary adjustments to improve service quality. For example, providing ongoing professional development for social workers, enhancing supervision, and fostering a culture of accountability can help ensure that services are delivered at the highest possible standard. By striving for perfection, social work organizations can reduce inefficiencies, improve client outcomes, and ensure that resources are used effectively.

CONCLUSION

Systemic issues such as poverty, discrimination and institutionalized inequalities can create significant barriers to the success of case management interventions. Inadequate social policies: The absence of supportive social policies or the presence of policies that perpetuate inequality can limit the effectiveness of case management in addressing the root causes of problems. Overwhelming caseloads: Social workers can be faced with a large caseload, limiting the time they can spend with each client and reducing the amount of support they can provide. Time constraints can lead to hasty decisions and insufficient attention to the complexities of individual cases. Social workers may encounter situations where the client's best interests' conflict with organizational priorities, leading to ethical dilemmas. Maintaining appropriate professional boundaries can be challenging, especially when social workers form close relationships with beneficiaries. Inadequate training and professional development opportunities may hinder social workers' ability to adapt to new methods, technologies, or evolving best practices in case management. Addressing these obstacles requires a comprehensive and systemic approach involving collaboration between social workers, organizations, policy makers and the wider community to create an environment conducive to the optimal functioning of social work case management.

By applying Lean principles to social work case management, organizations can address the deficiencies identified in our research. Precisely specifying value, identifying the value stream, ensuring smooth value flow, letting beneficiaries pull value, and continuously pursuing perfection can significantly enhance the quality and efficiency of social services. These principles provide a structured approach to eliminating waste, improving processes, and ultimately delivering higher value to beneficiaries, thereby improving their overall well-being and satisfaction with the services they receive.

While lean management offers numerous benefits, its implementation in social work comes with challenges. These include the need for cultural change, potential resistance from staff, and the necessity of ongoing training and support. Additionally, the complexity of social work services, which often involve dealing with unpredictable human behaviors and multifaceted social issues, can make the application of lean principles more challenging compared to other fields. Future research should focus on developing new intervention models, using emerging technologies, and addressing ethical and cultural challenges to improve case management practices and outcomes, as well as continue to explore the application of lean management in different areas of social work to further understand its benefits and limitations.

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MENTAL HEALTH AND SOME RISKY BEHAVIORS OF STUDENTS DURING THE COVID-19 PANDEMIC

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ABSTRACT

The aim of this study was to research the relationship between depression, stress and some risky behaviors, i.e. the use of alcohol, marijuana and problematic Internet use (PIU) during the Covid-19 pandemic among students of the University of Zagreb. The research was conducted during July, 2022. The final sample consisted of 112 participants who met the criteria for inclusion in the sample, 97 were female, 13 male and 2 undetermined. The questionnaire consisted of The Depression, Anxiety and Stress Scale (modified), Cannabis Abuse Screening Test (modified) and The Problematic and Risky Internet Use Screening Scale. The research was conducted online (through students Facebook groups).

The data were analyzed using the Pearson correlation coefficient in the statistical program IBM SPSS Statistics v20. The results showed the correlation between stress and alcohol consumption, as well as between stress and problematic Internet use. The correlation between stress and marijuana consumption has not been established, despite the fact that previous researches and theories indicate its existence. Correlation between depression and the consumption of marijuana and alcohol have also not been established.

The results of this research can be used as guidelines for future research and the development of prevention programs.

Keywords: students, stress, depression, risky behaviors, COVID-19

INTRODUCTION

The COVID-19 pandemic disrupted daily life globally, leading to mental health issues such as emotional disorders and addictions [1,2]. Research shows that women, young adults (18-30), seniors (60+), and those with higher education experienced more significant disruptions [3]. Furthermore, students, facing challenges like isolation, loss of independence, financial strain, and sudden shifts to online learning, experienced heightened stress, anxiety and depression [4].

Since the pandemic began, the number of stressors and depression levels increased by 25% [5], and alcohol sales and consumption rised up in many countries [6]. Furthermore, stress has been a major factor in the increase of alcohol intake since it was used as a way of coping with stress [7,8]

Research shows a positive correlation between depression and substance use [9, 10], a positive connection between stress and problematic internet use (PIU) [11], a positive

correlation existing between depressive symptoms and PIU [12]. Furthermore, studies highlight that marijuana is used to cope with stress and negative moods [13].

The theories which were used in the study to understand the relationship between mental health and problematic behaviors like alcohol, marijuana and Internet use are Bronfenbrenner's ecological theory, Davis's cognitive-behavioral model of problematic Internet use, the theory of problematic behavior and the self-medication theory.

Goals and hypothesis of the research

The first goal of the research was to determine the correlation between stress and certain forms of risk behaviors among students during the Covid-19 pandemic and a statistically significant correlation was expected, such that students with higher levels of stress will demonstrate higher levels of problematic Internet use and will consume alcohol and marijuana more frequently during the Covid-19 pandemic, and vice versa.

The second goal of the research was to determine the correlation between levels of depression and certain forms of risky behavior among students during the Covid-19 pandemic and a statistically significant correlation was expected, such that students with higher levels of depression will also exhibit higher levels of problematic Internet use and will consume alcohol and marijuana more frequently during the Covid-19 pandemic, and vice versa.

MATERIALS AND METHODS

A total of 115 students completed the questionnaire; however, due to the selected sample of students from the University of Zagreb, the analysis was conducted on 112 respondents. The questionnaire, created by the authors, was distributed through Facebook groups, and data collection took place during July 2022. The questionnaire included several instruments, the first one being the **DASS-21** [14] for measuring depression and stress, using modified subscales with 7 items. The assessment period was extended to 24 months compared to the original 12 that the scale usually measures. The Cronbach's alpha for depression is 0.90, and for stress, it is 0.91. Furthermore, it included the **CAST** [15] for measuring alcohol and marijuana consumption, consisting of 6 questions. A score of 2 or more points, ranging from 0 to 6 indicates high-risk consumption, with a Cronbach's alpha of 0.81. The authors used the **PRIUSS** (16) for measuring problematic Internet use, consisting of 18 items, where higher scores indicate greater problematic use. The Cronbach's alpha is 0.92. The collected data were processed using descriptive and analytical statistical methods. Pearson's correlation coefficient was used to examine the relationships, with a p -value <0.01 considered statistically significant (IBM SPSS v20). Participation in the study was voluntary, anonymous, and respondents could withdraw at any time without consequences. All information regarding the research was clearly communicated, and results were presented only in aggregate form. At the end of the questionnaire, participants had the option to contact the „Luka Ritz“ psychological counseling center for support.

RESULTS AND DISCUSSION

A total of 112 respondents, students of the University of Zagreb, were included in the data analysis. 67% of students were studying in social sciences, 13% in humanities, 9.9% in biotechnical, 9.6% in biomedical and 7.1% in technical studies.

Stress and alcohol consumption

Considering the first research goal, the results proved, as shown in Table 1. the existence of a statistically significant correlation between the level of stress and the frequency of alcohol consumption ($r=0.251$, $p<0.01$), i.e. a higher level of stress is associated with more frequent alcohol consumption during the Covid-19 pandemic, thus confirming the first part of hypothesis 1. The results are in line with previous findings and they are consistent with the previously mentioned theories, so stress in the occurrence of a pandemic, represent risk factors within Bronfenbrenner's ecological theory and the theory of problematic behavior. Also, the theory of self-treatment of addiction is confirmed in such a way that people who use alcohol do so in order to change an unpleasant emotional state like stress. Of course, since this is a correlation test, it is not possible to establish a causal relationship, i.e. whether stress is caused by increased alcohol consumption or vice versa, or whether a certain third variable has influenced such a relationship.

Table 1. *Correlation between stress levels and frequency of alcohol consumption*

Stress level			Frequency of alcohol consumption			r	p
N	M	Sd	N	M	Sd	0,251	0,008
112	1,6496	0,76281	111	0,3328	0,39650		

Stress and marijuana consumption

The results indicate there is no correlation between stress levels and the frequency of marijuana consumption ($r=0.069$, $p>0.01$) during the Covid-19 pandemic. Therefore hypothesis 1 is only partly confirmed (Table 2). Such results were not expected taking into account previous researches and Bronfenbrenner's ecological theory, the theory of problematic behavior and the theory of self-treatment of addiction, according to which, as explained on the example of alcohol consumption, the correlation between the mentioned constructs was expected. However, it is necessary to look at the fact that most of the participants in this study were female, and certain studies indicate that women use marijuana to a lesser extent and less often [17,18], so there is a possibility that this affected the results.

Table 2. *Correlation between stress levels and frequency of marijuana consumption*

Stress level			Frequency of marijuana consumption			r	p
N	M	Sd	N	M	Sd	0,069	0,471
112	1,6496	0,76281	110	0,0773	0,23318		

Stress and problematic Internet use

This study showed the existence of a correlation between stress and PIU ($r=0.455$, $p<0.01$), so a higher level of experienced stress is associated with a higher level of PIU, thus confirming part of hypothesis 1. The same can be seen in Table 3. These results are expected if we take into account previously conducted research and confirm all the previously mentioned theories. However, it is important to mention in this part that

during the pandemic, the Internet was indispensable, i.e. there was an increase in the use of the Internet and a decrease in social interactions outside the virtual world due to the measures in force, which restricted movement and required classes and certain jobs to be held *online* [19].

Table 3. *Correlation between stress levels and PIU*

Stress level			PIU level			<i>r</i>	<i>p</i>
N	M	Sd	N	M	Sd	0,455	0,000
112	1,6496	0,76281	103	1,1887	0,84394		

Depression and Problematic Internet Use

Regarding research problem 2, which examined the correlation between the level of depression and certain forms of risky behaviors in students during the Covid-19 pandemic, it has been shown that the correlation exists only between depression and PIU ($r=0.469$, $p<0.01$), as shown in Table 4. Again, such results are expected since the correlation between PIU and depression is very significant and consistent in numerous studies and these findings are in line with the previously mentioned theories, so depression, along with the pandemic, is a risk factor for increased levels of PIU in Bronfenbrenner's ecological theory, but, since Pearson's correlation coefficient cannot establish a causal relationship, one can argue that PIU may be a risk factor for the development of depression. Furthermore, Davis's cognitive-behavioral model suggests that psychopathologies such as depression are necessary as a distal cause for the appearance of PIU symptoms, and the same author explains that psychopathy itself does not cause PIU symptoms, but is a fundamental component in the etiology of the disorder [20]. Thus, depression can develop as a result of the use of Internet, but also vice versa - depression can stimulate the use of Internet, but also increase the risk of more frequent use. Finally, the theory of self-treatment of addiction, is based on the idea that people who use addictive substances do so to change a certain unpleasant emotional state, and not just to achieve euphoria, which in the case of this research was proven in the way that people excessively use the Internet in order to change and reduce the symptoms of an unpleasant emotional state, i.e. depression.

Table 4. *Correlation between depressive levels and PIU*

Level of depression			PIU level			<i>r</i>	<i>p</i>
N	M	Sd	N	M	Sd	0,469	0,000
112	1,1441	0,80732	103	1,1887	0,84394		

Depression and alcohol and marijuana consumption

There was no correlation between depression and the frequency of alcohol consumption ($r=0.465$, $p>0.01$), nor between depression and the frequency of marijuana

consumption ($r=-0.020$, $p>0.01$). This refuted most of hypothesis 2, and such results can be explained by the fact that the participants, when filling out the questionnaire, had to recall their habits and events from the previous 2 years, so it is possible that they can not remember certain elements. Furthermore, research proves that social support, which was not examined in this study, can affect this relationship and it is negatively correlated with depressive symptoms [21], and likewise, a higher level of social support is also associated with reduced alcohol consumption [22]. Also, research shows that the female gender receives more social support compared to the male gender [23], which could also have affected the results since the majority of the sample is female.

Research shows that women consume alcohol less and less often and have fewer alcohol-related problems [1], while men exhibit higher levels of depressive symptoms [23]. Furthermore, during the pandemic, it was women who experienced higher levels of stress [24], which is why it is possible that the first hypothesis is mostly confirmed, while the second is mostly not. As far as gender differences in marijuana consumption are concerned, it has been shown that boys consume the mentioned psychoactive substance more often than girls [17], so there is again a possibility that the results were influenced by the fact that the majority of respondents are female.

However, given that no correlation with marijuana consumption was confirmed in any of the research issues, the question arises whether this is due to the fact that marijuana is legally prohibited in the Republic of Croatia, therefore, it is possible that the participants either lack experience with consumption or do not feel comfortable answering questions related to it. Likewise, given that a connection with PIU has been established in both research problems, perhaps younger female population are more susceptible to PIU, as stated by the author [1], so it is recommended to further research this topic in the Republic of Croatia to prevent the development of addiction and negative consequences in time.

Limitations of the study

Possible limitations of this study can be manifested primarily in the lack of representativeness of the selected sample. Namely, the research was conducted on a sample of 112 respondents, students of the University of Zagreb, of which 97 are female students, 13 male students and 2 respondents who did not want to declare their gender. Due to the disproportion between the sexes, it is plausible that this imbalance may have influenced the results, as previously noted. Additionally, the participation of students from the various faculties of the University of Zagreb was not equally distributed, with a larger proportion coming from the social sciences. It is possible that students from this field share certain common characteristics, which could introduce sampling bias since members of the same group may provide similar responses due to shared experiences or interactions. Furthermore, there is a risk of giving socially desirable responses and, given the long duration of the study and its reliance on self-reported data, there is also a risk of subjectivity in the participants' assessments. This could lead to inaccuracies, such as forgetting or misremembering certain aspects of the tested variables. Moreover, the use of an online questionnaire introduces the potential for impersonation, dishonesty, multiple submissions, and other forms of falsification, with no feasible means of verification.

CONCLUSION

This study aimed to highlight the prevalence of depression, stress, and risky behaviors among students at the University of Zagreb during the Covid-19 pandemic, establish the relationships among these constructs, and raise awareness on the topic. Given that a significant aspect of social work involves engaging with young people, mental health, and addiction prevention [25], the authors deemed it essential to gain insights into these domains, especially due to the lack of relevant research in this area in Croatia. Since the onset of the Covid-19 pandemic, daily routines have drastically changed, affecting physical and mental health outcomes across the population [1, 2]. The recognition of these challenges served as inspiration for this research. The first hypothesis examines the relationship between stress and alcohol consumption, marijuana use, and problematic Internet use among students during the pandemic. The findings largely confirmed this hypothesis, revealing a correlation between higher stress levels and increased alcohol consumption and PIU among students. This connection was anticipated based on existing literature and relevant theories. However, the relationship with marijuana consumption was not observed, and potential explanations are discussed.

The second hypothesis was primarily refuted, as no correlation was found between depression and the consumption of alcohol or marijuana; reasons for this absence are also addressed. Finally, a concerning correlation was established between depression and PIU and further investigation into these connections is necessary to integrate relevant findings into social work practice effectively. Given that the insights from this study can serve as a foundation for future research, it is recommended to employ a representative sample to ensure a more even distribution of various characteristics within the target population. Additionally, although it is no longer feasible in the context of the Covid-19 pandemic, future data collection should occur at the beginning, during, and at the end of a pandemic to minimize the risk of data recall bias. Comprehensive research across Croatia is necessary to determine differences between students and young people who are not enrolled in higher education, segmented by regions, universities, and other characteristics. Such findings can then be integrated into social work and other fields practices, including recognition and prevention efforts with specific groups. Furthermore, it is important to investigate whether a consistent third variable, such as social support, influences the examined constructs and include this in future studies.

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MIGRATION OF ROMANIANS TO DEVELOPED COUNTRIES. REASONS, CHALLENGES AND PROSPECTS

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ABSTRACT

With the fall of the communist regime and Romania's accession to the European Union, international migration of Romanians has increased. Romania is one of the countries with the most intense migration from Eastern Europe to Western Europe, significantly impacting both the Romanian society and destination countries. Although this social phenomenon has been studied from various perspectives, the present research aims to examine in depth the lives and experiences of those who have chosen to emigrate: the reasons for their decision to relocate, their perceptions of the host country, and of the country of origin, the difficulties and strategies of integration, as well as their prospects. In order to answer these questions, we conducted qualitative research using in-depth interviews as data collection method. Although economic reasons are among the main reasons why Romanians choose to emigrate, social and cultural factors also play an essential role in their decision not to return to Romania. For the country of origin, migration can have unintended consequences: a decrease in the country's human capital and experts in certain fields. At the same time, migration can harm family life through separation from loved ones and difficulties in maintaining ties with the Romanian community and culture. A deeper understanding of this complex phenomenon can identify both the benefits and challenges of Romanian migration and ways to manage and maximise its potential for Romania and Romanians.

Keywords: migration, integration, qualitative research.

INTRODUCTION

The population is constantly shifting, with one key characteristic being its movement from one place to another. The right to free movement has been recognized globally for over half a century through the adoption of the Universal Declaration of Human Rights. Romania's accession to the European Union and the Schengen Area has facilitated this freedom of movement. The migration of Romanians is a significant phenomenon in Eastern European migration to Western Europe, influencing both Romanian society and the destination countries. A thorough understanding of this complex process can help identify both the benefits and challenges associated with Romanian migration, as well as strategies to optimize its potential for Romania and its citizens.

Migration is "a phenomenon of rebalancing the demographic equilibrium between regions, a mechanism of competition and regulation, a safety valve without which a community can be destroyed due to the fundamental change of its conditions of existence"

[1]. When the pressure on natural or social resources reaches a critical level, emigration becomes inevitable [2].

Emigration refers to the act of leaving one's country or region of birth to settle in another country or geographic region [3], seeking better living conditions, work opportunities, or social stability [4].

As a multifaceted phenomenon occurring over time and space, migration can be classified according to various criteria: political borders (internal vs. international migration), temporal components (permanent or temporary), decision-making factors (voluntary or forced), patterns of movement (staged, circular, or chain migration), and others [5] [6].

Although traditional categories of migration studies included three headings, namely temporary labor migrants, settler migrants, and refugees, new forms of migration have emerged: cross-border migration, residential tourism, business visits, labor contract migration, family reunification, marriage migration, educational migration, retirement migration, highly skilled migration and brain drain, environmental migration, human trafficking, and human exploitation [7].

The causes of migration are diverse and can be categorized into economic, ecological, and sociopolitical factors, which act as both *push factors* (compelling individuals to migrate) and *pull factors* (attracting individuals to migrate). It is assumed that individuals assess their living situations through a cost-benefit analysis and will migrate if the expected benefits outweigh the costs associated with relocating.

Theoretical perspectives on migration include the theory of integration, social network theory, and cultural diffusion theory:

Integration Theory: Also known as assimilation or acculturation, this theory, rooted in anthropology and developed by Redfield, Linton, and Herskovits, examines how migrants integrate into the host society. It highlights the complex aspects influenced by objective, subjective, economic, ethnic, and psychological factors [8]. Integration levels significantly impact the well-being of migrants and the overall socio-economic and political stability of the host society.

Social Network Theory: This theory analyzes migrant networks as forms of social capital. Migration destinations are often chosen based on existing support networks that provide information, emotional and social support, job opportunities, and housing. These networks are dynamic and expand as migration progresses, perpetuating a 'migration chain' [9].

Cultural Diffusion Theory: This theory explores how cultural exchanges and interactions between groups influence migration. It posits that cultural ideas, technologies, and practices spread through cultural contacts, motivating individuals to seek new cultural opportunities or experiences.

Migration of Romanians to developed countries

Emigration is a difficult phenomenon to measure, especially in the EU area, where the free movement of persons is guaranteed. However, official statistics in Romania are constantly striving to improve the quality of the estimated data [10]. The average number of Romanian citizens who have emigrated in the past four years has been 205,835 per year. The pandemic has weakened the migration trend, with 2020 being atypical in this respect. In recent years, the primary destinations for Romanian emigrants have been

Germany, Italy, Spain, Great Britain, Austria, and Belgium. Generally, more men than women emigrate, although the difference is sometimes negligible. The predominant age groups among emigrants between 2019 and 2022 were 20-24, 25-29, and 30-34 years. The number of people emigrating from Romania exceeds the number of people immigrating to Romania [11]. However, in 2022 the balance of international migration was positive, with the number of immigrants outnumbering emigrants by just over 85 thousand people. Data for 2023 have not yet been published by the National Institute of Statistics.

METHODOLOGY

Research Questions:

1. *What are the reasons Romanians decided to emigrate?*
2. *What are the difficulties Romanians faced in the integration process?*
3. *What is the attitude of Romanian immigrants towards their country of origin and the host country?*
4. *What are their future plans regarding returning to Romania, and what motivates these choices?*

During the data collection process, an additional research objective was identified, namely:

5. *What role does religion and the relationship with the church play in the process of emigration and integration?*

Research Design: This sociological study is descriptive and employs qualitative research methods, specifically interviews. Initially, unstructured interviews were conducted with a generative question. Data analysis through coding identified categories and subcategories, forming the basis for data-induced questions and reaching theoretical saturation.

Data Collection: *The research focuses on residents of Bran Municipality, Braşov County, who have settled abroad.*

The sample consisted of 24 individuals, with interviews conducted online lasting between 40 minutes to 1.5 hours. Theoretical sampling was used, involving data from relay informants and the snowball technique.

RESULTS

For data analysis, we employed open, axial, and selective coding techniques.

Socio-Demographic Data of the Respondents

The sample comprised 10 men and 14 women, with ages ranging from 19 to 55 years. Four participants emigrated with their parents before reaching adulthood but chose not to return to Romania upon turning 18. Most respondents had been abroad for over five years, with four having been away for four years. Notably, four respondents had resided in Germany and Italy for over 19 years. The current residence distribution of respondents is as follows: 12 in Germany, six in Italy, four in the United Kingdom, and two in France.

Identifying the Reasons for Romanian Emigration

The primary motivation for Romanian emigration is financial, driven by the pursuit of a more prosperous life, greater opportunities, and a quieter lifestyle. Financial burdens such as bank debts and the desire for higher salaries are significant factors: *"The debts from the bank were high, I had ended up giving more than half of my salary to the bank. I had to do something, and going abroad was the solution"* (Subject J).

Family reunification is another critical reason: *"With our departure, our family was reunited and me, my husband, and children were again under the same roof"* (Subject N).

Often, the motivation to emigrate is a combination of financial and familial reasons: *"I think Germany chose us, I gave it a chance and it was so good not to be stressed about money anymore, that I stayed with my husband permanently"* (Subject S).

Minors who relocated with their parents support their decision, considering the move to offer better opportunities.

Information about host countries was typically obtained from life partners, relatives, acquaintances, or online sources. Initially, most respondents received assistance from relatives and acquaintances, and some lived with them until they could secure their own housing: *"My aunt and uncle got involved in finding work and a home provided by the employer, they helped when I had to move for supplies, etc."* (Subject T).

Identifying the Difficulties Faced by Romanians in the Integration Process

A significant challenge encountered by Romanians abroad is learning the language of the host country. Out of the 24 interviewees, 18 were unfamiliar with the host country's language but made efforts to learn it to integrate into school or work: *"It was difficult for me to learn the language, but I showed interest and did well"* (Subject H); *"It's hard, but I needed it at school"* (Subject G). Six respondents knew the host country's language, which facilitated their integration: *"I knew the language since I was little, this was an important pillar for my accommodation"* (Subject D).

French and Italian, being more similar to Romanian, were easier to learn, while English posed fewer difficulties except for accents differing from those learned via media: *"The English I know from the Internet is not so formal"* (Subject E). Conversely, those in Germany faced significant language learning challenges: *"The most difficult is learning the language"* (Subject F), which hindered their integration: *"German is not a Latin language and its structure is different from Romanian, so I had to work a lot in my free time to improve my knowledge of German"* (Subject F); *"If I could turn back time, I would have learned the language before coming here"* (Subject I).

Another difficulty was the perception by locals, with some Romanians feeling labeled or discriminated against. Opinions about Romanians were mixed, with some viewing them negatively: *"I think that being Romanian I was somehow a victim of racism due to the negative publicity towards Romanians and the confusion between us Romanians in Romania and the ethnic Roma from Romania who steal. I even had people tell me they were amazed at how smart we Romanians are"* (Subject A). The fear of prejudice pushed some to be ashamed of their origins, while others felt compelled to prove that Romanians are honest and educated: *"They look funny at you when you speak Romanian, they think we're thieves and beggars, but if they see you're serious at work, they respect you. I didn't shy away from saying that I'm Romanian"* (Subject H).

Romanians abroad sometimes felt treated as inferior by the host country's citizens: "... as Romanians we are considered to be inferior. They have prejudices when it comes to us as a nation. Someone even asked me if we have malls or high-performance smartphones. What upset me more was how their attitude changes when they find out you're from Romania" (Subject B).

Attitudes of Romanians Settled Abroad Towards Romania and the Host Country

Generally, Romanians maintain contact with relatives, colleagues, and friends in their home country: "I go when I have the opportunity because my father lives there, but also to see my former friends" (Subject E). The connection with Romania weakens for those without relatives there.

Some individuals maintain contact with Romania primarily for administrative reasons: "Now I mostly come to resolve personal affairs/documents" (Subject D). This indicates both a physical and emotional distance from the country of origin: "I took a certain sentimental distance from Romania, which for me was beneficial or maybe even decisive. Later I rediscovered Romania almost as a tourist" (Subject C).

Romanians often draw comparisons between their country of origin and the host country.

Many highlight the differences in educational systems, often favoring the Romanian system. They argue that Romanian education is more rigorous and provides better training, while education abroad is perceived as more relaxed and superficial: "What I am most proud of in Romania is the education system, the one I know from when I was a student in high school. I am grateful that I acquired so much knowledge. We Romanians are very good at mathematics and physics and we had some advantage compared to those who studied in this country in terms of certain subjects, especially mathematics, which is not taught at a high level as it is in Romania" (Subject U); "I am surprised by the level of education here and the fact that it is much weaker; when I heard that here in the fifth grade a child doesn't know how to multiply properly, I was shocked. I don't know what they teach the children here, but it's certainly not very good" (Subject M).

Romanians' adaptability, inventiveness, and perfectionism in various fields are often recognized by natives of the host countries: "I even had people who told me that they were amazed at how smart we are as Romanians because we solved problems that they were not able to solve" (Subject A). However, a significant inconvenience is the non-equivalence of diplomas: "It is disturbing that here, in order to find a job, you have to go to school. School and studies at home are not recognized" (Subject B).

Despite this, Romanians acknowledge benefits in terms of education and services offered by host countries: "In our country, practice is learned by stealth because there is a saying that the profession is stolen, not learned! In Germany, it's not like that; they take the time to teach you" (Subject L).

Many Romanians in the diaspora express disappointment with Romanian politicians and the management of public affairs. Criticism often targets corruption, nepotism, lack of transparency, and excessive politicization of state institutions.

Romanians are often surprised by the culinary differences between Romania and the host countries. For some, the different food represented a shock and a difficulty in the integration process: "They sing happy birthday to you in their language and I don't get the cake made by my mother, only a cake that they call a cake. The negative part of my

stay here was and still is the food, nothing tasted like home, even though I cook the meals myself. Vegetables, fruits, and meat have a different taste. Not to mention their bread, which is terrible; it does not compare to the bread made in Romania. I'm not saying they don't have good food, but it doesn't compare to ours. I always ask my friends who come from the country to bring me some local products" (Subject B).

The Role of Religion in the Emigration and Integration Process

Four respondents were assisted by the church in the emigration process. Romanians abroad respect both their own holidays and those celebrated in the host country. The church provides a framework for speaking their mother tongue, meeting compatriots, and fostering unity, which gives them a sense of security. The church offers support funds to newcomers and those in need within the community. Accommodation and employment opportunities are provided through religious communities, facilitating integration.

The interviewed individuals are Orthodox, and, for most, religion is very important. They feel the lack of an Orthodox church or the distance to it acutely. Some respondents recall childhood holidays spent with family: *"I am proud that Romania is my country. I tell everyone that I am Romanian, and I tell them about our traditions and customs. During the holidays, I feel a little empty because I remember how it was at home during the holidays. Here they are Catholics, which is not very different from our church, but I prefer to have an Orthodox icon at home"* (Subject R).

Romanians are often surprised by the low religiosity in the host country: *"I felt that I was moving away from religion here, the Orthodox church being 200 km away. When I was in the country, we always went to church on Sundays and holidays. Here, unfortunately, I no longer have the opportunity and still try to keep my faith by listening to services on the phone. Here, people are not as religious as at home, and to my surprise, even the older generations are not very religious"* (Subject S).

Conversely, the religiosity of Romanians tends to increase with age. Many choose to spend holidays or events such as weddings and baptisms in Romania. However, the situation is different for young people. Although raised to be religious, young people more easily adopt other beliefs: *"Being abroad made me more open-minded, to be able to have my own beliefs"* (Subject D).

Religion plays an important role in the process of adaptation and integration, fulfilling several protective roles: "the protective element of faith, the feeling of belonging to a bigger group, the church as a place for encounters and establishing social ties, and the exchange of support among churchgoers" [12]. However, "migrants can choose whether to stay in the church or go a different way—to choose atheism, noninstitutionalized orthodoxy, or a different kind of spirituality. All of these choices are closely connected with both their pre-migratory lives and their post-migratory settlement experiences" [13].

Considerations on Returning to Romania

Of the 24 respondents, 20 do not wish to return to Romania. The prospect of a better life and more opportunities are primary reasons. Having family nearby and better future prospects for their children are strong arguments for staying abroad. Sandu [14] also confirms the hypothesis that migration is learned step by step: some Romanians who arrive in a certain country leave from there to another country, depending on what they find along their migration route. Therefore, there are certain social fields of Romanian emigration in which their remigration from one destination country to another must also

be taken into account, within specific migration cultures, in social networks and interactions.

However, some Romanians miss their country, traditions, and customs. Even if they think that they will never return, some keep this possibility open, especially in case of unforeseen circumstances. Raising the standard of living and reforming the system in Romania could be a significant reason for their return.

CONCLUSIONS

Despite emigrating to countries with different dominant religions, mature individuals remain firm in their beliefs. Emigration offers an opportunity to strengthen and deepen their spiritual understanding in a broader, multicultural context. Young people, however, may experience a change in beliefs due to interactions with other communities and cultural contexts, leading to a reconsideration of their religious or spiritual values and traditions.

Young people more easily integrate experiences abroad, adapting quickly to the local language and culture. They generally intend to stay abroad for extended periods.

Individuals with family ties or friends in the host country benefit from an advantage in the adaptation process, receiving emotional and practical support. Knowing the host country's language also facilitates faster and easier adaptation. However, all respondents make efforts to learn and improve their new language skills.

Economic reasons are a primary driver of migration, reflecting limited opportunities in Romania. Social and cultural factors also play a significant role in the decision not to return.

Migration has produced many unfavourable effects at all levels of Romanian society: reduction of the resident population, total or partial depopulation of some localities, reduction of the economically active population, ageing of the population, increasing the pressure on those left behind to support the elderly. All this has a long-term negative impact on the sustainability of health and social services [10]. Additionally, migration impacts family life, leading to separation from loved ones and difficulties in maintaining ties with the Romanian community and culture.

This study used a qualitative approach to explore the motivations, challenges and future plans of Romanian migrants. Multinational surveys are still needed for accurate measurement and hypothesis testing to provide a basis for long-term action.

Understanding the reasons and consequences of Romanian migration abroad can inform policies and measures that encourage return and provide a favorable environment for economic and social development in Romania. In this regard, the Department for Romanians Abroad has developed the National Strategy for Romanians Abroad 2023-2026 in order to adopt the best measures regarding this phenomenon [15].

Promoting cooperation between destination countries and Romania can facilitate reintegration and reconciliation. Addressing the reasons for non-return can contribute to creating a favorable framework for Romania's development and optimizing the country's potential and human resources. Migration is a complex phenomenon, and addressing this issue requires efforts at both the individual and governmental and societal levels.

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THE POSITIVE CONTRIBUTIONS AND SOCIAL SUPPORT OF FAMILIES WITH CHILDREN WITH DISABILITIES

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ABSTRACT

This literature review explores the current state of research on positive contributions and social support among families with children with disabilities in mainland China. Positive contributions refer to the beneficial impact on family dynamics and cohesion achieved through positive interactions with the child. International studies suggest that these contributions can enhance family happiness, while domestic research in China predominantly highlights negative aspects, such as the pressures these families encounter.

The review methodology involves analyzing both qualitative and quantitative studies on family quality of life, social support, and positive contributions. Sources include academic journals, policy reports, and research articles, with a thematic synthesis conducted to identify differences in international and Chinese perspectives, alongside specific cultural influences. Social support, crucial in helping families manage stress, plays a pivotal role in fostering positive contributions. Emotional, instrumental, and informational support types have shown to mitigate family stress and encourage adaptive growth. In China, however, parents, especially of children with autism, often rely on limited informal support, which fails to meet all their needs.

Cultural factors, such as collectivism, family obligation, and Confucian values, deeply influence family responses and perceptions of social support. Disabilities are frequently stigmatized, pushing families to focus on internal support networks and avoid seeking external aid. This cultural backdrop shapes the availability and nature of support, affecting how positive contributions are experienced.

In conclusion, while international research increasingly acknowledges the positive contributions of children with disabilities, Chinese studies remain more concerned with challenges. Future research in China should explore how social support mechanisms could amplify positive contributions, helping improve societal attitudes toward these families and enhancing their overall well-being.

Keywords: Positive Contributions, Social Support, Disabilities, Resilience

INTRODUCTION

Families of children with disabilities often face significant challenges, including emotional, financial, and social burdens, which can impact their quality of life and overall well-being. However, despite these challenges, many families display remarkable resilience and adapt in ways that lead to positive outcomes for both the child with disabilities and the entire family^[1]. In recent years, there has been growing recognition of the positive contributions that children with disabilities bring to their families, such as enhancing family cohesion, increasing empathy, and fostering personal growth among family members^[2].

In mainland China, the number of children with disabilities has been steadily increasing, leading to greater attention on how these families cope with challenges and the types of support they receive. Chinese cultural characteristics, such as collectivism, Confucian values, and a family-centered care approach, have a significant impact on how families perceive disabilities and how they access and utilize social support. In contrast to Western countries, where formal social services are often widely accessible, Chinese families tend to rely heavily on informal networks, such as extended family, to provide caregiving support^[3].

This literature review aims to examine the positive contributions that children with disabilities bring to their families and the role of social support in enhancing these contributions. By exploring both international and domestic research perspectives, this review seeks to identify cultural influences and gaps in understanding the unique experiences of families in China. Moreover, it aims to provide insights into how enhancing social support can foster positive family outcomes, ultimately promoting the well-being and integration of families with children with disabilities in Chinese society.

METHODS

This literature review adopted a systematic approach to identify and synthesize existing research on the positive contributions and social support of families with children with disabilities in mainland China. The methodology involved the following steps:

Data Collection

The data for this literature review were collected through a comprehensive search of electronic databases including Google Scholar, PubMed, JSTOR, and CNKI (China National Knowledge Infrastructure). Keywords such as "positive contributions," "social support," "children with disabilities," and "China" were used to locate relevant studies. Both peer-reviewed journal articles and government reports published between 2000 and 2023 were included to ensure a comprehensive understanding of both international and domestic perspectives.

Inclusion Criteria

The inclusion criteria were as follows:

Studies published in English or Chinese; Studies focusing on families with children with disabilities; Studies examining social support, or positive contributions.

Data Analysis

Thematic analysis was employed to synthesize the findings from the collected studies. The analysis involved coding the data to identify key themes such as positive family contributions, social support mechanisms, and cultural influences. Comparisons were made between international studies and domestic research in China to highlight differences in focus and perspective. The cultural influences specific to mainland China were analyzed to understand how they impact social support availability and the positive contributions of families.

RESULTS

Positive Contributions of Children with Disabilities to Their Families

Positive family contributions refer to the constructive impacts on family dynamics, cohesion, and development that emerge when family members respond to the efforts and needs of children with disabilities with positive cognitions and behaviors. This reciprocal support fosters an environment that enhances both the child's self-efficacy and the family's psychological well-being and cohesion^[4]. Behr et al. highlighted nine dimensions of these contributions, including happiness, family closeness, and personal growth, which have become widely used in studies examining family support effects for children with disabilities^[5].

International Research Progress: International studies have long recognized the importance of family contributions for children with disabilities. For instance, the Early Childhood Outcomes Center (ECO) in the U.S. has demonstrated through quantitative analysis that children with disabilities can foster positive changes within their families^[6]. Benson (2006) found that parents of children with autism gain positive experiences such as emotional support and social skills through adapting to their child's unique needs^[7].

Domestic Research Status: Domestic research on families of children with disabilities tends to focus on family stress and negative impacts, with less emphasis on positive contributions. For example, Wang et al. (2011) noted that children with autism impact families both positively and negatively^[8]. Tian et al. (2018) found that family contributions varied significantly by factors like parental education and income, with emotional support significantly enhancing family happiness, responsibility, and social engagement^[9]. This suggests the importance of positive contributions for enhancing overall family well-being.

The Impact of Social Support on Families with Children with Disabilities

Social support refers to the emotional, cognitive, informational, or material aid provided to help family members cope with stress and improve life satisfaction. Zhang's (2007) Social Support Scale, developed for families of children with autism, includes emotional, instrumental, and informational support, showing that both formal and informal support significantly impact family members' mental health^[10].

International Research Progress: International studies on social support for families with

children with autism focus on emotional, instrumental, and informational support. Renty and Roeyers (2006) found that the availability and effectiveness of social relationship support strongly impact positive family outcomes^[11]. Whitaker (2002) noted that while parents of children with autism have high informational support needs, they often lack adequate resources, particularly for educational access^[12].

Domestic Research Status: In China, social support for parents of children with autism is primarily informal and limited. An and Hu (2018) observed that parents of children with autism express a strong need for structured rehabilitation guidance and emotional support, with informal support being crucial for coping^[13]. Tian et al. (2018) found that social support significantly predicts positive contributions, with emotional support playing a key role in enhancing quality of life^[9]. Cultural influences, such as a preference for family-centered care, play a significant role in shaping the type of support that is available and accessed by families. Due to societal stigma around disabilities, parents often rely on informal family support rather than seeking formal assistance.

The Relationship Between Positive Family Contributions and Social Support

Social support affects positive contributions in families with children with disabilities both directly and indirectly. Directly, it promotes adaptive growth and mental health through emotional and instrumental support. Indirectly, it reduces family stress, enabling positive coping strategies that enhance family cohesion and life satisfaction. Benson (2006) demonstrated that emotional support for mothers of children with autism significantly improves psychological health, fostering closer family relationships through positive coping.

DISCUSSION

The role of cultural factors in shaping the positive contributions and social support experienced by families with children with disabilities in mainland China is crucial. Traditional Chinese culture, deeply rooted in Confucian values, places a strong emphasis on family obligations, filial piety, and collective well-being^[14]. This collectivist orientation means that families are often expected to care for members with disabilities within the home, relying on familial resources rather than seeking external help. This family-centric approach, while fostering strong family bonds, can also lead to significant caregiver burden and limited access to professional support services^[15].

The concept of “face” (面子) also plays a significant role in the social dynamics of families with children with disabilities. Many parents fear losing face in their community due to their child's condition, which can deter them from seeking external assistance or participating in public support programs^[16]. This cultural pressure contributes to the reliance on informal support networks and the underutilization of formal social services. Understanding these cultural elements is critical to developing effective interventions that can enhance both social support and the positive contributions of children with disabilities.

Moreover, the stigma associated with disabilities in China impacts the level and quality of social support that families receive. Negative societal perceptions often lead to isolation and discrimination, making it challenging for families to access community-based resources or to feel comfortable engaging in social activities^[16]. These factors emphasize the need for community education and advocacy programs to change public perceptions of disability, reduce stigma, and promote an inclusive environment where families can thrive.

Despite these challenges, the collectivist culture also provides a potential strength for building social support. Extended family members, including grandparents and other relatives, often play a significant role in caregiving, providing emotional and instrumental support. Harnessing this extended family support network, while also expanding formal support services, could be an effective strategy for improving family quality of life in China.

Future interventions should take into consideration these cultural nuances. Programs that provide support in a culturally sensitive manner, such as involving extended family members in caregiving training or providing support services that respect privacy and avoid stigmatization, may be more effective in reaching and assisting these families^[17]. Additionally, community-based initiatives that focus on reducing stigma and increasing awareness about disabilities could foster a more supportive environment for families, encouraging the use of formal support systems alongside existing informal networks.

CONCLUSIONS

In summary, international research on families with children with disabilities has shifted toward recognizing the positive contributions these children bring to their families, such as enhancing resilience, cohesion, and even providing a sense of purpose. This positive perspective helps counterbalance societal stigma and highlights the ways in which children with disabilities can enrich family dynamics. In contrast, domestic research in China remains largely focused on the challenges and negative impacts, such as psychological, financial, and social pressures, that these families face. This narrow focus not only limits the understanding of family resilience but may also reinforce stigma and bias against these families by painting an incomplete picture of their experiences.

To address this gap, Chinese scholars should expand research on the positive contributions of children with disabilities to their families, exploring how these contributions foster adaptive growth, strengthen familial bonds, and build emotional resilience. Specifically, research should examine the mechanisms through which social support enhances these positive contributions, as international studies have shown that access to emotional, instrumental, and informational support plays a critical role in alleviating stress and encouraging adaptive family functioning. This support can range from formal services provided by healthcare and community organizations to informal support from extended family and friends, which, while limited in scope in China, can

be a vital resource for many families.

Moreover, cultural factors unique to China, including collectivism, family-centered care, and the stigma surrounding disabilities, should be carefully considered in future research and intervention programs. Collectivist values and Confucian principles, which emphasize family loyalty and harmony, often lead families to adopt a self-reliant approach, seeking solutions within their own networks rather than accessing external support. Additionally, disabilities are frequently perceived as stigmatizing, causing families to hesitate in reaching out for help and leading to a reliance on family-centered care instead of community-based resources. Such cultural influences not only affect the availability of social support but also shape the way families perceive and experience the potential benefits brought by their children with disabilities.

Future research and intervention programs should consider these cultural nuances to design effective support systems that align with Chinese families' values and needs. Providing more systematic emotional, instrumental, and informational support, tailored to address both practical and psychological aspects, could significantly improve these families' well-being. This includes creating accessible community resources, raising awareness to reduce stigma, and encouraging family members to embrace external support. By emphasizing the positive contributions of children with disabilities, future research and interventions can help improve the social image of these families, promote their social integration, and ultimately support their healthy development in both urban and rural communities across China.

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THE IMPACT OF SURVEYS IN THE DESIGN OF MEDICAL DEVICES: INCREASING CIVIC PARTICIPATION AND COMMUNITY INVOLVEMENT

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ABSTRACT

Today, in a world dominated by technology and rapid innovation, involving end-users in the development process of medical devices has become a priority. Surveys have become a relevant tool to obtain direct feedback from users, providing essential information about their needs and preferences. This study explores the impact of these surveys in the design of medical devices, highlighting the benefits of civic participation and community involvement in this process. Participation in surveys encourages people to reflect, increasing awareness of important subjects such as medical devices. By analyzing data obtained from surveys, their relevance as indispensable tools in improving medical devices can be emphasized. They offer designers valuable insights from potential users regarding aspects such as design, functionality, ergonomics, or usability of medical devices. User feedback is fundamental in the medical device design process, achieved through effective communication between designers and users, aiming to meet their needs and build trust in the product. This allows for quick adjustments and necessary improvements to meet specific and collective community requirements, while promoting active participation and civic engagement. Through surveys, respondents feel involved and heard, which can strengthen confidence in the design process and increase awareness of user needs and preferences. Thus, participants become key partners in product evolution and contribute to its quality improvement, while community involvement through surveys can encourage civic participation and promote social responsibility.

Keywords: surveys, design, medical devices, civic participation, community involvement, feedback, users, product development.

INTRODUCTION

A democratic system is strengthened not only by economic development, but above all by increasing the level of civic participation. In Romania, adherence to European and Euro-Atlantic institutions based on democratic values is a necessary, but not sufficient condition for the formation of a robust civic culture. Similarly, economic development is essential, but insufficient. In order to integrate democratic values into society, it is essential to increase civic participation [1].

Participation in surveys significantly contributes to raising awareness and civic engagement of the community. It allows citizens to express their opinions and influence the development of various mechanisms, such as medical devices ensuring the satisfaction of user preferences and improving their quality. Surveys not only improve products, but also promote citizen participation and involvement in decision-making, implementation,

and implementation of decisions, an essential condition for the functioning and consolidation of democracy. It ensures greater adequacy of decisions and action programs to the needs of the social community and by participating in their elaboration, these decisions will be easier for citizens to understand and will benefit from wider support. This leads to increased efficiency of actions and supports the implementation of inclusive social development strategies [2].

The development of a community can not only be achieved through economic progress, but also through the establishment of a consensus on the legitimacy of political institutions, the acceptance of political pluralism and the peaceful resolution of conflicts, in-depth understanding of the mechanisms and political actors involved and building mutual trust between citizens and institutions, as well as active cooperation within the community. Participation in a community can manifest itself in various forms, including civic, community, electoral, and political participation [1].

Civic participation is paramount for a healthy and progressive society, and in order to increase citizen involvement in community activities and public decisions, it is important first of all to focus on youth involvement, and to identify functional groups, listen to the needs of citizens, promote collaboration between organisations, use media effectively, support public dialogue, paying attention to the rural environment and educate in civic values. Through these measures, we can build a more solidarity-based and responsible society [1].

It is essential to mention that community development projects have brought significant benefits, and with the support of non-governmental organisations in Romania, they have strengthened their role and influence in society. Although the field of community development is underfunded, small organisations also face difficulties in obtaining funding for their initiatives, recent changes have led to a greater focus on the technical aspects of community interventions and less on participation. Funding from international donors and non-governmental organisations has been gradually replaced by European funds, affecting the way community development projects are implemented. It is important that non-governmental organisations find innovative solutions to ensure the necessary funding and support for the development of local communities in Romania [3].

Surveys help to create more efficient communication between non-governmental organisations and the local community, involving residents in decisions that directly affect them. Through surveys, non-governmental organisations can adopt more relevant and adapted strategies to the real needs of communities, contributing to their sustainable development and obtaining direct feedback from community members, thus identifying their priorities and issues.

Over more than thirty years of using the concept of community participation in the field of health, it has been enthusiastically adopted, theorized, evaluated and used practically, but also heavily criticized. In the current context, marked by reforms that try to bring public services, including health services, closer to the population, the concept remains relevant and useful, despite criticism. Certain health policies, programs, or projects cannot be successfully implemented in communities without the active involvement of their members, and in Romania, the issue of community participation has been approached mainly from the perspective of community development, a subject present in numerous works. Various authors have highlighted low levels of community participation, especially in rural areas. Regarding community participation in health issues, only initiatives related to involving community members in returning research

results that addressed health aspects or initiatives that fall within the lowest level of participation, namely mobilization, have been identified [4].

Medical devices play an important role in ensuring the quality of medical services, protecting and promoting the health of the population. The safety of patients and medical device users directly depends on the quality of these devices. According to a report by the World Health Organization, medical devices and bioengineering represent 50% of medical practice, the remaining 50% being represented by medicines and doctors intervention [5].

Medical devices are now an omnipresent part of modern medical care, and are in many cases associated with the quality of care. Through collaboration with the community and participatory involvement of end-users, the risk of errors is reduced, and medical devices are ensured to be more efficient and safer, thus meeting the real needs of patients and medical staff. Through civic participation and community involvement, it is possible to obtain better and more adapted products to their needs, helping to improve the health system and protect the health of the population. Therefore, involving end-users in the development process of medical devices through surveys is necessary to ensure their quality and safety.

The implementation of quality standards in relation to medical devices has been largely determined by regulations. However, regulation in the field of medical devices in Europe is still at an early stage, which may jeopardise their reliability and safety. Interaction between users and devices, which is not adequately covered by regulation, should be a major concern in quality assurance programs.

Thus, surveys are pivotal to improve products and meet user requirements, providing valuable insight into their preferences. While device regulation is important, it is not sufficient to guarantee their reliability and safety. Education is also fundamental in ensuring the quality of medical devices, considering addressing specific issues in the field and promoting an effective and ethical development of medical devices.

MATERIALS AND METHODS

The hypothesis of this study stems from the fact that surveys can play a significant role in the design of medical devices, leading to increased civic participation and community involvement in the process. By collecting and analyzing direct feedback from potential users, designers can develop devices that better meet their needs and preferences, thereby helping to improve the quality and effectiveness of medical products. Also, community involvement in the design process can lead to greater trust and acceptance of medical devices, as well as an increase in social responsibility for their promotion and use.

The method used to collect perceptions and opinions of citizens, on involvement in the design and development of medical devices, consisted of distributing an online questionnaire. This method allowed to collect a large amount of data in an efficient way and involve a diverse sample of respondents, both people from areas that interact with the medical sector and as well as individuals outside of it.

The questionnaire was distributed online through survey platforms and social networks to reach a diverse and broad audience, obtaining insights and direct feedback from users on the design of medical devices. Participation was voluntary and respondents were assured of the confidentiality of their data and the right to withdraw at any time. The

data collected were analyzed using descriptive statistical methods to identify trends and correlations in participant responses. The process of distributing the questionnaire lasted for about one month, at the middle of the month 182 questionnaires were collected, followed by the rest of 155 questionnaires by the end of the month, resulting in a total of 337 complete questionnaires out of 350 distributed questionnaires.

The questionnaire structure was designed to obtain a deep understanding of user perceptions on medical devices, starting with key demographic questions on age and gender, continuing with exploring personal experience with medical devices and design priorities. The questions were formulated both in a closed format (with predefined response options) and in an open format (allowing respondents to provide detailed and personal answers). Demographic analysis assessed the distribution of respondents to understand their profile and the influence of age and gender on perceptions of medical devices. Personal experience with medical devices has been correlated with identified design priorities to assess the impact of direct experiences on preferences and concerns. Important aspects of design were analyzed to determine which features are considered critical by the majority of respondents, and feedback on negative experiences was analyzed thematically to identify common problems and suggest specific improvements. The importance of user feedback in the design process was then emphasized, highlighting the need for user-centered strategies and suggestions and comments have been analyzed to extract concrete ideas and recommendations for improvement of medical devices.

RESULTS

The questionnaire was completed by a varied sample, comprising participants from different age and gender categories, which facilitated the achievement of a broad perspective on public opinion. Analyzing the data collected from the questionnaire, several significant conclusions could be drawn.

First, the analysis of demographic data allows to identify perceptual trends and differences between various demographic groups, providing valuable information for understanding variations and similarities in opinions and experiences, and, thus contributing to the development of more precise improvement strategies and adapted to the specific needs of each segment of the population. Of the 337 respondents, 2 were under 18 (0.59%), 174 were between 18 and 30 years (51.63%), 117 were between 31 and 45 years (34.72%), 39 were between 46 and 60 years (11.57%) and 5 were over 60 years (1.48%). Regarding the distribution of the respondents gender, we note that of the 337 respondents, 214 were women, representing 63.50% of the total, while 122 were men, which is 36.20% of the total. Also, a single individual refused to provide information about his gender.

Interestingly, about half of respondents have knowledge about the use of medical devices, and the other half have no experience in this field. Respondents with personal experience in using medical devices can provide more detailed and informed insights compared to those without such experiences, who may need additional education and information to ensure the correct use of medical devices. Out of a total of 337 respondents, 336 responded, and 152 respondents (45.24%) said they had knowledge about the use of medical devices, while 184 respondents (54.76%) mentioned that they do not have the necessary experience on the use of medical devices.

As for the aspects considered most important in the design of a medical device, the responses were much more varied. The prioritization of different aspects of design by

respondents can guide the direction of research and development to focus on the most critical elements for users. A percentage of 17.80% of respondents pointed out *ease of use* and *user comfort* (5.93%), while the majority, that is 52.82%, considered *effectiveness of the treatment* as the most important aspect. Other participants mentioned *user safety* (16.32%) and *durability and quality of materials* (5.93%). Only 0.30% indicated *aesthetic design* as important, while 0.89% mentioned *other*. Therefore, the effectiveness of treatment was perceived as a fundamental aspect by most of the participants in the survey, highlighting the important role of achieving favorable results for patients.

There is also a significant concern about user feedback and needs in the design process of medical devices, highlighting the importance of direct user involvement in the development of these products. The results of the analysis show that an overwhelming majority of respondents consider it essential to integrate user feedback into the design of medical devices, with over 96% of them agreeing with this idea. This strong consensus underlines the need for design strategies that incorporate user feedback and needs in a participatory and user-centered way.

The suggestions and comments expressed by the respondents underline the need for an interdisciplinary approach in the design of medical devices, with a focus on ensuring their safety, effectiveness and adaptability to the real needs of patients and medical staff. Response analysis reveals the importance of involving users in the development of devices, providing key insights to improve their design in order to meet user requirements and expectations. This can lead to medical devices that are safer, more effective and better accepted by the community.

Based on the suggestions received from the participants, relevant proposals were highlighted for optimizing the design and development of medical devices. These include adapting the design to the specific anatomy of patients, implementing an intuitive interface, ensuring the reliability and security of the devices, regulating online sales by competent authorities such as the Ministry of Health. It was also emphasized the importance of aligning the design process to the real requirements of users and medical staff, drafting accessible user and assembly instructions, facilitating device maintenance, improving communication between users and specialists, using quality materials, incorporating user feedback into the process of improving the products and services offered. They also recognized the importance of meeting safety and efficacy standards before market launch, recommending the constant involvement of medical professionals and collaboration with interdisciplinary teams throughout the design process.

Thus, the data collected from our questionnaire can be useful in the process of developing and improving medical devices, as well as for guiding future research and innovations in the medical field. The results of our study indicate that feedback obtained through surveys has a significant impact on the quality and efficiency of medical devices, providing valuable information to identify user priorities and needs, providing medical device manufacturers with a solid foundation for the continuous improvement of their products.

DISCUSSION

The results of the study confirmed the hypothesis that surveys play an essential role in the design of medical devices, leading to increased civic participation and community involvement in this process. The involvement of end-users in the

development of medical devices, through surveys, is a major concern in the current context of research and innovation in the medical field. The results of this study support the importance of civic participation and community involvement in the design of medical devices, highlighting the benefits obtained through direct feedback from users.

By analyzing the data collected from our questionnaire, we noticed that the improvement of medical devices is closely related to the involvement of users and listening to their needs. Participants realize that they are not alone in meeting certain difficulties or appreciating certain aspects of medical devices, which can encourage a sense of community and sharing experiences, thus increasing civic engagement. In addition, individuals become more aware of their own perceptions and how they align or differ from those of others, facilitating a better understanding of personal needs and stimulating the search for optimal solutions for their health.

Involving the community through surveys brings many benefits, including increasing the acceptance of devices by valuing and listening to users, improving user-oriented design through direct feedback for specific adjustments, as well as reducing development risks and costs by identifying problems at early stages. These aspects contribute to increasing respondents confidence in the decision-making process and to a greater awareness among the community.

Prioritizing aspects such as treatment efficiency, user safety and ease of use are key directions for designing medical products that ensure optimal therapeutic results and optimize user experience. Also, feedback obtained through surveys reveals the need for an interdisciplinary approach in the design of medical devices, including in collaboration with medical professionals, and to ensure a more effective integration of medical devices into medical practice. Also, the focus on issues such as adapting to patient anatomy, ensuring safety and regulating online sales reflect the concern to provide reliable medical products that meet quality standards.

Survey participation not only influences the design of medical devices, but can also have a significant impact on public policy. The data collected can be used by policy makers to better understand the needs of the population and implement regulations that ensure the quality and safety of medical devices.

Another important aspect of surveys is voluntary participation. Although this may introduce a certain bias, since people who choose to participate may have a greater interest in the subject, the benefits of reflection and awareness are significant, it is essential that surveys are designed and distributed in a way that attracts the most representative sample of the population to ensure that the results are generalizable and relevant.

Continuous and up-to-date feedback is important for improving medical devices, as it allows manufacturers to stay connected with user needs and adjust products accordingly. Periodic surveys serve not only for data collection, but also as an educational tool for those who participate in them. Participants can gain new knowledge about the safety and efficiency of medical devices, which can lead them to become more informed and critical about the products they use. Thus, feedback and participation in surveys can contribute to more conscious and responsible use for medical devices.

Participation in surveys can also stimulate innovation. User feedback can reveal unaddressed needs and preferences to date, providing manufacturers with opportunities to develop new products and functionality. For example, suggestions for improving aesthetic design or adding new features can guide innovation in directions that make medical devices more attractive and useful for users. Thus, collecting and implementing

user feedback through surveys can build and strengthen the relationship between producers and users. When users see that their opinions are taken into account and that medical devices are improving according to their feedback, their confidence in manufacturers is growing and this trust can lead to greater brand loyalty and greater responsiveness to future products.

However, there are also limitations and challenges associated with survey participation, although efforts have been made to mitigate these limitations through rigorous methods of data collection and analysis methods, ensuring robust and meaningful results. One of the main challenges is to ensure a representative sample, given that participation is voluntary and can be influenced by demographic and socio-economic factors. Open response interpretation can also be subjective and time-consuming, requiring rigorous coding and analysis methods.

In the context of our study, the online distribution of the questionnaire may pose a risk of not covering all segments of the population, especially those who do not use the internet frequently. This may compromise the representativeness of the sample and influence the results in a way that does not adequately reflect the diversity of the population. An imbalance in the demographic distribution of survey participants can have a significant impact on the results, and the absence of an appropriate methodology can lead to subjective interpretations and unfounded conclusions. For example, if the majority of respondents are young (between 18 and 30), the data obtained may reflect more the preferences of this age group, ignoring the needs and concerns of other age groups, especially the elderly. The rapid evolution of technology can make some suggestions irrelevant before they are implemented, requiring continuous adaptability in the design process. In addition, the analysis of open responses can be subjective and time-consuming, requiring the need for rigorous thematic coding to ensure objectivity and consistency in data interpretation, and voluntary participation can introduce a bias into the collected data, since only people with a particular interest in the subject may be prone to respond, that may decrease the representativeness of the sample and affect the validity of generalizations based on these data.

While the research offers valuable insights into user perceptions and highlights the importance of user involvement in the medical device design process, to improve the quality and relevance of future studies, it is essential to ensure the widest diversity and representativeness in the sample, to use rigorous methods of data analysis and to implement measures to minimize participation bias. This approach will enable effective use of user feedback to guide the development of medical devices that meet user needs and preferences and future research could investigate other factors influencing user perceptions of medical devices, such as cultural differences, socioeconomic factors, and technological literacy.

CONCLUSIONS

Surveys can stimulate civic awareness and involvement, promoting a culture of social responsibility and ensuring products are adapted to user needs and preferences. Active community participation in the design and development stages of medical devices is a strong factor in ensuring the effectiveness and performance improvement of these products. By implementing user feedback from surveys, manufacturers can continuously adjust and improve medical devices to better meet user needs and preferences. Close

collaboration between producers and users, open and transparent dialogue, as well as the constant adaptation of the products according to the real requirements are key elements for the development of efficient and well-adapted medical products.

Therefore, the results obtained from the surveys provide an essential insight into the needs and preferences of users, thus guiding the process of designing and developing medical products in directions that maximize their effectiveness and safety. By receiving and integrating user feedback, manufacturers can develop products that better meet real requirements and support public health and well-being.

Active community involvement in the design of medical devices can help to promote social responsibility and facilitate an open dialogue between all parties involved. In addition, by ensuring product adaptability and relevance, the partnership between manufacturers and users can be strengthened, thereby supporting innovation and improving the health system as a whole.

Given these considerations, it can be concluded that surveys have a significant impact in the design of medical devices, providing substantial benefits to both manufacturers and end users. The use of these feedback tools promotes closer collaboration among all parties involved in the development of medical devices, driving innovation and continuous improvement. While challenges such as participation biases and limitations due to restricted samples exist, it is essential to address these issues and implement strategies to ensure the representativeness and validity of the collected data.

By addressing these challenges, surveys can become a vital tool in the continuous improvement of medical devices, and expanding the study nationally or internationally could provide a more complete picture of user perceptions in different regions and cultures. Manufacturers that do not take user feedback into account risk being overtaken by competitors who use this information to create better and more competitive products. Additionally, continuing education and effective regulation are important for the safety and reliability of medical devices, and fostering active community involvement, diversity of perspectives, and interdisciplinary collaboration are necessary to support medical device innovation and progress.

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THE INFLUENCE OF DIGITAL AND SOCIAL TECHNOLOGIES ON THE ADAPTATION AND RECOVERY OF THE UKRAINIAN COMMUNITY IN BRASOV COUNTY IN THE CONTEXT OF THE ARMED CONFLICT IN UKRAINE

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ABSTRACT

The study establishes the context of the armed conflict in Ukraine and the importance of understanding its impact on the Ukrainian refugee community (URC), exploring how digital technologies (such as social networks and online resources) have influenced the adaptation and recovery process of URC in Braşov. In this context, previous research on the conflict in Ukraine and its impact on Ukrainian communities was analyzed, identifying the role of digital and social technologies in the adaptation and recovery process of these communities.

The methods and tools used in the research, as well as how participants were selected and data analyzed, allowed for the examination of the role that social technologies (such as online support groups and collaboration through social platforms) played in facilitating the adaptation and recovery of the community.

A separate topic open for discussion within the study represents the role of authorities and non-governmental organizations in supporting the Ukrainian community in the adaptation and recovery process, with a focus on the use of digital and social technologies.

Keywords: Ukrainian community, digital technologies, adaptation and recovery

INTRODUCTION

The armed conflict in Ukraine has generated a major humanitarian crisis causing the migration of millions of people in searching a safe shelter. In this context, Braşov county has become an important destination for Ukrainian refugees who face multiple challenges related to adapting to the new environment and recovering from the traumas caused by the conflict. Digital and social technologies play a significant role in facilitating this process providing access to essential information, support services and communication platforms that helps in maintaining the social and cultural ties.

This paperwork explores the complex interplay between armed conflict, refugee resilience and the use of digital and social technologies, highlighting the impact of these factors on the Ukrainian community in Braşov County. The study analyzes the crucial

role of authorities and non-governmental organizations in supporting the adaptation and recovery process by providing specialized services and developing appropriate digital infrastructure.

Furthermore, the paperwork examines how members of the Ukrainian community use digital and social technologies to access information and to communicate, identifying both the benefits and associated challenges. By providing practical and policy recommendations, this research contributes to the improvement of technology-based interventions and services promoting an integrated and sustainable approach in supporting refugees in the current context.

MATERIALS AND METHODS

The goal of this research is to examine the influence of digital and social technologies on the adaptation and recovery process of the Ukrainian community in Brasov County in the context of the armed conflict in Ukraine. Study objectives include:

- Outlining the interference of the armed conflict in Ukraine, refugee resilience and the role of digital and social technologies.
- Identifying the role of authorities and non-governmental organizations in facilitating the adaptation and recovery of the Ukrainian community in Brasov County through digital and social technologies.
- Analysis of the use of digital and social technologies by the Ukrainian community in Brasov in communication and access to information during the conflict.
- Providing practical and policy recommendations for improving technology-based interventions aimed to support the adaptation and recovery process of the Ukrainian community in Brasov.

For data collection, a structured questionnaire distributed online was used to obtain quantitative data on the use of digital and social technologies and participants' perceptions. The results were synthesized to draw conclusions on the influence of these technologies on the adaptation and recovery of the Ukrainian community in Brasov County.

The sample included members of the Ukrainian community in Brasov County, directly affected by the conflict or through their families and acquaintances. Of the total respondents, 67.9% were women and 32.1% were men reflecting the departure restrictions imposed on Ukrainian men. The largest group of respondents was in the 25-44 age group (53.8%).

Most of respondents (68.9%) are located in Brasov, while 20.8% were in Ukraine at the time of filling in the questionnaire. The level of education of the respondents is high: 46.1% have a bachelor's degree, 27.5% secondary education and 21.6% have a master's degree.

The purpose of the study is to understand how digital and social technologies can influence the adaptation and recovery process of communities affected by armed conflicts, such as the Ukrainian one in Brasov County. Given the omnipresence of technology it is essential to investigate how these tools can support the social and psychological reconstruction of communities affected by trauma and dislocation.

RESULTS

Background on Ukraine's Armed Conflict Interference, Refugee Resilience, and Digital and Social Technologies In the digital age, digital and social technologies have become central in our lives having an influence in the way we conduct our activities and relate. These technologies play a crucial role in building individual and community resilience by facilitating access to information and resources that support these processes. According to research of Smith & Anderson [13], Mano [7] and Auxier & Anderson [1], the use of the Internet and social media platforms can provide social support and useful information for problem solving, thus promoting resilience by creating online communities that facilitate sharing experiences and mutual support.

Digital technologies significantly contribute to community resilience by facilitating communication and collaboration between community members. Mehen (2023) points out that the use of online platforms and social networks can strengthen social ties and the capacity for collective organization and mobilization in the face of challenges [8].

However, there are also negative aspects. Excessive use of social media can lead to social isolation and diminished authentic interpersonal connections, as well as mental health problems such as depression [12] and low self-esteem [2]. Social relationships are twice influenced by digital technologies: they facilitate communication and the expansion of social networks, but they can also lead to the de-personalization of relationships and the increase of online conflicts [15].

The armed conflict in Ukraine is a relevant case study for the impact of digital technologies on resilience. In the context of the conflict for many Ukrainians forced to take refuge, digital technologies have become a crucial source of emotional support and community-building in their host countries. According to the Eurofound Report (2024), online platforms and discussion groups provided safe spaces for expressing emotions, sharing experiences and mutual support [4].

The conflict in Ukraine began in 2014, following Russia's annexation of Crimea and the escalation of conflict in Donetsk and Luhansk regions. On February 24, 2022, Russia launched a large-scale military intervention in Ukraine targeting major urban centers and critical infrastructure, generating a major humanitarian and social crisis [7], [6]. This caused massive population displacements and significant human losses and refugee communities formed in various countries, including Romania.

In Brasov County, Ukrainian refugees face multiple challenges and their adaptation is significantly influenced by digital technologies. The dislocations and traumas associated with the conflict determined the need for adaptation and recovery in a new environment [10].

The role of authorities and non-governmental organizations in facilitating the adaptation and recovery of the Ukrainian community in Brasov County in the context of digital and social technologies. Authorities and non-governmental organizations (NGOs) have a key role in facilitating the adaptation and recovery of the Ukrainian community in Brasov County, especially through the use of digital and social technologies. These entities, through policies, programs and services, support the

integration and reconstruction of the community affected by the armed conflict in Ukraine.

Local and central authorities are responsible for implementing policies and programs that facilitate the access of the Ukrainian community in Brasov to digital and social technologies and support their use for adaptation and recovery. Support includes providing digital resources and infrastructure, developing technology education and training programs and facilitating collaboration between various organizations to provide end-to-end services [11].

Since the first days of the military intervention in Ukraine, the Brasov city authorities opened a center for refugees, the Brasov Business, Technological Transfer and Business Incubator Center (CATTIA). It quickly became a vital support for refugees, being perceived as a place of support and help, offering educational and social activities as well as communication infrastructure [5]. Currently, the KATYA center, relocated and coordinated by UNICEF, continues to provide essential services to refugees [3].

In addition to shelter, food and basic services, the CATTIA Center provided the communications infrastructure, facilitating the connection of refugees with their loved ones in the conflict zone and with the Brasov community. They showed compassion and a desire to help refugees by providing them with emotional and social support.

NGOs are making a significant contribution to supporting the Ukrainian community in Brasov, using digital and social technologies in the adaptation and recovery process. These organizations offer specialized services such as online psychological counseling, legal assistance, digital education programs, and networking and social support resources. For example, "Terre des hommes Romania" offers emotional, social and educational support, facilitating integration and socialization and organizing recreational and educational activities for children and families [14].

Collaboration between authorities, NGOs and other relevant entities is crucial for creating a solid support framework for the Ukrainian community in Brasov, in the context of digital and social technologies. This collaboration must be oriented towards identifying the priority needs of the community and developing effective, sustainable and inclusive strategies and programs.

The influence of social technologies on the adaptation and recovery of the Ukrainian community in Brasov County. Digital and social technologies are essential for the adaptation and recovery of the Ukrainian community in Brasov providing access to information about available services, administrative procedures and employment opportunities [10, p. 34]. These technologies facilitate communication and maintain social and cultural ties. However, there are significant challenges, such as language and cultural barriers, which can limit access to important information, and exposure to negative content online, which can affect the well-being of refugees [10, p. 6].

Access to online information and resources. Instagram is the most frequently mentioned platform (86 times), reflecting the preference for visual social media popular among young people. Telegram, mentioned 71 times, is appreciated for its security and flexibility, facilitating communication and quick access to information. WhatsApp, with

68 mentions, is used for instant messaging and video calling, and YouTube, with 65 mentions, appeals to video content for entertainment and learning. Facebook, although less popular (51 mentions), remains important for social connection. Zoom, mentioned 23 times, is used for video conferencing and distance education. Telegram is the most appreciated for supporting the adaptation of the Ukrainian community in Brasov (82 mentions), due to its efficiency in communication. Instagram, WhatsApp, and Facebook support various aspects of community connection and organization, indicating a diverse use of digital platforms.

Collaboration and solidarity through social platforms. The use of digital and social platforms, such as Telegram and WhatsApp facilitated the connection of members of the Ukrainian community in Brasov with their families and friends in Ukraine, enabling the exchange of information and mutual emotional support. Social media, including Instagram, Facebook and LinkedIn, have provided a safe space to express anxieties and needs, helping to create a digital social support network. This strengthened the cohesion and unity of the Ukrainian community in Brasov.

To find out about the situation in Ukraine, respondents especially preferred Telegram and Facebook for access to relevant community groups. Instagram and YouTube were named as secondary sources. Approximately 19.81% of respondents stated that they do not use digital and social platforms for information for various personal reasons.

Most of respondents (54%) accessed support resources through digital and social platforms, particularly on Telegram. The remaining 46% did not access these resources, indicating either a lack of need or a need for better awareness of available resources.

The positive impact of the use of digital and social platforms on the emotional and mental state was recognized by the majority of respondents. These platforms provided emotional support, facilitated communication and integration, and provided access to essential information. Respondents' comments include: "it's a big help, even in depression you feel there are means of help"; "thanks to messaging, I keep in touch with relatives and friends, which allows me not to isolate myself"; "yes, communicating with other refugees helped to understand the situation and made integration easier." However, a significant number of respondents did not see a clear impact or were unsure about the influence of these platforms, answering such as "Not at all", "did not influenced", "hard to say", "don't know".

Most respondents (80%) had no problems using digital and social platforms, suggesting familiarity and comfort with technology. However, 7% reported difficulty with the large amount of information, including unverified information, indicating a concern for information accuracy and potential confusion or additional stress.

Community organization and mobilization in the digital context. The effectiveness of digital and social platforms in supporting the adaptation and recovery of the Ukrainian community in Brasov is varied. The majority of respondents (almost 60%) consider these platforms very effective, underlining a significant positive impact. About 36% indicate moderate effectiveness, suggesting potential improvement. A minority considers the platforms ineffective, highlighting the need for specific interventions.

The overwhelming majority of respondents (85 out of 106) believe that the use of digital and social platforms has strengthened the Ukrainian community in Brasov by

facilitating communication, providing moral support and access to useful information. This conclusion is supported by answers such as: "Yes, so people could communicate and learn that they are not alone", "Yes, thanks to communication we become closer to each other", "Yes, this is an opportunity to find people with the same ideas and to be aware of current and important things", "Yes, the feeling of belonging to a common culture and values".

A few responses were neutral or negative. Suggestions for improving the use of platforms include avoiding inappropriate language, improving Romanian language courses, organizing online seminars and promoting local integration events, such as help in finding jobs, educational institutions, entertainment programs and psychological support.

CHALLENGES AND FUTURE PERSPECTIVES

The use of digital and social technologies for the adaptation and recovery of the Ukrainian community in Brasov County faces various challenges, including language and cultural barriers, which limit access to essential information and services.

- Exposure to negative news and online content can affect Ukrainian refugees' well-being and adjustment, resulting in feelings of insecurity and stress.
- NGOs and local authorities must provide specialized support, including online psychological counseling, legal assistance, digital education programs and networking resources to help the community overcome technological challenges.
- Excessive use of online social media can lead to social isolation and diminishing authentic interpersonal connections, negatively affecting the recovery and adaptation process.

With all these challenges in mind, there are promising prospects for the development and improvement of technology-based interventions aimed at supporting the adaptation and recovery of the Ukrainian community in Brasov County.

- Collaboration between authorities, NGOs and other relevant entities is essential to build a solid framework to support the adaptation and recovery of the Ukrainian community through effective, sustainable and inclusive strategies and programs.
- NGOs play a crucial role by providing specialized services such as online psychological counseling, legal assistance, digital education programs, networking resources and social support, contributing to strengthening community resilience and supporting individual and collective adaptation and recovery.
- Local and central authorities must ensure the existence of an adequate digital infrastructure to support the Ukrainian community, including the provision of digital resources, Internet access and devices necessary to use modern technologies.
- The development of technology education and training programs is vital to prepare members of the Ukrainian community to effectively use digital and social technologies, and these programs must be accessible and customized to the specific needs of the community.
- Digital technologies facilitate communication and maintenance of social and cultural ties for the Ukrainian community, online platforms and social networks contributing to

strengthening social ties, promoting mutual support and developing capacities for collective organization and mobilization.

- NGO initiatives, such as those carried out by "Terre des hommes Romania", which offer emotional, social and educational support, are essential for facilitating the integration and socialization of refugees, developing recreational and educational activities for children and families.

CONCLUSION

Digital and social technologies are essential in everyday life, influencing adaptation to changes and challenges. They provide access to information, social support and solutions to problems, but can cause social isolation and mental health problems. Authorities and NGOs support the Ukrainian community through policies and services that facilitate access to these technologies, providing resources, educational programs and inter-organizational collaboration.

The Ukrainian community in Brasov uses these technologies extensively to access information about services, procedures and employment opportunities, maintaining social and cultural ties. Challenges include language barriers and exposure to negative content online. Ongoing collaboration between authorities and NGOs is crucial for robust support. Development of specialist services, including online psychological counselling, legal aid and digital education programmes, as well as investment in digital infrastructure is needed.

The study suggests directions for future research: the specific impact of technologies on community adaptation, disparities in access and use, and the development of tailored interventions. Research should focus on assessing the long-term impact of digital technologies on Ukrainian refugees, including longitudinal studies on mental health and socio-economic integration. It is also important to investigate differences in access between demographic groups and the role of authorities and NGOs in supporting refugees' use of technologies.

The assessment of the effectiveness of digital education programs for refugees is essential to understand their contribution to adaptation and integration. Future research may provide more effective interventions tailored to the needs of the Ukrainian community in Brasov and other refugee communities.

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THE INFLUENCE OF VOLUNTEERING ON THE INNOVATIVENESS OF ORGANIZATIONS PROVIDING SOCIAL SERVICES

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ABSTRACT

The article aims to identify and evaluate the impact of volunteering on the innovativeness of organizations providing social services (OPSS). The activities of these organizations depend on the political, cultural, and social factors of the country, as well as the changes brought by globalization. Thus, there is an ongoing discussion on how to better organize the activities of these institutions while providing social services. It is essential to apply innovative methods appropriately, considering the specificity of the services and the characteristics of the service recipients. Therefore, the involvement of volunteers in the organization's activities can encourage innovative management decisions. The research indicates the need for and importance of volunteering when applying new management practices and providing social services to different groups of service recipients, evaluated and identified based on their individual needs and situations. Involvement in voluntary activities stimulates the process of service improvement, which provides the opportunity to offer appropriate assistance and organize work effectively in organizations providing social services. Applied research methods - analysis of scientific literature and documents, interviews of social workers, analysis and interpretation of research results. The review of the scientific literature presented in the article and the research data can be applied in improving the involvement of volunteers of organizations providing social services in the organizational process, in order to introduce innovative solutions and the application of new managerial practices in the social services sector.

Keywords: innovation, motivation, organizations providing social services, volunteering.

INTRODUCTION

In society, social inequality and various social problems such as poverty, health issues, aging, and others persist, creating a need to assist the more vulnerable members of the community who are facing difficulties [22]; [8].

As a result, states seek effective methods and measures to provide assistance that ensures individuals' basic needs and interests are met. One of the most widely utilized means to provide assistance and ensure social cohesion is the proper organization and accessibility of social services [3]; [28].

One of the most widely utilized measures to provide assistance and ensure social inclusion is the proper organization and accessibility of social services. Analyzing the current situation, it can be stated that the demand for social services in the EU and Lithuania is continuously increasing [16]; [7]; [9].

Social services are typically organized and provided by social service organizations, which may be state-run, community-based, or non-governmental institutions [28]. These organizations offer services to one or more social groups [24]; [8]. When analyzing the development of social service organizations, it is essential to consider the historical context. These organizations initially formed based on principles of volunteerism and philanthropy, with their activities shaped by institutional, social, and political factors, as well as traditions and societal attitudes towards support and assistance for individuals who, for various reasons, are unable to care for themselves [26]; [27]

Volunteering provides significant benefits, as organizations often lack sufficient human and financial resources; therefore, the work of volunteers can be crucial and contribute to the development of new working methods with service recipients and foster innovation within the organization [4]. Volunteering is beneficial not only for the volunteers themselves but also for the community [2]. Volunteers can engage in various fields, utilizing their creative potential and contributing to the overall well-being of society [6].

Researchers from various countries examine the activities of social service organizations and the characteristics of the social services they provide in EU countries [5]; [1]; [19].

However, there is a lack of research revealing the application of volunteers' innovative initiatives in the activities of social service organizations.

The aim of this article is to uncover the assumptions about the impact of volunteers on the implementation of innovative methods in social service organizations, with the goal of addressing social problems and applying new management practices.

ASPECTS OF VOLUNTEERING FOR INNOVATION IN SOCIAL SERVICE ORGANIZATIONS: THEORETICAL ASSUMPTIONS

The literature on the governance of OPSS shows that it is strongly influenced by the social policies of the state and the prevailing standards and values in society. It is important to note that in welfare states, OPSS can operate in a context of social cohesion, responding to the expectations of society, social policy makers, social service providers and stakeholders. Social cohesion can help people to respond to social challenges and overcome problems, as societies that are united and cohesive are more effective in dealing with emerging challenges and in supporting their members [17]; [27].

In socially cohesive societies, feelings of belonging, participation, inclusion, recognition and legitimacy are prevalent and contribute to social cohesion. Such a society must recognise that it is only through cooperation that problems can be solved in a united way and that social integration can succeed, ensuring stability, security, tolerance, solidarity and equality of opportunity for vulnerable social groups. The concept of social cohesion is thus based on the creation of the right environment and factors in which all individuals are encouraged to cooperate in order to promote the well-being of the community [5];[9];[12]. Researchers link social cohesion to social capital, social capital is the axis of social cohesion, and the relationship between the two is positive and beneficial for the development of a society or community: the more social capital a society has, the more cohesive it is. Thus, when the members of a community are bound together by social cohesion, this contributes to the well-being of the community. It can be argued that the key to successful social cohesion is community development [12];[8].

The activities of the OPSS are inseparable from the civic community, which in the concept of social cohesion is important for the development of successful social capital, because community support is essential for people with problems. The social capital model developed by Narayan, Cassidy (2001) identifies volunteering as one of the key drivers of social capital, and in Putnam's theory participation and engagement are essential elements of social capital to build civic communities by involving individuals in volunteering to help the OPSS [13];[15].

It should be noted that volunteering is an unpaid activity. Volunteering is defined as an altruistic activity designed to improve the quality of life and spread goodness for all in society, in return for which the volunteer gains more confidence. According to Kurapkaitienė (2019), a volunteer is a person who chooses to give of his/her time and energy for the benefit of society and the community [14]. A volunteer performs unpaid work that benefits other individuals and the community. Volunteering is one of the priorities in the development of OPSS and involving community members in the decision-making and implementation of the organisation. Volunteering in social service organisations is an important aspect that contributes to the efficiency of these organisations and the quality of their services, as often the financial and human resources of these organisations are very limited [10]; [23]. It is important to note that in the concept of social cohesion, volunteers are often members of the local community who can help service users build social capital in the community. Volunteers often have a wide range of experiences, skills and ideas that can enrich the work of organisations and help to find innovative solutions in the field of social work [20].

To get involved in volunteering in an organisation, we need to understand a person's motives, the factors that drive them to give up their time and their creative energy to contribute to the creation of wealth in society. In order to explain the motivation of an individual in the volunteering process, which reveals the actions to participate in the organisation, we can base our approach on the theories of needs and process.

Needs theories focus on human needs, which are the stimulus for action and the motivation to act and seek to satisfy them [29]. Process theories seek to explain not only what motivates a person to take a particular action, but how the process of motivation takes place and what triggers specific behaviours. The most commonly cited process theories are: Vroom's expectancy theory, Locke's goal-setting theory. These theories focus on a person's goals, expectations and hopes, and use these to shape the volunteering process, leading to satisfaction with the activity [14]; [29].

The choice to volunteer is driven by intrinsic and extrinsic motivational factors. Intrinsic motivation ensures that people enjoy the activity. Intrinsic motivation is usually derived from the activity itself, the content of the activity, the person's sense of happiness in pursuing the goal, the enjoyment of the activity. It is important to note that in the case of intrinsic motivation, personal values such as honesty, responsibility, willingness to give, empathy play a prominent role. A volunteer could be motivated by the desire to innovate, to be involved in the process of creation and cooperation, to feel needed and responsible for the processes that take place in society [13]; [14];[18].

Extrinsic motivation, which is easier to see and can be done in return for the promise of an external reward or incentive. It is influenced by external incentives, which may be rewards or other appreciation. The volunteer, knowing that his/her performance will be appreciated, strives to complete the task not only better but also faster. The external

environment is not the cause of the activity itself, but can be initiated by social policy makers, organisers, the community (e.g. an evaluation in an institution, getting an extra grade, getting into a university, etc.) [6]; [13]; [15].

In summary, intrinsic motivation of volunteers encourages people to engage in volunteering activities, even in the absence of evaluation, as extrinsic motivation, understood as a coercive means to achieve goals, is not in line with the principles of volunteering as a free and voluntary choice.

Volunteers choose OPSS based on intrinsic motives, because they want to apply their ideas to find unique solutions and solve problems in the community. The ability to create and develop new ideas is a key part of the volunteer's orientation towards improving the organisation, so volunteering can be described as an innovative process that involves the development and implementation of new ideas and processes. According to West and Richter (2008), the innovation process consists of two main activities: creativity and implementation. Creativity involves the generation of new ideas and innovation involves turning them into new services, products or processes [25].

The role of volunteers in the innovativeness of organisations can be based on the theory of diffusion of innovation, formulated Rogers (2003), which emphasises how innovations spread through social systems [21]. Volunteers play an important role in this process, especially in social service organisations where innovation can significantly improve the quality and efficiency of social services. Volunteers choose to volunteer with a wide range of experiences, skills and new ideas from different backgrounds, and their creativity and bringing new approaches to an organisation can act as a stimulus for innovation. According to Rogers, innovation tends to come from individuals with connections to the outside world, and volunteers are often the following individuals [21]

Research confirms that idea generation is strongly influenced by individual factors and idea implementation is strongly influenced by internal and external factors [4]. In the academic literature, innovation refers to novelty, new phenomena and activities through innovation [23];[25]. The process of innovation starts with the creativity of the individual, and the generation of new ideas can only take place through stimulating interaction with other members of the organisation. Thus, it can be argued that a volunteer can initiate new and innovative processes in the organisation in order to help others, taking into account the rapidly changing society and the dynamics of the organisation, but it is necessary to have the approval of the OPSS members for the implementation and development of innovative ideas.

RESEARCH METHODOLOGY OF VOLUNTEER ACTIVITIES IN ORGANIZATIONS PROVIDING SOCIAL SERVICES

In order to reveal the impact of volunteering on the innovativeness of social service organisations, a qualitative research strategy was chosen. Qualitative research is used to analyse under-researched topics and helps to discover new ideas and perspectives on how to better organise activities and achieve objectives [11]. The analysis of qualitative data through experiences and meanings allows the interpretation of data, the identification of categories and subcategories, and the identification of relationships between them. This analysis helps to gain a deeper understanding of the subject of the study, revealing subtle trends and characteristics that may be obscured in the analysis of quantitative data. This

allows a more complete and coherent picture of the results of the study to be built up and recommendations to be made based on the qualitative study [11]; [30].

For the qualitative research, a semi-structured interview method was chosen with social workers-volunteer coordinators from social service organisations. This method helped to uncover issues related to the topic, to gain a deeper understanding of its essence and to discover unexpected, unknown aspects. The interviews gathered information from the research participants and delved into their opinions, knowledge and experiences in order to gather different perspectives and opinions about the same phenomenon [11]; [30]. The interviews of OPSS social workers were chosen because of their expertise on the issue under study and their experience, allowing them to present aspects of their professional work with volunteers. The structured interviews were conducted with the aim of scientific objectivity, as they helped to reveal professionals' opinions and assessments about the object of the research and other phenomena and factors relevant to the topic of the paper, allowing to obtain detailed data about the phenomenon under study.

The object of the study is the impact of volunteering on the innovativeness of social service organisations.

The aim of the study is to identify and evaluate the impact of volunteering on the innovativeness of social service organisations.

The objectives of the empirical study are: 1) to carry out an opinion survey of social workers working with volunteers, which would help to identify the characteristics of volunteering in social service organisations; 2) to assess the preconditions of volunteering for the innovativeness of social service organisations. What are the characteristics of the volunteering process in OPSS? What motivation and qualities does a person need to have in order to volunteer in an OPSS? What is the role of volunteers in the innovativeness of social service organisations?

Five OPSS social workers working with volunteers were interviewed in a semi-structured interview. The selection criteria were: at least 2 years of experience working with volunteers and at least 5 years of professional social work experience. It is important to underline that the respondents agreed to participate in the study after being informed about the ethical aspects of the study: the conduct of the study, the discretion and confidentiality of the data. The data obtained are presented in such a way that the informant cannot be identified (codes given to participants: A_1; A_2; A_3; A_4; A_5). Limitations of the study: as the study was carried out only in Vilnius County, the results may not fully reflect the situation in all organisations. This study presents preliminary data. More detailed quantitative research is necessary to obtain more precise and reliable information.

RESULTS OF THE STUDY OF VOLUNTEER ACTIVITIES IN ORGANIZATIONS PROVIDING SOCIAL SERVICES

All the participants in the study stated that volunteers need to understand the specifics of the social services sector, to be willing to help people solve problems, and to have a vision for the volunteering process: *"the future volunteer needs to know his/her priorities and how he/she can contribute to our organisation"* (A_2); *"it is great how people already know what our organisation's mission is, it is much easier to start working together and helping others"* (A_4). It can be argued that the understanding of the organisation's mission is a very important sub-category that can provide a future picture of one's place

as a volunteer and the relationship between one's place and one's relationship in the organisation's internal and external environment. Social workers agree that it is necessary to take into account a person's attitudes and value system in order to engage effectively in volunteering in an organisation.

The intrinsic motivation of volunteers to volunteer is very important: *"the most important thing is the willingness to volunteer and to understand one's responsibilities"* (A_5); *the love for children and the desire to help them"* (A_2). Staff stressed that the volunteer's expectations and abilities are always taken into account. The role of the coordinators is very important, as they need to find out the volunteer's goals in the organisation, the possibilities to volunteer and to organise activities with the service users: *"I need to assess the questionnaires submitted, as well as to carry out interviews, to find out the motivation of the future volunteers to volunteer"* (A_3), *selection is done through an interview, sometimes it takes a couple of meetings for the future volunteer to get a sense of the work he/she will have to do, and also to check the motivation for volunteering in the short term"* (A_1).

The research participants noted that the selection interviews help to assess the person's potential for volunteering, and to suggest to the coordinators that the volunteer discover his/her activities in the organization. It is also very important to note that during the entire period of volunteering, social workers regularly hold meetings with volunteers, evaluate their activities, present and discuss the results of their activities in the organization. The research showed that in certain cases, the involvement of volunteers in volunteering activities depends on the institution's own capabilities: *"we have to think about how to attract volunteers, how to interest them"* (A_1), *it is very important to think about creating conditions for volunteers to work so that they can realize their ideas in our organization"* (A_5). The statements presented reveal that in each case the aim is to find out the motives of the volunteer in order to offer the most acceptable option for both parties in the volunteering process.

The research aimed to determine what competencies a volunteer should have for successful volunteering at OPSS. The informants distinguished between personal and social competences. Respondents define personal competences as abilities that encourage taking responsibility in the organization, including emotional self-awareness, which helps to recognize one's emotions and understand their impact when communicating with other members of the organization: *„they must understand that your decisions are very decisive“* (A_2); *"in our organization, calmness is important, control of emotions is the most important thing"* (A_1); *you need different qualities, sometimes you need a lot of understanding and ability, control of emotions"* (A_3).

When distinguishing the volunteer's social competences, the respondents emphasized that this ability is important for maintaining social relations and proper relations with beneficiaries and employees. They emphasized that it is important for the volunteer to understand both the external and internal environment of the organization, as this determines the success of volunteering and involvement in the service delivery process. Social awareness includes empathy for service recipients, awareness of the specifics of social work: *"when a person comes who is not from the social field at all, it is very difficult for him to understand the peculiarities of our organization"* (A_2); *„it takes time to understand what kind of service recipients these are. to accept challenges, you really need empathy and tolerance"* (A_1).

In order to clarify the role of volunteers in OPSS innovativeness, research participants emphasized the creativity of volunteers and their desire to apply innovative solutions in voluntary activities when working with service recipients: *"contributes to the ideas of organizing events, events are always very interesting, a new approach is emerging, how to involve service recipients in organization of events"* (A_3); *volunteers have offered to apply canithery to children in the day center, this allows children to relax, prepare for paichologist consultations or activities.."* (A_1). The research revealed that the creative activity of volunteers and the innovative solutions they provide contribute to OPSS changes, which change the spectrum of social services, introducing innovations in the lives of service recipients and the organization's application of new management practices.

Research participants emphasized the role of volunteers in project activities, because it is OPSS that can receive part of the financial resources from project activities: *"I am happy that volunteers help in project activities, offer new inputs, in writing projects"* (A_3); *"We were helped by the experience of volunteers, project literacy improved, because we, as social workers, sometimes focus only on the problems of service recipients"* (A_5). Research participants, highlighting the involvement of volunteers in OPSS activities, emphasized their opportunities for self-realization in various activities not only with service recipients, but also in the management and communication process of the organization: *"a new approach to the current situation helped us in the preparation of some documents"* (A_1), *helped us in the preparation of documentation to achieve a quality standard"* (A_3); *"the volunteer helps publicize the organization's activities, presents the organization's activities in a very interesting and creative way"* (A_2); *"the visibility of the organization improved because a volunteer offered to prepare and present the good experiences of our work"* (A_4).

The conducted interviews revealed the impact of volunteers on the innovativeness of the organization, the proposed innovations reveal the application of new practices and contribute to the creation of a modern image of OPSS. Implemented ideas create social capital by involving service recipients, organization employees and the community: *"the proposed events also involved community members, to come, see our environment, get to know each other and communicate together"* (A_1); *"When a volunteer comes, he sees and evaluates aspects of the work of our social workers"* (A_3); *"great, as the volunteer suggests new activities for the recipients of our services...social workers also see the application of new ideas"* (A_5). Thus, when employees receive new ideas and resources to carry out activities, they can protect themselves from burnout syndrome, because in order to improve themselves and apply new competencies, volunteers transfer their emotional intelligence to other team members. Employees, seeing the enthusiasm, initiative, and creativity of volunteers, can begin to look at their work as a space where they themselves grow and improve.

Research participants agree that volunteers realize their creative potential by engaging in activities, bringing new ideas to the management of the organization's activities and the application of social work methods. The main activities, which are supported by the new approach of volunteers, are related to the organization of socio-cultural services for service recipients, project preparation, communication with the community and publicity of services in the society, revealing the innovative perspectives of the organization. In conclusion, we can say that volunteers contribute to innovative solutions in the organization by giving their free time and creative ideas

CONCLUSIONS

The activities of organizations providing social services are based on the concept of social cohesion, which helps to solve the problems of social exclusion in society and the community, so when volunteers start their activities in the organization, they must understand that their volunteering activities must be based on basic humanistic values, such as social justice, respect for human rights, empathy and tolerance for people and their individuality.

Volunteers involved in the organization's activities spread their unique experience about the organization's mission in society among friends, relatives and acquaintances. A positive attitude is spread about the role of the organization in the community, helping potential service recipients to receive ongoing assistance in attracting material and human resources. The role of volunteers is particularly important in drawing the attention of other community members to the difficult situations of the target group, because this is done not by stigmatizing, but by communicating with equal members of the community. Thus, the role of volunteers in social work is significant and multifaceted. They not only complement the work of professional staff, but also contribute to building social capital and strengthening the community.

With the help of volunteers, organizations can expand the range of services they provide. However, it is important to note the unique role of volunteers in the development of organizations. They are often able to assess internal processes and services from an outside perspective and propose innovations within the organization, so volunteers can act as innovators within the organization, introducing new ideas and practices among community members. They can help bring together the ideas of the innovators and adapt the innovation to the specific needs of the organization and service recipients.

Rogers (2003) emphasizes the importance of leadership in the theory of diffusion of innovation, we can agree that volunteers take leadership positions by offering innovative solutions and integrating them into the organization. They can act as role models for others, demonstrating the benefits of new ideas and encouraging their adoption. The volunteer's unique experience and willingness to help contribute to the implementation of innovation and the development prospects of the organization.

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WORK INTEGRATION SOCIAL ENTERPRISES AS ROLE-MODELS OF SOCIAL SUSTAINABILITY

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ABSTRACT

The European Union's Agenda 2023 underscores its robust commitment to achieving the United Nations Sustainable Development Goals (SDGs) through a comprehensive and coordinated approach. This agenda focuses on integrating the SDGs into all EU policies and initiatives, ensuring that economic, social, and environmental dimensions are addressed simultaneously.

Social sustainability is a critical dimension of sustainable development that focuses on maintaining and improving the well-being of current and future generations. It encompasses efforts to foster equitable access to resources, opportunities, and social services, ensuring that all individuals and communities can thrive.

Work Integration Social Enterprises (WISEs) play a crucial role in reaching those targets that are also implemented in the UN's SDGs, by fostering social inclusion and economic integration by providing employment opportunities to marginalized and disadvantaged groups.

The primary objective of this paper is to provide a comprehensive overview of the diverse models of WISEs across Europe, capturing the unique features and practices that define their operations in different national contexts. By conducting a thorough secondary data analysis (desk research) it aims to systematically analyze the Romanian situation, identifying key areas of strength and potential challenges that WISEs face within the country. Furthermore, this paper advocates for the importance of fostering international collaboration among WISEs. Such cooperation is crucial for sharing best practices, enhancing operational efficiencies, and collectively advancing the social sustainability goals set forth by Europe. Through coordinated efforts and support from instruments like the European Social Fund, WISEs can significantly contribute to building a more inclusive and resilient European society.

Keywords: SDGs, Work Integration Social Enterprises (WISEs), social sustainability

INTRODUCTION

Social sustainability is a multifaceted concept that encompasses the ability of a society to maintain and improve the well-being of its current and future members through practices that promote social equity, justice, and cohesion. It is integral to the broader framework of sustainable development, which seeks to balance economic, environmental, and social needs. The following paragraphs shortly presents the theoretical foundations, key dimensions, measurement challenges, and policy implications of social sustainability, underpinned by current scientific research and discourse.

The concept of social sustainability is rooted in the broader framework of sustainable development, as outlined by the Brundtland Commission [1], which emphasizes meeting the needs of the present without compromising the ability of future generations to meet their own needs. Social sustainability specifically addresses the social dimension, focusing on issues such as social equity, justice, inclusion, and the well-being of individuals and communities.

The theoretical underpinnings of social sustainability draw from various disciplines, including sociology, economics, and environmental science. For instance, Sen's [2] capability approach highlights the importance of expanding individuals' freedoms and capabilities to achieve well-being, thus directly aligning with the goals of social sustainability. Similarly, Rawls' [3] theory of justice, which advocates for fairness and equality, provides a philosophical basis for social policies aimed at reducing inequalities and promoting social cohesion.

Social enterprises are organizations that apply commercial strategies to maximize improvements in human and environmental well-being, rather than maximizing profits for external shareholders. These enterprises operate at the intersection of the public, private, and voluntary sectors, leveraging business methods to address social issues such as poverty, inequality, education, and health. This hybrid model offers a unique approach to sustainable development by integrating social missions with market-driven mechanisms.

Social enterprises are distinguished by their primary mission to generate social value alongside financial returns. According to the European Commission [4], a social enterprise is characterized by its explicit social objectives, the reinvestment of surpluses into social causes, and a governance structure that reflects democratic or participatory principles. The dual focus on social impact and financial sustainability necessitates innovative business models that balance mission and market.

The emergence of social enterprises can be understood through several theoretical lenses. Institutional theory suggests that social enterprises arise from the need to fill gaps left by traditional market and government failures [3]. Resource dependence theory posits that these organizations manage external dependencies and secure resources through a mix of commercial and philanthropic means [5].

MATERIALS AND METHODS

Our approach involves the systematic collection and analysis of secondary data (desk research) from various reputable sources, including scientific articles, reports from international organizations, and national laws to examine the diverse models of Work Integration Social Enterprises (WISEs) in Europe, with a particular focus on the Romanian context. The methodology is designed to provide a comprehensive understanding of the different European models of WISEs, summarize their diversity, and explore the specific situation in Romania.

The analysis of the collected data involved several steps:

Summarizing the Diversity of European Models: We reviewed the literature to identify and categorize the different models of WISEs in Europe. This involved summarizing the key features, operational strategies, and legal frameworks of WISEs in countries such as the United Kingdom, Italy, France, Germany, and Sweden.

Analysing the Romanian Situation: We conducted a detailed analysis of the Romanian context, focusing on the development, legal framework, operational strategies, and challenges of WISEs. This analysis was informed by the review of national laws, policy documents, and scientific articles specifically related to Romania.

RESULTS AND DISCUSSION

Work Integration Social Enterprises (WISEs) play a crucial role in fostering social inclusion and economic participation by providing employment opportunities to disadvantaged groups. These enterprises operate at the intersection of social policy and economic activity, aiming to integrate marginalized individuals into the labour market. Different European countries have developed varied models of WISEs, each reflecting unique socio-economic contexts, policy environments, and historical developments. The following paragraphs examine WISE models in several European countries, highlighting their distinct features, challenges, and contributions to social sustainability.

United Kingdom

The UK has a rich tradition of social enterprise, with WISEs being a significant component. The British model of WISEs is characterized by a strong policy framework and diverse organizational forms. One notable model is the Community Interest Company (CIC), established under the Companies (Audit, Investigations and Community Enterprise) Act 2004. CICs combine social purpose with commercial activities, and their assets are locked to prevent demutualization [6].

British WISEs often focus on social inclusion by providing training and employment to individuals with disabilities, long-term unemployed, and ex-offenders. For instance, the social enterprise "Blue Sky" specifically employs ex-offenders, offering them work experience and skills development to reduce recidivism [7].

Italy

Italy's model of WISEs is deeply rooted in the cooperative tradition. Italian social cooperatives, particularly Type B cooperatives, are a primary form of WISE. These cooperatives are designed to integrate disadvantaged people into the workforce, including individuals with physical and mental disabilities, drug addicts, and long-term unemployed [8].

Italian social cooperatives benefit from supportive legislation, such as Law 381/1991, which provides legal recognition and support for social cooperatives. These enterprises operate in various sectors, including agriculture, manufacturing, and services, creating diverse employment opportunities. The success of Italian WISEs is attributed to their ability to combine economic viability with strong social missions, supported by an enabling legal and institutional framework [5].

France

France has developed a unique model of WISEs known as "Entreprise d'Insertion" (EI). These enterprises are specifically designed to provide transitional employment and support to individuals facing severe barriers to employment, such as low-skilled workers, long-term unemployed, and immigrants [6]. The French model emphasizes the importance of professional and social support, including personalized coaching and training programs, to facilitate the transition to the regular labour market.

The French government supports EIs through various subsidies and contracts, recognizing their role in promoting social cohesion and reducing unemployment. Additionally, the Social and Solidarity Economy (SSE) framework in France, established by the law of 31 July 2014, provides a supportive environment for WISEs, promoting their integration into broader economic policies [6].

Germany

Germany's model of WISEs is characterized by a strong emphasis on vocational training and integration into the mainstream labour market. The country's approach is institutionalized through various forms of social enterprises, including "Integrationsunternehmen" (integration enterprises), which employ a significant proportion of disabled individuals [9].

German WISEs benefit from comprehensive support systems, including funding from the federal and state governments, as well as the European Social Fund (ESF). These enterprises often collaborate with vocational training centres and mainstream businesses to provide on-the-job training and employment opportunities, enhancing the employability of disadvantaged groups [9].

Sweden

Sweden's WISEs operate within a well-developed welfare state framework, focusing on social innovation and inclusion. Swedish WISEs, often organized as cooperatives or associations, provide employment and social services to marginalized individuals, including immigrants, people with disabilities, and those with mental health issues [10].

The Swedish government supports WISEs through various initiatives, including the Public Employment Service, which collaborates with social enterprises to create job opportunities. Additionally, social procurement policies encourage public agencies to contract with WISEs, fostering their economic sustainability and social impact [10].

The models of WISEs across Europe reflect a rich diversity of approaches to integrating disadvantaged individuals into the labour market. While the UK and France emphasize legal and policy frameworks to support social enterprises, Italy and Sweden leverage cooperative structures and strong welfare systems. Germany's model highlights the importance of vocational training and collaboration with mainstream businesses.

Despite differences, common challenges persist, including securing sustainable funding, measuring social impact, and balancing social missions with economic viability. The success of WISEs depends on a supportive policy environment, access to financial resources, and robust partnerships with public and private sectors.

Work Integration Social Enterprises (WISEs) in Romania

Work Integration Social Enterprises (WISEs) have emerged in Romania as a vital tool for addressing social exclusion and promoting economic participation among marginalized groups. These enterprises seek to integrate disadvantaged individuals, such as those with disabilities, long-term unemployed, and other vulnerable populations, into the labour market. The following lines examine the Romanian model of WISEs, highlighting their development, legal framework, operational strategies, challenges, and contributions to social sustainability.

Development and Context

The development of WISEs in Romania is closely linked to the country's socio-economic transition post-1989. The shift from a centrally planned economy to a market economy brought significant social and economic challenges, including rising unemployment and social disparities [11]. The integration of Romania into the European Union in 2007 further influenced the growth of social enterprises, aligning national policies with EU standards and funding opportunities [12].

Legal Framework

The legal framework for social enterprises in Romania has evolved significantly over the past decade. The Social Economy Law (Law no. 219/2015) provides the legal basis for the establishment and operation of social enterprises, including WISEs. This law defines social enterprises as entities that prioritize social objectives over profit, reinvest profits for social purposes, and ensure participatory governance structures [13].

Under this framework, WISEs are recognized as a distinct category of social enterprises focused on work integration. These enterprises must comply with specific criteria, such as employing a significant proportion of disadvantaged individuals and providing supportive measures for their integration into the labor market [14].

Operational Strategies

Romanian WISEs employ various operational strategies to achieve their social and economic objectives. These strategies often involve a combination of commercial activities and social support services. Key operational models include:

Cooperatives: Many WISEs in Romania operate as cooperatives, where members jointly own and manage the enterprise. These cooperatives often engage in diverse economic activities, such as agriculture, handicrafts, and recycling, providing flexible and inclusive work environments [11].

Sheltered Workshops: These are specialized enterprises that provide protected work environments for individuals with disabilities. Sheltered workshops offer tailored job opportunities and vocational training, helping participants develop skills and gain work experience [11].

Social Enterprises of Insertion (SEIs): SEIs focus on integrating long-term unemployed and other marginalized groups into the labor market. They provide transitional employment, training, and individualized support to enhance employability and facilitate the transition to regular employment [15].

Challenges

Despite their potential, WISEs in Romania face several challenges that hinder their growth and impact. These include:

Financial Sustainability: Many WISEs struggle to achieve financial sustainability due to limited access to funding and market opportunities. The dependency on grants and subsidies can undermine long-term viability [15].

Regulatory Barriers: Complex and often bureaucratic regulatory requirements can pose significant hurdles for the establishment and operation of WISEs. Simplifying these processes could enhance the sector's growth [14].

Public Awareness: Limited public awareness and understanding of the role and value of WISEs can affect their market penetration and support from stakeholders. Greater efforts in advocacy and public education are needed [15].

Contributions to Social Sustainability

Despite these challenges, WISEs in Romania make substantial contributions to social sustainability. They play a crucial role in:

Reducing Unemployment: By providing employment opportunities to marginalized groups, WISEs help reduce unemployment and promote social inclusion [12].

Enhancing Social Cohesion: WISEs foster social cohesion by integrating disadvantaged individuals into the community and promoting inclusive economic participation [15].

Building Human Capital: Through vocational training and skill development programs, WISEs enhance the employability of their target groups, contributing to human capital development [15].

Encouraging Local Development: Many WISEs engage in activities that support local development, such as agriculture and crafts, thus contributing to the economic vitality of rural and disadvantaged areas [11].

Work Integration Social Enterprises in Romania represent a promising model for addressing social exclusion and promoting economic participation. Despite facing significant challenges, these enterprises contribute to social sustainability by providing employment, enhancing social cohesion, and fostering local development. Continued support from policymakers, stakeholders, and the public is essential to strengthen the sector and maximize its impact.

CONCLUSION

Social sustainability is a critical component of sustainable development, focusing on the well-being, equity, and cohesion of societies. It requires a multidisciplinary approach that integrates theoretical insights, robust measurement techniques, and comprehensive policy interventions to address the complex social challenges of the 21st century. Continued research and collaboration across disciplines and sectors are essential to advance the understanding and practice of social sustainability.

Social enterprises represent a promising model for addressing complex social issues through innovative and sustainable business practices. By blending social missions with market mechanisms, these organizations can contribute significantly to sustainable development. Continued research, supportive policies, and the mobilization of social finance will be essential to unlocking the full potential of social enterprises in creating lasting social impact.

International collaboration among Work Integration Social Enterprises (WISEs) holds significant potential for enhancing the efficiency and effectiveness of various working models across Europe. Such collaboration can facilitate the exchange of best practices, innovation, and mutual support, thereby addressing common challenges and optimizing the impact of WISEs. This can be realized through the instruments of the European Social Fund (ESF), which is dedicated to improving employment opportunities, promoting social inclusion, and reducing disparities across the European Union.

By leveraging the ESF's resources and mechanisms, WISEs can engage in cross-border partnerships, joint projects, and knowledge-sharing platforms. These collaborative efforts can help in standardizing effective practices, developing innovative solutions to common problems, and creating a cohesive support system for WISEs across Europe. Such initiatives would not only enhance the operational efficiency of WISEs but also align their efforts with broader European goals on social sustainability.

Furthermore, international collaboration facilitated by the ESF can contribute to achieving key European objectives, such as reducing unemployment, fostering social cohesion, and promoting inclusive growth. By working together, WISEs can more effectively address the diverse needs of marginalized groups, support local development, and contribute to a more socially sustainable Europe.

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SECTION EDUCATION AND

DIGITAL LEARNING INNOVATIONS

BEYOND THE CLASSROOM: EMPOWERING LEARNERS IN BIO AND GEOETHICS WITH ENGAGING NON-FORMAL RESOURCES

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ABSTRACT

Recent decades have witnessed extraordinary scientific and technological advances which have profoundly impacted society in multiple dimensions, such as healthcare, agriculture, energy, natural resources exploitation, environmental conservation, georisks management, and digital communication, promoting better living conditions for all. However, alongside the benefits, humanity also faces growing challenges and dilemmas concerning planetary sustainability and human rights. For this reason, the call for scientific and ethical literacy has never been more critical, namely in the field of bio and geoethics. Despite its importance, in Portugal, the integration of bio and geoethics in science education curricula is still very limited, occurring almost exclusively at higher education levels. This study explores the potential of non-formal education as an alternative to address bioethics and geoethics teaching at middle and secondary education levels. Non-formal activities, distinguished by their flexibility and learner-centered approach, offer significant opportunities for enhancing understanding and engagement with ethical issues in these fields. Specifically, this work analyses and evaluates the effectiveness of two non-formal educational activities: (i) an escape room focused on bioethics and informed consent and (ii) a modelling activity focused on geoethics and seismic risk. The activities took place over six weeks, for one hour a week. This study followed a mixed-methods methodology and involved 17 participants (n=17) aged between 12 and 16 (average 13.6 years) who attended a social charity institution after regular school time in an urban area of northern Portugal characterised by an underprivileged social context. A diagnostic test was applied initially, and an assessment snapshot was taken at the end of both activities. Findings indicate that participants significantly increased their knowledge of bio and geoethics and engagement with ethical issues. The outcomes highlight non-formal education's potential to enrich bioethical and geoethical knowledge and foster more conscious and participatory citizenship among adolescents. These findings can inform the development of future non-formal and formal educational activities and contribute to the broader discourse on bio and geoethics education.

Keywords: Science education, non-formal education, bioethics, geoethics.

INTRODUCTION

We are facing a future characterised by rapid change and uncertainty. Education systems must empower students to navigate these changes successfully. This involves equipping them with essential competencies, including knowledge, skills, attitudes, and values [1], that must be properly mobilised to address complex future demands [2].

For that purpose, a science education that tackles values is critical [3, 4]. Incorporating these elements into the curriculum ensures that students are scientifically proficient and ethically grounded, preparing them to participate in future decision-making and responsibly contribute to society [5].

UNESCO [6] and other works [7,8] underscore the importance of bioethics education, which helps students understand and handle ethical issues related to biological and medical research and applications. Bioethics is essential in addressing issues such as medical consent, justice in medical care, genetic engineering and many other impacts of biotechnological advancements [9].

On the other hand, geoethics involves reflecting on the values that should guide behaviours and practices affecting the relationship between humans and the Earth system. [10]. Integrating geoethics in geoscience education is essential in guiding students to consider the ethical implications of their actions toward the Earth system, promoting both a holistic perspective and sustainability [11, 12].

Despite their importance, bio and geoethics integration into educational curricula remains limited in Portugal, especially at middle and secondary education levels. This gap highlights the need for alternative educational approaches to impart bioethical and geoethical knowledge effectively.

Non-formal education provides flexible learning opportunities that are often more responsive to the immediate needs of students and communities [13, 14]. It can enhance personal and social development, complementing formal education by addressing gaps and reinforcing skills such as teamwork and communication. The European Commission [13] also acknowledges the importance of non-formal learning environments in science learning toward engaged and participatory citizenship.

The present work investigates the potential of non-formal education to learn bioethics and geoethics at middle and secondary education levels through innovative activities designed to promote bio and geoethical knowledge and engagement. In this work, we propose and evaluate two activities: (i) an escape room activity to address the bioethical topic of informed consent and (ii) a practical activity involving modelling to address seismic risk and geoethics.

METHODOLOGY

The present investigation aimed to analyse and evaluate the effectiveness of two non-formal educational activities: an escape room concerning bioethics and informed consent and a modelling activity regarding geoethics and seismic risk. For that purpose, a mixed-methods approach was applied.

1. Sample

The convenience sample comprised 17 participants (n=17) who attended a social charity institution after their regular school hours and voluntarily accepted to participate in the study. Parents' consent was also given. Despite the small number of participants, the activities enrolled all the target-age students who were available during one of the two hours scheduled weekly for the activities. The sample characterisation is presented in Table 1.

Table 1. Sample characterisation.

Demographic data		Students (n=17)	
		n	%
Gender	Female	11	64,7
	Male	6	35,3
Grade level	Middle	13	76,5
	Secondary	4	23,5
Age	Mean	13,6	
	Standard deviation	1,4	
	Minimum	12	
	Maximum	16	

The participants were primarily female (n=11; 64,7%), and the average age was 13,6 (the age range was between 12 and 16). Most of them were studying in middle school education, between 7th and 9th grade (n=13; 76,5%).

2. Data collection instruments

Two small diagnostic tests were applied initially, and two snapshot reports (SR1 and SR2) were applied at the end of the activities. Quantitative results were analysed using IBM SPSS Statistics© version 29, and a content analysis grid was used to analyse answers to open questions in both snapshots. Two science education experts and a medical doctor validated the data collection instruments. In addition, all ethical standards related to social science research were attended.

3. Procedure

The study's procedure followed three steps:

1. **Pre-intervention Phase:** a diagnostic test was administered to all participants to assess their baseline knowledge in bioethics and geoethics (Appendix 1).
2. **Intervention Phase:** participants engaged in non-formal educational activities for over six weeks, each lasting one hour per week. The escape room activity on bioethics and informed consent was conducted first (Appendix 2), followed by the geoethics and seismic risk modelling activity (Appendix 3).

3. Post-intervention Phase: a week after completing each non-formal educational activity, a snapshot report was administered to measure the knowledge and understanding of both themes (Appendix 4).¹

RESULTS

This section describes the results obtained from the initial diagnostic tests (Table 2) and the two snapshot reports applied after the activities (Table 3).

Table 2. Descriptive statistics of the classifications obtained in the diagnostic test, both in bioethics and geoethics (n=17).

Diagnostic test scores		
	Bioethics (%)	Geoethics (%)
Mean	30,9	33,8
Standard deviation	20,8	31,8
Minimum	0	0
Maximum	50	100

As revealed in Table 2, the mean classification on the diagnostic test was 30,9% on the bioethics topic and 33,8% on the geoethics topic.

Table 3. Descriptive statistics of the classifications obtained in the snapshot report (knowledge-related items), both after the bioethics activity (n=17) and after the geoethics activity (n=16).

Post activity snapshot report scores		
	Bioethics (%)	Geoethics (%)
Mean	85,9	89,8
Standard deviation	17,0	16,0
Minimum	60	50
Maximum	100	100

The post-activity results revealed higher mean scores, reaching 85.9% in bioethics and 89.8% in geoethics.

The open-ended item aimed to understand if participating contributed to extending their knowledge in bioethics and geoethics (SR1, Q4 and SR2, Q5). A content analysis grid was used to analyse answers to open questions in both snapshots (Appendix 5 and 6).

¹ Information on all the appendices is available at the following link:

<https://drive.google.com/file/d/1QRhHb8rs2wJRIx6e7QyVBCSZ7dkQ8-F1/view?usp=sharing>

Concerning Activity 1, all participants answered “Yes” (SR1, Q4, n=17; 100%), but only seven (n=7; 41,2%) justified their answer. Almost all students could define bioethics correctly (BA1, n=6; 85,7%), and all students referred to the two bioethical principles addressed in Henrietta’s Lack case (BB1, n=7; 100%) and recognised bioethics as crucial for individuals and society (BC1, n=7; 100%), as illustrated by one participant’s response: *“Yes, because bioethics is about making sure medical and scientific research is done in a fair and respectful way. The activity taught me about Henrietta Lacks, whose cells were taken without her permission. It showed me how important it is to respect people's choices about their bodies, which is the principle of autonomy. It also taught me about justice, meaning everyone should be treated fairly. Knowing about bioethics helps us make sure that scientists and doctors do their work in a way that respects people's rights and treats everyone fairly. This is important for keeping trust in medical doctors and making sure everyone and the society benefits from the scientific discoveries”*. Activity 2 revealed similar results (SR2), including all participants answering that participating in the activity increased their knowledge about the importance of geoethics (SR2, Q5, n=16; 100%). Nevertheless, only seven students justified their response (n=7; 43,8%). Almost all students could define geoethics correctly (GA1, n=6; 85,7%), most of them mentioned at least two geoethical values in their response (GB1, n=5; 71,4%), and all of them acknowledged geoethics value to citizens and society (GC1, n=7; 100%). In addition, concerning the geoethics activity, another participant responded, *“Yes. Geoethics is about making sure that our actions involving the Earth System are responsible. It focuses on values like responsibility, prevention or honesty. This means we should consider how our actions affect the planet and others. In the activity, we learned how to build structures that can withstand earthquakes, which is a responsible and preventive way to protect lives and property. It's important for geoscientists to share honest information about earthquake risks so that people can be prepared. By learning how to build earthquake-resistant houses, we can prevent damage and save lives during earthquakes. Geoethics helps us make better decisions about how we interact with our environment. It ensures safer cities and helps mitigate (natural) disasters like earthquakes”*.

DISCUSSION

The findings indicate a significant improvement in students' knowledge and understanding of bioethics and geoethics following participation in non-formal educational activities. Initial diagnostic tests showed low baseline knowledge in both areas, with a mean score of 30,9% in bioethics and 33,8% in geoethics, highlighting a substantial gap in formal education regarding these essential topics, as addressed in several works [7, 8, 11, 12]. Post-activities assessments demonstrated marked improvements, with mean scores rising to 85.9% in bioethics and 89.8% in geoethics, reflecting enhanced comprehension of the concepts taught. Despite little participation of students in answering the open questions (n=7; 41,2% for SR1; and n=7; 43,8% for SR2), qualitative analysis further corroborates the quantitative data, revealing an

enhanced understanding of bioethics and geoethics concepts and their applications. Students expressed a greater awareness of ethical issues and demonstrated the ability to apply bioethical principles correctly, expressing its importance to society. These results align with previous studies, which consider escape room tools for enhancing engagement and knowledge in educational activities [16].

The modelling activity addressing geoethics and seismic risk illustrated complex concepts through hands-on participation, emphasising the practical applications of ethical reasoning in real-world scenarios. This approach is consistent with the findings of a study [17] that highlighted the importance of using models to enhance students' understanding of seismic effects on buildings. Furthermore, other authors [11] acknowledge the role of non-traditional teaching of geosciences within the frame of geoethics, revealing that it can significantly develop students' scientific literacy and promote actions aligned with sustainability.

The study's outcomes indicate the potential of non-formal education to supplement traditional curricula in middle and secondary education, namely in bioethics and geoethics, which are underrepresented in formal education settings. The two activities fostered a more profound understanding of ethical issues, encouraging students to become more informed and ethically conscious citizens, a necessary condition to enhance their participation in society, as recognised by a study [15]. In addition, most bio and geoethics teaching studies only concern higher education [18, 19, 20] and, to a lesser extent, secondary education [7, 8, 11]. Considering the importance of the themes and given our study's positive results with students from middle school, this fact underlines the present work's importance in broadening the learning of bio and geoethics at younger ages. This work's limitations include the small sample size and the short duration of the intervention. Future research should aim to involve larger participant groups over extended periods to validate and expand upon these findings.

CONCLUSIONS

Incorporating non-formal educational activities, such as escape room-like games and practical modelling exercises, for learning bioethics and geoethics offers a dynamic and effective approach. These strategies foster engagement, critical thinking, and ethical awareness among students, preparing them to address the multifaceted challenges of our modern society. By exploring real-world histories, like the one from Henrietta Lacks, and engaging in hands-on activities related to seismic risk, students gain a deeper appreciation for the ethical dimensions of both scientific and technological advancements. This study underscores the potential of non-formal education to enrich bioethical and geoethical knowledge and engagement, contributing to the development of responsible participation in society. In addition, it can inform the development of other activities that address bioethics and geoethics both in formal and non-formal education, helping to ensure that the learning of these topics reaches a broader audience.

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DEVELOPING METACOGNITION WITH AN ACTION RESEARCH INTERVENTION: RESULTS FROM HUNGARIAN ENVIRONMENTS

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ABSTRACT

Metacognition has been acknowledged as a key component of self-regulation and has also a multidimensional nature, with at least three components: (a) metacognition as theory of mind, (b) metacognition as epistemic thinking, and (c) metacognition as knowledge and regulation of our cognitive self.

In an Erasmus+ collaborative project a multicomponent metacognitive training course for teachers was developed incorporating metacognitive knowledge and skills, adopting the principles of action research. The intervention's aim with respect to developing metacognitive skills was to inform teachers of recent research findings showing the importance of metacognitive abilities for learning and critical thinking and to present possible teaching approaches that can be incorporated into their everyday teaching practice to support the development of metacognitive thinking.

Results indicate that 9–12-year-old children benefit from a two-week training in metacognitive knowledge and comprehension as indicated by the increased number of children with higher metacognitive monitoring skills.

Keywords: metacognition, development program, action research

INTRODUCTION

Cognition is a form of knowledge about the external stimuli and facts stored in Long-Term Memory. Metacognition is a form of knowledge, as well; its distinguishing feature is its referent: the human processing system [1].

There is consistent experimental evidence that metacognitive processes play a major role in determining successful learning and problem solving as well as text comprehension [2]. The importance of metacognitive strategies in human problem solving is evident in the interpretation of Veenman, Elshout and Meijer's [3] results. In mathematics, Verschaffel et al. [4] demonstrated the effectiveness of a training program based on metacognitive strategies. There is research on the link between reading and metacognition. Some studies point to a link between conscious, controlled thought processes and reading comprehension (see [5]). In general, the ability to become an expert in a field is associated with a higher level of use of metacognitive strategies.

Given the relevance of metacognitive strategies for teaching problem solving, researchers have tended to focus on areas related to successful problem solving in school settings. Development programs and methods have been developed to teach metacognitive strategies or facilitate their implementation [6]. In some studies that have attempted to

link metacognition to school practice, the goal is usually not to develop metacognition per se, but rather to develop some important skills that can be developed through metacognitive strategies [7].

There is growing empirical evidence that elementary school students use metacognitive strategies. There are also important empirical results in the field of reading that show that metacognition plays an important role in elementary school students' reading performance [8, 9]. A classic study by Myers and Paris [10] found that even second graders had relevant explicit knowledge about reading, and many of the declarative metacomponents were similar to the beliefs of sixth graders.

However, as some researchers argue, metacognition is a fuzzy concept [11], since we cannot make a difference between metacognitive strategies and cognitive ones. The complexity of metacognition is further increased when terms such as metacognition and self-regulation are used interchangeably without adequate or explicit consideration of their overlaps and differences [12]. Alongside understanding our cognitive strengths and weaknesses, metacognitive knowledge encompasses our awareness of the origin and nature of knowledge itself, as well as the criteria we employ to justify it (referred to as our epistemic thinking and beliefs). Metacognition can be viewed as a disposition rooted in epistemology. Epistemic thinking, which refers to individuals' understanding of knowledge and the process of acquiring it, establishes the benchmarks individuals use to assess and modify knowledge claims, both online and offline. The origins of these benchmarks for knowledge formation and revision can be traced back to early achievements in theory of mind (ToM). ToM, the ability to predict or explain behaviour by attributing mental states such as desires, intentions, and beliefs to oneself and others, represents the initial form of metacognitive knowledge. It is the first knowledge we develop about the functioning of our own mind and the minds of others, and it plays a crucial role in our social interactions.

Previous intervention studies on metacognition in educational settings treated all the above metacognitive components separately following distinct theoretical traditions. There is need to design and implement a training course which include all the major components of metacognition: (a) metacognition as theory of mind, (b) metacognition as epistemic thinking, and (c) metacognition as knowledge and regulation of our cognitive self.

METHOD

In the framework of an Erasmus+ strategic partnership programme (Pro-Me-ToM Project), experts from four higher education institutions¹ have developed a Teacher's Training Program (TTP) with the aim to promote primary and secondary teacher's and 9-14 old student's metacognition. The 90-hour development programme aimed to make teachers aware of the importance and development potential of the three aspects of metacognitive thinking (metacognition as theory of mind, metacognition as epistemic thinking, and metacognition as knowledge and regulation of our cognitive self) and to prepare them to carry out development exercises in a classroom environment. The structure of the training programme is presented in Table 1.

¹ European University of Cyprus, University of Central Lancashire (Cyprus), Aristotle University and University of Ioannina (Greece).

Table 1. The structure and content of the TTP

Topic	Session: Content	
Introduction	1	Rational of intervention, working method. The concept of metacognition.
	2	The action research paradigm: theoretical background, methodology of implementation.
Metacognitive monitoring	3	Metacognitive knowledge and experiences. Metacognitive control (strategies and skills). Metacognitive experiences.
	4	Teaching metacognitive skills in classroom: practical guidance. Focusing on declarative, procedural and conditional knowledge. The error detection paradigm.
Epistemic knowledge	5	The notion and importance of epistemic cognition. Research findings. Instructional activities: the "argue with me" curriculum.
	6	The scientific thinking method: experimental protocols and controls, mutual criticism. Resolving uncertainty.
		Evaluating the reliability of information. Instructional proposal for source evaluation and epistemic cognition.
Theory of Mind	7	ToM construct, importance in social interaction. Developmental research.
	8	The impact of social environment on children's TOM development. Activities for promoting ToM skills
Feedback	9	Teachers relate obstacles and benefits of their application.
	10	Translating theory to practice using teacher's reflections as source.
	11	Teachers summarize their work and experience, discuss the effectiveness of TPP. Completing an evaluation form.

The development programme has been implemented in educational institutions in the participating countries (Cyprus, Greece, Romania, Hungary, Portugal) in the school years 2022-2023 and 2023-2024. The development programme targeted two age groups, 9–12-year-olds (lower grades) and 12–14-year-olds (upper grades). The participating teachers were teachers of primary education and teachers of humanities and languages in upper secondary education.

The training regarding the development of the three areas of metacognition was followed by classroom application, i.e., each area to be developed was applied for two weeks, four times a week for primary school children and two times a week for upper school children. Before the application of each module of the development programme, both teachers and students completed assessment tests to assess skills corresponding to the three components of metacognitive thinking (pre-tests, or before tests). After the application of the development programmes, similar tests were completed (post-test or after-measurement).

According to the principles of action research, reflective diaries were an integral part of the TTP. Teachers were invited to keep records of their attempts to promote their own and their students' awareness and skills. Thus, action research aimed at participants' professional development that results in students' learning and progress.

In the following, we present preliminary data on the application of the metacognitive knowledge and experiences component of the development programme for the Romanian and Hungarian study groups, based on the results of the lower school group.

PROCEDURE

The TTP was implemented during two training sessions, in the spring semesters of the academic years of 2022-2023 and 2023-2024. In Romania, teachers and native Hungarian-speaking students in schools of the Hungarian minorities participated in the programme; thus, the same tests and developmental exercises were used in both Hungary and Romania, in Hungarian language. The number of teachers and students in primary classes participating in the programme is shown in Table 2.

Table 2. Number of teachers and pupils participating in the development programme

	Teachers	Students
Romania	69	1470
Hungary	23	439

The pre- and post-tests measuring students' metacognitive skills consisted of two sets of tasks. The first part contained 14 items for self-assessing control of cognition practices, elaborated by Prof. Dr. Panayiota Metallidou from Aristotle University, Greece (results not included in this report).

The second part included two error detection reading assignments (in concordance with the error detection paradigm), similar to [13, 14], for measuring metacognitive monitoring skills. There were two stories with ancient animals in the pre-test and similar stories in the post-tests, followed by four questions: How comprehensible (easy to understand) does the story you just read seem to you (circle a number) with answer options from 1 (not at all understandable) to 4 (very understandable); Did you find any part of the story that confused you (Yes and No); If so, what it is (explain the problem) and How confident are you that if your teacher asked you comprehension questions you could answer them correctly (circle a number from 1-not at all confident to 10-very much confident) (confidence of comprehension question).

RESULTS

The effectiveness of the development programmes was checked by comparing the results of the pre- and post-tests. In accordance with the error-detection paradigm, children had to answer if they have found any confusing in the story. A „no” answer indicates a low level of metacognition. In case of “yes”, children had to explain the source of the confusion. Answers were included in three categories: 1- no (or irrelevant) answer, 2- the children underlined the confusing point with no, or incomplete explanation and 3 – the answer indicated that she detected the inconsistency. In accordance with the answers to these two questions, children were classified either in a high metacognitive monitoring group (HM) – including here children who detected the inconsistency in the text, and gave a reasonable explanation and low metacognitive monitoring group (in both error detection tasks) – and all the other children being included in the low metacognitive monitoring group (LM, see table 3). According to the working hypothesis, after the two-

week intervention program the number of children in the HM group should increase significantly.

For data analysis cases where children did not complete the pre or post-test for the metacognitive intervention were cleared. There were eliminated from analysis also children whose identification codes contained errors (so that the pre- and post-tests could not be matched with high confidence). A total of 1116 children with before and after test results were included in data analysis.

Table 3. Number of children in the Low and High metacognitive monitoring groups before and after intervention

Before	After		Total	%
	LM	HM		
LM	836	221	1057	94.71%
HM	25	34	59	5.29%
Total	861	255	1116	
%	77.15%	22.85%		

Before the intervention, 59 (5,29%) children were included this way in the HM group, while 1057 (94,71%) children were included in the LM group (table 3). Following the intervention, the number of HM children increased to 255 (22,85%), with a concomitant reduction of LM children to 861 (77,15%). This change was a consequence of 221 pre-intervention LM children becoming HM post-intervention, but with 25 children who were initially HM becoming LM following the intervention.

A McNemar's test with continuity correction determined that the difference in the proportion of HM children pre- and post- intervention was statistically significant, $\chi^2(1)=154,573$, asymptotic $p=0.00$.

Previous studies indicate that children with higher accuracy in metacognitive monitoring tend to have more confidence in their answers [15]. This hypothesis was tested using the 1-10 Likert scale confidence of comprehension question.

A Mann-Whitney U test was run to determine if there were differences in comprehension confidence between LM and HM rated student at pre-testing and post-testing. In case of pre-tests, distributions of the engagement scores for LM and HM children were similar, as assessed by visual inspection. Confidence of comprehension scores for HM students (mean rank = 677,10) were statistically significantly higher than for LM students (mean rank = 551,88), $U = 38,179$, $z = 2,913$, $p = .004$.

In case of after intervention categorization and groups and confidence answers, the results were similar: scores of HM students mean rank=667,61), were also statistically significantly higher than for LM students (mean rank=526,19), $U=137,600$, $z=6,172$, $p=.000$.

CONCLUSIONS

Results are in concordance with previous findings, indicating that metacognitive comprehension can be enhanced in elementary school context. Children with low metacognitive monitoring abilities benefit significantly even after a two-week (8 hours) training. Moreover, children with higher level of metacognitive monitoring abilities are more confident in their comprehension judgments indicating a higher accuracy of metacognition. Children with low metacognitive monitoring level might benefit from a training and could give more accurate confidence of comprehension answers.

We can notice that in this analysis the classification of children in the HM group had a quite severe criteria, two good answers for two tasks. That is when a child classified as HM at pre-tests was completing the post-tests, if at one of the two tasks has detected the inconsistency in text and answered “yes”, if the she did not argue accordingly (or was lazy to explain her reasons), she was transferred to the LM group.

Two months after the intervention program a follow-up test was completed by children, using the items of the post-tests. A more detailed data analysis taking into consideration partial failures and other collected data such as the metacognitive abilities and experience level of teachers is ongoing.

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DEVELOPMENT OF NEW SKILLS FOR MEDICAL STUDENTS IN PANDEMIC CONTEXT

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ABSTRACT

The present paper presents the results of an Erasmus+ project entitled "Development of New Skills for Medical Students in Pandemic Context. For most of the medical universities digital readiness/capacity was found unprepared for the COVID induced changes toward on-line education. Now, after 2 years, on line education is not anymore a novelty in higher education. But, especially for medical students, the problem raised during COVID pandemics was to follow practical stages. Telemedicine is a solution adopted in many countries both for medical as for educational services. By our approach we address not only the need to harness the potential of digital technologies for teaching and learning but also to equip students with digital skills as needed in present contexts of recovery after pandemic. The proposed solutions are in line with the digital transformation that Europe needs in the educational medical field. They will increase the capacity and readiness of participant HEIs to manage an effective shift towards required digital education and support medical university students in acquisition of new skills as requested by the labor market. e-Med offers an entirely new curricula/course addressing to COVID 19 symptoms, complications, treatment and recovery. Stimulation of innovative learning/teaching practices will be achieved by an interactive model of learning and training, encompassing the benefits of e-learning with innovative on line work-based approaches. The e-MED-skills on-line collaborative platform acts as a virtual place where both students and teachers will work together in learning, teaching and development of course content. As main aspects we promote digital content of training, OER development, testing and implementation of flexible learning pathways. The course content is developed by joint research, consisting in different e- modules dedicated to COVID 19 complex aspects included into the e-learning platform. A specific module dedicated to tele-medicine will develop digital skills of participants. The methodologies and e-learning tools were enhanced by work based learning approaches, aiming to give the students the opportunity to apply gained knowledge in live situations. A virtual environment offers on line consultations regarding COVID or post-COVID complications. Students can follow the medical teachers intervention and can directly work with patients under trainer supervision by the use of tele-medicine. In this way e-MED will engage students and medical universities in the path to digital transformation not only for teaching but also for medical services needed in future jobs.

Keywords: Telemedicine, COVID 19, medical students, digital skills.

INTRODUCTION

After 2020, medicine will never be the same again. The knowledge regarding COVID, its short and long term complications and treatment is in permanent change on EU level. At the time being, long-term medical interventions were considered for more than 75% of post COVID patients. Nowadays patients and society are being challenged by the long-term health complications associated with COVID-19, commonly known as long COVID [1]. In order to deal efficiently with long COVID and take proactive actions, it is important for medical professionals and patients to keep up with current progresses in diagnosis and treatment [2]. Until now the COVID 19 topic is not yet included into the medical higher education offer in Romania, Turkey or Poland. Due to its complex aspects, the need of such a specific course research based and permanently updated is more than a requirement for the responsiveness of involved HEIs. Moreover, medical schools must rapidly rearrange the dynamics of their educational curricula from the traditional platforms, to incorporate telemedicine as a common tool for students and patients and for these reason medical schools need to modify their curricula by incorporating telemedicine programs [3,4]. In the health sector telemedicine is a safe and feasible method to treat COVID and its complications as well as other pathologies[5]. There are various benefits in using technology of telemedicine, especially in primary care, making it easier for people to get preventive treatment, monitor discharged patients and manage their recovery [6,7]. In addition to being beneficial in keeping people safe, including the general public, patients and health workers, another important advantage is providing widely and immediate access to medical professionals, consultants, and additional education [8]. Therefore, this technology is an attractive, effectual and affordable option [9,10].

In order to answer to the identified specific needs we developed an Erasmus+ project - KA220-HED - Cooperation partnerships in higher education entitled ” **Development of New Skills for Medical Students in Pandemic Context**”, acronym e-MED-skills. The project started on 1.09. 2022 and will end on 31.10.2024. e-MED skills project aim to answer to areas that need to be strengthened (as identified by the partnership SWAT analysis) by innovative approaches in line with participants' needs and expectations and along with challenges for improving healthcare education. The mission of the project is to contribute to the generation, dissemination and application of knowledge related to COVID 19 and telemedicine in multiple contexts.

The main aim of the project was to develop and integrate an interactive model of learning/training in medical HE that encompasses the benefits of e-learning with online practical stages, targeting the COVID 19 medical aspects. The development of new educational pathways within e-MED skills project is based on collaboration between hospitals and Higher Education Institutes from Turkey, Bulgaria Romania and Poland. The present project is innovative as no such products/methodologies tailored on participant needs were developed until now by other EU projects or on national level in participant countries (after consultation of Erasmus+ project database and Ministry Educational sites). In particular its concrete innovative approaches are represented by its new content in terms of an interactive online course including different modules related to COVID19 in accordance to main organs/systems affected and short and long term complications, treatment and prevention. A module addressing tele-medicine and enhancement of digital skills was also developed. The methodologies and e-learning tools were enhanced by work based learning approaches, aiming to give the students the

opportunity to apply gained knowledge in live situations. A virtual environment offers on line consultations regarding COVID or post-COVID complications. Students can follow the medical teachers intervention and can directly work with patients under trainer supervision by the use of tele-medicine. In this way e-MED will engage students and medical universities in the path to digital transformation not only for teaching but also for medical services needed in future jobs.

MATERIALS AND METHODS

The methodology in delivering the e-MED skills outputs was tailored to the target groups needs. From a medical perspective we intend to teach medical students the basics of clinical management of COVID-19, including optimized supportive care interventions and therapeutics based on ongoing “living” assessment of new evidence generated by the global community. From a technical perspective we intend to enhance the students knowledge and skills to work in virtual environments by the use of telemedicine approaches. This included providing information on actual e-health approaches with main benefits and limitations so they can choose the best modality and offering basic knowledge needed for the development of an online virtual clinic (development and management of patient database, communication with patients and other medical professionals; data protection and ethical considerations). The training materials were provided in the form of online courses, included on an e-learning platform. The first step included the identification of the user requirements and platform architecture specifications, deciding on platform design, development of platform architecture, taking into account the present innovative trends/requirements for medical e-platforms and users needs. The partnership decided for the technological implementation and customization of an open source platform (e.g. Moodle). The e-learning platform was optimized to use interactive tools for medical images, video files etc. giving opportunity to develop video conferencing, track results of the training, learner performance, users activity and grades, assigning homework, upload and manage documents in different formats: Audio, Video, HTML, Text, rich text, .zip, .pdf; Track statistics. The educational team participated to the elaboration of course requirements/definition of the educational program, development of course curricula, content and methodology. The course chapters are based on current literature approaches and to EU standards. In the development of the general framework of the course, the educational team started by constructing a set of preliminary recommendations. Elaboration of research framework and tools referred to inclusion criteria, the milestones, and overall approaches, topics of literature research, and instruments to be used. The partnership reviewed all abstracts, recalled pertinent articles/books for review, and evaluated the studies meeting the inclusion criteria. They also abstracted, analyzed, interpreted, and/or summarized the relevant evidence for each course chapter. The training path was structured in multimedia educational objects (OERs). Virtual classes ensure a high degree of interactivity trainers – trainees.

Additionally to the learning materials, a virtual environment was developed within the project, leading the student to work on line with the patient. This functions as an on-line medical unit and gives the students the opportunity to apply gained knowledge in a virtual workplace and develop practical skills for assessment, decision, elaboration and follow up of post-COVID programs in the online environment. The teacher monitored

the services for all activities realized in the training session. The work-based approaches gave the students the opportunity to apply gained knowledge in live situations (setting up new forms of practical training and participation in real life cases).

An Ethics Advisory Board was the guardian of the correct governance practices which reviews at regular intervals.

The training path prototype (environment and content) was tested internally by the all project team members and by a group of trainees and patients (iterative and formative evaluation) with feedback to identify potential changes that were incorporated into subsequent forms.

Reaching the beneficiaries was done by the use of university and hospital networks, as all organizations are well known in the field, with consistent experience and strong networks with their target groups, through the e-MED-skills webpage (<https://e-medskills.eu>), E-MED-skills Facebook and Instagram page but also through professionals groups related to medical education area. Selected indicators of knowledge, attitudes, and practices were measured by questionnaires and surveys addressing the target groups (students and academic staff). The perception of beneficiaries such as patients & stakeholders about the quality and benefits of services based on SMART scheme was also evaluated.

RESULTS

The quantitative indicators of e-MED-skills results included 3 curricula on management of COVID 19 certified by partners in RO, TK and PL; 10 PPT course modules (135 slides), 252 text pages and 10 case studies; 3 protocols and correspondent videos for online rehabilitation; 5 brochures for patient education. Over 100 hours were spent on study and 20 hours for assessment. Over 85% of trainees entered the platform at least twice per month. 3 e-MED-skills online clinics are available in RO, TK, PL.

As result indicators, we estimated 200 registered users of the Project e-platform and we reached 415 users.

The online course addressing the management of COVID 19 included into the e-MED-skills on-line collaborative platform is available in English, Romanian, Turkish and Polish. It represents a comprehensive, science-backed course to understand, prevent, and combat COVID-19, including 8 distinct modules individualized on affected body systems: general and epidemiological module, cardiology, respiratory, neurological, internal medicine, rehabilitation, psychological, pharmacology and prophylaxis and nutrition module. Each module includes symptoms, complication and treatment for the targeted system. The prophylaxis and nutrition module includes nutrition advice for adults during the COVID-19 outbreak and post COVID period, in relation to other existent diseases.



Fig.1. The COVID 19 course

The module “Digital approaches for on-line medical services” aims to develop digital skills and competences for medical students and teachers to use on-line medical approaches. The course integrates theoretical and practical aspects to extend students knowledge regarding the use of different online tools in medicine and on-line medical services. It equips learners with a comprehensive understanding of Tele-health - an evolving scientific field in the healthcare domain, including 4 distinct modules that present the Tele-health concept, encompassing various technologies and modalities used for remote healthcare delivery exploring the distinct applications and considerations of tele-health across different cultural contexts internationally, examining the benefits and discussing the challenges associated with it and also an in-depth exploration of various consultation methods and clinical use cases for efficiently applying tele-health in diverse settings. The trainees will understand the different technologies used in tele-health consultations and the legal and regulatory frameworks and ethical considerations related and will learn how to develop effective communication strategies for virtual consultations, fostering patient engagement, and ensuring clear information exchange and active collaboration with other healthcare professionals. Following the training material and practical workshops, students will develop digital skills and easy their active inclusion in the global digital learning and working space. The course is integrated into e-MED-skills e-platform and offered as OER under a Creative Commons Public License.

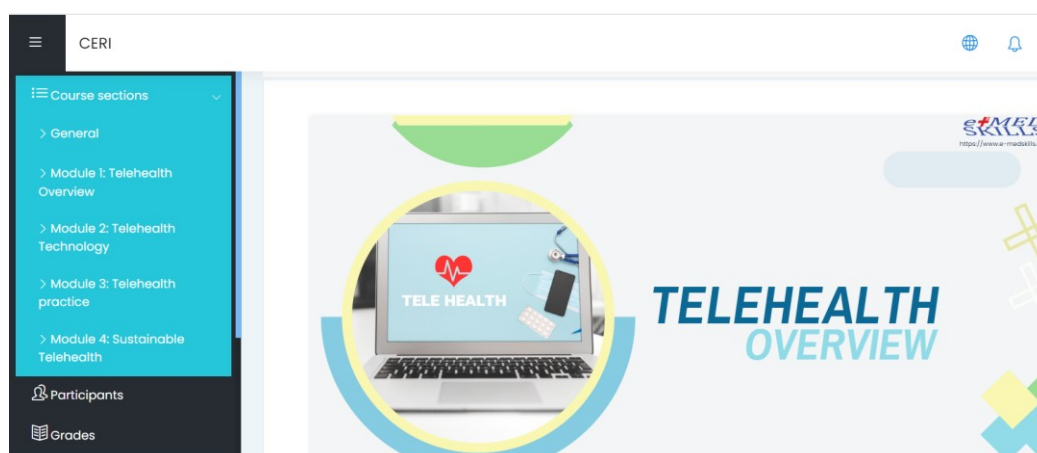


Fig.2. The module “Digital approaches for on-line medical services”

A tele-medicine platform was developed to offer case studies, rehabilitation protocols and videos and giving the possibility of online communication with patients regarding COVID/post COVID complications. In this way we aimed to enhance the methodologies and e-learning tools used for the development and implementation of the COVID course by work based learning approaches, aiming to give the students the opportunity to apply gained knowledge in live situations.

The tele-medicine platform is structured in 2 parts. The e-MED skills online clinic is a virtual space developed to meet the current needs of services required for telemedicine. that will offer on line consultations regarding COVID/postCOVID complications in the form of a facebook page. The output is independent from the e-learning platform- easy accessible for patients without registration and special features for deontological and ethical issues. The aim is to offer complete and quality services and personalised patient care for those who faces/faced any type of COVID 19 disease. The clinic is designed to ensure access to highly specialised medical professionals, protocols and tools that can be effectively and flexibly used whenever needed and by different users and can be accessed across different operating systems. Specialized assistance can be available from laptop or smartphone. Additional built-in features (appointment scheduling, measurement tools and communication with patient) are also available. The chat history permit to save both the chat discussions, the recommendations made and the documents that were sent during the consultation. The profile of each expert who will provide consultations is available on facebook. The patients were informed of all necessary steps in order to benefit of online consultations and rehabilitation. A privacy statement and informed consent is available online and has to be completed by each patient before benefitting of consultation. Students will follow medical teachers intervention and can directly work with patients under trainer supervision. More, trainees will guide the students to adapt their attitude to a open minded exploitation of their creative ideas influenced by external circumstances. Other aspects: transfer of acquired knowledge measured by the possibility to use detailed practical knowledge and to integrate knowledge from new fields as on-line assesment and patient focused interventions; development of new practical skills and demonstrate innovation in terms of methods used; demonstrating resource and team management responsibilities in an international work and study context. In this way e-MED will engage students and medical universities in the path to digital transformation not only for teaching but also for medical services needed in future jobs.

The second part of the tele-medicine platform was developed in the form of an youtube channel for didactic purposes. The e-MED skills channel is part of the project and offers case studies, rehabilitation protocols and videos regarding COVID/post-COVID complications and the correspondent therapeutical approaches. The material was developed by an international team of rehabilitation specialists from Romania, Turkey and Poland. For each case study and/or rehabilitation protocols the translations in national languages are provided.

DISCUSSION

Until the COVID-19 pandemic, telemedicine was underutilized and under-researched; the pandemics transformed it from an "option" into a "must". This prompted a swift rise in telemedicine consultations due to relaxed regulations and increased payment parity. Existing literature indicates that telemedicine offers advantages for both patients and healthcare providers, produces outcomes comparable to in-person care, and presents cost-saving opportunities [11]. Future research should focus on identifying which conditions are most effectively assessed and treated via telemedicine (including physical examination components), refining telemedicine communication techniques, ensuring equitable access for all patients, and educating the future healthcare workforce in telemedicine practices [12].

CONCLUSION

During COVID 19 pandemics the access to medical services was severely restricted with a negative impact on population health. Under new WHO policy, telemedicine is a key service in "strengthening the response of health systems to the COVID-19 pandemic". Tele-medicine platforms have grown exponentially during COVID19 pandemic, allowing a segue for medical schools to modify their curricula by incorporating telemedicine programs. The experience during the last year showed a great degree of satisfaction of patients and a lower costs for on-line health services. So even when (and if!) COVID pandemics, including actual long COVID 19 symptoms, will be over, the platforms will still be on "trend" as shown by research previsions. The EU Commission, closely working with policymakers to support the development of HE policies in EU countries in line with the Education and Training 2020 strategy (ET2020) identifies 4 key goals for European cooperation in higher education, of which 2 directly tackle our project: 1. Tackling future skills mismatches and promoting excellence in skills development; 2. Ensuring that HEIs contribute to digital innovation. At this moment digital skills competencies of students/medical professionals are low and universities didn't include tele-medicine in their educational strategies. It is important to equip students with digital skills as needed in their future careers and "coach" them to work on line with real patients.

Online medical services represent a contemporary problem-solving idea for medical professionals' education and professional development. The educational offer in medical studies lacks courses related to digital competencies for online medical services. The development of sustainable learning tools for lifelong learning will encourage telemedicine replication and promote transferability. The medical care community must learn from the current experience and draw lessons for the future, including the design of optimal online services enhancing access to and quality of care. Offering e-learning approaches and an interactive e-learning platform, as well as increased digital competencies is a feasible solution in this pandemic times. The e-MED-skills approach for on line medical services represent a contemporary problem solving idea in the health field for medical education and professional development in telemedicine.

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EMPOWERING UNIVERSITY LEARNERS: UNLEASHING THE POTENTIAL OF ESP THROUGH THE 7CS FRAMEWORK

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ABSTRACT

The article explores how the 7Cs framework, a student-centric approach and a new learning paradigm, can foster language proficiency, cultural understanding, and interdisciplinary collaboration in professional English learning among university students in English for Specific Purposes (ESP). In this study, the „JobLab approach“ was used to simulate real-world tasks tailored to the specific needs of graduates, meeting the demands of the 21st century. The approach's seven key elements, content, context, communication, collaboration, creativity, critical thinking, and culture, were seamlessly integrated into English training for 4 groups of participants (N=82), two groups in experimental and two in control groups. The „Six Thinking Hats“ and „SCAMPER“ tools also encouraged diverse perspectives and facilitated creative problem-solving. The research combines qualitative and quantitative methods. Data was examined statistically using SPSS software based on semi-structured interviews, questionnaires, and verbal creativity testing. The findings advocate adopting the 7Cs framework as a holistic and student-centred approach, promoting effective communication skills, critical thinking abilities, and rising intercultural competence.

Keywords: Job Lab, 7Cs approach, Six Thinking Hats, SCAMPER, CATs, Assessment.

INTRODUCTION

By exploring critical thinking and creativity in collaborative learning with professional content and real-life context while also considering cultural factors in the global business world, we aim to cultivate graduates' abilities to analyse, evaluate, and innovate the flow of ideas in their future professional fields. This approach not only enhances graduates' employability in the job market but also makes the practical benefits of the 7Cs framework evident and compelling.

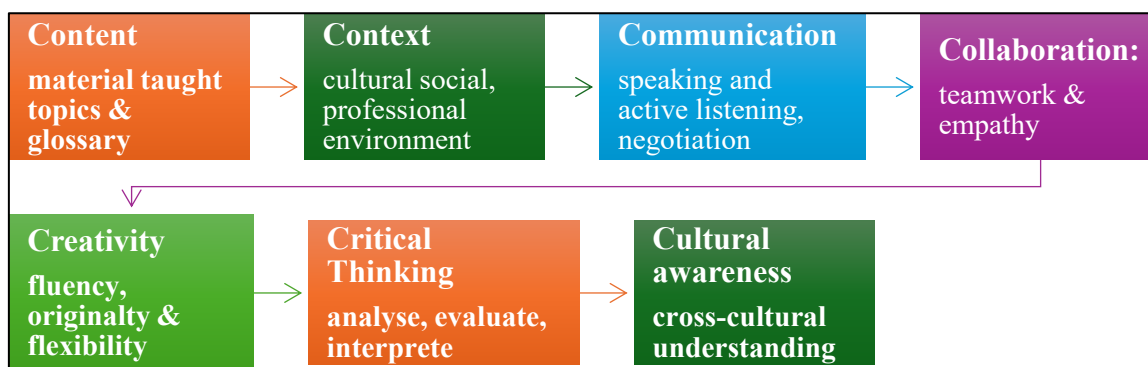
JOBLAB APPROACH

The JobLab approach, particularly within English for Specific Purposes (ESP) at the University of Zilina, Slovakia, is pivotal in applying the 7Cs framework. It offers a unique connection of theoretical and practical perspectives to foster holistic speaking and cognitive skill development among graduates. The 7Cs framework's transformative impact in a real-world educational setting instils confidence in its implementation and highlights its potential.

7Cs FRAMEWORK

The 7Cs framework encompasses seven key elements: content, context, communication, collaboration, creativity, critical thinking, and culture.

Applying the 7Cs framework to teaching English for Specific Purposes (ESP) suits the needs of economic student learners and the demands of the global world. Various researchers in the field advocate critical thinking through the lens of creativity and other factors. Critical thinking encompasses cognitive skills and dispositions essential for effectively analysing, evaluating, and synthesising information. Authors such as Facione [1] describe critical thinking as the ability to think independently; Ennis [2] outlines the dispositions crucial for critical thinking, and Morse [3] sheds light on the challenges faced in integrating critical thinking, providing valuable reflections on why it is often overlooked. They urge readers to think critically about the concept and generate novel ideas, solutions, and perspectives based on divergent thinking, flexibility, and the willingness to take risks.



Picture 1: 7Cs Framework involved in JobLab teaching/learning approach in ESP

SIX THINKING HATS

De Bono's concept of the Six Thinking Hats represents a lateral thinking tool for critical thinking development [4] used in the JobLab approach. It outlines different problem-solving and decision-making perspectives, including logical, emotional, creative, and practical angles, including business management, problem-solving, and creativity, using different "hats" representing different approaches.

Table 1: Six Thinking Hats - Various Perspectives Description Tool for Critical Thinking

Hat	Focus - approach
White Hat	Focus on facts and information about the JobLab program.
Red Hat	Express feelings, intuitions, and emotions about their experiences.
Black Hat	Identify the program's potential challenges, criticisms, and limitations.
Yellow Hat	Highlight the program's positive aspects, strengths, and successes.
Green Hat	Generate creative ideas, suggestions, and innovations for improvement.
Blue Hat	Facilitate the discussion and consider all perspectives.

(Source: authors)

SCAMPER

Eberle [5] states creative thinking development as an idea-generation SCAMPER tool, where each letter represents a brainstorming session with different ways of problem-solving. Table 2 describes the strategies and meanings based on implementing the SCAMPER tool.

Table 2: SCAMPER- various perspectives description tool for creativity development

Letter	Strategy	Description
S	Substitute	Consider alternative materials, processes, or components to change the idea.
C	Combine	Synthesise ideas from multiple sources to different views in a new concept.
A	Adapt	Modifying the idea to fit different purposes makes it more versatile.
M	Modify	Enhance the idea's functionality by making improvements or optimisations.
P	Put to Another Use	Explore alternative applications or contexts for the idea, repurposing it in different industries or settings.
E	Eliminate	Identify and remove unnecessary or complex elements to simplify the idea while maintaining its core functionality.
R	Reverse	Reversing the order or direction of elements within the idea can provide new perspectives, allowing for fresh insights and innovative solutions.

(Source: authors)

CATS

According to Angelo and Cross [6], classroom assessment techniques (CATs) describe evaluation as an efficient tool for learning in ESP to monitor progress and diagnose learning needs. Many authors, such as Hoy (Educational Psychology, 2021) and Brookfield (Becoming a Critically Reflective Teacher, 2017), have highlighted this importance.

ASSESSMENT

Peer assessment allows students to provide feedback on each other's work, offering perspectives and promoting collaborative learning in JobLab approach, as described in Table 3.

Table 3: Creativity and Critical Thinking Assessment Rubric

Criterion	Excellent	Proficient	Basic	Needs Improvement
Clarity of Argument	Clear, well-organized, logic	Mostly clear and well-organized, minimum lapses	It is not very clear, making it difficult to follow.	Clarity and coherence with flaws in logic.
Depth of Analysis	Deep insight with multiple perspectives,	Comprehensive, insightful, relevant	Superficial, lacks depth, focusing on	Shallow needs to explore the key

	addressing complex issues.	factors, offering interpretations.	surface-level aspects	aspects in more depth.
Evidence and Support	Strong, credible sources with clear, relevant examples.	Adequate, some sources in lacking of credibility or relevance.	limited or weak evidence, with few relevant examples provided.	Insufficient, anecdotal or unsubstantiated claims.
Logic and Reasoning	Sound, logical connections between claims and evidence.	Mostly logical, with occasional lapses, mostly in proper logic.	Some fallacies detract from its overall coherence.	Illogical, and needs coherence, undermining its persuasiveness.
Creativity and Innovation	Creative, original, offering novel insights or solutions.	Some creativity is conventional in its interpretation.	Lacks creativity, is unimaginative, and fails to offer innovative ideas.	Derivative lacks originality or fresh insights.
Overall Score, Added value	Demonstrates exceptional critical thinking skills across all criteria.	Displays strong critical thinking abilities with minor areas for improvement.	Critical thinking requires significant development in certain areas.	Lacks sufficient critical thinking skills and requires improvement in multiple areas.

(Source: authors)

METHODOLOGY

RESEARCH OBJECTIVES

The objectives of the work are to study the effects of using the 7Cs framework and traditional teaching approach in a Job Lab English semestral programme for undergraduates. The research design adopts a mixed-methods approach, combining qualitative and quantitative methods to gather comprehensive insights into implementing critical thinking and creativity within the 7Cs programme for ESP graduates. The questionnaires were verified in a pilot group ($\alpha = 0.81$).

Participants were graduates enrolled in an ESP program at University Zilina (N=82), two experimental groups (N=42), and two control groups (N=40).

DATA ANALYSIS

Before the study experiment started, all research instruments were developed, validated, piloted, and revised. The needs analysis 5-Likert scale questionnaire examined students' preferences, which were used to design the JobLab course. The t-test was used in the pre-experimental phase to compare the English language level grades and the academic achievement of students studying both classrooms to have the same level classes.

Qualitative data included a questionnaire with five open-ended questions to explore respondents' perspectives on integrating critical thinking and creativity. Additionally, focus group tests were set to explore topic-based verbal creativity further.

Quantitative data involved a survey in which participants were assessed on their perceived levels of critical thinking and creativity before and after participating in the 7Cs JobLab course.

Qualitative analysis was based on thematic analysis, identifying recurring patterns, themes, and insights emerging from focus group discussions and open-ended questions in questionnaires. Data were coded and categorised to uncover meaningful patterns.

FINDINGS

The experimental group showed improvements in critical thinking (self-reported: 40.63%, objective: 25%) and creativity (self-reported: 50%, objective: 27.27%), while the control group experienced declines in both areas. (Table 4).

Table 4: Findings on Perceived Changes in Critical Thinking and Creativity

Group	Critical Thinking (Self-Reported)	Critical Thinking (Objective Measures)	Creativity (Self-Reported)	Creativity (Objective Measures)
Experimental Group (average)	BEFORE	PRE	BEFORE	PRE
	03-Feb	60	02-Aug	55
	AFTER	POST	AFTER	POST
	04-May	75	04-Feb	70
value difference	40.63%	25%	50%	27.27%
Control Group (average)	BEFORE	PRE	BEFORE	PRE
	03-Jan	57	02-Jul	51
	AFTER	POST	AFTER	POST
	Mar-15	52.5	Feb-94	48
value difference	1.16%	-7.90%	8.89%	-3.92%

(Source: authors)

Table 4 shows that the average score increased from 15.24 in the pre-test to 19.36 in the post-test in the control group, with the median rising from 15 to 18. The standard deviation increased from 3.35 to 5.67, indicating a wider dispersion of scores in the post-test. Similarly, the experimental group improved, with the average score rising from 15.44 in the pre-test to 21.12 in the post-test. The median score increased from 15 to 20, and the standard deviation slightly decreased from 4.7 to 4.57, suggesting a more consistent performance among participants in the post-test. While both groups exhibited improvements, the changes in the experimental group were more pronounced. This suggests that the intervention might require a longer duration to produce more substantial and noticeable improvements in verbal creativity.

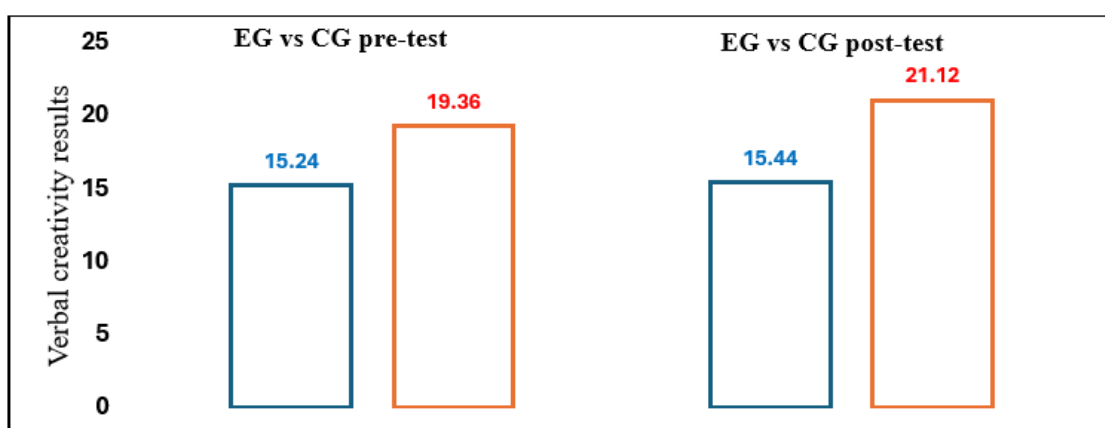
The tests were based on verbal fluency, flexibility, originality, and the divergent production of symbolic units known as word formation based on speed and correctness. Assessment: Score 1 point/correct word in fluency, 2 points for flexibility and 5 points for originality (novelty).

Table 5: Comparison of Verbal Creativity Results EG vs CG ($p < .05$)

Test/ group	Pretest/ control group	Posttest/ control group	Pretest/ experimental group	Posttest/ experimental group
Average	15,24	19,36	15,44	21,12
Median	15	18	15	20
SD	3,35	5,67	4,70	4,57

(Source: authors)

Graph 1 shows the verbal creativity test results (max 25) of the experimental group's average mean score (EG = 21,12), which achieved better results in divergent production of topic-based compounds semantic relations than the traditional control group score (KG = 19,36).

**Graph 1: Verbal Creativity Test Results Comparison**

Interpretation of qualitative findings from open-ended questionnaires described a positive impact expressed by satisfaction issues supporting quantitative findings in the creative categories of fluency, flexibility, and originality and their subtasks. In addition, all verbal creativity tasks based on the semi-structured interview results agreed upon a higher level of satisfaction in the experimental (3.50 - 4.50) than in the traditional control group (3.60 - 4.20).

DISCUSSION

More longitudinal and extensive studies are needed to investigate the research potential.

CONCLUSIONS

In conclusion, integrating 7Cs based on critical thinking and creativity offers a transformative approach to education that prepares graduates for the challenges and opportunities of the modern workforce. Through diverse perspectives and innovative problem-solving techniques, this approach seeks to uncover valuable insights into the effectiveness of the JobLab Approach in preparing graduates for success in their

professional endeavours. this approach empowers graduates to think differently, innovate boldly, and make meaningful contributions to their professions and communities by balancing analytical rigour and imaginative thinking. This study uses innovative 7C methodologies to foster effective communication and enhance graduates' employability, career advancement prospects, and well-being. The study sheds light on the pivotal connection between language development and the overall enhancement of professional skills within the JobLab framework. It aims to ensure all students' successful involvement and challenge, including cognitive learning, through problem-solving and collaborative interactions such as discussions, role-plays, and group work.

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EXPERIENCE OF THE PAST, FORMATION OF THE FUTURE: A DYNAMIC HISTORY OF STUDENT-CENTERED EDUCATION

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ABSTRACT

This article explores the historical evolution of student-centered learning, focusing on its relevance and implications for self-directed learning in higher education. **The goal of the article is to trace** the development of student-centered pedagogy examining its theoretical foundations and chronological development. **Methodologically**, a comprehensive scientific literary review was conducted, including theoretical foundations and empirical research, and an analysis was conducted. Analysis of the problem identifies an urgent need for a paradigm shift from traditional teacher-centered approaches to a student-centered learning environment. The results of the research shed light on these key role environments in the students' independence development.

The practical significance is to offer a student-centered learning environment as a tool for teachers and higher education institutions, which form the student's independent activity characteristics. This research contributes to the current discourse on pedagogical approaches providing insight into the transformative student-centred education potential in the higher education context. The results of the research is to offer practical advices for teachers, higher education and government institution officials who seek to improve the education quality encouraging independent learning among students. The article contributes to a broader understanding of the historical context and educative philosophy underlying student-centered approaches in higher education.

Keywords: student-oriented education; educational evolution; independent research; higher education paradigm; learning autonomy; pedagogical improvements; academic independence.

INTRODUCTION

This story unfolds against the background of the rich education history, which witnessed the ebb and flow of various pedagogical philosophies. From the classical rote memorization foundations to the progressive experiential learning ideals, the journey through time highlights the various experiments and breakthroughs that culminated in the predominant student-centered approaches. By examining the transformative

moments and influential figures who championed this pedagogical revolution, we gain insight into the social, cultural, and philosophical currents that push education towards a more inclusive and student-centered paradigm.

In addition, the dynamic student-centered learning history is intricately intertwined with the technological progress and global changes that characterize the modern era. As we move into the age of digital technologies, the role of technology in shaping educational methodologies is becoming increasingly prominent, creating both challenges and opportunities for teachers and students. Understanding how these external forces align with the student-centered learning principles providing nuanced perspectives on the adaptability and resilience of this pedagogical framework in changing societal face needs.

In our research, we seek not only to trace the student-centered learning trajectory, but also to critically assess its impact on the development of critical thinking, creativity, and lifelong learning skills. As the global educational landscape grapples with the rapidly changing world demands, this comprehensive review serves as a compass, guiding educators, policymakers, and students towards an informed understanding of the past as a catalyst for shaping the future of the education.

METHODS

This article uses a multifaceted approach to research the historical student-centered learning evolution and its implications for self-directed learning in higher education. The following scientific methods and techniques are used. The research includes a broad scientific literary review, including theoretical foundations and empirical studies. This method serves to obtain a broad existing knowledge understanding about student-centered pedagogy. The theoretical foundations and chronological student-centered pedagogical development was thoroughly analyzed. This method aims to trace the student-centered learning evolution, offering an understanding of its historical context and philosophy. An analysis of the problem was conducted to determine the urgent need for a paradigm shift from traditional teacher-centered approaches to student-centered ones learning environments. This method emphasizes the transition relevance to more student-centric educational models.

RESULTS

Education in Ukraine has moved to a student-centered approach, focusing on the individual student development, the independence and responsibility education. In the dynamic Ukrainian cultural and historical context, scientists emphasize the key role of teachers educating students' independence through independent learning, taking into account philosophical and pedagogical achievements in different historical periods. Different communities in different historical eras, formed by unique social, natural, ethnic and religious factors, create different pedagogical systems that served as a basis for the young people education. Ancient Greek and Roman philosophers such as Socrates and Cicero laid the educational principle foundations, promoting a theoretical human personality understanding. Socrates emphasized the critical knowledge understanding and the independent search for truth, while Cicero emphasized the conditional creation for cultural and moral development.

During the Renaissance, such teachers as S. de Bergerac, M. Montaigne, F. Rabelais, E. Rotterdamsky, V. de Feltr had a profound influence on education, emphasizing the need to support and nurture the student's individuality. François Rabelais advocated

independent learning, arguing that a true humanistic education goes beyond conventional methods and involves active participation in everyday life — whether at work, play, walks, or eating. This approach, emphasizing initiative and activity importance acquiring knowledge [2], remains a fundamental principle in the digital era, encouraging the interactive tool use to increase student engagement, foster critical thinking, and stimulate creativity.

In his book *Cruel Teachers*, Rotterdam Erasmus highlighted how teaching methods can stifle the curiosity of young people, preventing them from exploring the beauty in education. According to Erasmus, the development of empathy for teachers is crucial for enlightenment. Building a relationship with teachers, which is based on respect for the educational process, turns into a deep commitment to science itself [5]. Innovative education emphasizes the emotional competence of teachers, shaping education not only for the transfer of knowledge, but also for the personal development and satisfaction of students. This approach establishes a framework for strengthening behavioral patterns, increasing the desire to learn. In this context, teachers act as both transmitters of knowledge and mentors, inspiring students to delve into subjects independently, nurturing their innate curiosity and development.

Montaigne emphasized the main purpose of education: fostering students' intellectual independence, critical thinking, and questioning of doctrines. The process should arouse interest and cultivate a deep passion for learning. According to Montaigne, teachers should not impose views, but should educate students in the ability to critically analyze information, questioning even their own beliefs. Modern education requires teachers to contribute not only to the transfer of knowledge, but also to the creation of an environment for the education of students' individuality and self-sufficiency. In this environment, students take on the role of researchers, innovators and critics, and mentors support and develop these processes using a creative educational approach

The humanistic pedagogy of the Renaissance with its high ideals deeply shaped the following educational theories and practice. However, at the end of the Renaissance, humanism manifested itself mainly as a philosophical teaching that prioritized students' mastery of classical Latin.

Deep immersion in Latin grammar and imitation of Cicero defined the curricula of the humanist schools of the 16th century. The progressive educational concepts of that era developed thanks to the works of such thinkers as Jan Amos Comenius in the Czech Republic, John Locke in England, and Jean-Jacques Rousseau in France.

The ideals of humanistic pedagogy are being revived in the conditions of globalization and integrated education. Implemented through cross-cultural communication, critical thinking, and a student-centered approach, it emphasizes active student participation and tailors education based on individual needs and interests.

The 17th century became a decisive stage in pedagogical science, rethinking the role of the teacher in shaping the individuality of the student. Jan Amos Comenius exalted the teaching profession, calling it "the noblest under heaven." He emphasized the teacher as a catalyst for the spiritual growth of students and promoting the flourishing of virtue, arguing that the essence of education is to promote the harmonious development of the individual.

Comenius advocated the expansion of education beyond school, envisioned the preparation of young people for independent life, in particular for self-education throughout life. Today, this perspective perfectly complements various organizations, youth spaces and online learning platforms. Comenius believed in a humanistic vision

of education, considering man to be the most amazing creation of God, the pinnacle of existence and the embodiment of God. According to him, God assigned to people a unique purpose - to be "co-creators in eternity", making them the central figures of creation and recipients of glory and honor [3].

In the "Great Didactic", especially in chapter V. Komenius emphasizes the essential role of education in the formation of personality. While nature endows people with the potential for knowledge and moral virtue, imparting knowledge, virtue, and piety requires a deliberate effort in learning. Comenius claims that learning is an integral part of human destiny, and achieving one's essence requires education and independent search for knowledge.

J. Comensky emphasized that forcing children to research reflects a bad and immoral attitude. He advocated nurturing children's desire for knowledge through methods that avoid dissatisfaction and encourage continued learning.

The avant-garde ideas of Ya. Comensky influenced the emotional pedagogy of J.-Zh. Rousseau. He advocated free education, coordination with the natural development of the child, emphasizing the importance of nature and resistance to harmful external influences.

Jean-Jacques Rousseau aimed to eliminate social injustice through education, emphasizing natural freedom and equality. His educational program, focused on the natural sciences, envisaged the transformation of society and the individual. In the Sainte-Marie Educational Project, Rousseau collected the ideas of predecessors and contemporaries who advocated innovation in education. Jean-Jacques Rousseau, relying on existing ideas, creatively re-evaluated the ideas of his predecessors about education, the authority of a mentor and cooperation between a teacher and a parent. He emphasized the role of the educator in bringing up the unique, harmonious and independent development of the child, rejecting the imposition of personal beliefs.

Pedagogical concepts of J. Pestalozzi prefer the organization of education taking into account the characteristics of each child, contributing to his spiritual and physical development. This universal goal, however, is adapted to specific social conditions as children are prepared for specific roles in society.

J. Pestalozzi became a pioneer of formal education, advocating such an educational process that stimulates the activity and creativity of students, and promotes the independent search for knowledge. He emphasized the crucial role of teachers in arousing and maintaining the interest of students. Pestalozzi argued that education lays the foundation for personality formation by activating innate abilities and energies, establishing a learner-centered approach.

In the list of outstanding personalities who contributed to the development of the ideas of humanistic pedagogy in our country, G. Skovoroda and K. Ushinsky occupy a significant place.

A significant contribution to the humanistic approach quintessence was made by such outstanding scientists as R. Belan, S. Bondar, K. Havrilovets, I. Kondrashov, I. Matyush, N. Protasov, A. Smanser, V. Sushchenko, L. Khoruzhiy, M. Husak, H. Kostyuk, P. Peleh, M. Terekhova, B. Mityurov, V. Struminsky and others. The contribution of K. Ushinsky, who promoted children independence and initiative development in the educational process, emphasizing teacher's role, who should encourage them to independent knowledge with the literary help, should be especially noted.

H. Skovoroda's principles, which are an integral part of our research, emphasize the personal effort importance in learning. He emphasized that real achievements come from independent literary research, analysis, and observation. Skovoroda believed that effective life wisdom teaching requires persistent self-research, the teacher's authority, matching words with deeds.

The works of K. Ushynskiy and H. Skovoroda reflect a humanistic approach shaping their nationality, upbringing, and moral beliefs. It should be noted that the humanistic pedagogical foundations were laid in the 20th century, marking significant progress in pedagogical science. Humanism played a key role in shaping the neoclassical approach to teaching methods.

Prominent pedagogical scientific figures, in particular H. Vashchenko, V. Dukhnovych, M. Korf, O. Ogienko, S. Rusova, significantly formed the theoretical foundations from the humanistic approach to education. The value orientations outlined in their writings have become strategic guidelines improving the modern education system. V. Dukhnovych emphasizes the teacher's authority as a determining personal development factor for the child, asserting that the education success and general education system improvement depends on the qualifications and personal teacher qualities. V. Dukhnovych's saying "He who gave you education, he gave you more than he who gave you life" emphasizes the deep importance and noble purpose of the teacher's mission.

In our research, we focused on M. Korf's thesis that a teacher should be both an educator and a researcher. He advocated independent writing task inclusion, fostering a strong connection between the school and the local community, seeking to engage students in activities related to regional history.

Ukrainian educators emphasize the central "personality" place in their pedagogical ideas. They advocate making man the humanistic education center to foster freedom, independence, uniqueness, and a deep patriotism sense. This approach is considered important for educating people who can contribute to prosperity, international authority and recognition of the state.

In the 20th century, the humanistic education paradigm received a powerful impulse thanks to the works of scientists from the Western Europe, such as D. Dewey, M. Montessori, S. Frenet, G. Charrelman and R. Steiner.

Our research focuses on Waldorf pedagogy, a teacher-student interaction system that promotes self-discovery and actualization of an individual uniqueness. It is based on anthroposophical principles aimed at the holistic development of the physical, mental and spiritual personal aspects.

Research by O. Bodelan, S. Gozak, O. Ionov, S. Luparenko, V. Novoselska, and S. Sysoeva emphasize that Waldorf schools give priority to the development of creative ability, rather than the accumulation knowledge. Sh. Amonashvili considers Waldorf education as a human school model that offers valuable ideas for modern education. In Waldorf schools, teachers play a crucial role in guiding students to self-determination and creating optimal conditions for individual development.

D. Dewey's pedagogical pragmatism, based on the pedagogical centrism principles, considers the primary teacher's role as guiding students in active and independent efforts aimed at nurturing initiative and curiosity. Dewey emphasizes that the child is the foundation of education, emphasizing personal development as the basis for developing effective teaching methods.

The Montessori teachings involve the educator as a support companion. A child who independently overcomes difficult concentration needs, analytical skills, perseverance and purposefulness. The development of these traits is crucial achieving self-organization and discipline, and resolving inner turmoil. The mentor guides, but does not perform the task, promoting the child's path to independence, believing in his ability to express himself through exciting work. Montessori stands for the rejection of stereotypes about the intelligence level, emphasizing the understanding of the child's secrets serving him with love on the higher justice basis. Her pedagogical principles are aimed at learning, individualism, and observation freedom of the child. The motto "Help me do it myself" embodies the educational Montessori philosophy.

Humanistic psychologists such as R. Burns, A. Maslow, and K. Rogers view individuals as unique entities striving for self-realization. Rogers argues that students have the possibilities to develop their natural abilities, intellect, and emotions, fostering curiosity, decision-making, and responsibility. Maslow defines self-actualization as a path to personal improvement, personality development, and a deep understanding of one's identity, which is achieved through listening to inner impulses and discovering the truth. Achieving personal growth and self-improvement is possible after satisfying basic human needs.

A. Maslow's concept offers teachers not only to realize their potential, but also to actively promote the self-development and prosperity of students, contributing to their overall growth. K. Rogers emphasizes that the desire for self-realization not only persists, but also increases in the dynamic interaction of "man - environment", where individuals are constantly looking for new opportunities for intellectual growth. This point of view is expressed by K. Rogers in his work "Views on psychotherapy: the personality formation."

Cooperation between teachers and students promotes personality development, self-determination and self-realization. According to K. Rogers, the primary role of the teacher is to identify and remove barriers that prevent self-expression and psychological student growth. Rogers advocates the unhindered development of a child's inner talents without external coercion. This approach emphasizes the active interaction of the teacher, emotional support, encouragement of cognitive interests, promotion of autonomy in the educational environment.

In the context of domestic psychology, L. Vygotskyi, P. Kapterev, S. Rubinshtein and others are significant figures who covered this period. They proved that the learning process precedes development and that development occurs when an individual acquires knowledge.

L. Vygotsky singled out the "zone of immediate development", claiming that learning accelerates mental development. He advocated that the educational process should constantly be ahead of the child's current development, requiring the constant support of adults. "Zone of immediate development" is a gap between the child's current capabilities and his potential, which can be achieved under the guidance of a teacher.

We focus on P. Kapterev's professional development strategies, emphasizing the importance of deep knowledge in teaching, psychology, pedagogy, and effective teaching methods. According to Kapterev, for successful learning, it is necessary to understand the nature of the child, its differences from adults, to know the individual characteristics of students. He emphasized that teaching science requires an understanding of its essence, and applying a teaching method requires a deep

understanding of its development. Kapterev advocated the freedom and independence of teachers in choosing educational programs and methods [1].

S. Rubinstein's theories also attract our attention, since he focused on independence as a manifestation of conscious motivation and reasonableness of actions [4].

Independence in didactics implies the purposeful self-organization ability, coordination with the student's educational and professional achievements, and self-regulation.

Prominent researchers A. Leontiev, L. Vygotsky, S. Rubinshtein claim that the education of independence is the education pinnacle, which is achieved through purposeful pedagogical guidance. This approach increases independent learning and cognitive student activity, serving as a decisive and far-sighted method improving their professional skills and promoting continuous personal, creative and self-aware development.

Humanism encompasses such universal human values as love, freedom, dignity, justice, human personality, hard work, mercy, kindness, nobility, perfection. These ideals apply to all people and societies. The interaction between humanistic and national values is recognized, emphasizing human well-being as the most important. Guided by the equality, humanity and justice, humanistic value principles are the basis of the people-oriented education concept. A compassionate, democratic pedagogy that promotes equality, cooperation, and partnership is grounded in humanism.

The modern philosophical anthropocentric trend is gaining momentum, highlighting the research of the dynamics and human natural diversity. It focuses on evolving self-awareness and delves into the inner individual essence who undergo constant transformations amid social, economic, and technological influences. Within this philosophy, understanding one's own identity serves as a key path to deep self-awareness, contributing to social reflection and development.

This philosophical trend significantly transforms social perspectives, expands the scientific horizon, and promotes the development of innovative educational ideas. These changes mark a shift from conventional approaches to a more flexible and adaptive era in various professions, including pedagogy. The need for a new understanding of the most important pedagogical skills arises while adapting to the unpredictability of the modern educational landscape.

V. Sukhomlynsky emphasized the decisive role of the teacher in guiding the independent activities of children, emphasized the need for constant communication and mutual understanding between the teacher and the child. According to him, emotional culture is an integral part of pedagogical practice. Sukhomlynsky considered the teacher not only as a mentor, but also as a friend and comrade, arguing that true education consists in understanding and appreciating the child's thoughts and aspirations. He emphasized the dual role of the teacher as mentor and friend, promoting shared experience and joy with the student.

In the innovation era, teachers strive to create a favorable environment where every child can freely develop their best qualities. Pedagogical principles by V. Sukhomlynsky influenced such teachers as S. Amonashvili and I. Volkova in the 70th and 80th. Together, they formulated human pedagogy, combining collaboration and student-centeredness, emphasizing the human-centered philosophy importance in modern education.

The main interaction pedagogy provisions, according to the "Manifesto" published by "Uchitelska Gazeta", can be formulated as follows: the importance of transforming relations with students, which is based on the teacher's attention to the child's

personality, motivation and encouragement of their desire for academic success and personal development; the principle of setting ambitious goals for students, supporting their faith in their own abilities to achieve the tasks and in-depth learning of the material; providing structural support in the form of visual signals and tools that facilitate the assimilation, systematization and knowledge reproduction; learning without coercion, where the key to success is interest and systematic repetition, not coercive measures; implementation of the free choice principle, which gives children the opportunity to independently choose tasks, topics for research and interact with the teacher as an equal partner; application of the anticipation principle, which allows you to plan the educational process so that students feel the satisfaction in achievements and benefits from early acquaintance with complex topics; the use of large blocks of educational material, which contributes to the establishment of logical connections, the understanding of key ideas and the solution of problematic issues, reducing the fear of educational difficulties.

Pedagogy, according to I. Volkov, E. Ilyin, V. Shatalov, emphasizes the coordination of the lesson format with the content of the subject, emphasizing the need to reflect the subtleties of the subject in the structure of the lesson. The self-analysis method proposed by educational innovators Sh. Amonashvili, E. Ilyin, I. Ivanov, V. Karakovsky, and V. Shatalov fosters a collective assessment of students' work, fosters a sense of responsibility and a diligent approach to learning.

The effort to create the intellectual class basis, initiated by I. Volkov, V. Shatalov and M. Shchetynin, is aimed at the joint formation of life goals and values. Teachers play a crucial role in nurturing the individual interests of students, creating freedom and partnership environment.

The concept of joint creative education, introduced by I. Ivanov, V. Karakovsky, M. Shchetynin, highlights the involvement of children in collective creative activity from the very beginning, guided by the motto: "Be creative in everything - otherwise why not?".

Building a parent-teacher partnership should prioritize openness and trust. Educators should avoid conflicts, highlight children's achievements to foster harmonious family relationships.

A person-centered approach, which combines the above mentioned methods, focuses on recognizing each student as an individual, offering teacher attention and support for personal development. The collegial interaction of teachers is aimed at the soft perception of new pedagogical ideas, the rejection of competition in favor of unity and common goals.

The basis of these educational approaches are the humanistic pedagogical ideas, theoretical heritage and experience of schools in the 20th century. P. Blonskyi and S. Shatskyi spoke against formalism, rigid rules, creative independent stifling. A. Makarenko substantiated the demandingness and respect principles, implemented in practical activities, emphasizing trust in children and positive reinforcement. V. Sukhomlynsky singled out subject-to-subject interaction, urging the teacher to look at children as equals. The integration of these ideas improves educational environment, increases motivation of students, optimizes learning and ensures high knowledge quality. Human-centered principles are the basis of the theoretical foundations through the person-oriented approach introduced into pedagogical practice in the 1990th.

A recent research of the literature, in particular the works by S. Kulnevich, O. Pehota, A. Pligin, S. Podmazin, H. Selevko and others, reveals the flourishing of a variety of

approaches that give priority to the individual in education. It should be noted that in particular interest are theoretical studies that provide a complex rationale for a person-oriented approach.

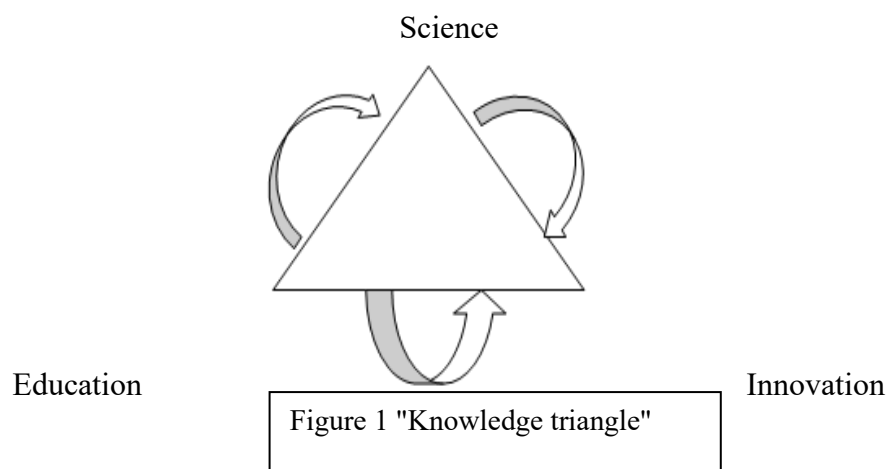
The current situation emphasizes the growing interest of the researchers in the person-closely-oriented educational paradigm. Among various theoretical models, the psychological-didactic I. Yakymanska concept and the didactic V. Serikov deserve attention approach, both are very relevant for modern educational challenges. I. Yakymanska perceives education as a process unique to each student, emphasizing the his individual experience realization outside the school curriculum.

The education goal scientifically reveal and enhance individual experience, contributing to the student development. The personally-oriented learning technology is based on subjectivity, reflected in didactic principles: material research should develop subjective experience of students, emphasizing transformation; constant synchronization of student experience with scientific knowledge; active self-evaluation and educational activity encouragement, which promotes self-education, self-development and self-expression; providing a choice when solving practical tasks; encouraging independent search for optimal learning methods; consideration of an individual learning methods for personal growth; evaluation covering both the results and the learning processes; providing opportunities for self-reflection and self-assessment of students.

I. Yakymanska's concept highlights the possibilities of internal developing mechanisms activation, which are independently formed by students during educational and cognitive activities. The educational concept by V. Serikov, which takes its origin in Rubinstein's personality theory, emphasizes the definition of an individual by significant positions. The main idea is the education of the key aspects by the student's personality - choice, introspection, search for the meaning of life, formation of one's own "I", responsibility, independence. Personal-oriented education stimulates personal understanding of life and internal self-development.

In updated educational models aimed at the individual, the humanistic connection is strengthened, the individual is endowed with subject characteristics - independence and self-regulation, which is the pedagogical process basis. The main educational goals provide for the conditional creation for the personality development and personal abilities. The decisive self-development mechanisms of an individual are interiorization, the transformation of external influences into the inner world, and personalization, the desire for self-actualization and self-realization.

We advocate the introduction of innovative pedagogical methods into the current educational process to improve the general interaction and higher education. Traditional didactic education needs an update, a transition to a student-centered model focused on the student's academic needs, past experience, and career vision. This shift should be the guiding principle of modern higher education. Person-oriented pedagogy contributes to the personality development, the independent formation, and forms an effective value system. The core of this system is the "Knowledge Triangle", which emphasizes the scientific and innovational educational interactions, in a student-oriented system (Fig. 1).



The modern educational paradigm is centered around the student, recognizing knowledge as the student property. The idea of the student's responsibility for acquiring knowledge, emphasizing individual needs, preferences, and teamwork needs to be reevaluated. The transition to a student-centered environment involves changing roles and responsibilities between teachers and students. Students play an active role in learning, making choices and planning their studies. The role of a teacher in a learner-centered environment requires educational issue discussion, diverse teaching methods, structured lessons, and respect for each student's opinion. Teachers should encourage independent decision-making, experiential learning and motivate active interaction with the material.

The student-centered adoption principles requires a careful revision of the teacher roles, a transition from traditional mentors to facilitators and mentors. They organize, guide and motivate students, taking into account their previous experience and professional aspirations. In student-centered education, the teacher undergoes a significant transformation, turning into the main mentor and advisor. A modern mentor acts as an architect of knowledge, leading students to learn the relevant material. Their mission includes providing deep learning, consulting, supporting critical understanding, and developing optimal learning scenarios. The basic student-centeredness principle for teachers is succinctly stated as follows: "Take me as an example, listen and learn, create and choose, dialogue, follow me, strive to surpass and create the art of knowing with me."

The implementation of student-centered principles promotes the development of autonomy, creativity, innovative thinking and initiative. Students develop critical thinking, problem-solving, and effective teamwork skills that are critical to their future professional success. Therefore, the joint relationship between teacher and student ensures the goal of primary education: preparing graduates for successful employment.

CONCLUSIONS

The research of the historical student-centered learning background emphasizes its key role in shaping the self-directed characteristics in higher education institutions. The research reveals the evolution of student-centered approaches, traces their roots and

theoretical foundations. The obtained results indicate that historical trajectory understanding provides valuable information about the development of independent student activity obtaining higher education.

These insights can be applied to the pedagogical strategy and institutional policy development that will contribute to create more student-centered learning environment. The practice implementation based on historical knowledge can increase the learning effectiveness in higher education by promoting autonomy and independent learning among students.

Prospects for further research. To deepen our understanding, future research could delve into the comparative analysis of different educational systems, examining how historical contexts influence the adoption and student-centered approach effectiveness. In addition, research into the technological advanced impact on the student-centered educational evolution in the digital age that will provide valuable information for today's learning environments. Finally, examining the relationship of student-centered education to cultural and societal factors can offer a narrow view of its global applicability and effectiveness.

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EXPLORING INTERNATIONAL EXPERIENCES: THE IMPACT OF ICT ON EDUCATION AND DIGITAL RIGHTS WITHIN THE LANDSCAPE OF DIGITAL DEVELOPMENT CHALLENGES AND OPPORTUNITIES

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ABSTRACT

The purpose of the study is to conceptualize the conceptual dimensions of the international experience of the impact of ICT on education in the context of digital development. While researching this article, we used the following scientific research methods: axiological, systemic, synergistic, and Agile methods, which allowed us to comprehensively study the impact of ICT on education. The concepts of the impact of ICT on international education, based on effective methods of digital learning, are analyzed. The international experience of forming a digital educational ecosystem model as an innovative paradigm of technological development that prefers innovative and entrepreneurial education is revealed. The subject of the study is the impact of ICT on various areas of international education. It is concluded that the paradigmatic changes in international education help to stimulate innovation, form a competitive specialist, and solve the problems of improving the impact of ICT on education. The study of the international experience of the impact of ICT on education in the context of digital development is important for the future development of education and preparation of society for the requirements of modern digital development of the "digital decade".

Keywords: ICT, international education, educational ecosystem model, socially responsible citizen, digital rights

INTRODUCTION

International expertise on the impact of information and communication technologies (ICTs) on education demonstrates a wide range of benefits, but also a number of challenges and opportunities. ICTs expand educational opportunities for people in remote regions or with disabilities, allow online learning, access to educational materials from anywhere in the world, and interaction with teachers and students via the Internet, as demonstrated in the post-secondary education process. Improving the quality of education through ICTs has begun to provide interactive learning materials, individualized learning programs, and other tools that help to improve comprehension and motivation to learn in the "new normality." The use of ICT in education has helped

to begin to build a student base of skills needed to succeed in the digital economy, such as computer literacy, programming, and multimedia skills. ICTs have enabled students to communicate and collaborate with peers and experts from around the world, creating opportunities to learn about different cultures, languages, and approaches to learning in the digital decade. Despite its positive impact, ICTs have begun to exacerbate inequalities in access to education due to differences in the availability of technology and user skills. This began to deepen existing social differences. In general, international experience shows that ICTs have significant potential for shaping an effective education model, but it is important to develop implementation strategies that take into account both the benefits and challenges of ICTs. The development of effective strategies for introducing information and communication technologies (ICTs) into the education sector is critical to successfully utilizing their potential. As international experience with the impact of ICT on education shows, it is important to include students, teachers, parents, administrators, and other stakeholders when developing implementation strategies. In this way, different needs and perspectives can be taken into account and greater support for implementation can be ensured. Providing ICT infrastructure and access requires ensuring that there is sufficient technical infrastructure and access to ICT for all stakeholders in the educational process. It includes not only computers and Internet connections, but also support for those with disabilities. It is important to provide teachers with the necessary skills and support to use ICT effectively in teaching and learning. Among other things, this includes training in the use of new technologies, digital literacy and online learning skills. Ensuring quality and effectiveness requires defining success metrics and tracking the effectiveness of ICT implementation, including its impact on learning and student outcomes. It is important to develop policies and procedures to protect student and teacher data from cyber threats and misuse. It is essential to continuously evaluate and adapt strategies to meet changing conditions and the needs of students, teachers, and schools. Only such a comprehensive approach will maximize the potential of ICTs to improve education internationally in the context of the challenges of digital globalization. [1]

RESEARCH METHODOLOGY

The integration of various philosophical methods (axiological, systemic, synergistic) for the study of international education with the Agile methodology allows for a comprehensive understanding and effective implementation of educational strategies for digitalization. In the digital world, in which educational paradigms are constantly evolving, philosophical methods serve as an indispensable compass and trajectories of 5G digital technologies. The Agile methodology is used as a methodology of flexible adaptive educational systems and digital development of education based on ICT as an innovative component based on the principles of sustainable growth. International education through digitalization helps to achieve the goals of training highly intelligent and intellectual specialists of the "digital decade", frameworks for analyzing and understanding these processes in the context of the modern world. The use of the Agile method promotes deep and flexible analysis of problems related to big data, innovative management capabilities, global challenges of new problems offered by creative digital technologies. These technologies, characterized by the ability to expand human communication capabilities in the field of informatization, have opened up new horizons for international digital education, form new relationships between people and

technology, and electronic public services through cognitive technologies (artificial intelligence, speech recognition, language analytics) allow gadgets to interact seamlessly with people. The integration of philosophical methods and Agile methodology has made it possible to actively shape the future of distance education in the digital environment. International education is based on advanced innovative digital technologies that have changed the way we think about digital skills in 2030. There is no doubt that the metaverse is becoming a key channel and technology for international education, which requires the formation of digital human and civil rights and a socially responsible personality. The meta-analysis of the results of previous studies was used to synthesize and summarize the findings, which allowed us to obtain a comprehensive overview of the topic under study based on existing experience. These methods can be used separately or in combination with each other, depending on the needs of the study and available information.

RESEARCH RESULTS AND DISCUSSIONS

1. Concepts of the Impact of ICTs on International Education and its Paradigmatic Changes in the Context of Digital Development.

The impact of information and disruptive technologies on international education can be viewed through the prism of paradigm shifts in the relevant fields and the socio-cultural changes they bring. Let us highlight certain theories, concepts, and paradigms that reflect the content of international education. 1) The theory of social constructivism reflects the idea that knowledge and reality are socially and culturally constructed. Under the influence of information and disruptive technologies, young people have access to a wide range of information and can actively create knowledge through interaction in virtual communities, social networks and Internet platforms. 2) Cultural media theory considers the impact of media on the formation of cultural standards, values and identity in the global environment, which is shaped by international education standards. Information and disruptive technologies not only affect the way media disseminate cultural content, but also create new forms of consumption and interaction with it. 3) The theory of the digital divide reflects inequalities in access to information technology between different social groups and regions, which is the case in the field of international education. The introduction of information and disruptive technologies can change the paradigm of this gap, but it can also create new forms of inequality, for example, in the use and understanding of these technologies. 4) The theory of postmodernism reflects the idea of blurring the boundaries between grand narratives, destroying unity and universality. Therefore, information and disruptive technologies can contribute to the emergence of new forms of cultural diversity and identity of the global world, change the ways of perception and understanding. 5) The theory of adaptation of cultural practices puts forward the idea that cultures and societies adapt to new technologies and information changes. Under the influence of information and disruptive technologies, cultural practices shaped by international education can change, adapt and transform to respond to new challenges and opportunities. 6) The theory of innovation potential of international education studies the processes of adopting new technologies and innovations of digital development. Information and disruptive technologies can cause a variety of reactions among users, from acceptance to rejection, and influence social and cultural paradigms. 7) The theory of technological determinism states that technologies determine social structures and cultural processes of digital development. Therefore, information and disruptive

technologies can be seen as a key factor in shaping new cultural, educational and tourism paradigms. 8) The theory of social networks and interaction analyzes the impact of social networks that arise through the use of information and disruptive technologies on social interactions and cultural practices of digital development of the world, Social networks create new ways of communication, information exchange and identity formation. These concepts and theories help us to better understand the impact of information and disruptive technologies on various spheres of life, the dynamics of changing cultural, educational, and tourism paradigms. They provide a framework for analyzing and understanding these processes in the context of the modern world. Paradigm theory provides a theoretical framework for understanding and explaining the social changes taking place in the digital society under the influence of information and disruptive technologies, helps to analyze changes in cultural processes, identity and values caused by the development of technology and media. Paradigm theory allows us to study the dynamics and evolution of digital changes over time, including changes in education, culture, economy, and other areas. Paradigm shifts help to stimulate innovation and development in various industries, contributing to competitiveness and efficiency. The application of paradigm theory in education helps to develop more effective teaching methods and adapt them to the needs of the modern world. Thus, the theory of paradigms is important both for theoretical understanding of social processes and for developing specific strategies and actions in the international education of the digital society, in which information and disruptive technologies play a key role in shaping new digital realities.[3]

2 International Experience of Forming an Educational Ecosystem Model as an Innovative Paradigm of Digital Development

The new digital paradigm of digital development of education includes three characteristics. First, the essence and fundamental starting point is that it should be created through innovations closely related to the needs of education consumers. Secondly, the digitalization process increasingly relies on multi-technology collaboration of "machines" that digitizes sectoral educational infrastructure and business processes, opening up endless opportunities for the development of thousands of industries. Third, the digital educational model is developing in the context of co-creation and sharing. The development of digital intelligence reflects the fundamental transformation of society and the economy to a new paradigm caused by innovations, modern infrastructure systems, systems of training scientific and technical personnel, and models of social development management. Digital elements of international education accelerate the reconstruction of new forms of economic and social development and management models. Intelligence is not only a way and a means, but also a direction and a goal of the educational paradigm of international education. The development of digital intelligence reflects the fundamental transformation of society and the economy to a new paradigm, causing the reconstruction of models of modern infrastructure systems. Intelligence is the main feature and center of development of the new stage of the digital educational model of the Industrial Revolution 4.0 ecosystem. The main goal of the educational paradigm of highly developed countries is to move from Industry 4.0, proposed by Germany in 2011, to Industry 5.0, formed by the European Union in 2021, in which the development of digital intelligence increasingly emphasizes the deep integration of industry and the entire economic, technological and

social system. One of them is to respond to the diverse needs, ranging from scale-oriented to value-oriented, of the international educational discourse. [7]

The focus of digital intelligence innovations in international education has shifted from the technology and product level to the ecological and systemic level, and competition in technology, products, and supply chains has become competition in platform-based ecosystems. Digital intelligence is based on new technology communities such as cloud conveyor terminal + AIoT. With a set of open solutions that combine cloud computing, a data processing platform, and a mobile terminal, an open technology system is being created with limitless collaboration and global optimization of the digital human.[4] The main challenges that need to be addressed, starting with improving efficiency to meet real-time needs, are the need to fully support model innovation, product innovation, organizational innovation, and management innovation to move from business data to business models and integration of production and operational solutions. The digital business model, organizational model, and industrial ecological reconstruction focused on consumer operations are key, for which a highly skilled workforce must be trained. The digital intelligence transformation includes digital intelligence in production linkages, digital intelligence in operations management, and the integration of intelligence into production and operations decisions. It requires full connectivity of online and offline, internal and external processes, consumer and industrial data to realize interaction and "provide education that satisfies people." To achieve this, innovation and entrepreneurial education should be prioritized as an effective starting point for improving the quality of training. Entrepreneurial education has identified a number of common challenges, such as difficulties in intercultural integration, stimulating entrepreneurial thinking, and implementing entrepreneurial projects (Social, Economic and Educational Transformations in the Digital Age, 2022).

Studying the whole process of innovation and entrepreneurship education through systematic design can solve the current problems of "ecological imbalance". In an open economy, entrepreneurial education should develop entrepreneurial talent with a global mindset, a good understanding of international rules, and intercultural communication skills. The educational ecosystem of innovation and entrepreneurship has ecological attributes such as diversity, interaction and symbiosis, self-organized evolution and sustainable development, and open and collaborative innovation. The educational ecosystem of innovation and entrepreneurship is based on the cultivation of students' innovative and entrepreneurial spirit and abilities with multi-element synergy, and includes clear endogenous dynamics and sustainable development. A developing, self-regulating and mutually beneficial education system is presented in (Table 1).

Table 1 - Development of a quality education system aimed at improving the educational mechanism of school-family-society cooperation

Tasks	Content and direction of quality educational paradigm development
Reforming and modernizing childcare services in kindergartens	Pilot inclusive childcare services, support units and communities to provide childcare services, and expand the pilot scale of childcare services in kindergartens
Reforming and modernizing college education	Formation of a new policy of digital education in colleges

Reform and modernization of vocational and higher education	Coordinate joint innovations in vocational education, higher education and continuing education, and implement an implementation plan to promote high-quality development of vocational education
Formation of digital universities	Promote the development of modern higher education by creating new digital universities
Formation of a new direction for the development of science and technology in the context of digitalization	Promote a high level of science and technology policy in the context of digitalization
Creating talent as the main resource of innovation and the main driving force of digital development	Promote the development of talents and their involvement in the development of regions, communities, and cities

Building a quality education system and improving the educational mechanism of school-family-society cooperation is a comprehensive process aimed at improving the quality of education and upbringing of students, ensuring more effective interaction between educational institutions, students' families and the public. This includes improving curricula, teaching methods and assessment, and providing access to quality learning resources and materials. Coordinated work between schools, families, and the community helps to create a nurturing environment for each child's development and provides them with the support and resources they need to succeed in school and in life.

3 Content and Directions of Developing a Responsible Digital Citizen in the Context of International Education

The content of international education is aimed at developing a responsible digital citizen and includes the following aspects: 1) Education should be aimed at developing skills in understanding and using digital technologies, including skills in searching, evaluating and analyzing information on the Internet, the ability to distinguish true information from fake information. 2) Cybersecurity, aimed at teaching personal data protection, awareness of online risks, and the ability to detect and avoid fraud and other cybercrime. 3) Educating students about responsible and ethical behavior in the digital environment, including the use of social media, communication in online communities, and attitudes toward other users. 4) Developing critical thinking about the content consumed online, including the ability to analyze media messages and refuse to accept the negative influence of the media. 5) Education should support the development of global consciousness, the ability to solve global problems and collaborate through digital tools and platforms. 6) Intercultural communication should promote understanding and respect for the diversity of cultures and perspectives that exist in the world, as well as develop skills for cooperation and constructive dialogue in an intercultural environment. 7) Digital democracy aims to teach participants how to solve public issues using digital tools, including the ability to express their opinions, accept the points of view of others, and collaborate effectively to achieve common goals. The overall goal of international education in the context of digital citizenship is to prepare students for active, responsible and ethical participation in the modern digital world.[2]

The development of international education encompasses learning, research, and the exchange of knowledge and experience in an international context and unfolds in the

context of the following areas. International student exchanges allow students to study or conduct research in other countries. These exchanges can be temporary (e.g., summer schools or internships) or for a longer period of time (e.g., student exchanges for one or more semesters). International study programs offered by universities or other educational institutions in different countries. They can be conducted entirely in English or contain elements of international learning and cultural exchange. International research projects that are jointly carried out by scientists from different countries to address global issues or solve specific scientific problems. These are programs that allow participants to gain work or volunteer experience in other countries, usually in areas related to education, medicine, social assistance, etc. International education promotes intercultural understanding, broadens participants' horizons, and helps them develop the skills they need to work and live successfully in a globalized world. In the context of the challenges and opportunities of digital civilization and globalization, international education plays an important role in preparing highly competent professionals to live in a global environment to which they must adapt. International education should aim to develop students' technological skills in the context of studying computer science, programming, and understanding of digital technologies, which helps students to adapt to rapid changes in the digital environment. Understanding the effective use of the Internet, the ability to analyze and evaluate information on the network, as well as awareness of ethical aspects in the digital environment are important components of global education.[6]

International education should promote the development of intercultural competence. Students should learn and understand cultural traditions, respect other views and be tolerant in order to cooperate in an international context. International education should help to recognize and understand global issues such as climate change, poverty, inequality and other challenges, students should be taught to analyze these problems and seek collaborative solutions. The development of ICTs makes it possible to provide education anywhere in the world through distance learning, and international education can use this approach to ensure accessibility of knowledge, accommodate language diversity, and promote a multilingual approach. Knowledge of many languages can facilitate international communication and understanding. International education should be flexible and adaptable to a fast-paced world, taking into account technological developments and global challenges of digital development. A balanced combination of digital technologies, intercultural understanding, and the promotion of global citizenship is key to effective global education. International education should foster global responsibility and active citizenship, and develop a socially responsible digital citizen with digital rights. International education requires innovative assessment methods that take into account the criteria of global citizenship, creativity and cooperation. The integration of modern technologies such as virtual reality and artificial intelligence can make global international education more accessible and engaging. International education should be aimed at developing socially responsible individuals who are able to understand and solve global problems. This requires cooperation between countries, innovative pedagogical practices, and the coordinated use of digital technologies to enhance learning and develop global citizenship. Digital rights are defined as rights that protect individual freedoms and privacy in the digital environment. As digital technologies become more and more important to everyday life, the protection of digital rights becomes crucial. Digital rights include the right to personal data protection and privacy online. This means that users should have control over what information is

collected about them, how it is used, and to whom it is accessible. Digital rights guarantee the right to freedom of speech and expression online. This includes the right to access information and to be able to freely express one's opinions and beliefs in the online environment without restriction or censorship. Digital rights include the right to access a variety of information online without restriction or censorship. It also means that the Internet should be accessible and available to all users, regardless of their race, gender, social status, or geographic location. Digital rights guarantee the right to access digital services and online resources such as education, health, e-government, etc. The protection of digital rights is becoming increasingly important in a world where digital technologies are becoming more and more influential in all spheres of life.[5]

International cooperation programs between universities and research institutions facilitate the exchange of best practices, innovations, and resources between institutions from different countries, which expands international education. International education promotes the exchange of cultural values, traditions, and perspectives between different countries, which fosters understanding and tolerance in a global society. These aspects of international education help to create an open, tolerant and multicultural environment for learning and cooperation, contributing to personal development, skills needed to live in a world with a constantly changing landscape, and the formation of a socially responsible and active citizen and his or her digital rights.

CONCLUSIONS

The international experience of the impact of information and communication technologies (ICTs) on education in the context of challenges and opportunities of digital development is of both theoretical and practical importance, as it focuses on the study of important aspects of ICTs in education and their impact on global development. The study of international experience allows us to understand how ICTs affect learning processes and educational systems in different countries. This helps to identify general trends and features of digital education development. The study helps to identify key challenges that arise in the process of introducing ICTs into education, as well as to identify opportunities that they provide for improving learning processes. The study of international experience allows to identify best practices in the use of ICT in education and use them to improve the educational systems of their own country. The practical significance of international experience of the impact of information and communication technologies (ICTs) on education in the context of the challenges and opportunities of digital development allows developing and implementing effective methods and strategies for using ICTs, which leads to improved quality of education. The study shows how important it is to take into account technological trends and adapt educational programs to prepare students for life and work in the digital world. International experience provides best practices for creating innovative approaches and programs that use ICT to engage and motivate students. Understanding international experience stimulates cooperation between universities, research institutions and educational organizations from different countries to jointly address the challenges and opportunities of digital development.

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FEATURES OF THE FORMATION OF PROJECT CULTURE OF FUTURE TEACHERS WITH THE HELP OF MODERN INFORMATION TECHNOLOGIES

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ANOTATION

The purpose of the article is to study the role and place of modern information technologies in the formation of the project culture of future teachers. Scientific methods are applied: questionnaires and surveys (to collect data from respondents), descriptive (to characterize didactic categories), comparative (to compare methods of forming project culture), experimental (creating conditions for cause-and-effect relationships between objects), grapho-analytical (for graphical interpretation of results), mathematical and statistical (evaluation of experimental results). The essence of the concept of "project culture" and its components are analyzed. A comparison of the methods of forming the project culture of the future teacher with the help of information technologies was made. It is substantiated that information technologies play an important role in the process of forming a project culture, allowing to automate the execution of project tasks, visualize processes, collaborate with colleagues online, and gain access to information and resources. Modern information technologies in higher education are analyzed: electronic textbooks and educational materials, online courses, mobile applications, immersive technologies (VR and AR). The conclusions of the formative experiment showed that the use of certain pedagogical methods, such as: project-oriented learning, the use of IT platforms, conducting trainings and master classes, as well as problem-oriented learning, demonstrates high effectiveness in the formation of a project culture among future teachers. Therefore, information technology develops cognitive and creative abilities, prepares young teachers for professional activities at a high level.

Keywords: project culture, project learning, information and communication technologies, future teachers.

INTRODUCTION

The project culture of teachers is an important component of their professional competence. The formation of the project culture of the future teacher is an urgent task of higher education, as it involves the development of such competencies in students as: the ability to set and solve project tasks; teamwork skills; ability for critical thinking

and a creative approach to solving problems; skills in using modern information technologies. That is why it is urgent to search for effective methods of forming the project culture of future teachers with the help of modern information technologies (electronic educational materials, online courses, virtual and augmented reality technologies), which allow modeling the processes of managing educational projects.

The purpose of the article is to characterize the effectiveness of the formation of the project culture of future teachers with the help of modern information technologies (electronic textbooks and educational materials, online courses, immersive technologies (VR and AR), mobile applications) and to conduct a formative experiment on their approbation in a higher education institution education.

RESEARCH METHOD

In the research process, there were general and special scientific methods. In particular, questionnaires and surveys were used to collect empirical data from respondents regarding the levels of readiness of future teachers to manage educational projects with students. The descriptive method was used to characterize the main didactic categories of the research subject (project culture of future teachers). The comparative method made it possible to compare the main advantages and disadvantages of modern information technologies, which are used by teachers in higher education, to compare the methods of forming project culture. The experimental method was used to create pedagogical conditions in which cause-and-effect relationships between research objects (teachers, students, the process of revealing the creative potential of project culture using modern information technologies) were investigated. The grapho-analytical method was used for graphical interpretation of the research results. The mathematical-statistical method made it possible to calculate the main results of ascertaining and formative pedagogical experiments, the method of evaluating the Student's t-criterion was used. The study was conducted on the basis of the Volodymyr Vynnychenko Central Ukrainian State University.

PRESENTATION OF THE MATERIAL

Pedagogy is a set of theories and practices of teaching and education as organized processes and ways of their improvement [10]; the task of the teacher is to build an educational process aimed at the goals of the curriculum [8].

Project-based learning is a method that assumes that students learn by working on real projects.

Projects can be different in scale and complexity, but they always have a practical focus and allow students to apply the acquired knowledge and skills in professional activities. Examples of the application of the project approach in education: development of a new product, organization of a social initiative, research of a scientific problem, creation of a work of art.

Project culture can be defined as a set of project knowledge, abilities, skills, values and personal qualities that ensure its ability to successfully implement project activities in various areas. The project culture of the future teacher is formed from the following components:

- motivational (interest in project activities);
- cognitive (knowledge of design theory and methodology);

- operational activity (ownership of methods of project activity);
- reflective (analysis and self-evaluation of design results).

The use of modern information technologies (IT) opens up new opportunities for the development of students' project culture. In particular, the use of multimedia tools and Internet resources makes it possible to attract large amounts of information for the implementation of projects. The use of software tools (text and graphic editors, spreadsheets, etc.) provides tools for processing and systematizing data, creating project documentation. The use of virtual reality technologies creates conditions for 3D modeling of design objects.

The following positions are fundamental in the design of the educational process: orientation towards the achievement of expected results; organization of educational activities by the teacher based on the system-activity approach; versatility of the system of evaluation (self-evaluation) of the process and results of the educational process; individual approach to education seekers [8].

The project acts as a tool for mobilizing the necessary resources, organizing the process, achieving certain results.

Project culture is a set of values, skills, knowledge and approaches that contribute to the successful implementation of educational projects. The team-oriented learning format provides an environment in which students experience typical problems faced by groups and practice working skills to achieve common goals [7].

The formation of project culture is based on a number of principles: interdisciplinarity, interactive learning, acquisition and exchange of practical experience, teamwork, purposefulness.

Information technology is a complex of interrelated scientific, technological, engineering disciplines that study methods of effective organization of the work of people engaged in processing and storing information;

Computer technology and methods of organization and interaction with people and production equipment, their practical applications, as well as related social, economic and cultural problems [11].

The basis of preparation for the use of computer technologies is the principles of didactics, which determine the requirements for the content, methods, organizational forms and means of learning, oriented towards achieving the set goal [1]. Information technologies play an important role in the formation of the project culture of the future teacher, they allow: to automate the implementation of project tasks [2]; visualize project processes [4]; collaborate with colleagues in real time [6]; requires students to take an active approach to problem solving [7].

Modern information technologies have a significant impact on higher education. They make education more accessible, flexible and effective:

1. Electronic textbooks and educational materials. Additional functionality in working with an electronic textbook is provided by software services that allow you to perform a contextual search, create electronic bookmarks and hyperlinks, use an electronic notebook, dictionaries, and reference databases [5].
2. On-line courses – allow students to study remotely, master the educational material independently.

3. Mobile applications – allow you to study using a smartphone or tablet for communication between students and teachers.

4. Immersive technologies such as Virtual Reality (VR) and Augmented Reality (AR) allow students to have a more realistic and immersive learning experience.

Methods of forming the teacher's project culture with the help of IT:

- Implementation of project-oriented learning, which assumes that students work on real projects in the process of learning that meet the needs of the labor market [2].

- Application of IT platforms for project activities. They allow students to coordinate their work, share information and resources, and receive feedback from teachers and colleagues [4].

- Conducting trainings and master classes on project management. Such activities allow students to familiarize themselves with the basics of project management and develop the necessary skills [6].

- Organization of problem-oriented training. The goals of problem-oriented training programs include: familiarizing future leaders with the problems they are likely to face in the future; providing students with knowledge relevant to these serious issues; development of skills in applying this knowledge, solving problems and implementing solutions; formation of leadership qualities that promote cooperation; development of abilities and skills of independent learning [7].

Means of distance learning can be: printed and written materials sent by regular mail or fax; telephone network; audio and video recordings, educational radio and television (as well as movies); interactive programmable educational tools, computer educational programs; local and global computer networks [9].

There are several different methods of forming a project culture with the help of IT. The following can be distinguished among the most common:

- Implementation of project-oriented training. This method assumes that students study in a group, collectively perform some kind of work, working on real projects.

- Application of IT platforms for project activities. IT platforms allow students to coordinate their work, share information and resources, and receive feedback from teachers and colleagues.

- Conducting trainings and master classes on project management. Such events allow students to familiarize themselves with the basics of project management and develop the necessary skills.

- Problem-oriented learning in higher education is a learning method that assumes that students learn by solving problems, tasks, and contradictions.

Below we will present the results of comparison and analysis of various methods of forming the project culture of the future teacher with the help of IT in Table 1.

Table 1. Comparison of methods of forming the project culture of the future teacher.

Method	Advantages of the method	Disadvantages of the method	Information Technology
Project-oriented learning.	Develop problem-solving and critical thinking skills. Students learn to work in a team. Ability to effectively allocate tasks, time, resources and work. Elements of scientific research.	Difficulties in coordinating work on projects. The complexity of evaluating and monitoring the work of each student (by the degree of participation and work in the project). Requires additional resources, materials and equipment.	Moodle, Canvas, Blackboard, Google Classroom, Microsoft Project, Microsoft Team, Virtual laboratories
IT platform	Facilitates the coordination of students' work. Ability to design models and simulate work processes. Use of virtual and augmented reality tools.	IT products can be expensive. IT platforms can be difficult for teachers and students to master at the first stages of implementation. Special computer equipment is required.	Asana, Trello, Wrike, Jira, 3D-Canvas, Auto-Cad, ArchiCAD, STEM
Trainings and master classes	Provides theoretical and practical knowledge of project management. The opportunity to visually see actions, processes, work methods and test the acquired knowledge in practice.	It can be difficult to find and convince qualified trainers, specialists with work experience. It takes a lot of time and effort to prepare and conduct.	Video conferencing systems, Virtual laboratories, interactive boards, Virtual simulators
Problem-oriented learning.	Develops critical thinking and creativity. Independent choice of methods, algorithms for problem solving.	Can be difficult for students. May require additional time and effort from teachers.	Blackboard Learn, Canvas, Moodle, Auto-Cad, Python.

Given the above, in order to conduct a comprehensive diagnosis of the formation level of project culture in future teachers, we combined the following methods of pedagogical research: questionnaires and testing.

During the development of psychological and pedagogical questionnaires, the following requirements were met: at least 15 questions, which should reflect students' motivation for future professional activities and readiness to manage educational projects, so that the expected answers to them were complete; questions can be both direct and indirect, can contain answer options (at least 3) or be without them; combinations of questions are possible.

During the development of the tests, the following requirements were taken into account: at least 20 test questions; the questions are aimed at checking personal qualities and knowledge of educational project management; the wording of the questions should be such that the expected answers to them are plausible; questions can be both direct and indirect; only one correct answer option; at least 4 answer options.

Taking into account the above, in order to carry out a comprehensive diagnosis of the formation of the level of project culture among future teachers, we combined such methods of pedagogical research as: questionnaires and testing.

For the experiment, 240 students of bachelor's level, II, III, IV years, majors: 014.09 Secondary education (Informatics) and 015.39 Professional education (Digital technologies) were selected. Respondents were divided into two groups: experimental (120 people) and control (120 people) with approximately the same level of success. In the control group, students received professional training according to traditional pedagogical methods. In the experimental group, students were trained using methods of project culture formation: project-oriented learning, IT platform, trainings and master classes, problem-oriented learning. The author's special course "Educational Project Management" was introduced.

Table 1 shows the analysis of indicators of the readiness levels of students to manage educational projects. To evaluate the results of the pedagogical experiment, statistical indicators were used [3]: $\bar{x}$ – arithmetic mean; σ – root mean square deviation; m – the value of the standard error. The reliability of the results was assessed by the Student's t-test, which is a hypothesis testing method.

Table 1 shows changes in the level of readiness for managing educational projects among students (in the experimental group of respondents).

Table 1. Analysis of the levels of readiness to manage educational projects among future teachers of the experimental and control groups (before and after the experiment)

Readiness levels	Experimental group (EG), Control group (CG) / person			Statistical indicators			
				$\bar{x}$	σ	m	t
Low	To the experiment	74	EG	21,9	2,12	0,5	1,4
		70	CG	20,7	2,47	0,6	
	After the experiment	30	EG	18,4	1,89	0,63	1,5
		68	CG	21,3	2,46	0,5	
Average	To the experiment	27	EG	32,22	7,34	2,03	0,6
		30	CG	34,89	5,83	1,7	
	After the experiment	55	EG	46,33	3,79	0,93	2,8
		32	CG	38,86	5,82	1,64	
High	To the experiment	19	EG	61,13	5,41	2,04	0,5
		20	CG	44,34	6,01	2,1	
	After the experiment	35	EG	72,16	2,57	0,77	3
		20	CG	44,24	5,15	1,9	

Low level of students' readiness to manage educational projects at the beginning of the experiment $t = 1.4$ (in 74 people); after the experiment $t = 1.5$ (in 30 people) and both indicators are in the zone of insignificance.

The average level of readiness of students to manage educational projects at the beginning of the experiment $t = 0.6$ (in 27 people) is in the zone of insignificance, and after the experiment $t = 2.8$ (in 55 people) in the zone of significance.

The high level of readiness of students to manage educational projects at the beginning of the experiment $t = 0.5$ (in 19 people) is in the zone of insignificance, after the experiment $t = 3$ (in 35 people) in the zone of significance.

The results of the experiment showed the high effectiveness of pedagogical methods of forming the project culture of the future teacher: project-oriented learning, IT platform, conducting trainings and master classes, problem-oriented learning. So, this testifies to the effectiveness of the updated teaching methodology and the special course "Educational Project Management".

Therefore, the formation of a project culture among future teachers is an important component of the development of modern society and economy. The use of modern information technologies can greatly facilitate this process by providing access to educational resources and practical tools.

DISCUSSION

It is important to consider modern technologies as an additional tool for the formation of project culture, and not as a substitute for practical experience and interpersonal skills. To form the project culture of the future teacher, it is necessary to use a comprehensive approach that includes all four methods described above. Implementation of project-oriented learning is the most effective method, however, its implementation can be difficult. The use of IT platforms can facilitate the coordination of students' work on projects, as well as providing them with access to information and resources. Conducting trainings and workshops is an effective method for providing students with theoretical knowledge about project management. Problem-oriented learning motivates students to independently choose methods and algorithms for problem solving, and forms creative thinking.

Note that the presented results of author's research and development can be useful for teachers of pedagogical educational institutions. The practical significance of the obtained results lies in the development of a comprehensive approach to the formation of the project culture of future teachers using modern information technologies. The proposed methods can be implemented in the educational process of pedagogical institutions to increase the efficiency of training specialists.

The results of the study do not cover all aspects of the formation of project culture among future teachers by means of IT. Therefore, the prospects for further research may be: development of methodological recommendations regarding the use of project-oriented learning in the training of future teachers in higher education institutions; study of professional adaptation of students to project activities, search for other methods of forming project culture.

CONCLUSIONS

The results of the conducted formative experiment showed the effectiveness of forming the project culture of future teachers with the help of information technologies (electronic textbooks and educational materials, online courses, immersive technologies (VR and AR), mobile applications). The experiment showed an increase in the level of students' readiness to manage educational projects - from insignificant indicators at the

beginning of the experiment both for the average level ($t = 0.6$ in 27 people) and for the high level ($t = 0.5$ in 19 people) to significant after the experiment for medium level ($t = 2.8$ in 55 people) and high level ($t = 3$ in 35 people).

It has been established that the use of certain pedagogical methods, such as: project-oriented learning, the use of IT platforms, conducting trainings and master classes, as well as problem-oriented learning, demonstrates high efficiency in the formation of a project culture in future teachers, promotes the development of cognitive, creative abilities.

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FOSTERING ENGLISH COMMUNICATION PROFICIENCY: A STUDY ON THE IMPACT OF PROJECT-BASED LEARNING IN JOBLAB FOR GRADUATES

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ABSTRACT

The study examines the impact of innovative Project-based learning (PBL) on enhancing the graduate English language learning approach called „JobLab“ at the University of Zilina, Slovakia. The paper explores the efficacy of integrating JobLab's project-based approach into the learning framework to enhance graduate students' verbal creativity and presentation proficiency. Forty-four graduates were divided into an experimental group (N=22) with project-based training and a control group (N=22) with conventional teaching (T-test). The classroom observations, pre-and-post-knowledge online testing comparison using the online testing Socrative platform, and Students' self-assessment questionnaires were employed to gather data. This research adopts a mixed research approach. SPSS software was utilised for statistical analysis through qualitative and quantitative data analysis. This research highlights the practical benefits of project-based integration in JobLab as a catalyst for nurturing proficient communicators and future managers in various professional domains. Results indicate improved professional English language learning performance for the experimental group, positively impacting learners' vocabulary acquisition, motivation, and self-awareness.

Keywords: ESP, JobLab, Motivation, Project-based Learning (PBL), Transferrable skills.

INTRODUCTION

In today's dynamic professional global landscape, developing effective communication skills in English, the language of business is paramount for success. Transferrable 21st-century skills such as speaking in public, problem-solving, decision-making, and presenting ideas use the language efficiently and develop “life skills“ for personal and social well-being.

However, contemporary graduates often face challenges in meeting the evolving demands of the workforce, particularly in terms of communication proficiency. Recognising this gap, this study delves into tailored English for Specific Purposes (ESP) training and innovative project-based learning (PBL) within the JobLab framework to address these critical skills gaps.

ENGLISH FOR SPECIFIC PURPOSES (ESP)

Drawing from Celce-Murcia's insights [1], which emphasise the multifaceted nature of language acquisition (L2) involves acquiring thousands of words, grammar, and

pronunciation rules so that diverse teaching methods and Job Lab approaches to foster student engagement and enthusiasm. ESP learning is focused on the specialised needs of future economics. In the MS Team university platform, the topic-based glossaries, study materials, and project-based tasks were integrated to enhance language acquisition. Regular assessment ensures continual progress in both language proficiency and subject-specific knowledge in a dynamic learning environment that encourages active engagement, creativity and critical thinking.

THE JOBLAB FRAMEWORK

The Institute of Lifelong Learning, Department of Foreign Languages at the University of Zilina, Slovakia, has recently introduced an innovative English language teaching model for engineering students called JobLab. It is pioneered by the university and focuses on practical preparation for the business world through a collaborative approach. JobLab entails a two-semester professional topic-based English training aimed at enhancing students' language proficiency, teamwork, and communication skills. The 12-week experiment (100 minutes a week), combines face-to-face teaching based on the online university platform recordings in MS Teams (Study materials, Students' portfolios, Assessment Criteria).

The curriculum included glossaries, project-based tasks, and group presentations covering various business aspects such as product creation, branding, marketing strategies, advertising, business planning, financial support, and forecasting. Teachers implemented effective teaching strategies as scaffolding, layering, modelling, learner-centred assessment, and error treatment, to support student learning. JobLab's approach involves interactive workshops with glossaries, case studies, role-plays, gamification, and audience interactivity based on a PBA approach for students to "become experts in topic-based tasks" and contribute to higher professional identity.

Bridging the theory-practice gap, the design includes video-based presentation development experiences, covering requirements, and expected outcomes for each module of exciting topics such as Branding, Sales Pitches, Business Plans, and Marketing. Practical insights into concepts like the 4Ps, market segmentation, and SWOT analysis are provided based on collaboration among team members to ensure that the project stays on track. Monitoring progress and evaluating the project's success are leading parts for improvement in future projects.

PROJECT-BASED LEARNING (PBA)

Comparing traditional and PBA approaches offers insights into their effectiveness in fostering student motivation, engagement, and presentation skill development.

Brook [2] *describes traditional teaching as "a teacher-centred approach, lecture-based information transfer criticised for damaging communicative competence"* due to inadequate interaction and dominance of teachers and limiting learners' inability to initiate individual learning and oral performance appropriately. Traditional education tends to produce low student engagement; students often pay less attention to the subjects. (Brook, 2002, p.12)

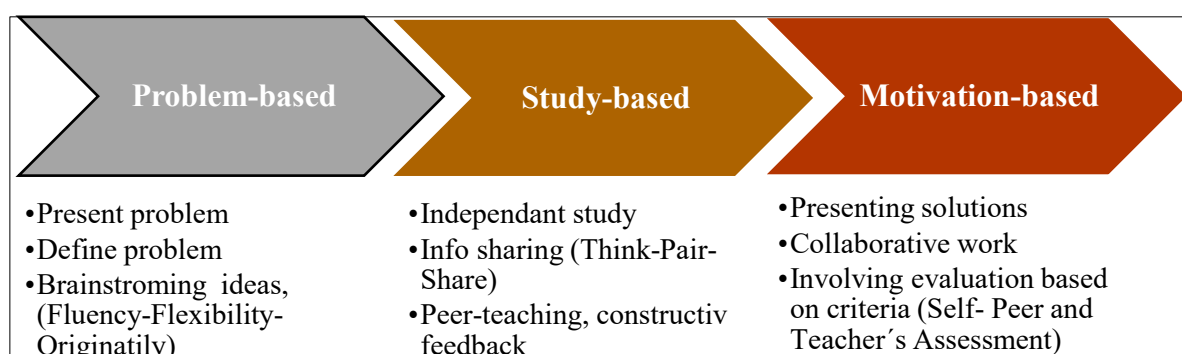
Project-based learning (PBL) contrasts traditional teaching methods to improve educational effectiveness and foster student-centred learning. Traditional teaching is often criticised for its lecture-based approach, which limits interaction and hampers students' ability to initiate learning. As a result, student engagement tends to be low. Educators and

students need to understand the advantages and challenges of PBL and utilise it to enhance learning.

PBL promotes mindfulness and caters to diverse learning styles by incorporating experiential learning, collaboration, and feedback mechanisms. While beneficial, PBL poses challenges such as managing workload and adapting to collaborative work. JobLab English language training goes beyond language skills, emphasising soft and hard skill development. Interactive workshops in JobLab guide teacher trainees in topic-based tasks, fostering a robust professional identity. These workshops gradually develop speaking skills, creativity, and critical thinking.

Project-based learning (PBL) is an instructional student-driven approach emphasising learning from various sources through engaging and meaningful projects.

In PBL, students work on real-world challenges or problems that require them to apply knowledge and skills acquired during their studies. The projects are often interdisciplinary and encourage collaboration, which is critical to their studies. The projects are often interdisciplinary and encourage collaboration, critical thinking, and problem-solving..



Picture 1: Module of JobLab for Problem-Based Learning in English for Graduates

The step-by-step processes implemented in the JobLab approach can bring innovative and effective solutions, as described in Table 1.

Table 1: Problem-solving and collaborative learning steps involved in the JobLab approach

Problem-solving	Step-by-step processes description
Define Problem	Break down the problem into components to clarify focus and objectives.
Brainstorm Ideas	Create creative solutions through a collaborative brainstorming session.
Independent Study	Research to gather relevant information and insights, deepening understanding of the problem.
Info Sharing	Encourage knowledge exchange among participants -Think-Pair-Share.
Peer Teaching, Feedback	Foster collaborative learning by having participants share findings and provide constructive feedback.
Present Solutions	Articulate solutions clearly, justifying them with research and analysis.
Collaborative Work	Develop and refine proposed solutions through teamwork incorporating collaborative work principles
Evaluation	Assess solutions based on predetermined criteria, incorporating self-assessment and peer feedback for improvement.

MOTIVATION

The concept of motivation plays a crucial role in determining the level of engagement in learning, which is closely linked to self-esteem and overall academic achievement.

According to Rubio [3], motivation is “*a psychological and social phenomenon in which an individual evaluates his/her competence and own self according to a set of values*” (Rubio, 2007, p. 5).

Arnold & Douglas [4] describe intrinsic motivation as the internal drive and personal satisfaction derived from learning a language, while extrinsic motivation involves external factors such as grades, rewards, or social approval. This concept expands our understanding of motivation beyond individual aspirations, highlighting the significance of broader sociocultural factors in shaping learners' motivations. By tailoring the learning experiences to learners' specific needs and motivations, we can enhance engagement, foster a positive learning environment, and promote long-term language proficiency.

PRESENTATION SKILLS

The importance of presentation skills as high-demanded 21st-century skills describes North & Worth [5] as a part of interpersonal skills and the most frequently required competencies in newspaper ads for entry-level jobs, essential for job interviews and business success at the workplace." We know that presenting and info-sharing are vital to communication skills, which are fundamental in graduates' careers. Many surveys confirmed that 21st-century skills focus not on hard skills or core subjects but on transferrable life soft skills.

RESEARCH METHODS

The empirical study employed a mixed-methods approach to investigate the impact of Project-Based Learning (PBL) on students' presentation skills and pre/post-testing results in ESP. It was conducted at the University of Zilina, Slovakia, within the Department of Foreign Languages, Institute of Lifelong Learning. The research design incorporated quantitative analysis using the Wilcoxon test in pre-and post-testing and qualitative analysis through classroom observations and self-assessment questionnaires.

HYPOTHESES

The study formulated hypotheses to test the effectiveness of PBL in improving presentation skills and enhancing students' motivation and engagement. Specifically, the null hypotheses (H0a, H0b, H0c) proposed that there would be no statistically significant difference in presentation skills and pre/post-testing results before and after the experiment. Conversely, the alternative hypotheses (H1, H1b, H1c) posited that significant differences would exist in these variables following the implementation of PBL after the experiment.

H_a: The PBL approach will/will not increase presentation skills in ESP.

H_b: The PBL approach will/will not increase students' motivation and self-awareness.

H_c: The PBL approach will/will not increase the acquisition of learning goals.

DATA COLLECTION

Participants included forty-four graduates from the field of economics with approximately the same level of English B2 based on CERR [6] enrolled in a professional JobLab development program. Data collection methods comprised pre- and post-

knowledge testing, self-assessment questionnaires with 5-Likert scale items, and classroom observations. The questionnaires were designed to assess students' perceived motivation levels, engagement, and satisfaction with the learning process, while classroom observations provided insights into student behaviour, interaction, and participation during PBL sessions.

RESULTS

The findings based on the questionnaire and comparing results from pre- and post-testing indicate improvements in three aspects favouring the PBL approach over the traditional method.

Presentation Skills Development (Ha): The mean score for presentation skills development increased substantially from before ($M=4.36$, $SD=0.57$) to after ($M=4.80$, $SD=0.41$) the experiment in the PBL approach group. In comparison, the traditional method group also showed an increase, but to a lesser extent (before: $M=3.80$, $SD=0.80$; after: $M=4.08$, $SD=0.70$).

Motivation and Self-awareness (Hb): The PBL approach group demonstrated a higher mean score for motivation and self-awareness both before ($M=4.48$, $SD=0.59$) and after ($M=4.60$, $SD=0.50$) the experiment compared to the traditional method group (before: $M=4.40$, $SD=0.58$; after: $M=4.72$, $SD=0.46$).

Acquisition of Learning Goals (Hc): The PBL approach group exhibited a noticeable increase in the mean score for acquisition of learning goals from before ($M=4.36$, $SD=0.57$) to after ($M=4.52$, $SD=0.51$) the experiment. Although the traditional method group also increased (before: $M=4.40$, $SD=0.58$; after: $M=4.76$, $SD=0.44$), the increment was less pronounced than the PBL approach group.

Table 2: Wilcoxon test of experimental and control group – the hypothesis evaluation

Wilcoxon test	Control group – traditional teaching/learning approach		
Hypothesis	1. Ha Presentation Skills Development	2. Hb Motivation and Self- awareness	3. Hc Acquisition of Learning Goals
alpha	$\alpha=0,05$	$\alpha=0,05$	$\alpha=0,05$
p	0,008	0,157	1,000
Z	-2,646 ^b	-1,414 ^b	,000 ^c
Hypothesis Evaluation	Rejection of the null hypothesis	Confirmation of the null hypothesis	Confirmation of the null hypothesis
Wilcoxon test	Experimental group – PBL teaching/learning approach		
alpha	$\alpha=0,05$	$\alpha=0,05$	$\alpha=0,05$
p	0,000	0,008	0,025
Z	-4,564 ^b	-2,646 ^b	-2,236 ^b
Hypothesis Evaluation	Rejection of the null hypothesis	Rejection of the null hypothesis	Rejection of the null hypothesis

Based on the Wilcoxon test (Tab.1) for the control group, the null hypothesis was confirmed for two hypotheses: motivation and self-awareness (Hb) and acquisition of learning goals

(Hc). The results suggest no statistically significant differences in these variables before and after the experiment in the control group. Presentation skills development (Ha) was rejected (p-value of 0.008 and a Z-score of -2.646) with significant improvements.

The PBL teaching/learning approach proved effective for the experimental group; the null hypothesis was rejected for all three hypotheses with significant improvements and demonstrated the effectiveness of the PBL approach in enhancing presentation skills, motivation and self-awareness, and the acquisition of learning goals compared to traditional teaching methods.

FINDINGS

The study's findings have significant implications for English language education based on PBL, which fosters a dynamic and interactive learning environment conducive to student success. These findings underscore the importance of innovative teaching methods in promoting active learning and student-centred education in higher education settings.

DISCUSSIONS

The study had two limitations: the sample size and the relatively narrow disciplinary origins of course participants. More longitudinal and extensive studies are needed to investigate the potential of the divergent approach in depth.

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CONCLUSIONS

This study uses dynamics of language development, particularly in the context of innovative PBL methodologies within the JobLab framework; the research emphasises the significant role of language development in fostering effective communication. The study sheds light on the pivotal connection between language development and the overall enhancement of professional skills within the JobLab educational setting. The JobLab framework aims to ensure all students' successful involvement and challenge, including cognitive learning through problem-solving and collaborative interactions such as discussions, role-plays, and group work.

This indicates a potential for broader application of similar methodologies across various educational contexts to simultaneously improve language and professional competencies. Future research should investigate the specific elements of PBL that most effectively promote language and skill development. It could further refine educational strategies, ensuring they are tailored to maximise student outcomes.

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HIGHER EDUCATION RESPONDING TO ARTIFICIAL INTELLIGENCE TECH, CONCURRENT CORRELATE WITH THE SUSTAINABLE DEVELOPMENT GOALS

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ABSTRACT

Artificial intelligence (AI)'s emergence along with its progressively broader impact on different sectors needs assessment of all effects on achievement of each sustainable development goal (SDG). As AI technology turns to be more prominent in lives of individuals, increasing number of practitioners as well as researchers have underscored importance to integrate AI as one learning content. In spite of recent efforts to develop AI curricula along with guiding frameworks within AI education, every educational opportunity does not provide equally inclusive as well as engaging learning experience for each learner. For promoting equity and equality in society along with increasing competitiveness in AI workforces, this is vital in widening applications of AI in sector of education. Different frameworks of AI can provide appropriate guidelines to make learning much more inclusive over disciplines. The paper will discuss how to promote educational experience with the use of applications of AI technology along with enhancing goals of sustainable development. The paper will also highlight benefits as well as drawbacks of using different technologies of AI in this sector of education.

Keywords: Artificial Intelligence Innovation – Higher Education – SDGs – Society Development

INTRODUCTION

There is emergence of AI as one transformative force having the potential in significantly contributing to achieve every SDG. Such comprehensive analysis helps in exploring AI's multifaceted role to advance sustainable development over different domains and sectors. Powerful tools as well as technologies are offered by AI which can help in enhancing decision-making, optimizing allocation of resources, and driving innovation for supporting all objectives of sustainable development (Goralski & Tan, 2020). Regarding education as well as skill development, every adaptive learning platform based on AI, personalized learning system, and virtual tutorial system are revolutionizing this sector of education, expanding all types of accesses to better quality of education, along with fostering every lifelong learning opportunity for all individuals (Palomares et al., 2021). In addition, by tailoring learning experiences and educational content to every learner preference and need, technologies of AI are empowering learners in pursuing higher

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education, acquiring new skills, and participating more significantly in this knowledge economy.

Alongside such potential benefits, AI's adoption in efforts of sustainable development raises also regulatory, ethical, and social considerations which should be addressed carefully. Issues related to privacy of data, technological unemployment, algorithmic bias, and digital divide need policy interventions and proactive strategies for ensuring that every AI-driven solution contributes to sustainable development, inclusive, and equitable outcomes (Vinuesa et al., 2020). AI has started producing many new learning and teaching solutions which are undergoing testing currently in several contexts. Hence, technologies of AI have vital roles to play in sustainable development as well as higher education. By providing data-driven and personalized educational tools along with techniques, AI could enhance the overall efficiency as well as quality of education, along with contributing to achieve SDGs through the ability in providing efficient data-driven solution to each environmental, social, and economic challenges (Kulkov et al., 2024). The paper will evaluate how technologies of AI can promote educational experience by providing efficient solutions. The paper will also discuss how such technologies can help in achieving goals of sustainable development.

METHODOLOGY

Scoping review was implemented for conducting this review. Scoping review serves as one efficient tool to determine the scope as well as coverage of existing literature upon a specific topic, providing clear indication of volume of all available studies and literature, along with overview of the focus (Di Vaio et al., 2020). This search process has been carried out with the focus on Google Scholar database for materials between 2020 and 2024. This search has yielded 102 results. Then, four phases have been used for this study that includes identification of appropriate studies, selection of studies, organization of data, and summarization and generation of report of all results. First phase has involved identification of appropriate studies. For focusing on current research, there has been a limit set for database search to last five years. Different keywords have been used for this search, such as artificial intelligence, education, sustainable goals, and AI frameworks. Full-text and abstract screening has been performed and exclusion as well as inclusion criteria have been established for this work.

In next phase, an efficient selection process has been conducted for ensuring minimal bias. For maintaining consistency, there has been use of one protocol based upon PRISMA-ScR. Criteria of selection for such studies includes written using English, published between 2020 and 2024, reports, and peer-reviewed articles. Total of 26 articles met this inclusion criteria. For ensuring reliability as well as consistency, there is use of appropriate measures for assessing inter-rater reliability. In next phase, thematic analysis has been conducted for all data collected from these sources. Final phase includes organizing along with summarizing all results. Different findings have been achieved from all data collected. Both benefits as well as drawbacks of using technologies of AI in this sector of education has been identified in this research.

FRAMEWORK

In education's dynamic landscape, this global market of e-learning has undergone some profound transformation that marks the departure from different traditional methods for embracing innovative methods. In education's realm, framework of personalized learning

can stand as innovation's beacon, altering these traditional landscapes by tailoring educational experiences to distinct attributes of all learners (Kamalov et al., 2023). Such a framework can delve beyond surface that can venture into essence of how all students apply, absorb, and process knowledge. At the core, this framework of personalized learning is one student-centric and adaptive pedagogical framework which recognizes individuality of all learners. This framework can ensure that students possess unique learning styles, weaknesses, and strengths (Hooda et al., 2022). Such an essence lies to create the educational journey, which is responsive, fluid, and dynamic to every evolving need of all learners.

Universal Design for Learning (UDL) is another framework with the aim in making learning much more inclusive for each student by planning proactively for diversity in classrooms that includes learning preferences, backgrounds, and abilities. At the core, it is recognized by UDL that the approach of one-size-fits-all to education is limiting inherently, along with promoting proactive design of every tailored educational experience (Dai et al., 2020). UDL places the premium to honor flexibility with this goal to dismantle each barrier to learning along with attending to every unique learning need of each student. The focus of UDL is on accessibility along with leveraging use of different assistive technologies for supporting every learning need of each individual (Chiu & Chai, 2020). UDL can promote different adaptable activities as well as assessments which empower every learning in assuming control over learning.

For navigating AI-infused environment for education, the framework of deep learning can be used. This framework involves set of different guidelines that provides the mindset to engage with AI in an ethical, thoughtful, and critical manner. All elements have practical exercises and learning objectives for all students. This framework can help individuals in uncovering different areas of research, study, and interest (Kuleto et al., 2021). It can help individuals in exploring every emerging trend in this field, uncovering every historical data appropriate to own studies, and gathering diverse perspectives. The framework can help students in using AI for simulating any real-world scenario along with participating in any AI-driven discussion on any complex topic.

Generative AI is another framework of AI which focuses to create new content or data in place of analyzing along with interpreting any existing data. Generative AI uses techniques of deep learning for generating natural language text (Ahmad et al., 2021). Generative AI is filled inherently with several potential offering applications which could revolutionize different educational practices. Integrating generative AI into education's realm is reshaping this way knowledge gets absorbed as well as shared. It can help in independently creating every content stand at educational progress's forefront, offering the move towards much more interactive as well as personalized learning settings (Joshi et al., 2021). This framework serves as the driver for changes by providing different tools which could transform learning methods and teaching approaches. This framework can customize all educational contents based upon unique needs of each individual.

PRACTICAL CASES

In this digital world where technologies are advancing at a rapid pace, this is no surprise that technologies of AI are making their way into this domain. Given AI's recent explosion into this sector, it is the starting of what could be quite transformative for learning and education. A program of AI is developed by Stanford research for providing every student with assistance when such individuals are stuck in any digital learning.

Also, a chatbot powered by AI was recently implemented by University of Murcia for assisting every student with different inquiries regarding academic programs and the campus (Kulkov et al., 2024). This chatbot has demonstrated high proficiency level, answering almost 92% of answers correctly. Such as implementation provided every student with such prompt responses as well as resulted in increase in motivation of students.

Another intelligent tutoring system was proposed for helping every fifth-grade student in learning mathematical units of division as well as multiplication. This system has helped in improving mathematics learning performance of students along with increasing learning motivation. Also, another chatbot powered by AI was implemented in Georgia as the teaching assistant for more than 300 students for one course (Nguyen et al., 2023). The accuracy rate was quite high, responding to almost 10000 inquiries of students in every semester with high efficiency.

DISCUSSION

Technologies of AI holds huge potential to enhance education's quality at every level of study. Major advantages of using AI within education include access to some quality education, enhanced learning outcome, and cost as well as time efficiency. AI within education possesses the capacity in efficiently improving learning outcomes for students by providing significant learning experiences using collaborative filtering and knowledge tracing (Ahmad et al., 2022). Technologies of AI could be utilized for customizing every learning experience for matching and predicting certain student needs by analyzing past navigational patterns and interactions, identifying every individual strength as well as innovation, and tracking every knowledge state. Due to this, more motivated and engaged students, enhanced academic successes, and increased retention of information can be achieved (Luan et al., 2020). Trends and patterns in data of students could be identified using AI for helping each educator in identifying along with addressing any challenge or learning gap in the real time.

AI could improve increase student retention, engagement, and motivation by using personalized feedback system based upon intelligent tutoring system or transformer models based on deep learning by catering to different individual preferences and learning styles (Nguyen et al., 2023). Learning outcomes could be also improved with the automation of every time-consuming administrative task, such as planning of learning and teaching activities, assessment, and grading, allowing each educator in focusing on direction interaction with students as well as efficient teaching strategies. Every existing instruction tool driven by technology could be more enhanced using AI (Bahroun et al., 2023). Resources and tools of AI, like text-to-image generation, text summarization, smart content, adaptive assessment enabled by AI, AI video generation platform, virtual tutors, and voice assistants might supplement traditional techniques of learning by providing each student with some additional materials as well as interactive experiences which improves understanding of many complex concepts (Nemorin et al., 2023). AI could be utilized for improving productivity along with facilitating student collaboration with the promotion of teamwork, skills of problem-solving, and team effectiveness, all such are needed for succeeding in this current workforce.

A huge advantage of using AI is automation of several manual tasks. AI's introduction in education has also resulted in paradigm shift, with the potential in dramatically improving cost as well as time efficiency for educators and students. Automation of duties of teachers

would provide much time savings which can allow better focus of such personalized learning (Cantú-Ortiz et al., 2020). In addition, AI could streamline different educational processes, like generating questions with the use of prompts, content creation, and grading, reducing the overall workload upon educators along with enabling them in focusing on every higher-order task that includes problem solving and thinking. AI could be trained in grading different assessments and subjects that include graphing assessments, essays, and questions of problem-solving.

There is also potential in AI in altering budget allocations of educational institutions with the reduction of reliance on resource-intensive, traditional methods with respect to cost efficiency. Also, with AI's incorporation into educational scenes, educational institutions could save money upon hiring teachers along with other staff members while providing education of high quality to all students (Vincent-Lancrin & Van der Vlies, 2020). Educational resources based on AI as well as digital textbooks could be delivered at fraction of cost of traditional counterparts. Due to this, such low-cost innovations and frugal solutions improve overall access to education, especially for every student in a low-source setting and in any remote region. It can help in democratizing along with contributing to broader educational setting (Ayanwale et al., 2022). Fine-tuning and quality control the AI would be major responsibilities of teachers. Also, while AI could be used for performing different tasks, educators should approve those results.

Issues of data security and privacy affect all technologies. Location details, personal data of users, and communications are quite vulnerable to monitoring by any government or hacking. Such issues exist also in AI applications in domain of education (Villegas-Ch et al., 2020). As tools of AI penetrate different educational institutions, each of them collects as well as processes huge volumes of sensitive data that includes personal data, behavior patterns, and academic records of students. Potential for unauthorized access or misuse of such data presents huge risks to different stakeholders (Alam, 2021). Violation of any individual privacy right or potential for any discriminatory practice are some key dangers. Additionally, inadequate measures of data security might lead to leaks or breaches, further exacerbating such issues along with undermining trust within each AI-based educational system.

FINDINGS

AI's arrival in education possesses the potential in producing efficient transformations in relationship between students and teachers. While technologies of AI offer numerous promising abilities for adaptive feedback, personalized learning experience, and efficient assessment, this also presents a few novel issues to dynamics of traditional educational bonds (Alam, 2023). As technologies continue in permeating educational sphere, issues arise regarding human connection's potential dilution along with erosion of student-teacher rapport, with impact upon development of different socio-emotional skills as well as shared sense of different classroom communities. Increased reliance upon AI would affect invariably interpersonal dynamics among students and teachers (George & Wooden, 2023). AI's introduction can alter teachers' traditional role along with affecting this relationship between students and teachers. As technologies of AI become much more embedded in assessment evaluation and content creation, a potential outcome can be decline in authority of teachers, as students do not consider them to be ultimate authority.

AI's implementation in education also raises a few issues regarding security as well as privacy of data, as such systems depend on huge amount of data of students for

personalization and analysis. Several solutions have already been proposed that includes implementing robust policies of data protection, efficient access controls, and encryption techniques (Spivakovsky et al., 2023). Ensuing protection of all sensitive data as well as complying with regulations of data privacy is vital for maintaining trust along with preventing potential misuse. In addition, fostering privacy awareness's culture in every educational institution is vital for ensuring compliance with regulations and laws of data protection (Lameras & Arnab, 2021). It needs development of efficient guidelines for AI developers and educators which outline the most efficient practices along with promoting ethical use, transparency, and accountability of AI within education.

While AI-based VR and AR applications have already demonstrated significant outcomes in different educational contexts, long-term impact and efficacy must focus to address such challenges that can ensure the equitable as well as responsible integration of such AI-based VR and AR technologies into every educational ecosystem (Kamalov et al., 2023). Every student is more interested in a few lessons. In traditional systems, there is use of one teaching method for every student. However, this issue has been solved by AI. In education systems based on AI, new education would be distinct to every individual and students would be assessed. Strengths as well as weaknesses of all students would be measured along with academic processed would be based on each individual ability (Kulkov et al., 2024). AI could provide different conditions for each student for receiving answers from teachers. With AI becoming smarter, modern education systems would become more advanced over time. In future, systems would be able in assessing conditions of students by scanning faces.

As technologies of AI continue to advance, this would generate unimaginable and new applications in this domain of education. An exciting future opportunity involve fusion of virtual reality and AI for providing every learner with some visually rich educational contents. Also, lifelong learning is another direction where AI can be poised in transforming landscape of upskilling and continuous education, laying this foundation for more resilient as well as adaptable workforce in future (Palomares et al., 2021). As different facets of life are permeated, this is crucial in educating individuals about literacy of AI. Given AI's power this is vital in being aware of all ethical considerations while using this technology. In addition, the potential to exacerbate socio-economic disparities along with widening this digital divide should be considered as proper access to such advanced tools of education might be limited to all those who could afford them (Vinuesa et al., 2020).

RECOMMENDATIONS

In education, technologies of AI can offer numerous benefits, like operational efficiency, personalized learning, and effective feedback. AI in education can cater to needs of every student along with adapting to their distinct learning styles. This can help each student in learning at own pace by efficiently identifying when an individual is ready in moving on to several more advanced concepts (Hooda et al., 2022). Algorithms of AI can analyze such understanding along with offering additional reinforcement or practice for ensuring concept clarity. In addition, this can help in improving their understanding as well as retention of all materials. Transforming education needs engagement of each who serve school systems. It can be ensured that education is enhanced by AI for every student by working together for facilitating leadership, supporting innovation, building capacity, providing guidance, and promoting AI literacy (Dai et al., 2020).

AI within education is rapidly used for personalizing every learning experience for each student. Technologies of AI provide tailored educational contents based on learning styles, skills, and interests. AI can analyze performance data of students along with identifying every pattern of each learning difficulty and every gap in understanding (Ahmad et al., 2021). Algorithms of AI can be used by adaptive platforms for assessing huge volumes of performance data of students. Such information can help in evaluating strengths as well as weaknesses of students. AI can combine details with every individual need, learning style, and preference for creating every customizer learning path. Such adaptive platforms can consider learning styles of students, like auditory or visual learners (Luan et al., 2020). This can also deliver content in ways which are most efficient for learners. Personalized approaches to learning can help each student in learning better along with keeping each of them motivated.

A few recommendations can be followed for promoting educational experience with the use of AI along with enhancing goals of sustainable development.

Support innovation: Research as well as development should be funded for advancing AI in different educational tools, pedagogy, and curriculum. By supporting proper innovation, development of several AI technologies can be driven which can enhance experiences of learning along with improving every student outcome (Nguyen et al., 2023).

Build capacity: Staff as well as educators should be supported to integrate AI into school operations and management, teaching, and learning. Programs of professional development could help staff members in understanding AI along with its ethical considerations and limitations. By developing capacity, it can be ensured that every leader can develop the expertise in serving the community as well as every staff is equipped in using AI significantly and responsibly through any education system.

Provide guidance: Clear guidelines should be established for responsible as well as sage usage of AI tools along with techniques in education. It should be ensured that tools of AI are ethically used, focusing on responsible usage and student privacy. By providing proper guidance, it can be ensured that learning experiences are enhanced by AI without compromising privacy or safety (Nemorin et al., 2023).

Promote literacy of AI: AI concepts should be integrated into curricula along with teaching every student in evaluating AI along with its outputs. Every student could become an informed consumer along with creator of technologies powered by AI by understanding limitations as well as potentials of AI.

Foster leadership: AI can be used within education task forces with policymakers, community members, students, experts, and educators for guiding policy along with overseeing implementation. Such task forces could drive innovation along with ensuring that there is alignment between AI and educational goals (Ayanwale et al., 2022).

CONCLUSION

There is change in this world at a rapid pace, and technologies are used by different processes more each day. An application of technologies of AI is simplification of different tasks of all individuals along with office automation that is quite effective still. In future, different types of robots could create instructional videos and conferences and produce articles. AI provides different possibilities for all students with several physical

issues. As Meta-AI could be an efficient automation tool, there can be use of meta AI systems in different projects of deep learning. Additionally, in this super-intelligent and highly connected society, this demand for processing of data is increasing. Also, with such acceleration, meta AI would benefit numerous users in near future. AI can help in removing borders as well as modern education would become one global thing. Different technologies increase speed of transfer of knowledge by facilitating new learning and education.

In future, transfer of learning as well as knowledge all over the world would accelerate significantly. AI provides quick access for students to education. Students can have access to different learning materials using online-based AI. In addition, AI using different IT technologies could increase the overall efficiency in several areas. Also, the most vital part to use AI could be considered to be helping individuals in knowing their purpose. There are several virtual tools to conduct online exams; however, tools of AI help in conducting different online exams along with solving every predictable issue during such exams. This research has analyzed this relationship between sustainability and AI in education based on literature in this field. There is great potential in AI in enhancing online education in several ways, such as allowing in developing knowledge networks, generating appropriate tests, enabling diversity as well as fairness, and improving the overall quality of all learning materials.

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INFORMATION AND COMMUNICATION TECHNOLOGIES USED IN EDUCATION IN THE CONTEXT OF INDUSTRY 5.0 DEVELOPMENT

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ABSTRACT

New technologies have made it possible to eliminate geographical barriers, thereby changing the traditional learning model. ICTs support lifelong learning by providing tools that allow for the creation of virtual learning environments through online courses or more informal settings. The purpose of the article is to study the theoretical and practical aspects of information and communication technologies and the conditions for their use in education in the context of Industry 5.0. It is proved that the informatization of the educational sector meets the deep needs of the whole society for the effective use of educational resources. Information, communication and artificial intelligence enrich the digital transformation. Educators need to prepare students for life in the information and knowledge society by developing the skills that students need to make full use of ICTs. The introduction of new technologies into education has changed the levels and educational roles of all its agents (teachers and students), and the new educational content being created is becoming more interactive, engaging and varied. It is concluded that ICT and 5G technologies serve as a catalyst for the development of new technologies and open up new opportunities for business, science, education and other areas.

Keywords: ICT in education, digital technologies, INDUSTRY 5.0, digital education, ChatGPT technologies, ICT competences of the 21st century.

INTRODUCTION

Currently, the digitalisation of all spheres of life is accelerating, and the digital transformation of industries requires a large number of digital specialists with professional skills.[11] The main challenge for the coming years is the integration of education and educational technologies, which will result in the active use of cloud technologies, MOOCs, Big Data technologies, robotics, etc. and 5G technology, i.e. fifth generation mobile communication technology. Educational institutions can fully rely on the new opportunities that technology will bring to education. Therefore, we can identify the key points of education informatisation for the coming years, including improving ICT infrastructure, increasing educational efficiency, the level of management, improving the quality of education, and sharing resources. The essence of

integration lies in reorganisation and reengineering, as educational institutions face major challenges that require restructuring and reforming education in many aspects. First, we need to reorganise and restructure the learning process [1]. We need to use information technology to support the comprehensive reorganisation of teaching and learning activities. To achieve the optimisation of re-engineering, it is necessary to transform learning to be: 1) student-centred; 2) learning-oriented; 3) capability-building; 4) process-oriented. Secondly, the three spaces should be organically combined. For the integration of education and educational technologies, it is necessary to connect the spaces that are related to the integration of teaching and learning activities at three levels: 1) physical space; 2) resource space; 3) social space. We are still at the stage of integrating physical space, but how to organically integrate these three spaces to form a new educational environment should be completed in the coming years. Thirdly, educational and research staff must be trained to become digital specialists. The abilities of educators need to be integrated, and there are basically three ability integrations, namely: 1) integration of technology; 2) academic knowledge; 3) the art of teaching. Among them, technology refers to ICT technology, academic knowledge to subject knowledge, and teaching art to teaching methods. Therefore, it is necessary to integrate science, teaching and technology in a deep way to train competent professionals. Fourth, we need to make full use of Big Data technology to achieve personalised learning. In the coming years, we must create a new educational ecology and modernise education by: 1) changing the form of education; 2) re-engineering the educational environment; 3) restructuring the assessment system; 4) re-engineering and reorganising the educational process [2].

MATERIALS AND METHODS

General philosophical methods - the method of analysis and synthesis, interconnection, abstraction and transition from the concrete to the abstract and from the abstract to the concrete, historical and logical, comparison, institutional - helped to bring all the disparate empirical data into a coherent concept of developing directions for the evolution of digital technologies from the Fourth Industrial Revolution 4G to 5G. One of the methods is the Agile method, trying to explain big data that can predict the future, which should become adaptive, stable, and efficient. The Supernova era has brought to life new categories - information, Datasphere management, Big Data, data mining, creative digital technologies, digital societies, characterised by the intensification of human communication capabilities in the space of informatisation. It is necessary to clarify the purpose of the technology and ensure transparency, comply with data security rules and data use principles, and clearly define that data always belongs to users or consumers. A prerequisite for data freedom is the protection of security and privacy. Big Data technology is designed to quickly extract valuable information from various types of data using new processing modes to achieve deep insights, sharp discoveries and accurate decision-making. A social diagnosis of the state of digital technologies from the Fourth Industrial Revolution and their evolution from 4G to 5G was carried out.[15]. ICT in education is important because it helps to improve the teaching and learning process. However, it requires special intervention and financial investment from stakeholders and key actors in the education sector. ICT has a unique dimension for all, helping students with and without disabilities, i.e. regardless of their educational needs [1], [2], [3].

RESULTS

The immediate goal of introducing ICTs in education in the context of INDUSTRY 5.0 development is the application of information technologies in education. When applying information technology, it is necessary to: 1) to do a good job of creating software that is closely related to the theory and methods that determine the direction of information technology application in education; 2) to create a model of education informatisation that is compatible with the environment for building education informatisation, educational objects and educational content; 3) to increase the interest of young people and basic skills in the use of information technology; 4) to promote the development of information technology and curricula at different levels, and the integration of theoretical research and practice [3].

Information technology refers to a system of tools and methods for collecting, processing, storing, exchanging and applying information. Its content includes two aspects: 1) means, i.e. various information carriers. The core of information technology is the digitisation of information and the network transmission of information. Information technology is the technical backbone of education informatisation and the driving force of education informatisation. In order to implement the informatisation of education, it is necessary to educate a large number of education informatisation professionals who have basic knowledge of information technology and the ability to apply information technology. As a field of ICT, education informatisation capabilities have two meanings: first, they are general education informatisation capabilities, which are intended for all kinds of personnel involved in education, training, management and other education services. The general information technology knowledge requirements, abilities and quality of all personnel in this field; secondly, it is the educational information professionals interested in applying and supporting the informatisation of education. In order to meet the needs of the masses for high-quality education, the overall coordination of hardware, software, teams and mechanisms to promote the implementation of local education informatisation should be followed. The rapid development of technologies such as the Internet, cloud computing, and the Internet of Things has profoundly affected the informatisation design of higher education, which has entered a stage of "leapfrog" development. New technologies, such as multimedia and the Internet, have replaced the "blackboard + chalk", making learning more vivid and effective. In addition, informatisation has brought a large number of new models of online digital teaching. Compared to traditional models, the new teaching models are not only new in form, but also introduce many new learning concepts, such as emphasising student-centred learning. By building education informatisation, it is possible to improve the quality and level of information services and create an open, collaborative and intelligent information services platform. Informatisation of the education sector meets not only the needs of the education sector itself, but also the deeper needs of the whole society for the efficient use of educational resources. As we are all aware, whether it is cloud computing, the Internet of Things, or building education informatisation, the use of network infrastructure is always a top priority.

The first aspect is that regardless of hardware systems, software systems, or educational resources, we must shift from a focus on training and management to a focus on student learning. From teacher learning to student learning, this is the common law in our education sector, the second is the return from IT (information technology) to education. The third aspect is to move from focusing on hardware development to focusing on

application development. The fourth aspect is that the level of intelligence of educational information systems and educational software should be gradually increased. Existing intranet equipment, software and servers can be used, and Internet technologies and standards can be used to create your own inter-network - Intranet. Services recognised by the Intranet authorities should be developed: 1) electronic web publications, 2) catalogue services, 2) e-mail, 4) security management, 5) global network connection, 5) file transfer, 6) printing, and 7) network management. The development of ICT in education has brought about significant changes in the forms of education and teaching methods, accelerating the process of informatisation of education on the principles of overall planning, integration of resources, strengthening of services and efficiency. Artificial intelligence (AI) as a factor in the development of society in the context of INDUSTRY 5.0: advantages and disadvantages [4].

There is a view that artificial intelligence will revolutionise the labour market. The development of artificial intelligence has greatly expanded the world of human experience and contributed to the prosperity of human society. Today, a very popular and widely accepted viewpoint is that artificial intelligence is increasingly likely to become more and more like human intelligence and eventually cease to be controlled by humans. It is to be feared that artificial intelligence will be used by authoritarian and totalitarian policies, the most serious concern is that artificial intelligence will eventually not only have stronger skills than humans in all aspects, but its own independent consciousness, will and emotions, so that it will no longer be controlled by humans [5].

This can only be realized when the artificial intelligence has intelligence and many abilities that are superior to humans, especially when it has its own independent consciousness, will and emotions rather than simply following human instructions.

Table 1. Artificial intelligence (ai) as a factor in the development of society and global digitalisation: advantages and disadvantages

Content of the artificial intelligence (AI) function	Advantages of artificial intelligence	Disadvantages of artificial intelligence
Artificial intelligence as a source of high performance	High efficiency, reliability, replacement of people for more dangerous work	Ability to innovate is low in the field of innovation due to lack of fixed measurement standards
Artificial intelligence is good at tedious mechanical work	AI is highly reliable, less likely to make mistakes than humans, and more efficient	In the field of innovation, due to the lack of fixed measurement standards and output models, artificial intelligence does not cope well with innovation
The value of artificial intelligence	The value is relatively low in the long run, it can significantly save labour costs as less physical labour and more intellectual labour is required.	For ordinary enterprises, the cost is too high and the threshold for use is too high.
The use of artificial intelligence	The key issue is data mining to help businesses make better decisions	Artificial intelligence as a threat to humanity's existence.

Improving workplace efficiency with AI	People will be surrounded by IoT devices that can speed up complex tasks and perform everyday activities.	AI systems can break down.
Artificial intelligence as a means of providing many automated services for people	These services can be smart and improve the environment	The use of AI often involves collecting and analyzing large amounts of personal data. This raises concerns about privacy and the potential misuse of sensitive information, leading to breaches, identity theft, or unauthorized access.
Artificial intelligence for decision-making in the workplace	The rapidity and effectiveness of some AI applications make them attractive to executives looking to gain more business advantage.	The use of artificial intelligence to manage employees will lead to the fact that the work of managers will become increasingly isolated, destroying human functioning.
The future of workplaces	Artificial intelligence will actually lead to long-term job growth.	Decision-making software raises some concerns
Artificial intelligence can truly eliminate human error in the process	AI saves time and labour costs, and thus reduces human error.	The biggest disadvantage of artificial consciousness is that it will completely destroy human functioning.

Many scientists believe that once artificial intelligence gets out of human control, to the extent that it matches or even surpasses human intelligence, then it will eventually control humans and even destroy human civilisation. However, human control in this sense is really just artificial intelligence as a tool and means used by some humans to control other humans. This situation is much more worrying than the use of artificial intelligence by some as a tool to control others [6].

In the post-COVID-19 era, the education industry has moved quickly to digitalisation. Most classrooms have already installed a virtual learning system that requires video conferencing and other equipment, but it is not without technical difficulties. The lack of communication networks has already widened the technology gap in some parts of the world. However, the integration of 5G networks into the delivery of educational services has many opportunities: completely solving network connectivity problems, simplifying the classroom process, improving the learning experience and enhancing the quality of teaching. 5G helps educators at all levels to improve the learning experience for students. How can the global education community leverage its capabilities to transform existing and future learning models? 5G is an acronym for fifth-generation wireless communication technology, which refers to the fifth iteration of mobile network services. 5G differs from 4G, the most widely used wireless technology, in the delay between sending and receiving information. Thanks to its extremely low delay, 5G enables faster, more reliable and uninterrupted delivery of educational services[7].

For example, a 5G base station can accommodate and support approximately ten times more communication devices than a 4G base station. This is extremely important in educational scenarios, as lower latency and higher bandwidth enable extremely high levels of connectivity over long distances. Expanding the coverage area of 5G signals on campus can improve the availability of wireless networks. In this regard, some

universities have begun work on connecting to the 5G network. The University of Miami has taken the lead in implementing 5G technology on its campus, providing students with more opportunities for online classes and academic activities. 5G can also use virtual reality and augmented reality (AR) technologies to improve the quality of video conferencing, increase haptic feedback, enhance immersive learning, and facilitate the delivery of personalised educational services. For example, the AR app Froggipedia allows students to study the internal organs of frogs without harming real frogs, and allows them to observe the evolution of frogs from tadpoles to adults. As another example, in the field of continuing education, the VirtualSpeech tool can help people learn public speaking skills more effectively and practically[8].

5G offers five key benefits for learning:

1. Improved teacher-student interaction and collaboration between students. If you're logged into Zoom (mobile cloud video conferencing), you're likely to experience delays and interruptions in your connection, which can negatively impact the delivery of educational services. Thanks to 5G technology, the quality and reliability of video conferencing platforms will be improved worldwide. So instead of wasting time waiting for courses to load, spend it connecting teachers and students, even if they are in remote locations. In a 5G scenario, teachers can save time by not having to deal with delays or interruptions in audio and video connections, so they can focus on students, students can download videos and learning materials faster, even without interruption. a guest speaker appears in the classroom without delay. In addition, because 5G allows for more data to be transferred, communication between students participating in a group discussion will be faster and with less latency [9].

2. Improving the quality and implementation of immersive learning. Skills such as lab work and hands-on exercises require additional tactile stimulation to produce the same online learning effects as in real-world and real-time scenarios. Anyone interested in learning new skills and visualising abstract concepts in an interactive way can potentially benefit from AR and VR scenarios incorporated into immersive classrooms. 5G can provide high network bandwidth and seamless connectivity, making it easier for students to learn complex concepts through zooming, shrinking, and even touching. Additionally, haptic responses (which reproduce emotions, touch, or movement through direct contact with physical objects) can enrich interactive content by bringing tactile learning into the classroom using traditional video conferencing platforms[10].

3. Providing a personalised learning experience. In the education sector, 5G can change this, increasing the personalisation of educational services by creating intelligent systems that understand the unique needs of each student and create exclusive learning channels. For example, virtual teaching assistants can help different types of learners access different types of courses and assessment materials according to their own circumstances and preferences. This situation has important implications for development and professional development, as well as technical and vocational education and training.

4. Facilitating mobile learning. As 5G technology extends to more and more aspects of everyday life, mobile learning will become easier, and the response time and speed of various communication devices, especially mobile devices, will also improve. 5G technology will provide greater flexibility for busy students and professionals who need to learn outside the classroom.

5. Creating an equitable learning environment. 5G will accelerate the drive to democratise access to quality education in an inclusive and affordable way by creating equitable learning environments for those with limited resources. Verizon's innovative 5G-enabled classroom, for example, creates an immersive learning experience that makes learning fun and has the potential to change the way everyone learns.

The last two decades have seen profound technological change all around us, underpinned by breakthroughs in both software and hardware. Information, communication, and artificial intelligence are being combined, and a wide range of concepts are being enriched, which is called digital transformation [12].

At the same time, it is relevant to discuss how to put into operation new intelligent systems of the fifth industrial revolution. The dominant characteristic of the fifth industrial revolution, Industry 5.0, is that going beyond the production of goods and services for profit requires everyone to think and act differently. As a result of convergence, the boundaries between different disciplines are blurred, requiring a thorough discussion of what engineering education should be. Recent paradigm shifts that essentially emphasise skills over degrees are needed to cope with the challenges posed by the trends of the fifth industrial revolution. To address these challenges, four strategies for implementing ICT in education in the context of INDUSTRY 5.0 development are presented: 1) lifelong learning - interdisciplinary education; 2) modules of sustainability and human-centred design learning; 3) practical courses on data velocity; 4) human interaction experience with an agent, machine, robot, computer. Over the past two decades, we have seen profound technological changes around us, supported by new breakthroughs in both software and hardware. Information, communication, and artificial intelligence (AI) are converging, and a wide range of digital concepts are cross-fertilising. These changes are causing what is commonly referred to as digital transformation, whose main characteristics are convergence and erosion. We are witnessing the phenomenon of convergence, where convergence lays the foundation for the emergence of advanced and new technologies. While the term Industry 4.0 is defined as the combination of the Internet and new technologies and leads to a new fundamental paradigm shift in industrial production, Industry 5.0 is based on the transition to a sustainable, human-centred and resilient industry. This new paradigm shift is taking place at the interface of traditional disciplines [13].

The rapid development of ICT in education in the context of INDUSTRY 5.0 has contributed to changes in education, enabling polymorphic and intelligent teaching and learning support and services. Therefore, it is necessary to analyse the history of the development of global educational technologies, to understand current issues and developments in the policy, practice and concepts of educational technologies around the world. Educational technology requires not only an in-depth study of teaching practice, but also improvements in overall design and policy guidance. In order to advance the digitalisation process, it is necessary to build an educational digital framework based on AI+ICBM (IoT, Cloud Computing, BigData, Mobile), create a system of public digital education services to facilitate resource sharing and openness of information on issues such as the future educational environment, schooling reform and equality in education. The Future of Teaching and Learning of ICT in Education in the context of INDUSTRY 5.0 is described in four dimensions, including the main teaching and learning scenarios and countermeasures. These include the use of key technologies in teaching and learning: 1) artificial intelligence for learning analytics; 2) artificial

intelligence for learning tools; 3) spaces for blended learning; 4) blended/distance learning models; 5) microdata [14].

CONCLUSIONS

In order to solve the practical problems of implementing ICT literacy in education in the context of INDUSTRY 5.0 development, it is necessary:

1. To standardise and update digital competences and literacies and skills for both teachers and students. On the one hand, while ICT can provide quick access to a large amount of information, it cannot guarantee the accuracy of the content and requires users to verify the information received, which places increased demands on the ability to verify information. On the other hand, in a learning environment with human-computer collaboration, teachers and students need to improve information literacy, such as the ability to apply information technology and data thinking, and to form a harmonious, effective and sustainable relationship of human-computer collaboration with intelligent technologies. A system should be established to support digital literacy and improve the skills of teachers and students, such as improving the mechanism for teaching digital literacy and teacher skills, improving the relevant curriculum and practice system, and creating an intelligent digital literacy and skills monitoring platform.
2. To establish a campus access system for intelligent technology products. On the one hand, with the rapid development of artificial intelligence technology, relevant research institutions should strengthen the classification of intelligent technology products. On the other hand, to improve the campus access system for intelligent technology products. A regulatory system for review, supervision, and accountability should be established, including laws and regulations, policy measures, system rules, and management methods. The government and the education sector should promote the use of ICT in educational assessment, educational support and training to facilitate the development of education.
3. To strengthen the educational social experiment of artificial intelligence and Big Data. Unlike laboratory experiments, social experiments have less control over processes such as learning, and it is not certain that the results obtained are caused by the intervention. Therefore, it is important to study the real impact of AI technologies on real educational processes through social experiments, which can help to verify how effective a particular technology is in education. On the other hand, it is important to conduct in-depth research on the methodology and experimental norms of social experiments with artificial intelligence, and gradually improve the system of social innovations with artificial intelligence in education.
4. To standardise educational use cases for intelligent technologies To maximise the educational benefits of intelligent technologies such as ChatGPT, it is necessary to systematically analyse the mechanism of links between the real needs of educational use cases and technology supply. Standardisation of educational scenarios for the use of intelligent technologies is a necessary measure to achieve efficient technology supply.
5. To strengthen the research on the relationship between students' cognitive characteristics and intelligent technology scenarios, to conduct a chain analysis of time, place, person, resource, function, subject and other elements related to the use of

intelligent technologies such as ChatGPT. Investigate what knowledge from different subject areas can be expressed by intelligent technologies, use generative artificial intelligence technology to help teaching find the best combination of artificial intelligence and knowledge of different subject content.

6. When studying the problems of ICT in education, it is necessary to identify problems and conditions for their solution: 1) learn quickly on failure, establish feedback loops so that they can learn quickly from failure. 2) move from the bottom up, from the outside in. This requires finding a few good applications and solutions, starting with pilot projects in rural and remote areas and gradually promoting and reaching all students. 3) The best technologies are those that are already available, accessible and affordable. 2) do not use technology for technology's sake. If the direction is wrong, simply adding a new technology will not only be more expensive, but will not have the desired effect.

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METHODICAL APPROACHES TO THE STUDY OF STUDENTS' MUSICAL ABILITIES IN THE PROCESS OF PEDAGOGICAL COMMUNICATION

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ABSTRACT

The purpose of the research is the improvement of the socio-perceptive skills of the teachers for the correlation of the study and understanding of students' musical abilities. For the achievement of the set of goal, the general scientific methodological approaches (systemic, competent) and the research methods as abstract-logical, analysis and synthesis have been used to study, to generalize and to systematize the obtained information with the purpose of the comparison of the different views of the scientists on the problems of the pedagogical communication and the teaching of students' musical abilities. The detection of the peculiarities of the study and the levels of understanding by the teachers of the uniqueness of the students' musical abilities has been included to the tasks of the research. On the basis of the conducted research, we have found out that the increase of the level of the pedagogical communication (social-perceptive skills) of the teachers can be successfully implemented in musical-pedagogical activity. The program of the observation of the pedagogical influences and the teaching methodology of the evaluation of the effectiveness of the activity of teacher during the individual classes have been developed, and also the ways of the improvement of the socio-perceptive skills of the teachers for the correlation of the study and understanding of students' musical abilities have been outlined.

Keywords: pedagogical communication, musical abilities, individual originality, pupil's personality, pedagogical influences, musical development, musical-pedagogical activity.

INTRODUCTION

One of actual problems of pedagogy of institution of secondary education is problem of activity of teacher. The formation of personality of modern teacher of music requires special musical education and professional-pedagogical preparation in their close unity. One of conditions of successful solution of such complex tasks is a deep knowledge and understanding of pupil's personality by teacher. This condition is especially important as for music lessons in process of individual lessons, which greatly contribute to both general and spiritual, artistic development of pupils.

The actuality of problem of understanding of pupil's personality by teacher is growing due to the fact that teaching of music carries out in condition of pedagogical communication, which is associated with formation of very subtle and complex relationships between teacher and pupils and it requires high compatibility,

commonality and mutual understanding, success of development of musical, artistic-creative abilities of pupils depends on them.

The solution of this problem requires, among other things, preparation of new generation of teachers of music, pedagogues-musicians of the XXI century, who are able to involve young people to deep knowledge and artistic communication with musical art. The modern school needs at the same time highly qualified specialist, and teacher-educator, and spiritual mentor of younger generation.

One of the most important qualities of pedagogue-musician is his ability to organize interaction with children, so to communicate with them, to study their abilities, to manage their activities. The process of communication between teacher and pupil is an essential component of content of professional-pedagogical activities. The readiness of teacher to communication with pupils is ability to build and to solve training and educational situations of communication, ability to use effectively their arsenal for cognition of personality of pupil.

RESEARCH METHODOLOGY

The general scientific methodological approaches (system, competence) and research methods such as abstract-logical, analysis and synthesis for study, generalization and systematization of obtained information with purpose of comparison of different views of scientists of problems of pedagogical communication and study of musical abilities of pupils have been used in article for the achievement of this purpose.

The problem of preparation of teacher to communication with pupils is reflected in research of pedagogues-scientists such as I.A. Ziaziun [3], V.O. Kan-Kalik [4], O.Ya. Rostovskyi [9], O.P. Rudnytska [11], V.A. Slastonin, I.F. Isaev, E.N. Shiyanov [13] and others.

Mostly, understanding of this problem has been promoted with works of psychologists: P.G. Ananiev [1], O.M. Lieontiev [7], and others. In works of these scientists, essence of pedagogical communication, its structure, functions, conditions, stages of formation of communicative skills, methods of teaching of certain techniques of pedagogical communication have been revealed; appropriateness of psychic phenomena has been established on the basis of which communicative skills can be formed, can be chosen certain style of communication according to personal quality of teacher. In musical-pedagogical science, especial aspects of teacher's understanding of pupil's personality have been touched indirectly in researches devoted to performing and pedagogical activities of outstanding musicians (B.L. Kremenshtein [6], J. Milshtein [8], etc., musical individuality of pupils (S.I. Savshynskyi [12], M.E. Feigin [15])).

PRESENTATION OF THE MATERIAL

The attempt to reveal relationship between teacher and pupil has been made by M.E. Feigin. He has considered three pronounced types of these relationships, and he has given them appropriate characteristics: authoritarian, liberal and purposeful individual education. Authoritarian pedagogy is aimed at recognition of undoubted authority of teacher. The teacher's instructions are followed by pupils steadily, without explanations and evidence. The threat of such pedagogy lies in passive mastery of musical tasks by

pupils, in stereotypical approach of teacher to all pupils with different musical abilities [15].

The motto of liberal ("free") pedagogy is "self-expression" of pupil. The teacher has no right to interfere, to direct, to overcome musical inclinations of pupils. This type of pedagogy is not typical for our school, although its individual manifestations sometimes occur in different variants.

The last type of relationship between teacher and pupil is illuminated in detail; it is purposeful individual education. It is characterized with convincing, conscious activity of teacher, his active leadership in formation of pupil and it is aimed at education of independence, initiative, it promotes detection, development of the best aspects of the pupil's personality, his inclinations and abilities. Such purposeful individual education is possible in condition when correct concept of pupil's personality has been formed by teacher.

In the ratio of general and special abilities, according to B.G. Asafev, general abilities play a leading role. And in order to master musical profession, only technical perfection is not enough, synthesis of technique and wide spiritual culture are necessary. The teachers usually try to influence pupils, they develop consciously or intuitively their musical abilities, inculcate them necessary skills of work, but pupils' thinking remains outside sphere of pedagogical influence [2].

According to B.L. Kremenshtein, development of special abilities of pupil is determined with ability to listen to himself, and formation of intellect is determined with analysis and generalization, which lead to cognition of appropriateness of music. The correlation of these two sides (emotional and analytical such as special and general abilities) is in each case individually. The dominance in pupil of one of sides imposes an appropriate imprint on his musical impressions, perception and reproduction of music. The figurative-emotional perception of music has been dominated in initial stages of teaching. The musician's intellect also develops further. Along with emotional beginning, role of conscious element in relation to music increases. The success of each teacher depends on his understanding of relationship between figurative and intellectual orientation of pupil [6].

The teachers-practitioners have solved empirically problem of individual approach. In theory of music pedagogy, this question has also been studied on empirical level. Among works of musical education and teaching in terms of study of this problem, research arouses interest, in which methods of teaching in process of training of play musical instruments have been revealed. There are several points of view in relation to classification of methods, for us work of S.I. Savshinskyi [12] is especially important, in which an attempt is made to generalize and to distinguish main teaching methods: the method of imitation, the method of emotional-volitional and method of intellectual influence.

The method of imitation is used by teachers mainly to pupils-beginners or when verbal explanations cannot be used. Using this method, teacher should know that pupils take only outside of what they see, without going into its essence. S.I. Savshinskyi calls method of emotional-volitional influence as "conductor method", meaning gestures, tact, melodies, and also musical illustrations (show), comparisons, associations. Conducting, gesticulation, facial expressions of teacher help pupil to find expressive tempo, rhythm and other characteristics of musical image of work. The use of this

method, pedagogue tries to influence pupil's emotionality, his imagination. The author warns against excessive enthusiasm of this method, as it can cause development of passivity of pupil. This method is suitable only in cases where pupil has a sufficiently developed performing apparatus and intellect. The third method is intellectual. It encourages pupil to thinking and it develops actively his independence. S.I. Savshynskyi notes that enthusiasm with excessive rationalization in work can also be negative. Each of described methods has a right to exist, but "they must interact and be used in work depending on type of pupil, stage of his development and tasks of teaching at the moment" [12].

According to B.L. Kremenshtein, method of analysis of musical work is important for development of pupil thinking. By musical analysis, she means logic of interaction of elements of expression in middle of whole, dependence of performing plan from content and structure of work [6].

S.I. Savshynskyi notes that he often encounters subjectivism among young teachers in estimation of pupil's performance of musical work. Everything that does not correspond to taste and artistic convictions of teacher is regarded by him as shortcoming. S.I. Savshynskyi distinguishes three types of pedagogical practice: 1) descriptive; 2) consideration and conclusion based on their own taste and regulations; 3) consideration and conclusion based on the analysis of phenomenon, establishment of its causes and consequences. The latter type of criticism, to his mind, is the most meaningful. However, it is almost not used in pedagogical practice [12].

Thus, in theory and in practice of musical education, questions of study and understanding of pupil's personality by teacher are violated in connection with research devoted performing and music-pedagogical activities. The pedagogues-musicians, who set task of study of individual-psychological qualities of pupils, emphasize that only under this condition it is possible to control their musical development.

DISCUSSION AND RESULTS

The researches of S.V. Kondratieva [5], S.I. Torichna [14] have been showed that level of understanding of pupils by teachers is closely related to level of pedagogical mastery. It is higher level of understanding of pupils, the higher level of pedagogical mastery of teacher. The teacher's understanding of pupil's personality is a central link that provides effectiveness of pedagogical activities. The effective use of knowledge of subject, pedagogics and methods is possible only during condition of deep understanding of pupils'.

The levels of teachers 'understanding of pupils' musical abilities have been determined by us by means of analysis and generalization of consequences of observation in process of educational activities on the basis of free characteristics of pupils and ratings. As a result, two levels of teachers' understanding of pupils have been singled out: high and low.

The observations have been conducted during the period of research. The task is to fix pedagogical influences in individual lessons of play instrument and to determine how pedagogical influences are motivated with understanding of pupils' musical abilities by teachers, to clarify and to control data obtained as a result from other methods. The subject of observation is pedagogical influences in process of didactic activity, namely:

influences with expressive means of the word, solace of pupil, nonverbal forms of communication, combined effects.

In the process of observation of lessons, it has been found out how teachers of different levels of pedagogical skills understand individual uniqueness of pupils' musical abilities and therefore choose certain methods of teaching. The analysis of materials of the research allowed distinguishing two levels of understanding of pupils' musical abilities that influence style of teachers' activity.

The first level is characterized with completeness and deep of understanding of pupils' musical abilities, unity in reflection of general and special musical abilities, unity of quantitative characteristics of musical abilities and analysis of their qualitative originality, focusing attention on positive aspects of personality, while seeing negative penetrations into motivational sphere of musical activity.

The teachers of the second level of understanding characterize mainly special abilities of pupils. The quantitative characterization of musical abilities prevails over analysis of their qualitative originality, teachers do not always understand psychological content of these qualities. In case of discrepancy of pupil's personality to teacher's "standard" of estimation of musical endowments is manifested with tendency to selection of negative features.

It is known that people's understanding of each other has been developed in course of communicative activities. The mastery of social-perceptual skills is a necessary condition of increase of level of pedagogical skills. The socio-perceptual skills mean use of scientific, artistic knowledge about people, which are formed in practice of communication, in process of interpretation of appearance, behavior and activities of person in connection with set purpose.

We have suggested ways of improvement of social-perceptual skills, which, in our opinion, will increase of level of their understanding of pupils' musical abilities. The offering work with improvement of level of teachers' understanding of pupils' musical abilities, we have relied on principles which have been developed by leading teachers-practitioners:

1. Combination of study of personality and his musical abilities with his education and teaching.

This principle has in common with well-known position of S.L. Rubinshtein: "To study children, educating and teaching them, in order to educate and teach, studying them; it is way of only full value pedagogical work and the most fruitful way of cognition of children's psychology" [10].

In practice of music teaching, education and teaching of pupils are often detached from study of his personality. Sometimes teachers only teach pupils of play musical instruments. The tasks are solved in lesson which are aimed primarily at development of special skills and abilities, mastery of knowledge which concern to realization of performing plan of musical work. Not all teachers can reveal real reasons of successes and failures of their pupils, can outline ways of their further special and general development, taking into account uniqueness of personality of each of them. The realization of this principle will help teachers to understand better pupil's personality, and therefore to form purposefully necessary qualities in him.

2. The ability of teachers to apply theoretical knowledge of pedagogy and psychology in process of practical study of personality.

There are cases when teachers know theory, but cannot apply it in practice of study of pupil's personality, or, conversely, more experienced teachers achieve high results in educational work based on practical study of pupils, but they do not have sufficient psychological-pedagogical preparation. "An experienced teacher, as B.G. Ananiev has written, achieves high efficiency of teaching and education thanks to deep knowledge of their pupils, peculiarities of their mastery, social behavior, personality's features and motives of activity. His knowledge, more than the diagnostic knowledge of doctor, is empirical as result of insufficient anthropological-psychological preparation of teachers " [1]. This principle emphasizes necessary of unity of theory and practice for deeper study of pupils' personality by teacher.

3. The combination of study and understanding of pupils' musical abilities and choice of adequate ways of influence.

The choice of ways of pedagogical influence foresee penetration into originality of pupil's personality. But this penetration is based on empirical experience of teachers without scientific psychological-pedagogical knowledge about pupils. On the basis of such study, pedagogical influences are chosen also. The specified principle aims to prevent spontaneity of choice of influences in teaching of understanding, to achieve providing of purposeful education, which "goes" along the "meridians" of individuals. "

4. The combination of study of pupils' personality with self-knowledge and self-perfection of teacher.

The teachers' consideration of results of pedagogical influence allows amending in their own behavior in relation to personality who is subject of pedagogical study and influence. In case when pedagogical influence does not give expected result, teacher turns again to analysis of pupil's personality and to check of degree of adequacy of their influences. The comparison of results with set purpose, with requirements and expectations of pupils gives opportunity to engage in self-education and to improve their own activities.

5. The providing of motivation of psychological study of other people, disclosure of significance of this study as condition of effectiveness of activities, conditions of conduction of principle of humanism in relations with pupils.

CONCLUSION

So, we have studied out that increase of level of pedagogical communication (social-perceptual skills) of teachers can be realized successfully in musical-pedagogical activities, in particular in process of teaching of play musical instruments and singing. It has been turned out that with increase of teachers' understanding of pupils' musical abilities, level of performing regulation of pedagogical activity increases also significantly. The using of knowledge of psychology and pedagogy during study of personality, his motives of activity, vision of personality in general, in particular structure of musical abilities taking into account its general development, selection of individual originality of musical endowments, prognostication of musical-performing activity of pupils, overcoming of negative stereotypes during characteristic of pupil's

personality are socio-perceptual skills, improvement of which is one of conditions of increase of level of communicative activity of teacher. The improvement of these socio-perceptual skills affects pedagogical activities of teachers, providing his individualization.

The experience of research on musical-pedagogical material reveals possibilities of improvement of teachers' understanding of pupils' personalities. The outlined ways of increase of teachers' level of social-perceptual skills, namely actualization of knowledge in sphere of scientific psychology and pedagogy, conducting of discussions about task of studying pupils' personality and definition of ways of their further musical development, organization of discussions about individual pupils, analysis of results of prognostication of activity and pedagogical mistakes after visiting of lessons, giving help in compiling of psychological-pedagogical characteristics, etc.

The problem of people's understanding of each other requires further deep research. It is important to install role of socio-perceptual skills in formation of personality of teacher-musician; relationship of teacher's understanding of pupil's personality and his own personality; influence of effective characteristics of communication of teacher on his understanding of pupil's personality; mutual understanding of teacher and pupil in individual lessons; pedagogical communication in process of teaching of musical subjects as one of ways of formation of initiative and creative activity of pupils.

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NATIONAL ABILITY TESTS IN ROMANIA

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ABSTRACT

This study investigates the evolution of national standardized tests in Romania, contextualizing these developments within international educational practices. Employing an exploratory, descriptive research methodology, the research is based on desk research and document analysis of relevant laws, regulations, and methodological guides. The primary objective is to provide a comprehensive overview of the regulatory changes and their impacts on assessment processes over the past decade and a half.

The findings reveal that the Romanian education system has undergone significant transformations, particularly in the legal framework and implementation of standardized assessments. Initially mandated by the Education Act of 2011 and reinforced by subsequent legislation, these assessments have progressively incorporated skills measurement and critical thinking, shifting away from rote memorization. The centralized control by the Ministry of Education ensures uniform testing procedures nationwide, despite occasional data security breaches.

Recent advancements include the introduction of digital assessment systems, aiming to provide faster feedback and more efficient data analysis. However, challenges such as technical issues and the need for adequate teacher training persist. The study highlights both the benefits and drawbacks of these standardized assessments, noting their role in providing objective data on student performance while also recognizing the stress they can induce in students. This comprehensive analysis positions Romania's national assessments within the broader context of international practices, illustrating both the progress made and the ongoing challenges in achieving educational quality and fairness.

Keywords: National evaluation, evaluation, exam material, Romanian education

INTRODUCTION

Various assessment methods are used worldwide to measure and improve the effectiveness of educational systems. In Romania, national assessments play a key role in ensuring and developing the quality of education, particularly at the primary education level. This study examines the legal framework for assessments, the roles of schools, teachers, and parents, as well as the formal requirements and types of tasks for tests in grades 2, 4, 6, and 8. The methodology for national assessments in grades 2, 4, and 6 is the same, while the 8th-grade exam contains special elements since it also serves as an entry point to high school.

MATERIALS AND METHODS

The present study employs an exploratory, descriptive research methodology, specifically utilizing desk research and document analysis of relevant laws and regulations. The primary objective was to provide a comprehensive overview of the evolution of national standardized tests in Romania, contextualizing these developments within the broader framework of international educational practices. By meticulously analysing legislative texts, ministerial orders, and methodological guides, the study aims to trace the regulatory changes and their impacts on the assessment processes over the past decade and a half. This methodological approach enables a detailed examination of how Romania's national assessments have evolved in response to both domestic educational policies and global pedagogical trends.

DISCUSSION

Assessment is an integral part of the educational process, especially in primary schools, where fundamental skills and knowledge are established. Assessment systems should not only focus on measuring students' performance but also encourage the learning process and support teachers' pedagogical work. Standardized measurement and assessment play an increasingly important role in education, particularly in primary education [1]. These tools provide objective and comparable data on student performance, enabling schools and teachers to identify areas needing improvement and track students' progress. Various countries use different methods for primary school assessment. Below are some notable examples [2].

Finland's education system is famous for its learner-centred approach and high-quality pedagogical practices. Assessment is primarily formative, focusing on supporting students' development. Finnish teachers enjoy significant freedom in choosing assessment methods, and results are not used for ranking (oph.fi).

In Germany, students take tests in math and German at the end of the second year of Grundschule (primary school) and move to the second level of primary school or remain at the first level for another year based on the results. Following this, continuous informal assessments help place students into school types according to their abilities from the fourth grade onwards. These include Gymnasium (academic), Realschule (academic and vocational training combined), and Hauptschule (preparation for vocational training) [3].

In France, students take standardized tests at various stages of primary school, particularly to measure mathematical and linguistic skills locally. The main purpose of these assessments is to track students' progress and the effectiveness of educational programs. National standardized assessments occur only after age 14 [3].

In Spain, students take standardized tests at the end of the third and sixth years in math, language, and science and technology. These tests help assess students' basic skills and knowledge at different stages of education [3].

In England, students take standardized tests at various stages, such as the end of Key Stage 1 (around age 7) and Key Stage 2 (around age 11), including math, English, and science. These tests play a crucial role in evaluating education quality and tracking student performance [4].

In the United States, assessment systems vary by state but commonly feature summative assessment methods, such as standardized tests. These tests aim to measure schools' and teachers' performance and ensure educational standards (see National Centre for Education Statistics, nces.ed.gov). Evaluating education quality is also a critical issue internationally, leading to the development of international assessments over the past decades. The most notable are the studies organized by the International Association for the Evaluation of Educational Achievement (IEA) for over three decades and the OECD-coordinated PISA surveys, well-known to the public.

Standardized measurement systems used in primary schools differ significantly across countries, considering each country's educational traditions and goals. These systems aim to uniformly measure student performance, assist in developing educational programs, and ensure education quality in the respective country.

In Europe, primary schools mainly use textual assessments and local formative and summative assessment processes. In contrast, in Romania, students write four national assessments during the nine years of general school, in grades 2, 4, 6, and 8. These standardized assessments have been organized by the National Centre for Assessment and Examination (Centrul Național de Evaluare și Examinare) under the direct subordination of the Ministry of Education since the 2013/2014 school year. According to the new measurements prescribed by the Education Law, the general goal of national competency assessments is to provide information to students, teachers, parents, educational counsellors, directors, and supervisors that can help optimize the teaching-learning process [5].

Legal Framework

The legal framework for national assessments in Romania is defined by education laws and regulations. The main goal of national assessments in primary education is to evaluate education quality and monitor student performance. National assessments are overseen and organized by the National Ministry of Education (Ministerul Educației). Key legislation includes the 198/2023 Education Law, which regulates the assessment system in detail, and the Internal Regulations of Schools (4183/04.07.2022). National assessments in grades 2, 4, and 6 are regulated by methodology 3051/12.01.2016, and the assessments are organized annually according to a fixed schedule (for the 2023-2024 school year, the dates were published in the Official Gazette 138/19.II.2024).

The national assessment for 8th grade is regulated annually by a new Ministerial Order (for the 2023-2024 school year, Order 6155/31.08.2023) due to significant differences in the organization, content, grading, etc., each year. The most significant change for this school year is the digital evaluation of papers.

The Role of the School

Educational institutions play a key role in conducting national assessments. Their tasks include forming special committees for each involved grade, appointing and preparing supervising and evaluating teachers (except for the eighth grade, where a national evaluation committee is formed), preparing the national tests, downloading them from a specified location at a given time, informing students about the assessment process, uploading results to a national database, and analysing and using the results to improve the teaching process [6]. Schools collaborate with local and national educational authorities to ensure the smooth conduct of the process.

The Role of Teachers

Teachers' role is crucial in the assessment process. They prepare students for the tests, provide a suitable learning environment, and support students' development [7]. Teachers help identify learning gaps by analysing assessment results and providing feedback, organizing group and individual information sessions for students' parents, supervising exams, grading papers, and preparing individual assessment sheets for each student in each subject, including textual evaluations and correction guidelines [8]. This is done both on paper and digitally on a designated platform.

The Role of Parents

Parents' role in the assessment process is to provide support and cooperation. Parents need to be informed about the goals and processes of assessments and support their children during preparation. After receiving the assessment results, parents confirm with their signatures that they have been informed of their child's results and can cooperate with teachers to further their child's development. At the end of the 8th grade, assessment results are published nationally according to students' individual codes.

The Role of the National Centre for Assessment and Examination

The National Centre for Assessment and Examination (Centrul Național de Evaluare și Examinare - CNEE) is a key institution in the Romanian education system that performs many essential tasks to ensure education quality. The CNEE's duties include ensuring compliance with legal frameworks, recording and analysing data related to student assessment, and supporting educational reforms through the continuous development of assessment systems. The institution collaborates with the Ministry of Education and other educational institutions to improve the efficiency and effectiveness of the Romanian education system. The CNEE's main tasks include organizing national assessments and exams (responsible for national assessments from the 2nd grade national assessment to the 12th grade baccalaureate exams, and preparing several national exam simulations annually), providing, translating, and ensuring the reliability of tests and exam tasks, approving sample tasks, and sharing them on the official assessment website (<http://subiecte.edu.ro/2024/evaluarenationala2/>). CNEE staff develop, structure, and ensure that exam questions and tests meet educational standards and requirements, considering suggestions from teachers and the national student council. The institution also conducts analytical and research work, collecting and interpreting data, and formulating short- and long-term goals and suggestions for improving education quality based on assessment results. It organizes training for teachers to improve their assessment methods and techniques and ensures that teachers are up-to-date with the latest educational and assessment trends and technologies. Finally, it initiates international relationships and collaborations with similar institutions in other countries and international organizations to develop assessment and examination systems. The institution participates in several international research projects. In the past five years, numerous technological developments have been made, culminating in the introduction of digital assessment tools and platforms for the first time in 2024. The CNEE also deals with developing curricula, determining lesson frameworks, and approving textbooks and workbooks.

Formal Requirements and Types of Tasks for Tests

The purpose of national assessments in Romania is to provide a comprehensive picture of students' knowledge and skills in grades 2, 4, 6, and 8. Below, the assessments are detailed by subject: Romanian language, mathematics, and the minority language.

National assessments cover different subjects and grades and have different formal requirements and task types.

All students in the 2nd grade take a national test in the Romanian language and mathematics and natural sciences, as well as children in the minority classes in the language of the minority. The testing is conducted on 4 different, consecutive days, based on a preliminary calendar: the first day is the competence to understand the text read in the mother tongue, the second day is the text creation (composition) exam, the third day is mathematics and science, while the fourth day (for students studying in minority education) is Romanian language competence of understanding/creating a read/written text is measured.

The native language tasks include tasks for measuring reading comprehension: simple tales or stories, after which the students have to answer basic questions about the text, as well as basic grammar rules, such as spelling, creating simple sentences, hyphenation, separation, forming opinions.

In the text creation exam, the ability to create a written text is evaluated according to the following aspects: 1. correct creation of content/sentences; 2. spelling words; 3. appropriate use of punctuation marks; 4. complexity/originality/title.

We encounter tasks related to basic operations from mathematics and science: addition, subtraction, multiplication, and division in simple text tasks, as well as recognizing shapes, continuing simple patterns, and the children have to solve tasks related to time. They have to write a textual, opinion-forming answer to an assignment. Children have 30 minutes for each test.

In the 4th grade, there are 3 tests, on consecutive days (not in the same week as for the 2nd graders): Test 1: the competence of understanding/creating a text read in Romanian. Test 2: native language comprehension competence. Test 3: mathematical competence.

When measuring reading comprehension in the mother tongue, stories or informative texts are more complicated. In addition to reading comprehension questions, students have to give short written answers, and they also have to deal with tasks aimed at applying more detailed spelling and grammar rules.

In the 6th grade, the national assessment consists of two exams: language and communication and mathematics and science. In the first test, students are given text comprehension tasks in their mother tongue, English and Romanian, which require a detailed analysis.

In the second exam students have to solve tasks from the subjects of mathematics and sciences: algebra, geometry, biology and physics. Both exams last 1 hour.

In the 8th grade, the national test is taken in Romanian language and literature, mathematics, and for the national minority students in their mother tongue and literature, on three different days, which includes the entire 1-8th grade curriculum and is a condition for admission to the 9th grade.

In the last 15 years, significant changes have taken place in Romania in the organization, conduct, evaluation, legislation, preparation and implementation of

national standardized tests in the 2nd, 4th, 6th and 8th grades [9]. These are described in the followings.

Legislation and Regulation

The introduction of competence measurements was mandated by the Education Act dated January 5, 2011, and similarly appears in the new Education Act of 198/2023. The Ministry of Education and state authorities periodically update the regulatory frameworks to reflect educational reforms and national policies. In the 2011/2012 and 2012/2013 academic years, the measurement tools and the guidebook for measurement coordinators were tested on a national representative sample, and feedback questionnaires were evaluated. Following this, the first measurements were carried out. Experimental measurements were conducted in the 4th grade in 1995, 1998, 2000, 2005, 2007, and 2009, but they were not regular, and the test structures did not yet align with the structure of international competence measurement tests [5]. The Education Act (2011) determines the measurement of basic competences. The 2014 Methodology issued by Ministerial Order (No. 3334/2014.04.24) overrides the provisions of the Education Act for national minorities and changes the exams at the subject level as described above.

This was not changed by the 2016 Methodology (2016.01.12./ Ministerial Order), which was intended for the following academic years. The ministerial orders detailing the methodology thus override the law and contain provisions that are contrary to the law itself: they prescribe competence measurement in the state language as early as the 2nd grade (measuring the competence of understanding/creating texts read/written in Romanian while students are just learning to read and write in the state language in this grade) and, according to the chronology, place the state language first, suggesting the secondary nature of the mother tongue. The overriding of the law by ministerial order perfectly reflects the Romanian state's assimilation ideology and attitude towards the Hungarian minority, as Péntek János puts it: "The law, which fundamentally determines the legal environment, thus seeks to comply with European norms but cannot free itself from the nation-state ideology. The majority perspective prevailing in state education also considers the state language as the starting point for the minority and regards equal opportunities not as a natural right but as a privilege with certain conditions and obligations" [10].

One reason for introducing the novel national measurements was the perception that teachers' evaluations were unreliable. From 2017, the organization and conduct of exams also faced trust issues, so from 2018, only institutions equipped with cameras in classrooms could organize national measurements. From this year, the new measurements developed at the centralized central level aim to assist teachers in assessing based on uniform standards and simultaneously provide more reliable measurement mechanisms for individual learning, thus following the model of international PISA-type measurements [9]. Although, according to the Education Act, the goal of the measurement at the end of the 4th grade is to diagnose elementary education (ISCED 1), the results are only useful as a basis for comparison at the task level. It is not clear how the student compares to the school, county, or national average, and the results of schools cannot be compared.

In the 2018-2019 academic year, the conditions for the examination of children with special needs appeared in legislation for the first time, applying the 3124/2017 methodology, and in the 2019-2020 academic year, the evaluation was carried out based

on a special methodological guide for 8th graders. It was not possible to organize exams for the 2nd, 4th, and 6th grades (edu.ro).

From the 2021-2022 academic year, the ministerial orders 5455/2020 and 3744/2021 were applied to conduct the exams. There were no substantial changes in the measurement tools for any grade, despite students spending several months in a disorganized home learning system called “online education”. In this academic year, the possibility of transitioning to digital evaluation is being tested in one county (Dâmbovița), which will be fully introduced in the 2023-2024 academic year for 8th graders, while elementary students will still evaluate on paper, but the results will be uploaded to an official platform, and from this academic year, the papers will also be scanned and attached to the evaluations. Although the introduction of online assessment allows for faster data processing and evaluation, it did not meet this expectation this year, as 10 days passed between the last exam and the announcement of the results for 8th graders, while elementary and 6th-grade teachers had one week to complete evaluation and announce the results.

Over the past 15 years, standardized tests have shifted focus towards skill measurement and critical thinking, not just memorization. Although the school curriculum has not changed, the test content is continuously updated to meet national education standards and modern pedagogical principles. The new tests integrate problem-solving skills and practical applications better at both lower and upper levels [11]. In recent years, sample tests and practice materials to aid student preparation have become more widely available in schools and online platforms.

The centralization of testing allows for standardized procedures nationwide. The Ministry of Education uses centralized control to ensure uniform testing rules; however, exam items often leak on social media. Despite increased attention to secure testing, including stricter data protection and anti-fraud measures, violations occur annually. The transparency of assessment processes and results has increased. The publication of results and more detailed feedback enable students to better prepare. The evaluation systems combine test-based and performance-based assessment to provide a comprehensive picture of students’ knowledge and skills [12].

CONCLUSION

Over the past one and a half decades, significant changes have occurred in Romania regarding national standardized tests in terms of regulation, testing methods, implementation procedures, and evaluation. These changes have affected not only the administration and conduct of exams but also the content of tests and the role of schools. Their goal is to ensure the quality and fairness of the testing process and better meet modern educational needs. The introduction of the digital assessment system offers many advantages for students, teachers, and parents, including faster feedback and easier data analysis. However, it is important to consider potential drawbacks, such as technical problems and a lack of necessary technical knowledge. For a successful transition, appropriate technical background, trained teachers, and assessment experts are essential.

Among European countries, Romania is one where national assessment affect every child in the 2nd, 4th, 6th, and 8th grades. Standardized measurement and assessment play an increasingly important role in education, particularly in primary education, where children are measured as early as the 2nd and 4th grades. These tools provide

objective and comparable data on student performance, enabling schools and teachers to identify areas needing improvement and track student progress if results are fed back to teachers. A disadvantage is that they can cause significant stress and anxiety in students, especially in lower grades, and difficulties in coping with testing situations can negatively impact performance. The focus on testing often leads to the sidelining of creative thinking and problem-solving skills. Teachers tend to “teach for the test”, leading to a rigid curriculum and reduced interest in learning. Standardized measurements do not always accurately reflect students’ true knowledge and abilities. Cultural differences, language barriers, and unfamiliarity with testing methods can affect student performance, distorting the assessment of true abilities.

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NEUROMYTHS AND COGNITIVE HEALTH: A STUDY WITH SENIOR CITIZENS

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ABSTRACT

Neuroscience has witnessed profound scientific and technological advancements over recent decades, transforming our understanding of the brain and leading to significant improvements in both diagnosing and treating neurological disorders. This field of knowledge is an exciting topic for researchers and health professionals, psychologists, educators, and even the general public. The rapid expansion and the complexities of neurosciences have also led to the emergence and spread of several neuromyths. These myths concern various misconceptions or unfounded beliefs arising from incorrect interpretations of neuroscience research and its application in educational settings or other areas. Healthy ageing and maintaining cognitive health are pivotal aspects of life quality in senior populations. As the importance of lifelong education is recognised worldwide, educational endeavours in the form of senior universities play a crucial role in supporting an active and engaged elderly community. This study investigates the prevalence of neuromyths among senior citizens enrolled at senior universities and analyses which attitudes they adopt to maintain their cognitive health. To achieve that purpose, a questionnaire was developed and administered to 64 senior citizens (n=64) enrolled in two senior universities from urban areas in the northern region of Portugal. The questionnaire covered prevalent neuromyths, such as the belief in using only 10% of the brain and other diet-related and cognitive function misconceptions. The results indicate the prevalence of some neuromyths in Portuguese senior citizens attending senior universities. Nevertheless, participants demonstrated some knowledge regarding practices that contribute to good cognitive health. These findings highlight the need for educational outreach and public engagement initiatives by neuroscientists, educators, or science communicators, which can help to demystify brain science and dispel popular neuromyths. By fostering a better understanding of how the brain actually works, we can ensure that the benefits of neuroscience advancements are more fully realised across society and empower individuals to make informed decisions about their cognitive health and well-being.

Keywords: Brain health, lifelong education, neuromyths, neuroscience, senior universities.

INTRODUCTION

Neuroscience has experienced significant scientific and technological advancements over the past few decades, transforming our understanding of the brain and leading to substantial improvements in diagnosing and treating neurological disorders. These advancements have broadened the field's scope, attracting interest from researchers, health professionals, psychologists, educators, and the general public alike [1]. Despite these advancements, neuroscience's rapid expansion and complexities have contributed to the emergence and spread of several neuromyths – misconceptions or unfounded beliefs arising from incorrect interpretations of neuroscience research and its applications [2,3]. Neuromyths are particularly prevalent in educational settings, where misinterpretations of neuroscience findings can lead to ineffective or even counterproductive teaching practices [4]. These myths, such as the belief that individuals only use 10% of their brains or that listening to classical music can boost intelligence, not only misinform the public but also hinder the application of genuine neuroscientific insights that could improve educational and health outcomes [5]. The persistence of such neuromyths can undermine the potential benefits of neuroscientific advancements, especially when these myths are integrated into educational practices and policies [2,6].

1. Mind, Brain, and Education: An emergent scientific field

Mind, Brain, and Education (MBE) is an interdisciplinary domain that integrates neuroscience, psychology, and education insights to enhance teaching and learning practices [3]. This approach aims to bridge the gap between the scientific understanding of brain function and practical applications in educational settings. By leveraging neuroscientific knowledge, educators can develop more effective strategies to support cognitive development and learning processes [2]. MBE advocates for the use of evidence-based practices in education. For example, research has shown that spaced repetition, retrieval practice, and formative assessment are effective strategies for enhancing learning and retention [7]. By understanding how the brain processes and retains information, educators can design curricula and instructional methods that align with cognitive principles, thereby improving educational outcomes [8]. One of the critical challenges in the field of MBE is addressing and correcting neuromyths among educators. Studies have shown that targeted training and professional development can reduce the prevalence of neuromyths and promote the adoption of scientifically supported teaching methods [5,9]. For instance, programs that provide teachers with accurate information about brain function and learning processes can help dispel myths and encourage effective educational strategies [3]. Research on MBE lies in the collaboration between neuroscientists, psychologists, and educators to develop and disseminate best practices based on robust scientific evidence. As the field evolves, ongoing research is needed to understand the neural mechanisms underlying learning further and translate these findings into practical applications. Additionally, efforts to combat neuromyths and promote accurate neuroscience education among teachers and the general public remain essential [3].

2. Cognitive health in seniors: The importance of lifelong education

MBE also emphasises the importance of lifelong education and cognitive health, particularly in older adults. Engaging in intellectually stimulating activities and continuous education can significantly benefit cognitive function and overall brain health [10]. Healthy ageing and maintaining cognitive health are crucial for the quality of life in

senior populations [11]. Cognitive decline is a common concern among the elderly, and strategies to maintain cognitive health are essential for promoting independence and well-being in this demographic [12]. As global recognition of the importance of lifelong education grows, educational programs like senior universities play a vital role in supporting an active and engaged elderly community. Senior universities and other lifelong learning programs are crucial in providing opportunities for older adults to remain mentally active, which can help mitigate cognitive decline and enhance the quality of life [13]. These institutions offer opportunities for seniors to continue learning, stay mentally active, and socially connected, which are essential factors in cognitive health maintenance [13,14]. Research indicates that participation in educational activities can positively impact cognitive function and delay the onset of cognitive decline [10,15]. Given the intersection of neuroscience, education, and ageing, it is essential to understand the prevalence of neuromyths among senior citizens and their attitudes towards cognitive health. This study investigates the prevalence of neuromyths among senior citizens enrolled in senior universities and analyses the attitudes they adopt to maintain their cognitive health. By addressing these gaps, we aim to highlight the need for targeted educational outreach and public engagement initiatives to demystify brain science and dispel popular neuromyths.

METHODOLOGY

The present research aimed to evaluate the prevalence of neuromyths among senior citizens enrolled in senior universities and analyse their attitudes toward maintaining cognitive health. Using a predominantly quantitative methodology, a questionnaire was developed among members of Portuguese senior citizens.

1. Sample

The convenience sample participating in the study consisted of 64 members ($n=64$) from two universities in the northern ($n=44$; 68.8%) and central ($n=20$; 31.3%) regions of Portugal. The majority were female ($n=51$; 79.7%), with only 13 male participants (20.3%). The participants ranged from 60 to 85 years, averaging 72.2 years ($S.D.=6.30$). Regarding their academic qualifications, most held a bachelor's degree or equivalent ($n=34$; 53.1%), while a significant percentage ($n=27$; 42.3%) had not pursued higher education.

2. Data collection instrument

The data collection instrument (Appendix 1) consisted of a questionnaire composed of two groups of questions – i) neuromyths and ii) cognitive health –, beyond sociodemographic questions. The first group of questions was related to the classification of the truthfulness of 37 neuromyths described in the literature by Torrijos-Muelas et al. [16] and the participants' value judgments regarding them. The second group consisted of 14 statements related to behaviours that enhance good cognitive health and the identification of the study participants' practices for maintaining it. The questionnaire was validated by three science education experts and a health professional.

3. Procedure

The questionnaire was applied in two senior universities, and its completion had an average duration of 15 minutes. Participation in the study was voluntary, and the anonymity and confidentiality of the collected data were guaranteed, as well as compliance with all ethical standards related to social science research. Approval (ref.

CE2024/p155) was also obtained from the Ethics Committee of the Faculty of Sciences of the University of Porto (FCUP), and informed consent regarding data collection was obtained.

RESULTS

The results of the closed-ended questions from the administered questionnaire are presented in the following tables (1 and 2).

Table 1. Answer frequencies for question Q1.

Statement	True		False		Do not know	
	n	%	n	%	n	%
1	56	87.5	2	3.1	6	9.4
2	31	48.4	7	10.9	26	40.6
3	57	89.1	0	0.0	7	10.9
4	61	95.3	1	1.6	2	3.1
5	58	90.6	1	1.6	5	7.8
6	38	59.4	8	12.5	18	28.1
7	34	53.1	10	15.6	20	31.3
8	26	40.6	16	25.0	22	34.4
9	14	21.9	27	42.2	23	35.9
10	22	34.4	30	46.9	12	18.8
11	16	25.0	33	51.6	15	23.4
12	7	10.9	36	56.3	21	32.8
13	27	42.2	24	37.5	13	20.3
14	31	48.4	15	23.4	18	28.1
15	17	26.6	17	26.6	30	46.9
16	47	73.4	4	6.3	13	20.3
17	24	37.5	26	40.6	14	21.9
18	50	78.1	2	3.1	12	18.8
19	23	35.9	20	31.3	21	32.8
20	25	39.1	18	28.1	21	32.8
21	31	48.4	6	9.4	27	42.2
22	38	59.4	11	17.2	15	23.4
23	36	56.3	10	15.6	18	28.1
24	16	25.0	38	59.4	10	15.6
25	23	35.9	11	17.2	30	46.9
26	27	42.2	23	35.9	14	21.9
27	10	15.6	40	62.5	14	21.9
28	47	73.4	12	18.8	5	7.8
29	13	20.3	26	40.6	25	39.1
30	43	67.2	9	14.1	12	18.8
31	16	25.0	28	43.8	20	31.3
32	22	34.4	20	31.3	22	34.4
33	15	23.4	22	34.4	27	42.2
34	56	87.5	3	4.7	5	7.8
35	54	84.4	2	3.1	8	12.5
36	45	70.3	2	3.1	17	26.6
37	7	10.9	45	70.3	12	18.8

A significant proportion of participants believe in the efficacy of coordination exercises and enriched environments for improving learning (Statements 4 and 5, with 95.3% and 90.6% agreement, respectively). These beliefs are consistent with findings in educational neuroscience, suggesting that such activities enhance cognitive abilities by promoting neuroplasticity. The study reveals prevalent neuromyths, such as the belief that individuals use only 10% of their brains and that hydration significantly affects brain size (Statements 9 and 12, with 42.2% and 56.3% of correct answers). The recognition of these neuromyths underscores the persistent challenge of misinformation in public understanding of neuroscience. Interestingly, there is also a considerable amount of uncertainty, particularly in the hereditary recognising aspects of mental capacity and the concept of critical periods for learning (Statements 37 and 8, with 18.8% and 34.4%). This uncertainty reflects a knowledge gap that can be addressed through targeted educational initiatives.

Table 2. Answer frequencies for question Q2.

Statement	It is important		It is not important	
	n	%	n	%
1	60	93.8	4	6.3
2	62	96.9	2	3.1
3	59	92.2	5	7.8
4	58	90.6	6	9.4
5	56	87.5	8	12.5
6	58	90.6	6	9.4
7	60	93.8	4	6.3
8	51	79.7	13	20.3
9	59	92.2	5	7.8
10	60	93.8	4	6.3
11	60	93.8	4	6.3
12	43	67.2	21	32.8
13	56	87.5	8	12.5
14	59	92.2	5	7.8

Table 2 results reflect the senior participants' attitudes towards various behaviours and practices for maintaining cognitive health. Notably, most respondents placed significant importance on most behaviours listed, indicating a strong belief in proactive measures for cognitive well-being. For instance, nearly all participants agreed on the importance of regular physical activity (Statement 1, 93.8%) and maintaining social interactions (Statement 2, 96.9%). This aligns with the growing body of research supporting the role of physical exercise and mental challenges in promoting brain health and delaying cognitive decline. Similarly, the significance of a balanced diet (Statement 4, 90.6%) and engaging in mentally stimulating activities (Statement 7, 93.8%) were widely recognised, corresponding with established evidence highlighting the benefits of nutrition and social engagement for mental health. However, there was less consensus on the necessity of certain other practices, such as consuming specific brain-boosting supplements (Statement 12, 67.2%), where a notable 32.8% of respondents did not consider them important. Overall, these findings underscore a broad awareness among seniors of various health-promoting behaviours, although the level of perceived importance varies.

CONCLUSION

This research illustrates a complex landscape of beliefs and knowledge about brain function and cognitive health among senior citizens. Also, it emphasises the importance of lifelong education, especially in seniors, where maintaining cognitive health is crucial for quality of life. Activities that engage the brain, such as puzzles, social interaction, and physical exercise, are recognised as vital practices, reinforcing the role of ongoing cognitive engagement in mitigating age-related cognitive decline. Overall, these findings highlight the necessity of accurate neuroscience communication and the benefits of lifelong learning programs. Such initiatives can help correct misconceptions, promote scientifically accurate knowledge, and support cognitive health across the lifespan. The study's emphasis on addressing neuromyths and promoting evidence-based practices is crucial for enhancing educational and health outcomes, particularly among older adults.

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Appendix 1. Questionnaire.

Group I. Neuromyths	Q1. Rate each of the following statements according to their truthfulness based on your knowledge by placing a cross (X) in the option you consider most correct: T – true, F – false, or DK – do not know. 1. Individuals learn better when they receive information according to their preferred learning style (e.g., auditory, visual, or kinaesthetic). 2. Differences in hemispheric dominance (“left brain” versus “right brain”) can help explain individual differences in learning. 3. Short periods of coordination exercises can improve the integration of left and right brain functions. 4. Exercises that practice coordination of motor-perceptual skills can improve learning. 5. Stimulus-rich environments enhance the cognitive ability of preschool children. 6. Children are less attentive after consuming sugary drinks and/or snacks. 7. It has been scientifically proven that dietary supplements rich in fatty acids (omega-3 and omega-6) positively affect school performance. 8. There are critical periods in childhood after which specific skills cannot be learned. 9. We use only 10% of our brains. 10. Children should develop their native language before learning a second language. If they do not, neither language will be fully learned. 11. Learning problems associated with differences in brain function development cannot be alleviated through education. 12. Students’ brains shrink if they do not drink enough water (6 to 9 glasses a day). 13. Regular consumption of caffeinated beverages reduces attention. 14. Prolonged periods of mental exercise can change the structure or function of some parts of the brain. 15. The left and right hemispheres of the brain function independently. 16. There are different types of intelligence (e.g., interpersonal and logical, with different IQs [intelligence quotients]). 17. Drinking large amounts of extra water (even when not thirsty) is vital for normal brain function. 18. Learning styles should be based on multisensory educational approaches (VAK model – visual, auditory, or kinaesthetic stimuli). 19. Consuming vitamin supplements (or other medications) enhances learning. 20. Teaching according to learning styles is more important in language learning than in other types of learning. 21. Children have learning styles dominated by particular senses. 22. A common sign of dyslexia is seeing letters in reverse. 23. Listening to classical music increases reasoning ability. 24. Children should be exposed to enriched learning environments by age 3; otherwise, their learning capacity will be lost. 25. The brains of individuals with attention deficit hyperactivity disorder (ADHD) are overstimulated. 26. IQ test results are not related to school performance. 27. Educating children similarly leads to similarities in their personalities as adults. 28. Memory works like an audio recorder or video camera and accurately records our events/experiences. 29. Individuals can develop new learnings, like new languages, while sleeping. 30. Handwriting reveals our personality. 31. IQ test results (intelligence quotient) are virtually unchangeable over time. 32. Everything necessary for brain development happens in the first three years of life. 33. Following a specific diet can help overcome certain neurological deficiencies, such as ADHD, dyslexia, and autism spectrum disorders. 34. Doing basic mental exercises (Brain Gym) aids learning. 35. Students have a predominant intelligence profile, e.g., logical-mathematical, musical, or interpersonal, which should be considered in the teaching process. 36. The production of new connections in the brain can continue into old age. 37. Mental capacity is hereditary and cannot be altered by the environment or experience. Q1.1. Indicate which statements you found most curious, or which raised the most doubts. Please justify.
Group II. Cognitive health	Q2. Maintaining good cognitive health is important for people of all ages, including older adults. From the following practices, mark with a cross (X) those you consider paramount for good cognitive health. 1. Exercising the brain (such as puzzles, board games, or crosswords). 2. Staying socially active (such as interacting with friends and family and participating in social groups). 3. Exercising regularly. 4. Maintaining a healthy diet. 5. Managing anxiety and stress levels. 6. Maintaining adequate and quality sleep. 7. Staying mentally active through courses, hobbies, etc. 8. Having regular medical check-ups. 9. Staying hydrated. 10. Avoid excessive consumption of alcohol and tobacco. 11. Staying active with cultural activities and events. 12. Taking supplements if necessary. 13. Staying optimistic and positive. 14. Being attentive to warning signs such as memory loss or difficulty concentrating. Q2.1. Indicate two of your practices that you consider relevant for maintaining your cognitive health. Please justify.

«PARENTS» OR «FRIENDS» IN THE RELATIONSHIP WITH ADOLESCENTS? PSYCHOEDUCATIONAL IMPLICATIONS AND TYPES OF INTRAFAMILY RELATIONSHIPS IN ADOLESCENT EDUCATION

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ABSTRACT

The most beautiful, but also the most complicated period in a person's life is adolescence, because at this age, a series of transformations take place, making the transition from childhood to adulthood. Most teenagers, if they do not have the right guidance in life, can get lost in the thicket of emancipatory opportunities of today's world, which give them the illusion of freedom, independence and personal autonomy in all aspects of life. A decisive role for the adolescent's integrative education has always been played by the family, which prepares him to face all the challenges of this world. In contemporary society, we are witnessing to an increasing degree a reversal of the values and principles of a healthy life, whose reality and benefits are proven both by the humanities and medical sciences, but also by the spiritual experiences of man. In the secular world, it is observed that teenagers are encouraged to view their relationship with their parents on an equal footing, in other words, the parents are seen as "friends" and the word "parent" is not used anymore. Specialists in psychopedagogy draw attention to the fact that such an approach creates a vacuum in intrafamily relationships, a confusion with major implications in the life of the teenager, who can slide down the wrong path in life and get lost, because no entourage will be able to take the place of their mother and father or provide them with parental safety, love and understanding. In this study, we used experiential methods, such as case study, making a comparative analysis of the ways of approach in the relationship between parents and adolescents.

Keywords: Parent, friend, family, adolescent, intrafamilial relationships, psychopedagogy, experiential methods.

INTRODUCTION

Raising and educating the young generation requires a major responsibility of all institutions (family, school, church, community, etc.) involved in the process of training and developing the personality of young people, and the family is the basic nucleus, in which man is fulfilled and perfected. It is in the family that the foundations of human educability are laid and the new generation, capable of adaptation, is prepared to face a society that is constantly changing and transforming.

Being a parent is, according to the orthodox Christian teaching, a gift from God, a sacred calling to human perfection, an art of polishing children's souls into the most noble and beautiful human values, therefore, a number of specialists from various fields of research, such as psychopedagogy, sociology, theology, research and analyze ways to improve intra-family relationships in the context of the changes and transformations

taking place in contemporary society, marked by the phenomenon of globalization and digitization, whose effects produce a revaluation of the great cultural, social, educational and generally human paradigms.

Moreover, the family represents the basic cell of society, the oldest institution for organizing social life, but also the first school of human educability. Therefore, it is very important that, within the family, harmonious relations, of good understanding, of valuing the potentialities, the intellectual, emotional, cultural and social capacities of children are developed, with a view to creating good social relations in the community.

When children reach the age of adolescence, in the family, we witness a series of *crises* (concerning the adolescent's identity, the parents' authority), which lead to the so-called "conflict between generations". If this conflict is managed by parents with tact, wisdom, responsibility and involvement, that can cancel out its negative effects with all its implications, whether we are talking about a deterioration of the interparental relationship (divorce) or a strained relationship between parents and teenagers, with major implications in the lives of both parties.

Wishing not to "lose" their children, some parents end up revaluing their relationship with their own children, changing the role of the parent into that of a friend. In what follows, we will present the implications of this type of relationship that some parents have with their teenage children, through a comparative analysis of the two parental roles in intra-family relationships.

Adolescence and its general characteristics

Due to the attitudinal-behavioral variabilities specific to this stage of life and due to the complexity of human development at this very important stage in human life, adolescence has been characterized by many attributes, epithets and metaphors. Thus, it is said that it is the "age of reason", but also that it is a "stormy revolution" or "second birth", as we find in Jean-Jacques Rousseau, in his pedagogical novel *Emile, or On Education*[1], and the American psychopedagogue Granville Stanley Hall called it, in his work *Adolescence*, "a storm and stress"[2], introducing, for the first time, the character of crisis specific to this period of human life, a characteristic on which most specialists agree; therefore, adolescence is also called "a juvenile crisis, a crisis of originality, a difficult age, an ungrateful age, an age of drama, the age of great ideals, the golden age, the age of social integration, etc."[3]. In Hall's view, three main categories are described that give adolescence the characteristics of a crisis: "*the conflict with one's parents*: adolescents tend to rebel against authoritatively imposed norms and rules, as they seek greater independence and autonomy. *Mood disorder*: the hormonal changes and psychological stress of adolescence can cause uncontrollable changes in emotions. *Risky behavior*: the combination between the need for stimulation and emotional immaturity leads to an increased risk of engaging in risky behavior during adolescence"[4].

Even if adolescence is the age of important changes in a person's life, it is not necessarily accompanied - as it has often been argued - by conflicts and dramatic adaptive crises. In recent years, research on adolescence has shown that these characteristics depend mainly on the appearance and quality (authenticity) of relationships with one's family, school and group of friends, on the broader, cultural and social context, in which the adolescent develops.

In adolescence, major human transformations are manifested both *biologically* and *psychologically* and *socially*.

Psychologically, we are witnessing a process of change regarding the self-image, which intersects with the adolescent's tendency to define themselves, looking for their own uniqueness and originality, and the key question, which the adolescent will ask themselves in order to define themselves, is: "Who am I?" In identifying their own *self*, the adolescent will be helped by a remarkable cognitive ability, being thirsty for knowledge, for discoveries that will fascinate them and open new horizons for them on a professional, emotional-sentimental and cultural-social level.

Socially, too, major changes occur in teenagers, because, in this period of life, they show an increasing desire to spend more time with other people of the same age as them and, consequently, spend much less time with parents and family than when they were children. As a result, peers and friends are given greater importance in adolescence, because they provide benefits, support, and resources. Thus, school is the most important social context, an environment in which adolescents establish and maintain connections and friendships with peers. This interpersonal and interdependent closeness between people, which characterizes the social connection in adolescence, gives a sense of trust and belonging to a community, of being accepted and appreciated for one's own qualities, which is a necessary condition for learning and well-being. That is why in adolescence, social connection has a fundamental role in successfully overcoming individual, communal and societal challenges. In adolescents who develop social connections, we see that they look forward to going to school, they feel liked and accepted for who they are at school, they feel close to teachers and schoolmates, they feel like a valuable part of society, they feel that they are part of the process of making decisions about issues that matter to and affect them, they care what adults think about them and care about the well-being of those around them, they trust that the adults around them care about their well-being and that they will help them when they need it.

Adolescents and the relationship with their parents

In this context, it is important to analyze the psychoeducational implications of the types of intrafamily relationships, starting from the identification of the factors that cause emotional distancing between the parent and the adolescent, these being: the disappointments experienced by the child in relation to their parents, a friendship relationship between them not having been strengthened; the parents are not open enough to age-specific topics; parents show reluctance to the new changes, not being able to accept the transition to a new stage of the child's life, which is also based on faulty communication between family members (husband-wife, parents-child); the parents' lack of trust in the child; the parents are possessive and the parents' personal wishes are strongly reflected on the child without the child's consent.

The researcher Larisa Cuznețov mentions that: "the role of the contemporary family in the construction of the self remains important and is not limited to primary socialization, but is much broader and consists in the intergenerational transmission of a cultural system of values"[5]. In addition, the American psychologist Diana Baumrind developed the concept of the four parental educational types, which are commonly used in psychology:

1. *The authoritarian/dominant style* characterized by the imposition of fixed rules by parents and very high expectations of their children. Within this style, a low

sensitivity of parents towards children is manifested, which leads to the child's low self-esteem and parental pressure that causes stress, children often being subjected to punishments for small things and not having the right to their own opinion. Even though they may turn out to be great students with excellent academic results, socially they may behave like robots, lacking empathy, imagination and spontaneity. Children raised in this way either rebel or submit and are prone to aggression.

2. *The permissive/forgiving style* is the opposite of the authoritarian style and is also known as *tolerant*. Forgiving parents are very sensitive and loving, they do not like to create boundaries between themselves and their children, therefore, the label of parent - best friend befits them. Permissive parents do not know how to say "no" to their own children and, basically, their rules do not apply, which can be harmful, because those children grow up without standards and will struggle with responsibility in life, while in school they can obtain poor results. In general, the children raised by permissive parents have a positive attitude towards life, but behave immaturely, impulsively and lack independence.
3. *The neglectful/non-involved style*, also known as non-participating parenting, is characterized by the parents' indifference to the children's needs, letting them fend for themselves, not being interested in the children's activities and spending very little time with them, which is considered to be worse than the authoritarian style. Neglectful parents are overwhelmed by their own work or hobbies, but it often happens that they are simply not interested in their children, because they never wanted children. Therefore, they do not show them love and are essentially absent from the children's lives. They do not punish them, but they do not praise them either, and the children who grow up with such parents often have the most problems in all aspects of life, because they do not know how to establish new relationships, they get poor academic results, they do not trust themselves, their mental and emotional health suffer and they find solace in drugs and alcohol.
4. *The authoritative/democratic style* is considered to be the ideal parenting style, which balances sensitivity, love and clear expectations, boundaries and demands. Such a parent provides support to the children and guides them on the path of life, but in such a way that the child feels safe and loved. This style would be a balanced combination of the authoritarian and forgiving parenting styles, with parents supporting their children, insisting that the rules be followed, but also showing a willingness to make exceptions. In these families, parents listen to their children, are empathetic and help them cope with different situations. Sanctions are present, but they are proportionate to the children's actions and are usually accompanied by explanations and advice on how to avoid them in the future. Children raised by authoritative parents follow the rules and can talk openly with their parents about pleasant and less pleasant things. They are confident, empathetic, independent and hardworking[6].

Parents cannot take the place of their child's best friend

Being a parent means being a responsible adult who forms a relationship based on respect, protection, warmth, love, care, guidance, communication, relaxation and good humour with their teenage child. The teenager needs all those things to develop and

form harmoniously, therefore, the parents' example is essential in their development, because the teenager learns by observation, which denotes that it is important that the parent, i.e. the father or the mother, be a positive role model for them. By showing them how to communicate respectfully, how to resolve conflicts peacefully and how to make responsible decisions, the teenager will appreciate and respect the relationship with their parents, without distorting the "friendship" manifested in the relationship with them.

Friendship and close parent-teen relationships are two different things, and unfortunately, few see the difference between them. Consequently, the parent should not have the tendency to replace the best friend, but their task is to teach their own child to find friends, to build a circle of friends, to show him how to behave towards friends and what friendship entails.

Friends are always on an equal footing, on a horizontal level, which means that both people are at the same level of responsibility, have the same actions, spiritual values or common interests, giving each other mutual trust, emotional comfort, sympathy and affection.

Child-parent relationships, on the other hand, pan out on a vertical level, because here there is subordination, there are roles, responsibilities and unequal accountability. The younger the child, the more rights and fewer responsibilities they have. As they grow up, the child is given more and more freedom, but also obligations, and the parent, throughout their life, will be on a higher level and will always enjoy what is called respect.

The advantages of a parent-child friendship can be multiple, from certain points of view. From open and honest communication, a relaxed atmosphere, transparency, mutual understanding to strengthening the bond between generations; however, there are also several negative aspects that can occur, when boundaries become too flexible in a relationship of friendship.

One of the main disadvantages is the risk of losing parental authority, for in trying to be a friend to their child, the parent may have difficulty maintaining discipline and ensuring the child's respect, while authority is essential, in order to guide the child on the right path and give them clear milestones in their development.

When a parent's role is not clearly defined, children may feel confused and have difficulty understanding expectations or the consequences of their own actions. Proud of their child, parents avoid talking to them and imposing important rules and norms of society, which leads to whole generations of children who think that they are entitled to everything, without understanding and cultivating respect for their neighbour who, by comparison to them, had only a poor education. Towards someone like that, they can even show downright brutal behaviour.

In a family, a child is dependent on their parents and, even in the case of the best relationships, not on an equal footing, that is, they should understand that they are in a hierarchy, in which an adult is assigned a leading role, without seeing them as a despot or an oppressor, but as a mentor in the child's real world, where the parent provides food, shelter, care, knowledge, education, skills, support, protection, and the child accepts all this as a manifestation of parental care. In the case of a friendship with the parent, the roles may change and the child may become confused about their obligations and rights.

Becoming their peers, parents encourage the child's excessive freedom, minimally controlling their behaviour and forgetting that they cannot yet objectively evaluate reality. That leads the child to wrong and not always harmless decisions.

Parenting involves determination and rigor. Becoming friends with their own children, parents leave their leadership position and do not insist on their decisions, being afraid to lose this friendship. In this case, the child's education suffers a lot. With no limits and no obligations imposed on them, the child will do whatever they want, always making decisions and solving on their own problems that, in reality, are the parent's duty, which will make the child think that only they are important, becoming a monument of selfishness and bad upbringing. The result over time is that, more often than not, it will be extremely difficult to correct the situation.

As the child grows up, they learn to be autonomous and ready to live separately from their mother and father. It all starts with the first steps and ends with getting a job and moving out in adulthood. This process is called separation and should be completed, when the child becomes an adult or finishes school. The child may stay in their parents' home for various reasons, but at the same time, they have the capacity to make independent decisions and take full responsibility for their own life.

In a friendship, the two friends confide in each other. But when one of them is the child and the other is the parent, the things said in secret are not quite right for the child's ears. If a parent complains about their partner or exposes their child to their financial problems, they may scare and stress the child with a number of situations that are beyond their capacity to understand.

In a friendship, the mother or father seems to take the place that usually belongs to a friend from school, university, or work, sometimes even a romantic partner. It is very important for the teenager to build these relationships and fill all the vacancies in their life.

CONCLUSIONS

For the Romanian philosopher Vasile Băncilă, adolescence is "the age of insurmountable perplexities and insights that force the power of understanding; of paralyzing timidities and messianic drives; of goal-seeking urges and cosmic self-suggestions; of otherworldly calls, like the familiar voice of a being that you have never seen, and puerile acts of survival; of mind-boggling obscurities and metaphorical revelations; of confused swarming of energy and troublesome perplexities; of premonitions, drives, dull urges, confusions and lights. An age when the mythical and impersonal world of childhood meets the critical and personal world of adulthood"[7].

In essence, adolescence is the separation from home and parents, orientation towards the world and towards others, the need to be free, to manage one's own life, to be autonomous.

To educate means to correct, force, coerce, demand, control, check and much more. To raise a child is to feed them, to care for them, to clothe them at first, and later the duties of a parent grow to helping them, protecting them, advising them, when they need it, to correcting them, when they are wrong. Even adults need parents to give them advice and guide them in the right direction.

It is wonderful when parents have a trusting relationship with their child. This is a necessary condition for a healthy relationship. But that relationship must be created in an "adult-child", "parent-son/daughter" formula and not in one where everyone plays the role of a friend, because when the adults in the family are friends with the children, it turns out that there are friends, but no parents, and "friendly" education is largely a fake.

It is important that parents form, together and by common agreement, a set of clear rules, healthy principles and criteria, which they apply according to the given context, but all in a gentle and understanding way. That is what the quality of parent-friend of the child consists in, because, usually, the term friendship denotes a close relationship, based on respect, understanding, love and kindness/gentleness. Friendship with the child, in the sense of these defining values, does not mean that the quality of parenthood, with its specific authority, is lost. By analogy, the child who has become a teenager, then an adult, will understand that friendship with the boss at work does not mean taking advantage of that professional relationship and minimizing the managerial role/function of the "boss". On the contrary, they will know where and how certain limits, beneficial for both parties, are imposed.

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**PERCEPTIONS OF LATVIAN UNIVERSITIES MANAGEMENT STUDENTS
ON CORPORATE SOCIAL RESPONSIBILITY AND ITS IMPLEMENTATION
IN LATVIAN ENTERPRISES**

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ABSTRACT

In the European Union, corporate social responsibility is no longer a novel concept in contemporary enterprises. In various enterprises, corporate social responsibility has reached different levels, and Latvia is also pursuing its development path in this area. Within this framework, enterprises are encouraged to pay greater attention to responsibility not only towards employees but also towards the environment and society, thus implementing a sustainable approach to corporate management. Several researchers have emphasised that the interest and understanding of managers play a crucial role in ensuring corporate social responsibility within enterprises. Their values, and their desire to implement sustainable corporate policies, thereby also caring for future generations. Therefore, the question of the understanding, knowledge, and motivation of future leaders in addressing corporate social responsibility issues becomes relevant already now. Hence, the issue of understanding, knowledge, and motivation of future managers in addressing corporate social responsibility matters becomes pertinent already. The aim of the study is to elucidate the perception and attitudes of management students on corporate social responsibility and its implementation in Latvian enterprises. The objectives of the study are to develop the theoretical framework of the research by evaluating the situation in Latvia regarding the implementation of corporate social responsibility, as well as the experience of other countries concerning management students' attitudes towards corporate social responsibility and opportunities for improving the study process; and to empirically obtain results for the development of guidelines to enhance the content and methods of study courses. The research methods applied in this research include theoretical research methods, such as content analysis of management science literature, as well as empirical research method: a questionnaire survey of management students from several Latvian universities. Within the scope of the study, a questionnaire survey was conducted among management students from several Latvian universities. The survey aimed to ascertain students' awareness of corporate social responsibility, its significance, and implementation in Latvian enterprises. Additionally, it examined the role of study courses in enhancing understanding and readiness to promote social corporate responsibility. The study also explored the statistical significance of students' socio-demographic characteristics with perception and attitudes towards corporate social responsibility. The research results will be used to enhance the content and methods of study courses in terms of promoting corporate social responsibility.

Keywords: corporate social responsibility, enterprise managers, Latvia, Latvian management students' perceptions

INTRODUCTION

One of the ways to conduct business in a sustainable and responsible manner is through the implementation of corporate social responsibility (CSR) principles within the enterprise. CSR involves the deliberate integration of all aspects of an enterprise's operations, recognizing that each action has future consequences and impacts on society and the environment.

It also means that enterprises take responsibility to ensure their decisions and actions positively affect society and the environment as much as possible. To ensure the implementation of corporate social responsibility in the context of sustainable development within enterprises, educating future managers at universities is crucial. Consequently, research into the perception and attitudes of students—who will become future managers—towards CSR is highly relevant, as these factors will shape their managerial behaviour. The authors' choice of research topic was influenced by the investigation of management students' personal views on CSR in business [4], using Carroll's CSR pyramid [3] and the value exploration approach [17]. In studying students' perceptions of CSR, it is important to consider the influence of environmental, organisational, and individual factors [4]. Research has demonstrated the significance of students' socio-demographic indicators in their perception and understanding of CSR: the content and level of study courses (bachelor's, master's), the year of study [4], gender—women exhibit a stronger philanthropic and ethical orientation [5], and differences in CSR perception, attitude, and implementation among students from different generations [18]. The aim of the research is to elucidate the perception and attitudes of management students on corporate social responsibility and its implementation in Latvian enterprises. The objectives of the study are to develop the theoretical framework of the research by evaluating the situation in Latvia regarding the implementation of corporate social responsibility, as well as the experience of other countries concerning management students' attitudes towards corporate social responsibility and opportunities for improving the study process; and to empirically obtain results for the development of guidelines to enhance the content and methods of study courses. The research methods applied in this research include theoretical research methods, such as content analysis of management science literature, as well as empirical research method: a questionnaire survey of management students from several Latvian universities.

MATERIALS AND METHODS

Research question: Is there a statistically significant correlation between students' socio-demographic characteristics and their perception and attitudes towards corporate social responsibility?

Research theoretical and methodological basis: the theoretical framework of the research is based on the theoretical principles of CSR: entrepreneurs' economic and legal responsibilities; ethical responsibilities and responsibilities towards the environment and society [2], [3], [4]. As university students prepare to make important career choices, these findings can help expand the field of corporate social responsibility research by identifying factors that contribute to the development of students' orientation towards CSR. Empirically, the research is based on a survey questionnaire developed by the authors, considering the situation in Latvia regarding CSR implementation and adapts insights from other studies and surveys to align with the research objectives and respondent group [4], [18].

Research period: survey of students in the three largest public universities in Latvia (University of Latvia, Latvia University of Life Science and Technologies, Riga Technical University) was conducted in April to May 2024.

Research limitations.

The study covers students studying in public universities.

The study looks at universities as a whole, without analysing individual universities.

Time limitation (research period).

Evaluation of the Implementation of Corporate Social Responsibility in Latvia

During the period when the European Commission initiated extensive debates on CSR across Europe in 2001, Latvian enterprises had only a limited understanding of these issues. However, with Latvia's accession to the European Union, discussions on CSR in Latvia rapidly increased. The early implementation of CSR in Latvia can be traced back to 2010, when the Employers' Confederation of Latvia (*LDDK*) proposed the creation of a CSR platform. This initiative, in collaboration with representatives from the public and private sectors, as well as non-governmental organisations, established the main principles of CSR. In that year, a Memorandum on Corporate Social Responsibility Principles was signed, articulating the understanding of CSR and its development prerequisites, and including references to both international and local CSR evaluation instruments.[13]. To promote the development of CSR in Latvia, the association "Institute for Corporate Sustainability and Responsibility", in collaboration with the Employers' Confederation of Latvia and the Free Trade Union Confederation of Latvia (*LBAS*), has been determining the Sustainability Index since 2010. This index aims to assess the level of corporate social responsibility in Latvian enterprises. The methodology for the Latvian enterprises' Sustainability Index was based on theoretical guidelines for CSR, the introduction of similar indices in economies comparable to Latvia, such as Estonia and Croatia, and the most significant global indices, such as the Dow Jones Sustainability Index and Business in the Community's Corporate Responsibility Index. It also considered the ISO 26000 standard for social responsibility and the Global Reporting Initiative (GRI) G3 guidelines. [6]. The experience of Latvian entrepreneurs in addressing CSR issues is reflected in a study published by the World Bank in October 2005, which surveyed 83 of the largest enterprises in Latvia. The study reveals a relatively narrow perspective on CSR among enterprises executives: approximately half of the enterprises equate corporate social responsibility with ethical behaviour, environmentally friendly activities, responsiveness to stakeholder concerns, and transparent business operations. Similarly, the 2011 study conducted by Sauka et al. did not show significant progress in addressing CSR issues. This study surveyed 405 randomly selected Latvian business leaders and owners. The findings indicate that 72% of enterprises had not contributed to the development of local infrastructure, and 74% had not measured their impact on the environment. However, 32% had supported environmental protection initiatives, and 73% used energy-saving equipment. Overall, the study demonstrates that Latvian entrepreneurs need to significantly improve their understanding and implementation of CSR, particularly in terms of their responsibility towards employees and society.[16]. Since that period, the situation regarding CSR implementation in Latvian enterprises has improved. Various NGOs, such as the Latvian Employers' Confederation and the Latvian Chamber of Commerce and Industry (*LTRK*), as well as the Institute for Corporate Sustainability and Responsibility, regularly organise conferences and discussions on CSR topics. CSR aspects are also integrated into business education programmes, and there is state-level support for the development and implementation of CSR programmes.

Importantly, several key national development planning documents-the Latvian National Development Plan for 2021-2027, the Latvian Sustainable Development Strategy until 2030, and Latvia's commitment to the UN Sustainable Development Goals-demonstrate Latvia's commitment to sustainable development [10], [11]. According to the authors of the article, the Institute for Corporate Sustainability and Responsibility has made a significant contribution to the development of CSR. Since 2010, the Institute has been regularly conducting assessments of the local Sustainability Index. The minimum threshold for obtaining the index is at least 40% of the specified criteria, a target achieved by approximately 90 enterprises each year. Among these enterprises are primarily large enterprises and a few medium-sized enterprises. Since 2010, the average performance rating of Latvian enterprises has gradually increased (from 47.9% in 2010 to 63.1% in 2015, 79.8% in 2021, and 82.2% in 2023) [6],[8]. Based on their CSR evaluation results, enterprises are categorised into five levels according to the index methodology: Platinum, Diamond, Gold, Silver, and Bronze. The results of the 2022 Sustainability Index indicate that 4 participants received certification in the Diamond category; 23 in the Platinum category; 20 in the Gold category; 23 in the Silver category; and 8 in the Bronze category [7]. Overall, these results indicate the willingness of Latvian entrepreneurs to align with globally recognized standards and guidelines in the field of corporate social responsibility.

Attitudes of Students from Other Countries Towards Corporate Social Responsibility

Research on this topic has been conducted in the USA, Canada, China, and several European countries. A 2018 study among students at the Faculty of Management of the Czestochowa University of Technology in Poland investigated students' knowledge and understanding of CSR, as well as their readiness as company clients to consider CSR in their daily choices. It was found that 76% of respondents did not know what CSR is, while 24% had heard of it. Of these 24%, only a small proportion could name companies that are socially responsible. The majority of respondents (45%) had no opinion on whether companies should include environmental activities in their daily operations, while 37% believed that such activities should be undertaken. More than half of the respondents did not consider CSR in their daily choices, with only 18% stating that CSR actions by companies would affect their purchasing decisions. [14]. Overall, the study indicates that Polish students' knowledge and understanding of CSR need improvement. A 2021 study analysing the opinions of Georgian management students found that the main reason for implementing CSR in companies, according to the students, is the realisation by entrepreneurs that a purely economic approach is not sufficient for success in today's world (65%). Students believe that the development of CSR in companies is driven by increased social expectations (55%), changes in consumer awareness (53%), and the need for credibility within EU economic policy (40%). The students identified external activities that reflect CSR in everyday business practices as respecting human rights (69%), maintaining good relations with customers (60%), and fostering good relationships with business partners and suppliers (52%) [21]. In another study conducted by Hungarian researchers in 2018 among management students at the University of Debrecen, it was found that 74.3% of the surveyed students believe that Hungarian business leaders place the greatest emphasis on consumer satisfaction. Slightly fewer respondents (60%) considered fair and ethical treatment of employees to be very important. According to the students, the most important stakeholders for businesses are

consumers (62.9%), followed by employees (54.3%), while owners are considered important by relatively fewer students (40%). A significant proportion of respondents (46%) agreed that one of the indicators of business effectiveness is the level of ethics and social responsibility observed [1].

While the researchers measured student opinions across various dimensions, the results indicate that the level of interest and understanding of CSR varies between countries. Despite some regions showing limited awareness, there is an encouraging trend towards the development of CSR implementation in others.

RESULTS AND DISCUSSION

According to data provided by Latvian universities [12], [15], [19], as of 1 January 2024, there were 673 management students enrolled in Latvian universities. A total of 158 management students from Latvian universities completed the survey questionnaire, which means that the sampling error is 0.07, and therefore the results of the study are statistically significant [9]. Descriptive and inferential statistical methods were employed for data analysis. The following indicators were calculated during data processing: arithmetic means (M), standard deviations (SD), Spearman's correlation coefficients and Pearson's Chi-Square test.

Respondent characteristics: among the 673 management students in Latvian universities, there were students enrolled in both bachelor's and master's programmes. The percentages of respondent characteristics are presented in Table 1.

Table 1 Percentages of demographic, level of study and job-related characteristics of the students

Participant characteristics	Percentages (%)	Participant characteristics	Percentages (%)
Gender		Level of study	
Male	41.8	Bachelor study programmes	75.9
Female	58.2	Master study programmes	24.1
Age (years)		Experience in enterprise management	
18-24	69.6	Yes	25.3
25-31	8.2	No	74.7
32-38	9.5	Experience in individual commercial activities	
39-45	7.6	Yes	26.6
≥46	5.1	No	73.4

Source: Produced by the authors

As shown in Table 1, the majority of respondents are women (58.2%), and the most represented age group is 18 to 24 years old (69.6%).

The students' opinions on CSR principles and their implementation in Latvian enterprises are as follows: The majority of respondents (92%) agree that enterprises should not only focus on profit-making but also address environmental and societal needs. When assessing the extent to which various CSR-related conditions are observed in Latvian enterprises, students expressed the most positive opinion about the implementation of

responsibility towards customers (55.1% believe it is largely observed), with an average arithmetic score of 2.53. Conversely, the most sceptical opinion concerns the improvement of the quality of life in the surrounding community, with only 15.2% believing it is largely improved and 19% believing it is not improved at all. These responses confirm that students view most of the mentioned conditions as being observed to only a small extent in Latvian enterprises.

The Pearson's Chi-Square test was applied to determine whether there are statistically significant correlations between students' socio-demographic and work-life indicators and their opinions on CSR principles and their implementation in Latvian enterprises. It was found that several trend-level correlations exist (Pearson's Chi-Square $.05 < p < .10$): There are correlations with the gender of respondents: a correlation ($p=.055$) exists with the recognition that enterprises should not only focus on profit-making but also address environmental and societal needs. Additionally, among the respondents who answered 'yes,' 60% are women and 40% are men. There is also a correlation ($p=.058$) with the recognition that CSR involves responsibility towards the law, as well as a correlation ($p=.067$) with the recognition that an enterprise's ethics and social responsibility are crucial to its long-term profitability. Among women, 39.1% agreed with this statement, and 48.9% fully agreed. Among men, 37.8% agreed with this statement, and 34.8% fully agreed.

There are correlations with the age of respondents: a correlation ($p = .088$) exists with the recognition that, in Latvia, CSR involves concerns for environmental protection issues, as well as with the opinion that the level of CSR implementation by enterprises in Latvia is being evaluated. Among the youngest age group (18-24 years), 30.9% of students stated that there is an evaluation of the level of CSR implementation by enterprises in Latvia. A correlation ($p=.009$) was also found with the opinion that an enterprise's ethics and social responsibility are crucial to its long-term profitability. In this regard, 82.7% of students from the youngest age group agreed or fully agreed with this statement. Additionally, a correlation ($p=.099$) was found with the opinion that a corporately socially responsible enterprise is attractive as a place to work. Among the youngest age group, 92.7% of students agreed or strongly agreed with this statement.

There are correlations with the respondents' level of study: a correlation ($p = .054$) exists with the opinion that the level of CSR implementation in enterprises is evaluated in Latvia. Trend-level correlations also indicate that students' work experience in an enterprise is correlated ($p = .084$) with the acknowledgment that CSR topics have been included in some university courses. Additionally, respondents' experience in managing an enterprise is correlated ($p = .064$) with the view that enterprises in Latvia implement responsibility towards customers, and with the acknowledgment ($p = .087$) that a university course has fostered a desire to be a socially responsible person. Furthermore, students' individual entrepreneurial experience is correlated ($p = .083$) with the acknowledgment that enterprises should not only focus on making a profit but also consider environmental and societal needs, highlighting the importance of experience in the implementation of CSR.

In the survey, students expressed their opinions on which Latvian enterprises implement CSR at a higher level: 72.8% of respondents recognised that large enterprises do, while 27.2% believed that small and medium-sized enterprises do. This opinion aligns with the ratings of the Sustainability Index over recent years. The research found only one trend-level correlation between CSR guidelines and their implementation in Latvian enterprises with the level of study. When evaluating the reasons for the lack of CSR implementation

in enterprises, 60.1% of respondents cited a lack of knowledge about CSR among managers, and the same proportion (60.1%) acknowledged that managers do not understand the importance of this issue. Additionally, 51.9% believe that enterprise managers view CSR as contrary to the business objectives of the enterprises.

Within the scope of the study, students' opinions on the study courses at Latvian higher education institutions that include CSR guidelines were analysed. Students evaluated these statements on a 5-point scale (1 - not at all; 5 - to a very great extent).

Table 2 Descriptive statistics of the characteristics of study courses

Characteristics of Study Courses	Mean	SD
The study courses have broadened and deepened understanding of CSR	2.92	1.22
The study courses have encouraged students to seek additional information about CSR	2.52	1.22
The study courses have fostered students' desire to be socially responsible individuals	2.96	1.20
The study courses have fostered students' desire to be socially responsible leaders	2.96	1.28

Source: Produced by the authors

It is evident that the arithmetic mean of the three study course indicators is above 2.9, which reflects a positive evaluation by the students. Conversely, the standard deviation indicates that the ratings were relatively consistent, except for the SD=1.28 for the indicator 'the study courses have fostered students' desire to be socially responsible leaders,' which suggests greater variance in student evaluations.

To determine whether there are interrelationships between the characteristics of the study courses, Spearman's correlation coefficient was calculated. Several positive, statistically significant correlations were found. There is a moderately strong positive correlation between the indicator 'the study course provided an expanded and deepened understanding of CSR' and the indicator 'the study course stimulated the search for additional information on CSR' ($r_s = 0.48$). Additionally, the indicator 'the study course provided an expanded and deepened understanding of CSR' has a positive correlation with 'the study course encouraged the desire to be a socially responsible person' ($r_s = 0.65$) and 'the study course encouraged the desire to be a socially responsible leader' ($r_s = 0.65$). There is also a positive correlation between 'the study course stimulated the search for additional information on CSR' and 'the study course encouraged the desire to be a socially responsible person' ($r_s = 0.51$) and 'the study course encouraged the desire to be a socially responsible leader' ($r_s = 0.47$). Conversely, there is a strong positive correlation between 'the study course encouraged the desire to be a socially responsible person' and 'the study course encouraged the desire to be a socially responsible leader' ($r_s = 0.78$). This indicates that the content of study courses and the methods used in the study process are related to students' understanding and readiness to be socially responsible individuals and potentially become socially responsible leaders.

CONCLUSION

1. There are several statistically significant trend-level correlations between respondents' socio-demographic indicators and their attitudes and understanding of corporate social responsibility.

2. Younger age group students (82.7%) are more likely to agree with the statement that corporate ethics and social responsibility are crucial for long-term profitability. A significant proportion of respondents in this age group (92%) highly value corporately socially responsible enterprises as attractive workplaces.
3. The courses on CSR at public universities in Latvia enhance the understanding of future managers regarding the importance of CSR and their readiness to implement CSR principles in enterprises.
4. The trend-level correlation between students' individual entrepreneurial experience and the belief that enterprises should care not only about profit but also about environmental and societal needs indicates a positive direction for CSR implementation in Latvia.
5. In Latvia, high-level CSR implementation primarily occurs in large enterprises. The issue of problematic aspects of CSR implementation in medium and small enterprises requires further in-depth research and increased attention from researchers and the government.
6. Respondents believe that the lack of CSR implementation in enterprises is due to managers' lack of knowledge about CSR (60.1%) and managers' lack of understanding of the importance of this issue (60.1%). This matter requires further in-depth research and the potential improvement of continuing education for current managers.

The authors are also planning further research on this topic using a more detailed questionnaire that includes aspects of managers' values and incorporates more complex questions. This approach aims to gain a more precise understanding of the perceptions of management students at Latvian universities regarding corporate social responsibility.

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PERMANENT AXIOMS OF CHRISTIAN PEDAGOGY

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ABSTRACT

Pedagogical science, through the materialist covering that is imposed on it lately, has distanced itself from the spiritual needs of man. Despite this fact, the influence and importance of Christian values remain eminently valid and current. Christianity and especially Orthodoxy, through their entire content based on the teachings of Lord Jesus Christ, the Pedagogue par excellence, continue to inspire educational ideas, mentality, and pedagogical thinking. Christian pedagogy imposes itself as a necessity in today's society, through the need for moral-spiritual and religious education of the young people, increasingly deprived of the knowledge of perennial values. Following the life principles of Christian morality and evangelical virtues calls man to spiritual rebirth and edification, to rediscovering the existential meaning of life, through living the states of holy-spiritual life, cleansing, illumination, and deification. From the Orthodox perspective, moral-spiritual education is a continuous disciplining of the human soul and the education of its will, benefiting its body, all these contributing to the harmonization of contemporary society, engulfed by so many disturbances and disruptive threats to European identity. Therefore, in order to highlight the subject of this study, we have used the analytical, historical and synthesis method, in collusion with the values of pedagogy in general.

Keywords: Christian pedagogy, moral-spiritual education, *Holy Scripture*, *Holy Tradition*, European identity, Orthodoxy.

INTRODUCTION

Pedagogy, a term whose etymology comes from the Greek language [παιδαγωγία, formed from the junction of the words παῖς (= child) and ἀγωγή (= growth, leadership, education)], adopted in all European languages, suggests from Antiquity to our days the science of child education, taking various forms and names depending on the objectives pursued. In the case of those who refer to the teachings of the Lord Jesus Christ, the cultivated education can be characterized as Christian, especially since it is founded on the two sources of *divine Revelation*, *Holy Scripture* and *Holy Tradition*, extending into various related disciplines of general pedagogy. In this context, pedagogy also receives the characteristic of being Christian, but its object of study is education. However, pedagogy is not confused with education as a socio-human phenomenon, because pedagogy represents a contextualization of education, in fact, it is the science of education that studies the laws of education appropriate for children and young people from one generation to another, and also for humans in general.

According to the philosopher J. Fr. Herbart (1776-1841), pedagogy as a science, is based on ethical philosophy and psychology. Ethical philosophy shows the purpose of education, and psychology shows the way, the means, and the obstacles[1]. The Romanian pedagogue G. G. Antonescu (1882-1955) considers that in conducting education, it is necessary to take into account certain essential conditions: knowledge of psychology and implicitly of the child's soul, as well as establishing a moral ideal towards which people should strive, regardless of the epoch or society. Thus, to achieve the proposed ideal, knowing the student's soul and the respective ideal are crucial in the evolution of education, resulting in the definition that imposes itself naturally, namely, "pedagogy is the science that, taking into account the knowledge [it has] about the human soul and the ideal [it has] set on the purpose of human life, will indicate the necessary means for determining the development of the soul towards its destiny"[2].

Biblical, Patristic, and Philosophical Foundations of Christian Pedagogy

Since ancient times, the Greeks cultivated human education by relating to the meaning of the term *παιδεία*, which refers to the education of children through the cultivation of the spirit and the formation of character. Thus, true education refers to the person, both body and soul, and Christianity, cultivating not only the bodily needs of humans, but especially their spiritual and soulful needs, acquires, by definition, the divine right to educate the human soul. This is why specific pedagogy is recognized among the branches of scientific pedagogy, leading humanity towards its divine destiny, as emphasized by great Christian educators (Clement of Alexandria, Origen, Saint John Chrysostom, Saint Basil the Great, Saint Gregory of Nyssa, Saint Gregory the Theologian, Blessed Augustine, Saint John of Damascus, etc.).

Christianity reveals to humanity "the Way, the Truth, and the Life (*Jn* 14:6)", namely Jesus Christ, who is the Teacher or Pedagogue par excellence (*Mt* 23:8). Christian pedagogy textbooks present the image of man in his entirety, body and soul, considering not just the horizontal dimension of life, but also its vertical dimension, which focuses, among other things, on the cultivation of virtues, worked in the eschatological perspective of life beyond the grave[3]. Christian teaching places particular emphasis on the spiritual perfection of man, called to cultivate the stages of the holy-spiritual life (cleansing, illumination, and deification). Therefore, priority is given to the virtues of the soul, then to the bodily needs, according to the teaching of Lord Jesus Christ: "What does it profit a man to gain the whole world, yet forfeit his soul? (*Mk* 8:36)". Christian pedagogy has always had as its primary objective the embrace of life as a gift from God and the enactment of the teachings of the Pedagogue Jesus Christ, through which the dimensions of human life are revealed as spiritual fulfillment, physical health, and spiritual perfection. Thus, Christian pedagogy is Christ-centered and practical, focused on the Pedagogue Who encourages action, according to Clement of Alexandria, and not on a pedagogue of an abstract method, aiming not only to teach, but also to guide towards a wise way of living[4].

While general pedagogy considers artistic and cognitive techniques concerning the reason and consciousness of man, aiming at the education of future generations, Christian pedagogy emerges as a product of the two-millennial Christian morality, offering man a purpose in the world by realizing the state of being in God's image, which he carries as an ontological given following his creation. Therefore, Christian pedagogy does not only deal with the intellectual or physical formation of man, but especially with achieving his

moral-spiritual perfection, so that the educational goal of the educator has common points, from an eschatological perspective, with the one being educated[5]. The *Holy Scripture*, considered the *book of books*, has always been and will remain an inexhaustible source of educational principles, systematically exposed in various historical contexts, making its texts, grouped in the *Old and New Testament*, a moral-educational guide valid anywhere and anytime. Alongside the importance of the prophetic phenomenon in the history of human salvation, the issue of education is viewed in the *Old Testament* on the foundation of the traditional family (father, mother, children) and the role that the child has in society: "My son, keep your father's command and do not forsake your mother's teaching. Bind them always on your heart; fasten them around your neck. When you walk, they will guide you; when you sleep, they will watch over you; when you awake, they will speak to you. For this command is a lamp, this teaching is a light, and correction and instruction are the way to life (*Prov 6:20-22*)". The purpose of education consists in acquiring wisdom and understanding, however, related to living according to God's commandments (see *Prov 3:13-15*). As educational methods used by parents for their children, the *Old Testament* mentions education through reprimand, where necessary, yet all in a dynamic pedagogical sense, in the light of the moral-spiritual formation of the child (see *Prov 13:24, 29:17*, etc.).

In the *New Testament*, education is under the spotlight of the teachings of the Savior Jesus Christ, Who marks a new paradigm in the plan of education: the spiritual perfection of man and the improvement of his life from all aspects, through the fulfillment of God's commandments. In precepts such as, "be perfect, therefore, as your heavenly Father is perfect (*Mt 5:48*)", "take my yoke upon you and learn from me, for I am gentle and humble in heart, and you will find rest for your souls (*Mt 11:29*)", "man shall not live on bread alone, but on every word that comes from the mouth of God (*Mt 4:4*)", Lord Jesus Christ reveals that the educational reality of man does not consist only in a methodical material order of human, natural science which has no basis in *Divine Revelation*, but in the experience of the holy-spiritual life which, being based on the data of *Divine Revelation*, helps man to reach the knowledge of God and the transcendence of the world. Therefore, Lord Jesus Christ becomes the perfect model of Christian following, the embodiment of the Pedagogue par excellence, on the foundation (*I Cor 3:11*) upon which the entire Christian pedagogy and education have been built.

Thus, Christian educators from different earlier periods of the Church, listed above, through their experiences and works, have left to subsequent pedagogy valuable treatises on applied moral pedagogy, recognized by general pedagogy, through esteemed names (John Amos Comenius, Friedrich Wilhelm Foerster, Dr. Karl Weiss, Sebastian Haidacher, Frantz Xavier Eggersdorfer, etc.) who have appreciated the importance of Christian pedagogy, in the evolution of general pedagogy[6]. From the perspective of this Christian pedagogy, there is always consideration, alongside the intellectual aspect, of the moral-spiritual aspect of education, for forming a clear horizon of a practical Christian life, according to which educators, meaning teachers and professors, themselves become role models for their students and pupils, just as the Lord Jesus Christ has been and is to everyone the Model Teacher or Pedagogue. Consequently, various Holy Fathers and ecclesiastical writers of the Church, as models of Christian pedagogues, have emphasized the necessity of education and the benefit of the permanent spiritual cultivation of man. If one carefully studies the lives of the Holy Fathers and their writings, it is observed, among other things, that the depth of expression of their own holy-spiritual experiences

and their approach to issues of faith, depending on the challenges of their era, is closely analogous to the intellectual preparation of these Holy Fathers, yet always related to the living of the states of the holy-spiritual life of cleansing, illumination, and deification. This aspect indicates the truth that man is called to participate in the mystery of faith, and, implicitly, in the process of his own education, not just with the senses, but also with his power of thought and reflection, because he has the opportunity to cultivate all his faculties, that is, both senses and emotions, as well as reason and consciousness, but also the mind into his heart, through the education received and even to choose from this education what helps him and leads him towards the authentic living of life on this earth.

For example, Clement of Alexandria, one of the first Christian scholars from the convergence of the 2nd and 3rd centuries, who left an initial outline of autonomous Christian pedagogy[7], identifies three states of human nature, customs, aspirations, and passions, which can be shaped, honed, polished by relating to Christian teaching[4]. Saint Basil the Great (330-379), Archbishop of Caesarea in Cappadocia, also an author of ascetic-pedagogical writings, considers, regarding the education of children, that their souls should be guided from the beginning, that is from an early age, towards practicing good deeds, because they are still easily shaped and educated. In other words, he is soft like wax and easily receives the forms that are pressed upon him, and when reason and the power of judgment come, he will begin the path of life right from the earliest notions and examples of piety that have been taught to him, so that his thinking may easily indicate the good to follow[8]. In the education of children and youth, one can refer both to Christian writings and to secular ones. The classic example is the *22nd Homily* or the *Address to young men on how they can beneficially use the literature of Greek writers*. This text belongs to Saint Basil the Great and was particularly valued during the Renaissance, being interpreted as a legitimization and recognition of classical culture by the Christian Church, but it also represented the first work of Saint Basil the Great that was printed. Considered a "small moral treatise in the well-known genius of Plutarch", Saint Basil the Great expresses in it, among other things, the encouragement to young people to read classical texts and assimilate the culture of the time, but not "without discernment", in order to be protected, "with all care, the soul", considering only those authors and those writings in which they "praised virtue or condemned vice"[9]. Saint John Chrysostom (347-407), Archbishop of Constantinople and one of the greatest orators of the Eastern Church, was concerned with the art of educating children and youth. In his work *On vainglory and how parents should educate their children*, Saint John Chrysostom considers that parents are the primary responsible educators in the lives of children and offers them Christian pedagogical precepts for their proper raising. According to the pedagogical thinking of Saint John Chrysostom, to educate means to take care of the spiritual cleanliness and propriety of children and youth. Education, for Saint John Chrysostom, represents not only a moral duty, but also a noble art, greater than any other art, because other arts consider a limited worldly benefit, whereas education, accompanied by the Christian perspective, regards the care of the future life[10]. "Youth", says Saint John, "is a wild thing and needs many to be set over it, teachers, tutors, attendants, nurses; for even with so many safeguards it can scarce be kept in check. Like unto some untamed steed, some untamable wild creature, such is youth"[11].

Using the pedagogical concepts of Saint John Chrysostom regarding the intellectual and moral-spiritual growth of a young person, like an athlete of Christ, we come to understand the importance of exercising both the body and the soul of a person, in order to live

virtuously in the world. From the Greek terms dedicated to the educational process, we can take as a reference, at this point in the study, the term "μόρφωσις (instruction, education, teaching, etc.)", which can be best understood as "shaping". The Greeks used the term "μεμορφωμένος (educated, trained, formed, etc.)" to describe an educated or shaped person, which remains, under the form "μορφωμένος", in use in modern Greek, today. In contrast, an uneducated person was like a soft ball of wax or clay, being "unshaped (ἀμόρφωτος)". Human thinking, expressed through reason and consciousness, is what undergoes shaping and acquires habits, which, through practice and training, represent the materialization of virtues. Thus, virtue becomes a concern of education, as acquiring a virtue requires practice and discipline, to become a natural habit in our lives[12].

Moral Spiritual and Religious Education from the Orthodox Perspective

From early childhood, a child is open to knowledge through experiencing various states and feelings, which aid in developing their personality, being devoid of any selfish thoughts or passions. However, this state of innocence risks deterioration, if the surrounding environment is not conducive to receiving a healthy education from a moral, spiritual, and, implicitly, religious standpoint. For this reason, moral-spiritual education, through Orthodox Christian teaching, relates to the two organs of *Divine Revelation*, namely to the *Holy Scripture* and *Holy Tradition*, so that the Orthodox-specific mode of thinking is instilled in man from an early age, and, thus, it will bear fruit as they grow.

The British-born German philosopher, H. St. Chamberlain (1855-1927), quoted by the German Lutheran theologian C. G. Adolf von Harnack (1851-1930) in his works, referring to the moral-religious perspective and its impact on the world through the teachings of Lord Jesus Christ, makes the following statement: "what Greece did for the intellect, Christ did for the moral life: man had not a moral culture till He gave it. I should rather say, the possibility of a moral culture; for the motive power of culture is that inner, creative process, the voluntary masterful conversion of the will, and this very motive power was with rare exceptions quite overlooked; [...] Yet we have in the revelation of Christ the one foundation of all moral culture"[13]. Referring to Orthodox bioethics, the American philosopher H. Tr. Engelhardt Jr. (1941-2018), who converted to Orthodoxy, contends that "Christians ought to draw authority not from the consent of particular individuals, nor from conclusions to discursive moral philosophical arguments, but instead from the experienced revelation of the requirements of God"[14].

For someone to achieve a successful moral education, they need a moral ideal to aspire to. In Christian pedagogy, this ideal we must strive for is communion with Lord Jesus Christ, who becomes a Prototype after which our personalities are modeled. Nonetheless, the condition that inherently imposes itself, the foundation upon which Orthodox moral education is based, is faith in God. The phrase "Nihil Sine Deo" is a benchmark of Christian moral-spiritual education, grounded in the *Holy Scripture* and by which it is understood that nothing moves without God's will in a person's life (*Ps* 103:15; *Mt* 6:27). Moral-spiritual education is imperative, from the perspective of Orthodox Christian faith, in that it aims for the perfection of man, because only by following this process does a person experience the transition from being made in the image of God to resembling Him. The deification of man represents the fulfillment of his ontological purpose, because when God created the first man, Adam, in His image, He called him to resemble Him. This process of man's deification represents the third stage of the holy-spiritual life and is

based on embracing the first two stages of this life, cleansing and illumination. Experiencing these states also means experiencing the state of sanctity, through which a person receives the workings of the Holy Spirit's charisms, so that from his heart, becoming a dwelling of the Holy Trinity (*Jn* 14:23), will spring forth love for God, for neighbor, for oneself, and for all creation.

What is mandated by Christian morality is the radically new quality of life, making the Christian ethos distinct even from the most noble moral objectives. This differentiation is due to the fact that Christian morality looks at the personal identity of the man, identifying the person with their true self through the rejection of egocentrism. The man, as rational being, and, consequently, the only living being capable of education[15], have been endowed with the ability to know and fulfill God's will, as well as with free will: "He created man from the beginning, and left him in the hand of his counsel. If you will, you shall keep the commandments, and to perform acceptable faithfulness. He has set fire and water before you: stretch forth your hand unto whichever you will (*Sir* 15:14-17)". Thus, human freedom is defined in relation to moral freedom. However, knowledge entails a continuous process of internal conversion, leading a person from words to deeds, balancing their aspirations and their way of being. Moral-spiritual education involves a gradual inquiry into human understanding through God, because a correct understanding of general pedagogy cannot be achieved without Christian pedagogy, which is in relation to biblical and patristic anthropology, providing the correct understanding of deification in relation to moral-spiritual education. In the context of moral and spiritual values, specific only to humans among all living beings, the human desire for immortality and thirst for knowledge are explained, and through the varied forms of life they lead, it indicates that humans possess freedom and reason, emotions and states, through which they relate to a meaning of life marked by perennial values that give a transcendent character to the meaning of life, by relating them to a Supreme Being[16].

Saint Sophrony Saharov (1896-1993), founder of the Monastery of St. John the Baptist in Essex, England, a disciple of Saint Silouan the Athonite (1866-1936) from Mount Athos, places special emphasis on man's acquisition of the works of divine grace, namely making his heart a dwelling for the Holy Spirit, where God the Father and God the Son come to reside together. This work is much more beneficial than simply adhering to moral laws or ascetic rules, which are only channels of action through which one can achieve the intended goal, as they are not an end in themselves. In this sense, Saint Sophrony stated that "holiness is not an ethical, but an ontological concept. A man is not holy because his morals or conduct are good, or even because he leads a righteous life in the sense of devoting himself to spiritual endeavor and prayer-indeed, the Pharisees kept the fasts and made 'long' prayers. But that man is holy who bears within himself the Holy Spirit"[17].

Moral freedom, therefore, must be educated through a relationship with God, in a free and conscious manner, by embodying moral good in the daily life of a person. For achieving perfection, in addition to the objective contribution from God, human cooperation, consent, and faith to will what God desires with him are required. Thus, through this freedom, if it is educated on the basis of the principles of Orthodox moral education, the man can discipline his thoughts and senses, and, moreover, he acquires the work of his mind in his heart, of course, to the extent that he becomes spiritually and psychally healthy. At this point, it is worth noting that the man, with this double health, has two types of memory: the memory of the body's cells, which helps the body function

properly, and the memory of the heart, the place where God dwells and where the prayer of the heart or the Jesus Prayer, also known as the prayer of the mind, the single thought, or at all times ("Lord, Jesus Christ, have mercy on me"), occurs. Thus, man was created by God with two centers of his personality: a center of the nervous system, through which, based on brain coordination, man takes action and interacts with the external world and with his inner self; a spiritual center of the human personality, located in the heart[18], about which Romanian Father Arsenie Papacioc (1914-2011) stated that the heart is the deepest depth within us, a being within a being, the place that He has made especially for Him to dwell. The mind is subordinate to the heart. Our being of responsibility and of true joy through union with God is the heart[19].

CONCLUSIONS

The importance and role of Christian pedagogy are founded on permanent axioms, in relation to the perennial values of humanity. Christian pedagogy, with a profound biblical and patristic character, does not only concern itself with intellectual or physical instruction, but also develops an interest in the moral perfection of man. Overall, Christian pedagogy targets the whole person, body and soul, which, from an eschatological perspective, explains and justifies the interest in the vertical dimension of life.

Without ignoring the role of general humanist pedagogy, which considers techniques of the fruit of human thought, Christian pedagogy, as a product of experiencing the holy-spiritual life, including Christian morality, offers man a life perspective, a purpose in the world, through which the educator sets a goal with which they can shape the younger generations. The *Holy Scripture* or *Bible* remains, for Christian pedagogy, an inexhaustible source of educational principles, which, through its principles, methods, and exhortations, presents itself as a moral-educational guide valid anywhere and at any time. While the *Old Testament* presents themes of moral-spiritual and religious education, often received by the child in the family environment, the *New Testament* marks a paradigm shift in the plan of education, viewed in the light of the deeds and teachings of Jesus Christ, which consider the spiritual renewal of man and the attainment of holiness, based on cultivating love for God, man and world.

Through the progressive spiritualization viewed in the light of patristic teaching, Christian pedagogy has consistently focused on a moral, spiritual activity of education, through a knowledge and research of man, towards internal conversion, which involves the cleansing from sins and passions, through acquiring the works of divine grace. Moral-spiritual education, viewed from the Orthodox perspective, aims at the perfection of man, which is based on the formation of the moral-spiritual character, through the sanctity of life and the fulfillment of divine commandments. Christian pedagogy, being Christocentric, permanently places at the center of its moral-spiritual and religious educational activity, the Teacher Jesus Christ, Who is the perfect model of Christian following, the embodiment of the Pedagogue par excellence, on Whose foundation the entire Christian pedagogy and education are built.

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PREPARATION OF YOUNG PEOPLE WITH MILD INTELLECTUAL DISABILITIES FOR THE TRANSITION FROM SCHOOL TO WORK AND CHOOSING A PROFESSION

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ABSTRACT

This article examines the process of transitioning young people with mild intellectual disabilities from school to the workforce, with a particular focus on the role of vocational guidance and professional preparation. The study highlights the key theoretical models and methodologies used in the vocational training of these individuals, as well as the practical challenges they face during the transition. Effective vocational orientation tools are identified, including personalized planning, practical work experience, and mentorship programs, which help these young individuals make informed career choices. The article also provides recommendations for educational institutions and professionals on how to organize a more effective transition process. These recommendations emphasize the importance of early vocational orientation, individualized transition planning, and ongoing support, ensuring that young people with mild intellectual disabilities are adequately prepared for and successfully integrated into the workforce.

Keywords: With mild intellectual disabilities, career, teacher, young people.

INTRODUCTION

The preparation of students with special educational needs for professional careers remains one of the problematic areas of the Lithuanian education system. The acquisition of life skills and the opportunity to gain professional skills could be improved by adopting and adapting the experiences of foreign countries to Lithuania's educational practices. The transition from school to employment often becomes a challenge for young people with special educational needs. According to Laužackas, Danilavičius, and Guskienė [21], there are high demands on vocational education in today's society: it must provide knowledge in professional and general education that meets the level of contemporary science and technology, as well as cultural values, and it must also ensure the competencies necessary for the chosen field in practice. Vocational training must create conditions for developing and updating previously acquired knowledge, enabling workers to adapt to the constantly changing requirements of the labor market. Since "the 21st century is the age of information and technology, as well as changes in climate, economy, and values," the European Commission's communication "Europe 2020" foresees investments in technological development, new processes and technologies, and funding to enhance human capabilities, as the era demands increasingly higher qualifications for professional jobs, which is to be achieved through technological education of the younger generation (Žygaitienė et al.) [29]. These trends inspire even greater exclusion of individuals with disabilities and pose more significant challenges in preparing for careers. Laužackas [21] believes that vocational training is a process that encompasses pre-

vocational education, initial vocational training, professional qualification improvement, vocational retraining, and vocational rehabilitation.

In Lithuania, the vocational training model applied is solely focused on vocational education. Research conducted by Lithuanian scholars such as Baranauskienė [1;3;4;6;7], Baranauskienė and J. Ruškus [9], and Baranauskienė and Juodraitis [2], concerning the transition of young people with mild intellectual disabilities to adult life, their options for career choices, and preparation for those careers indicates that the employment prospects for these individuals are often hampered by a lack of communication skills, irresponsibility, insufficient psychological and physical readiness, illiteracy, inadequate mathematical skills, personal appearance, and high influence from others (Baranauskienė, Ruškus [9]).

Frequently, they inadequately assess their capabilities and the labor market situation, leading to disappointment in their professional skills. This negatively affects their job readiness, employer attitudes, and generates emotional difficulties in integrating into the labor market. Individuals with mild intellectual disabilities are particularly sensitive to rejection by colleagues, often finding themselves in lower-paying jobs, which frequently places them at the brink of poverty. Young people with special educational needs often struggle significantly to adapt to the job market. As a result of unsuccessful careers, there is a risk of alcohol abuse, increasing dissatisfaction with their profession, work, and salary.

Often, individuals with special educational needs, unable to fulfill the roles expected of them by society and family, experience social exclusion, with social assistance becoming their only source of income, eventually leading to proposals to reside in a care home (Baranauskienė, Ruškus, [9]). In the book "The Importance of Decision-Making Skills in Career Development" (Hickson, Khemka [18], Khemka [24] discusses the teaching of decision-making skills to people with intellectual disabilities, which are crucial for better integration into the community.

Several theoretical approaches and methodologies are applied to the vocational training of young people with mild intellectual disabilities, emphasizing the importance of individualized learning, social skills development, and integration into the labor market. The authors explore various theoretical frameworks. The key theoretical models and methodologies can be identified as follows: *Social Education Theory*: This theory emphasizes the development of social skills necessary for successful integration into the labor market. Young people are taught communication, work ethics, collaboration, and conflict resolution skills. Practical situations and role-playing are often used to strengthen these skills (Bandura[10]; Feri & Maemonah[15]). *Ecological Systems Theory*: Based on Bronfenbrenner's ecological systems theory, the vocational training and transition of a young person into the labor market are understood as a complex process involving several interconnected systems: family, school, community, and employers. It is crucial that all these factors are aligned to ensure a smooth transition and professional readiness (Smedley & Syme, [28] *Competency Development Model*: This methodology focuses on developing practical skills and competencies necessary for specific professions.

Vocational training is organized to foster specific technical skills needed to perform the job while promoting independence and self-confidence (McClelland [25]). *Transition Theory*: This approach analyzes the transition from one educational environment to another as a dynamic process that requires planning and support. Transition theory posits that it is essential to prepare individualized plans that encompass both academic and professional goals, ensuring that young people are ready for practical work (Bridges & Mitchell, [12], Bridges & Bridges, [11]).

Job Skills Training Methodology: This method involves teaching young people specific job skills in real or simulated work conditions. Through practice, they gain experience that they can later apply in actual work settings. This method includes tools such as job shadowing, learning by doing, mentorship support, and feedback (Goldstein, [17], Ibrahim, Boerhannoeddin, Bakare, [19]). *Individualized Education Plan (IEP)*: This methodology is based on analyzing each student's personal needs and abilities to create a customized learning plan that includes both academic and vocational preparation. The IEP ensures that learning objectives align with the student's capabilities and future career aspirations.

The application of these theoretical models and methodologies allows for the effective preparation of young individuals with mild intellectual disabilities for transitioning into the labor market, helps them choose the right profession, and successfully integrate into society. The theory of social education encompasses various theories and perspectives aimed at understanding how individuals acquire social skills, values, norms, and behaviors through interaction with their environment, other people, and society. This theory is often associated with social learning theory but covers a broader range of socialization processes. One of the main authors of this theory, Bandura [10], formulated the social learning theory, which states that learning occurs through observation, imitation, and modeling. His concept of "modeling" demonstrates how people learn behaviors by observing others, not just through direct experience. A part of social learning examines how individuals learn by observing others' behavior, receiving feedback, and through social interaction. The process of socialization involves individuals learning and internalizing the culture, values, norms, and beliefs of society. Socialization occurs throughout life through family, school, community, media, and other social institutions. Socialization helps a person become a fully integrated member of society. Pass [27] argues that Jean Piaget and Lev Vygotsky contributed to the theory of social education through their research on cognitive development. These authors studied how children acquire and develop cognitive abilities through social interaction. Vygotsky emphasized that learning and cognition take place in a social context, where adults or peers help the child acquire new skills and knowledge. Kohlberg [22] developed the theory of moral development, describing how individuals learn moral norms and values through interaction with their environment. Kohlberg [22] claimed that moral development occurs in stages, which depend on social and cultural conditions. Erikson [13;14], in his theory of psychosocial development, highlighted how individuals form their identity throughout life through social interaction and experiences. His theory includes eight stages of development, each with its social challenges and crises, shaping the person's identity and social integration. Kalina, C., & Powell, K. C. [23] in their research present theories of social constructivism and argue that cognitive or individual constructivism is based on Piaget's theory, while social constructivism stems from Vygotsky's theory. The authors point out that the similarities include inquiry-based teaching methods. Proponents of this

approach emphasize that knowledge and reality are socially constructed through human interaction. Vygotsky and other supporters of social constructivism stress that learning occurs through collaboration with others rather than in isolation.

MATERIALS AND METHODS

Theoretical Analysis of Literature. This research is grounded in a theoretical analysis of relevant literature, focusing on career education and career planning for young adults with mild intellectual disabilities. The literature reviewed highlights the importance of providing tailored career guidance and planning to facilitate the transition of these individuals into the labor market. It also explores various social, educational, and psychological theories that address how individuals with intellectual disabilities acquire the skills necessary for career success and integration into society. The research is contextualized within the framework of social learning, cognitive development, and social constructivism theories, providing a foundation for understanding the unique challenges faced by this population in their professional lives.

Qualitative Research Methodology. The study employed a qualitative research methodology, specifically using semi-structured interviews and content analysis to gather and interpret data. This approach allowed for in-depth exploration of the experiences and perspectives of the participants, ensuring a nuanced understanding of their career paths and challenges. The participants included 12 young adults with mild intellectual disabilities, aged 21 to 29. Some of these participants were employed but not in professions aligned with their formal training, while others were engaged in simpler tasks that did not match their qualifications. The research was conducted in compliance with all ethical standards, ensuring the participants' rights, confidentiality, and informed consent were respected.

RESULTS

The study revealed several key findings related to career education and planning trends and activities within schools. Key results included: Career guidance and planning activities provided in schools played a significant role in shaping the participants' career paths, though many faced challenges in securing employment that aligned with their educational qualifications. A gap was identified between the training provided in school and the actual employment opportunities available to these individuals. Many participants ended up in jobs requiring fewer skills than those they were trained for. Social support from family, teachers, and peers was crucial in helping these individuals navigate career decisions and overcome employment challenges. The findings underscore the need for more tailored and ongoing career support, both during and after formal education, to better align the skills of young adults with mild intellectual disabilities with available job opportunities.

The analysis of career education and planning in schools revealed that many young individuals with mild intellectual disabilities did not receive adequate information on how to plan their careers or what professions might be suitable for them. Informants noted a lack of information regarding potential career paths after finishing school, which led to difficulties during the job search process: "...nobody told us about professions...", "...teachers didn't talk to us about careers during lessons, neither did our class teacher,"

"...nobody at school discussed careers with us, and I didn't know what I wanted to be when I grew up until after I finished school." The young people acknowledged that they did not make much personal effort to learn more about career options, but when faced with real-life situations, they realized how crucial this information was for planning their careers: "There were a lot of lessons at school, but I often skipped them, so I don't remember much, but nobody taught us how to find a job or choose a profession. It's very difficult because everywhere they ask for a resume, and I didn't know how to write one..."

The primary sources of information about career opportunities were friends and people in their immediate environment, such as grandparents and neighbors. Often, they learned by observing others at work: "...I learned about it by watching my neighbors build a house; that's when I realized I wanted to be a construction worker." A considerable amount of information was also gained through conversations with friends, discussing their parents' professions and activities. Media, such as television, served as another source where they could learn more about career possibilities. Extracurricular activities were also places where some information was obtained, but it was often insufficient and, for some, seemed like a meaningless way to spend time: "When I went to school, my parents made me join clubs, but I didn't like them. At least I got to meet my friends, and we would fool around during rehearsals."

It is important to note that when informants were asked to assess their career planning experiences, they frequently highlighted the negative experiences they had in school rather than directly addressing the question. This suggests that their negative experiences may have contributed to a lack of motivation to plan for their future: "We learned all kinds of subjects in school, but I really didn't like it there. It was very hard because I often didn't understand anything, and the teacher rarely helped. Most of them were angry and yelled at the whole class, calling us names, and I didn't want to do anything because it was even worse there..." Additionally, a lack of personal initiative and interest in the information provided at school did not facilitate consistent planning for their future prospects.

The study found that these young people struggled the most with academic subjects in school, and they learned about professions primarily from family members and neighbors. Very little or no information about careers was provided to them at school, leaving them unaware of the opportunities available and the choices they could make.

Analyzing the decision-making and independence experiences of young adults with mild intellectual disabilities in the context of personal career planning and decision-making processes reveals a tendency towards spontaneous behavior, often driven by previous experiences: "I decide everything very quickly and never ask anyone, even though I get into a lot of arguments afterward, but I don't care. I just can't think about something for long." For many of these young people, the lack of experience in making personal decisions during school becomes an obstacle when planning their future. They admit that it was much easier in school because decisions were likely made for them, "but now, when I have to decide something, it's really hard."

In many situations, decision-making depends heavily on external factors, particularly the influence of parents and friends. Often, young people delay making decisions until they receive advice or help on how to proceed. Decisions are frequently made only after listening to the opinions of friends or parents. In most cases, they avoid well-thought-out decisions due to fears about potential negative consequences, which they imagine would worsen their situation.

When decisions are made, they are often impulsive and resolute. The analysis highlights that once a decision is made, they are unwavering: "I decide, and that's it, no one will convince me otherwise." In summary, the past experiences in school where decisions were consistently made by others, combined with a tendency towards spontaneity and reliance on the opinions of others, limit the independence and autonomy of young adults with mild intellectual disabilities in decision-making. This becomes a significant and insurmountable challenge for them in the processes of career planning and development.

DISCUSSION

Each vocational training model for individuals with disabilities, despite its advantages and disadvantages, does not guarantee the successful professional integration of students with mild intellectual disabilities. One of the key conditions for a successful transition from school to the labor market for individuals with special educational needs is targeted career planning. The development of an individualized transition plan could help the young person, their family, and their teachers achieve common transition goals, the implementation of which would enable the young adults to become economically active citizens. Such a plan would ensure that the young people acquire the necessary professional preparation and skills that meet adult expectations and labor market requirements. Young adults with mild intellectual disabilities transitioning from school to the labor market face several key practical challenges that hinder their successful professional integration. Here are some of the main challenges:

Lack of appropriate job skills – Despite receiving education, young adults often lack sufficient practical skills required in the real labor market, which complicates their successful entry into the workplace.

Lack of self-esteem and confidence – Due to previous learning difficulties, young adults may lack confidence, leading to fears and hesitation when making career or job-related decisions.

Limited social support – A lack of adequate support from family or community often hinders a successful transition into the labor market. Parents and teachers may not provide the necessary guidance needed to meet the expectations of the labor market.

Employer attitudes and employment opportunities – Employers are often not adequately informed about the capabilities and potential of people with mild intellectual disabilities, which can reduce their employment opportunities.

Gaps in career planning – Career planning in schools does not always include an analysis of individual needs, which is necessary to help these young adults effectively transition into the labor market.

These challenges demonstrate that, to successfully integrate young adults with mild intellectual disabilities into professional life, it is essential to develop individualized transition plans and strengthen the involvement of both schools and families in the transition process.

CONCLUSION

Career Planning Deficiencies: The study revealed that young people with mild intellectual disabilities do not receive sufficient information about career planning in school. As a result, they face significant challenges in choosing a profession and establishing themselves in the labor market. This indicates that the current education system does not adequately meet the specific needs of these young people in terms of career choice.

Limited Information Sources: The primary sources of information about career opportunities were friends, family members, and people in their immediate environment, with the school's role in this area being very limited. This highlights the need to strengthen career education provided by schools to ensure that all students receive the necessary information and support.

Impact of Negative School Experience: The young people often experienced a negative school environment that not only hindered their learning process but also diminished their motivation to actively plan their careers. This underscores the need to improve the school atmosphere and teachers' attitudes to enhance student engagement and motivation.

Lack of Personal Initiative: The study participants acknowledged that they did not take enough initiative to learn more about career opportunities. This aspect emphasizes that in addition to school support, it is also important to cultivate students' independence and responsibility in their career planning.

Need for Specialized Education: The study revealed a clear need for specialized career education programs in schools, which could help young people better understand the world of professions and make informed decisions about their future. These programs should be integrated into the overall educational process and tailored to the needs of students with special needs.

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QUALITY OF LIFE OF UNIVERSITY STUDENTS WITH DISABILITIES: AN ECOSYSTEM PERSPECTIVE

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ABSTRACT

This article explores the quality of life (QoL) among university students with disabilities through the lens of Bio-ecological Systems Theory and its Process-Person-Context-Time (PPCT) model. This approach integrates insights from biological, psychological, and social sciences to examine the complex interactions between students and their environments, from microsystems to macrosystems. We clarify how environmental elements and individual traits influence students' experiences by concentrating on dynamic engagement and interaction processes throughout time. Building on Bronfenbrenner's work, we highlight the role of social support systems, academic validation, and quality interactions within educational settings. This study also reviews the historical evolution and empirical foundation of Bio-ecological Systems Theory, stressing its relevance to modern special education.

Keywords: Bio-ecological Systems Theory, Bronfenbrenner, Students with Disabilities, Quality of Life, PPCT

INTRODUCTION

Students navigate complex educational ecosystems that shape their college experiences and outcomes, with increasing focus on the quality of life (QoL) for students with disabilities. The Bio-ecological Systems Theory serves as a framework for understanding the intricate interactions between individuals and their environments. Bronfenbrenner (1994) emphasizes that the dynamic interplay between students and their contexts is crucial for educational development. According to Bronfenbrenner (1979, 1994), individuals actively engage in interconnected environments.

Bio-ecological Systems Theory posits that development is influenced by interactions across multiple environmental levels, from microsystems (e.g., family, educational institutions) to macrosystems (e.g., cultural contexts) (Bronfenbrenner, 1979; 1994). This framework allows for a comprehensive examination of factors affecting the QoL of university students with disabilities, identifying barriers and facilitators impacting their academic experiences. For example, faculty support can significantly influence student engagement (Patton, Renn, Guido, & Quaye, 2016). Moreover, context affects not only academic performance but also social interactions and personal development (Carter, 2017). Similarly, time influences experiences as historical and cultural factors shape educational environments (Bronfenbrenner, 1994).

Bronfenbrenner's PPCT model (1979, 1994) provides a multidimensional perspective on the QoL of university students with disabilities. *Process* involves interactions with families, peers, and educators (Patton et al., 2016); *Person* emphasizes the active role of students in their development (Bronfenbrenner & Ceci, 1994); *Context* considers various environmental influences (Carter, 2017); and *Time* focuses on developmental stages and significant changes (Bronfenbrenner, 1994).

This study aims to explore the QoL of university students with disabilities through the PPCT model, analyzing its historical development, empirical support, and practical implications for interventions.

METHODOLOGY

This study adopts a comprehensive methodology encompassing two main aspects. First, concerning the definitions and significance of QoL, it is grounded in the bioecological systems theory and its PPCT model. This framework emphasizes the complex interactions between environmental factors and individuals, providing a theoretical perspective for understanding the QoL of college students with disabilities. Second, regarding the definitions and characteristics of ecological systems, the study conducts a systematic review of relevant literature, integrating prior research findings to develop a holistic understanding of ecological systems theory and its application in the context of QoL research.

DEFINITIONS AND THE IMPORTANCE OF QUALITY OF LIFE

The World Health Organization (WHO) defines Quality of Life as "an individual's perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards, and concerns" (WHOQOL Group, 1995). This definition highlights QoL's subjective nature, encompassing both objective life circumstances and personal interpretations.

Besides, social relationships and environmental factors, including social support and access to resources, significantly influence QoL. For individuals with disabilities, QoL transcends traditional indicators like income, providing a more comprehensive view of satisfaction and happiness. This perspective is vital for shaping social policies, healthcare, and education aimed at enhancing their well-being (Schalock, Bonham, & Verdugo, 2008).

QoL assessments are essential for designing person-centered support services, allowing for tailored interventions that meet the unique needs of individuals with disabilities (Schalock et al., 2008). Policymakers also rely on QoL measures to inform social policies and improve accessibility, education, and community support for disabled individuals, enhancing their social participation (Costanza et al., 2007).

Moreover, QoL serves as a predictor of long-term outcomes like mental health and overall life satisfaction. Higher QoL levels correlate with reduced risks of depression and anxiety, which are often heightened by social isolation (Steptoe, Deaton, & Stone, 2015). By identifying barriers to inclusion and emphasizing equitable support services, prioritizing

QoL improvements can effectively address the challenges faced by individuals with disabilities, fostering a more supportive society.

CONCEPTS AND CHARACTERISTICS OF ECOLOGICAL SYSTEMS

Urie Bronfenbrenner's ecological approach (1977) redefined human development by incorporating external influences beyond the family, acknowledging that even indirect factors impact growth. His model, now called the bioecological model, has continued to evolve, integrating both genetic and environmental influences on development to understand the complex interactions between individual growth and the environments in which individuals exist (Bronfenbrenner & Ceci, 1994). According to Bronfenbrenner, this model is structured around two defining characteristics.

First, proximal processes as the engine of development. Throughout an individual's life course, particularly in the early developmental stages, human development is achieved through active and complex interactions of biological and psychological organisms with the people, objects, and symbols in their external environment. These interactions occur in a sustained, patterned manner, such as parent-child activities, peer interactions, play, and learning new skills (Bronfenbrenner & Morris, 2006). Continuous participation in these proximal processes enables individuals to develop their abilities, motivations, knowledge, and skills, highlighting the active role that individuals play in their own development.

Second, the sources of energy for the developmental engine. The form, strength, content, and direction of proximal processes affecting individual development are systematically influenced by multiple factors. These factors include the personal characteristics of the individual, the environment in which they exist (including both immediate and broader social and cultural contexts), and the temporal changes over their life history (Neal & Neal, 2013). Bronfenbrenner posits that an effective theory must be able to embody these defining characteristics within its research design, specifically manifested as the PPCT model. In this model, individual characteristics appear twice: first, as one of the four elements influencing the form, strength, content, and direction of proximal processes; and second, as developmental outcomes, emphasizing the dynamic interplay between the individual and their environment.

Bio-ecological Systems Theory primarily emphasizes influences at the environmental and systemic levels, placing less focus on the nuanced differences in individuals' subjective experiences. When examining the quality of life (QoL) of university students with disabilities, relying solely on environmental factors may fall short in capturing their genuine needs and personal experiences. Thus, a comprehensive understanding of their QoL requires attention to the interaction between individuals and their environments. Furthermore, the temporal dimension is a crucial aspect within Bio-ecological Systems Theory that must be considered. However, in practice, researchers often face difficulties in dynamically capturing changes in these factors—specifically, how to operationalize and measure such changes, and to analyze their long-term effects on the QoL of university

students with disabilities, which presents a significant challenge. In addition, the influence of the macrosystem on individual development is indirect and tends to unfold over extended periods. Establishing a meaningful connection between policy changes at the macro level and the specific experiences of students is also a complex task in this research.

THE ECOLOGICAL SYSTEM THEORY AND QUALITY OF LIFE

Figure 1 illustrates that an individual's quality of life is shaped by their multi-layered ecological systems. Combining insights from Bio-ecological Systems Theory and the PPCT model enables us to identify key factors at each level.

MICROSYSTEM

The focal individual engages in two distinct settings. The setting on the left features daily interactions with the individual's mother, father, and sibling, which we recognize as a *family microsystem*. On the right, interactions occur between the person, teacher, coach, and principal, classifying this as a *school microsystem*. Together, the family and school environments have long been acknowledged as essential microsystems that influence children's development (Bokhorst, Sumter, & Westenberg, 2010).

MESOSYSTEM

Given the context of cross-setting social interaction, it can be identified as a mesosystem. This social interaction occurs between participants in different settings that include the focal individual. In our example, *the family/university mesosystem* interaction illustrates this type of cross-setting social interaction. When the family actively participates in the individual's academic life—such as by communicating with teachers or engaging in school activities—these mesosystem connections can enhance the individual's adaptability in university settings and improve their quality of life.

EXOSYSTEM

The exosystem consists of the social interactions among three actors in the educational policy area: the superintendent, the mayor, and the principal. Although the child does not participate directly in this setting, they interact with its participants. This interaction is direct with the principal and indirect with the superintendent and the mayor through the principal. Therefore, we identify it as the *educational policy exosystem*. Educational research often explores how school administrators, government officials, and policymakers indirectly influence children's development. This, in turn, impacts the individual's learning conditions, social support, and overall quality of life.

MACROSYSTEM

The *cultural macrosystem* represents the broader cultural background that influences beliefs and norms within other systems. It is believed to capture macrosocial phenomena insofar as their effects are reflected in patterns of individuals' social interactions. This

cultural context affects quality of life by shaping lifestyle, value systems, and societal attitudes toward individuals with disabilities. For example, in cultures that highly value equality and inclusive education for people with disabilities, positive attitudes permeate across all system levels, enhancing individuals' social participation and self-esteem.

CHRONOSYSTEM

The chronosystem reflects changes in social interaction patterns over time and can also apply to our hypothetical example of the developing individual, including historical events as well as biological and physiological changes. These temporal factors influence the individual's life experiences and adaptation process. For instance, a person with a disability might experience changes in quality of life during significant transitions, such as entering or graduating from university. The chronosystem helps us understand how QoL evolves with developmental stages and shifts in the surrounding environment.

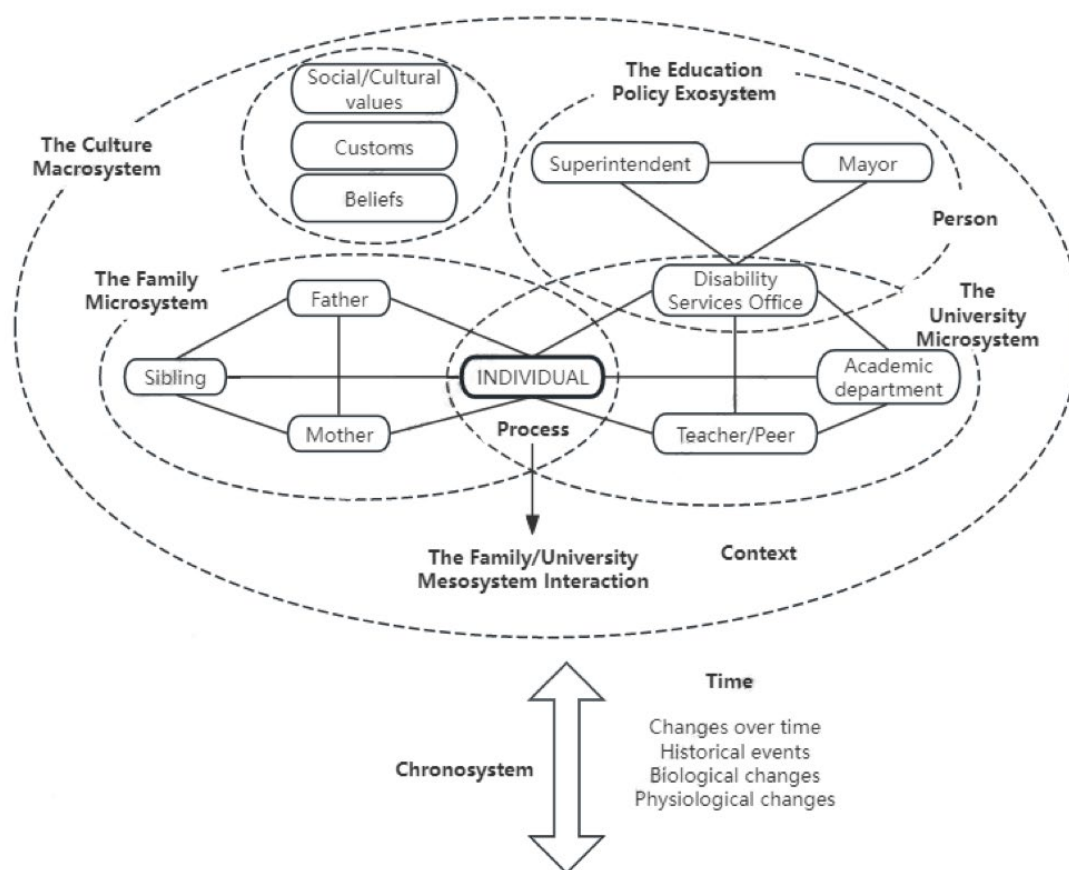


Figure 1. Bio-ecological Systems Theory model of QoL for University Students with Disabilities

METHODOLOGICAL ISSUES AND EMPIRICAL SUPPORTS

Research on the quality of life of university students with disabilities from an ecosystem perspective faces unique methodological challenges. A central challenge involves designing studies capable of capturing the intricate interactions between individuals and the multiple ecological systems that surround them, including family, peers, educational institutions, and broader social contexts. Traditional research methods, such as randomized controlled trials (RCTs), often isolate variables and fail to account for the dynamic and interdependent nature of these systems, lacking the flexibility required to address these complexities (Bronfenbrenner, 1979). To ensure ecological validity—meaning that research findings accurately reflect the real environments of students with disabilities—alternative approaches are necessary (Bronfenbrenner & Morris, 2006).

We adopt a constructivist approach that integrates multiple factors affecting students with disabilities based on PPCT model (Bronfenbrenner & Morris, 2006). To be specific, this approach allows for a comprehensive understanding of the interdependencies between individuals and their environments, including analyses of direct influences (e.g., accessibility measures in classrooms) and indirect influences (e.g., institutional policies and societal attitudes towards disability). This model provides an examination of the intricate ways in which diverse environmental factors collectively influence students' quality of life, focusing on the dynamic interplay between microsystems, mesosystems, exosystems, and macrosystems (Neal & Neal, 2013).

Empirical support for this approach is drawn from previous research on Bio-ecological Systems Theory, which has highlighted the importance of considering multiple environmental influences simultaneously (Rosa & Tudge, 2013). Studies have shown that factors such as family support, accessible campus facilities, peer relationships, and inclusive policies significantly impact the well-being and academic success of students with disabilities (Lombardi, Murray, & Kowitt, 2016). These findings emphasize that research design should focus on the diverse contexts that shape students' experiences rather than isolating these factors for methodological simplicity.

Furthermore, we leverage social network analysis methods to bring key constructs of the ecological model to life, specifically focusing on the interaction networks among students within the university setting. This approach allows for measuring the quality and frequency of social interactions, essential for understanding how support networks impact the quality of life of students with disabilities. Also, it identifies potential gaps or barriers within these networks that may limit students' access to resources and opportunities (Neal & Neal, 2013).

FUTURE DIRECTIONS

This study examines the quality of life of university students with disabilities from an ecosystem perspective, offering several future research directions. One potential area is exploring network-based approaches to understand how various systems influence students' lives, using social network analysis to map interactions and identify support

points or barriers (Neal & Neal, 2013). Another direction is investigating how specific university policies and practices, such as accessibility services and inclusive teaching, impact students' inclusion and well-being across different cultural contexts.

Longitudinal studies could provide insights into how students' interactions with their environments change over time, aligning with Bronfenbrenner's focus on developmental processes (Bronfenbrenner & Morris, 2006). Examining the role of digital environments and online social networks in shaping students' experiences is increasingly necessary, particularly in hybrid and online learning contexts. Finally, engaging students with disabilities as co-researchers can ensure their perspectives are central to the research, leading to more tailored and effective support systems.

CONCLUSION

This article revisits Bronfenbrenner's (1979) Bio-ecological Systems Theory, a cornerstone framework that has profoundly shaped developmental research, in conjunction with the PPCT model. Introduced more than four decades ago, Bronfenbrenner's theory sought to establish a comprehensive understanding of human development by considering the numerous systems that impact an individual's lived experiences, regardless of their proximity. While many of the concepts from this theory have now become widely accepted in QoL practices, they were revolutionary at the time of their inception, significantly transforming educators' approaches to special education and their analytical methods.

DECLARATION OF CONFLICTING INTERESTS

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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THE ART IN ENGINEERING

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ABSTRACT

Traditionally, engineering education teaches natural principles and technical procedures in order to yield reliable, predictable results. It is a highly cognitive activity. However, computer based technologies are reducing the need for engineers' routine work on well-defined tasks and are shifting focus to creating completely new products and services and novel solutions for "unsolvable" challenges. To utilize full potential of their creativity engineers need to learn how to think outside of the box, break rules, release fear of mistakes, discover joy in experimentation and also to better understand their customers, users. These traits are nurtured in artistic education and thus the question arises whether engineers would benefit from inclusion of art in their education. The existing research on this topic gives positive answers. However, in order to modernize curricula, besides changes in space, equipment, and financing, attitudes of teachers and students are important. In this paper the results of a brief, initial survey among 600+ students at the University of Zagreb's Faculty of Electrical Engineering and Computing are presented indicating that Generation Z freshmen and seniors are inclined to accept some art education in their curriculum.

Keywords: art, artistic education, engineering, engineering education, survey

INTRODUCTION

Engineering is highly cognitive activity, very structured, very analytical, repeatability is expected, predictability is expected. Emotions are not perceived to be important. Engineering education teaches principles and procedures to be followed, exactly and precisely. Breaking rules is, traditionally, not welcome.

Art is highly creative, typically less structured and analytical, with emphasis on synthesis. It intensively involves emotions. It is expected to produce unique, often unpredictable results. Breaking rules is normal, expected.

At the first glance, traditionally art and engineering seem to be quite opposite activities, and thus their educations. However, information and communication technologies are invading general, traditional engineering reducing the need for well defined, repeatable, labour intensive activities. Even improvements of existing product and services are experiencing high level of automation and less demand for engineers' work. Therefore engineering is shifting towards more creative activities, creating completely new artefacts, breakthroughs, genuinely novel approaches. Their main characteristic is creativity, the need to think outside of the box, often breaking the rules and high level of imagination. It also requires releasing the fear of mistakes and willingness to experiment and above all, to take risk. All these is more like artistic endeavour than traditional engineering.

Although research on potential benefits of including art in engineering education are not new [1], they often focused on benefits like improving spatial skills [2], visual representation [3] and similar skills [4].

But true leverage of artistic education is that it could help engineers in creative processes [5] by experiencing joy and benefits of experimentation by thinking out of the box, by breaking rules, reducing fear of mistakes, ignoring common wisdom of impossible [6].

Designing new products and services, creating novel solutions, tackling “unsolvable” problem, designing user interfaces and experience, debugging, educating both engineers and users would all benefit from engineers willing to risk, freeing their imagination and using their fundamental engineering skills to their full potential [7]. Understanding users and their experience using engineered products and services requires emotional involvement and empathy [8][9].

However the traditional engineering education is reflected not only in typical curriculum, but also in educational spaces, equipment, financing and graduation theses. The entrenched pure rationalism is not only in minds of teachers, but often students, too.

This paper researches the views of “Generation Z” [8] freshmen and seniors on the possibility to include artistic education within their engineering education.

MATERIALS AND METHODS

The survey has been conducted during the winter semester at the Faculty of Electrical Engineering and Computing of University of Zagreb in two groups of students: 650 freshmen and 91 seniors (2nd year graduate students). 517 freshmen and 87 seniors responded.

Survey was conducted at the end of a regular lecture. It was anonymous and students did not receive any credits for answering. Survey had five multiple choice questions about students’ attitudes towards art in engineering and engineering education and two multiple choice questions about their exposure to art education and artistic involvement. Questions were presented as PowerPoint slides on the projector screen. Students responded via Audience Interactivity Tool (audit.alti.online) using their smartphones. Students use this tool during their regular classes to respond and get credits being registered with their student numbers as well as to ask anonymous questions without any registration. Thus they knew how to use the tool and were confident that their answers are anonymous. The questions were:

1. Relationship between engineering and art
2. Importance of engineering and art for this world and its future
3. Art in engineering education
4. Art is important in engineering if and when ...
5. Would YOU like to receive some art education during your engineering studies?
6. Do you have any previous artistic education?
7. Does anyone in your family (parents, siblings, grandparents, somebody else important to you) have artistic education or is actively pursuing artistic activities?

RESULTS

For the question 1: “What is the relationship between engineering and art?” the following answers were offered:

- A. Engineering and art are completely different, no essential common points
- B. Artists frequently have to include some engineering in their work
- C. Engineering is supporting, enabling art
- D. Art is somewhat important in some types of engineering work
- E. Art is an important component of engineering work
- F. Engineering and art are in their core essence the same

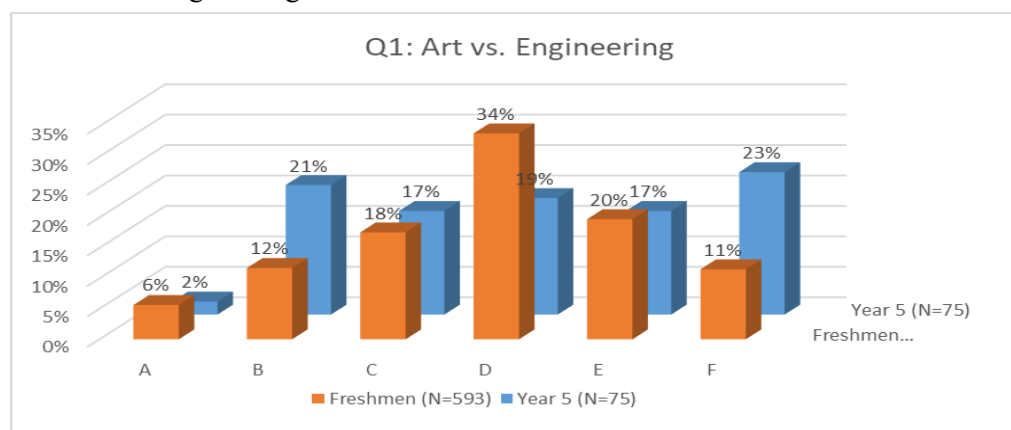


Figure 1: Results of answers to question 1

This offers the conclusion that majority of students perceive art to be important or related to engineering work.

For the question 2 “Importance of engineering and art for this world and its future?” the following answers were offered:

- A. Engineering is exclusively important
- B. Engineering is far more important than art
- C. Engineering is somewhat more important than art
- D. Engineering and art are equally important
- E. Art is somewhat more important than engineering
- F. Art is far more important than engineering
- G. Art is exclusively important

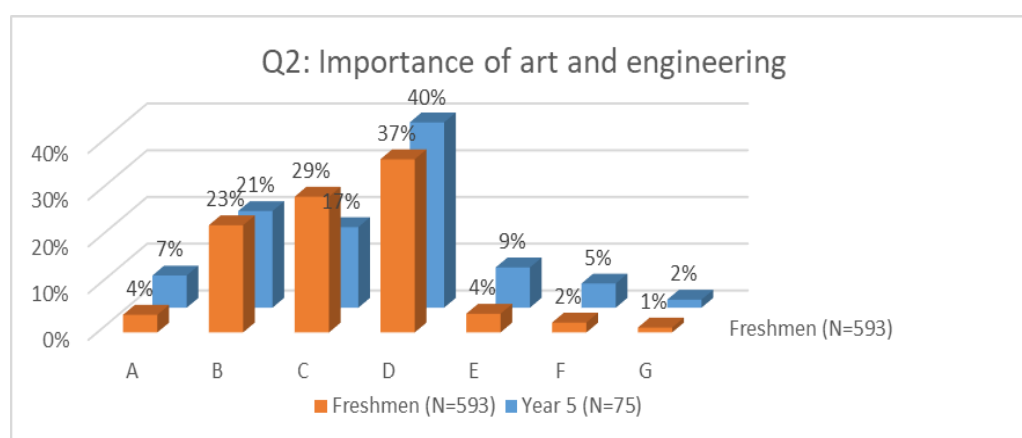


Figure 2: Results of answers to question 2

As expected from engineering students, about half in both cohorts perceives engineering to be the key for the world's future, but important is that about a third of freshmen and almost half of seniors perceive art to be equally important.

For the question 3 “What do you think, to what extent should art be included in the education of engineers?” the following answers were offered:

- A. There should be no art education in engineering studies
- B. There should be some art education in engineering studies
- C. There should be significant portion of art education in engineering studies
- D. Study programs should be offered to combine engineering and art equally

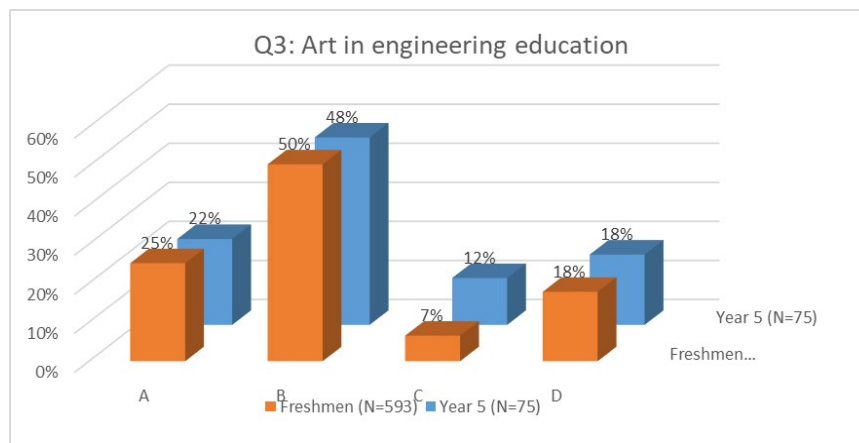


Figure 3: Results of answers to question 3

Half of students believe there should be some artistic education included in engineering studies and 18% believe a combined art and engineering studies should be offered.

For the question 4 “Art is important in engineering if and when.” the following answers were offered:

- A. Building user interfaces
- B. Designing products and solutions
- C. Identifying users' needs
- D. Managing engineering teams
- E. Educating engineers
- F. Educating users
- G. User support
- H. Maintenance
- I. Never

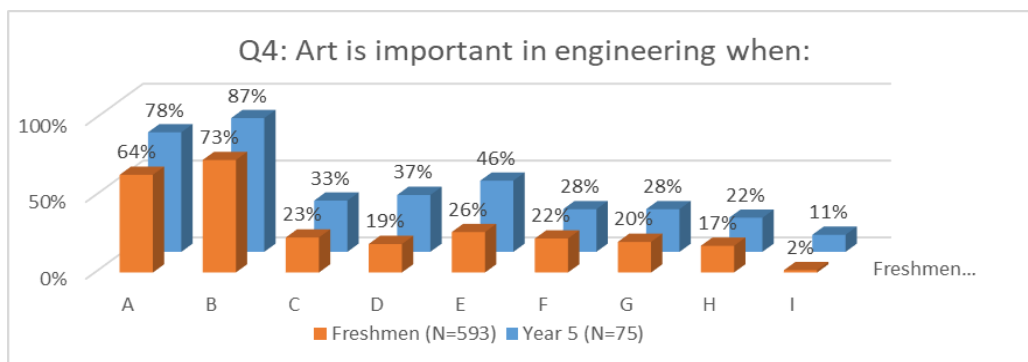


Figure 4: Results of answers to question 4

Large majority of students believe art is important in designing new products and services, while about two thirds art is important in designing user interfaces.

For the question 5 “Would you like to receive some art education during your engineering studies?” the following answers were offered:

- A. No, none at all.
- B. Yes, one course
- C. Yes, several courses

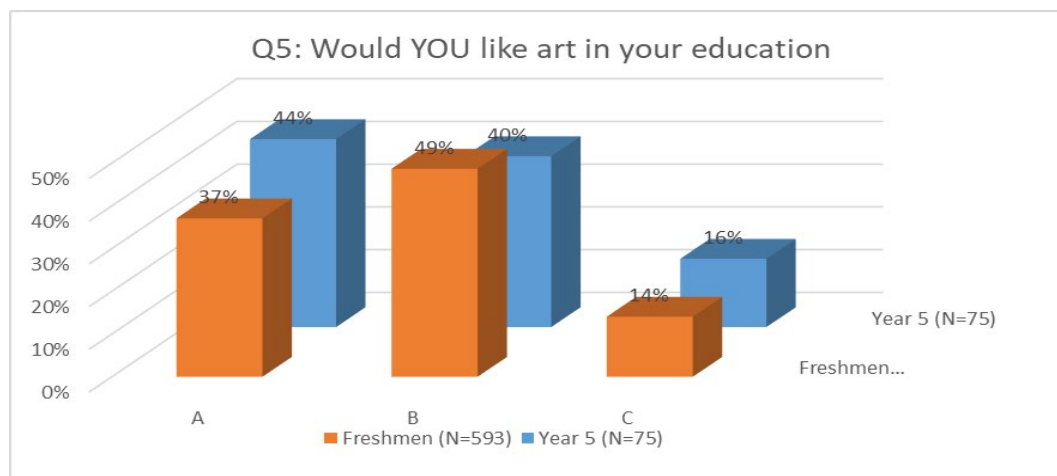


Figure 5: Results of answers to question 5

It can be concluded that more than half of students would like to have some artistic education included in their engineering education.

The survey wanted to have insight in previous students' exposure to art and artistic education and artistic activities. Thus two more questions were asked.

For the question 6 “Do you have any previous artistic education (including self education)?” the following answers were offered:

- A. None
- B. Music – playing instruments
- C. Music - singing
- D. Dance
- E. Painting, sculpting
- F. Photography
- G. Filmmaking (including videography)
- H. Literature writing
- I. Other

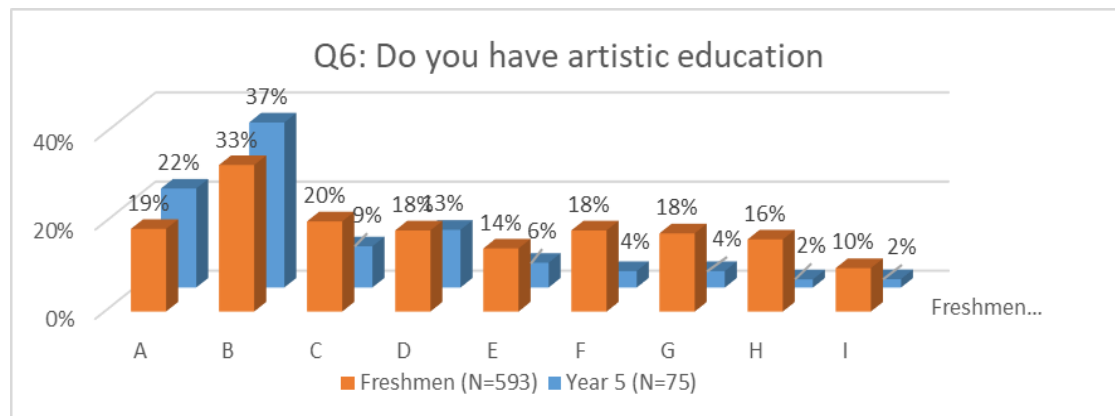


Figure 6: Results of answers to question 6

Only 20% of students did not have any artistic education. It should be noted that in Republic of Croatia music and painting education is included in primary education curricula.

For the question 7 “Does anyone in your family (parents, siblings, grandparents, somebody else important to you) have artistic education or is actively pursuing artistic activities” the following answers were offered:

- A. Parent
- B. Sibling
- C. Grandparent
- D. Somebody else
- E. Nobody

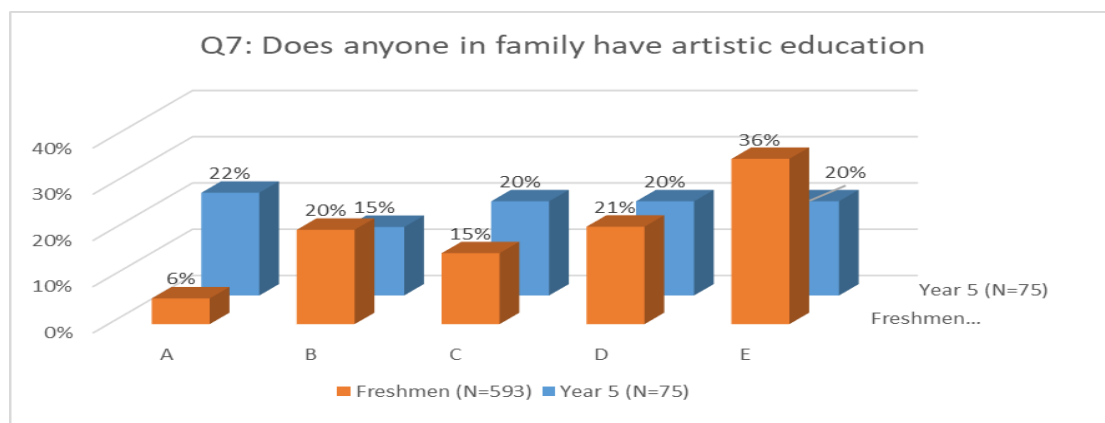


Figure 7: Results of answers to question 7

Two thirds of freshmen and 80% of seniors had influential person involved in art during their childhood.

DISCUSSION

The results of this survey suggest that more than half of students believe that art is important in engineering work. About half believe art is important for the future of the world, with expected prevalence to engineering. Half believe there should be art education in engineering education. Vast majority of students believe art is important in engineering when designing products and services and building user interfaces. Perception of importance of art in all areas increases in older students. More than half

would like to receive artistic education during their studies. 80% have some artistic education or activity and two thirds of freshmen and 80% of older students have an influential person involved in art. In general it can be concluded is that students of engineering, both freshmen and seniors recognize importance of art in engineering, engineering education and the world future.

This study did not research possible correlations between their attitudes and experiences in previous artistic education most of them received as well as mandatory artistic curricula in primary education, nor influences from their family and close persons involved with art. It can be also speculated that their positive attitudes toward arts may be due to high exposure they experience though modern media and technologies. Further insight in the desired type, method and intensity of artistic education majority expressed interest in, is needed and possible subject of future research.

In this survey a comparison between freshmen and senior students was possible, but a longitudinal study should be conducted in order to draw conclusions how their attitudes change along their education for engineering profession. This is especially important due to high speed of changes and novelties in technology and public media.

CONCLUSION

As engineers' tasks shift from routine predictable assignments to increasingly creative work a justifiable question is whether their education needs changes, too. Since creative skills are the core of artistic education, the idea to enrich engineering education with artistic education and work seems logical.

While changes in curriculum, workspace and equipment would be needed the greatest challenge are changes in attitudes in teachers and students.

This brief, initial survey at University of Zagreb's Faculty of Electrical Engineering and Computing indicates that Generation Z freshmen and seniors are inclined to accept including art in their education. A further study on types, methods, breadth and intensity of education that is both needed and would be accepted by students is welcomed.

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THE ETHICAL, PSYCHOLOGICAL, AND GENDER DIMENSIONS OF THE TEACHING PROFESSION

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ABSTRACT

Professional ethics consists of rules of conduct and prescribed deontological codes. If education is the basis of any human society, we will consider the teaching profession a very important construction of the social environment, normatively influenced by it. Social rules and expectations will be reflected in the behavior of teaching staff and will have a long-term influence on the evolution of society. For this reason, we consider it necessary to study the character traits of people who choose a teaching career. The results can predict subsequent behaviors and compliance with social norms and requirements influencing educational policies.

The study was conducted on a group of students from different specializations who intend to pursue a teaching career. Since the human being is multidimensional, to establish the psychological and social dimensions that make up the profile of future teachers, three types of tests were applied that evaluate personality traits, interest in the profession, and the hierarchy of professional values: The personality questionnaire with five factors (Big Five), the Professional Interests Questionnaire, and the Professional Values Questionnaire. These tests are part of the CAS psychological assessment platform of the Cognitrom company, which was data processed with.

The data processing results allowed highlighting of the dominant features of the people who chose the teaching career and highlighted social and gender stereotypes regarding the teaching profession. These results may predict an at least incipient relationship with ethics and professional deontology and may reflect the impact of public policies on the interests and axiological values of future teachers.

Keywords: didactic conduct, value dimensions, personality traits

INTRODUCTION

The teaching profession was considered a basic job necessary to build a healthy social system. The future of any society depends on the educational system, the teaching staff being a central element of the system.

The level of skills of the teaching staff is one of the most important factors that determine the quality of the teaching act reflected in the results obtained by the students. Studies have shown that student performance has improved significantly on international tests in countries that have implemented special public policies.

In Romania, the initial preparation for the teaching profession requires that students and

graduates of higher education complete the courses of a didactic master's degree with a duration of 2 years or psycho-pedagogical training programs of level I, respectively II, accredited according to the law. The university psycho-pedagogical training programs of level I, respectively II, and the didactic master's degree represent the training models for the teaching career of the simultaneous and consecutive type, frequently encountered in many European systems. Romania aims to strengthen the initial training of teachers. The pedagogical module, which was the initial training for the vast majority of teachers in schools, offers practical training and education that is considered limited because it lacks training in modern teaching techniques or inclusive pedagogy [5]. To overcome this challenge, the new legislative package stipulates that future teachers will be required to follow a mandatory teaching master's program.

Starting in 2025, the professional profile of the teaching profession will become mandatory, which describes the skills necessary for the teaching activity, adapted according to career stages and education level. It will establish the set of quality standards for the initial training and continuing professional development of teachers and provide guidance on career development. Previous assessments have shown that the certification process tends to assess theoretical knowledge without being a genuine measure of workplace competence [5]. The new legislative package stipulates that future teachers will be required to follow a mandatory teaching master's program. Students in these programs, as well as those pursuing double-major teaching degree programs, will receive a stipend equal to the net salary of beginning teachers. In addition, students enrolled in a teaching master's degree must complete a mandatory teaching internship and will benefit from mentoring. Studies in recent years show that the profession of teacher is no longer among the requests of young people. However, it continues to be chosen because of the prestige and satisfaction it brings. Very often, those who aspire to this profession come from families where intellectual activities are valued. It was also found that women are more attracted to this profession, the studies highlighting the possibility of emphasizing the expressive and affective dimensions of women so necessary in the interaction with students, but also with other social actors. Romanian society has registered important changes at the social level. Integrated in the European education space, Romania's new targets aim at creating resilient systems, open to inclusion.

At the end of 2023, the Education Law brought important changes to the teaching profession. The aim is to strengthen the initial training of teaching staff; therefore the new legislative package envisages training for the teaching profession through a compulsory didactic master's program, but also the completion of a compulsory teaching internship with mentoring support [4].

The prospective character of education orients us towards a permanent analysis and reporting of the purposes of pedagogical actions to the contents, their value essence, and their adjustment to the future. The prospective aspect helps to anticipate, and overcome difficult situations and design new, superior actions, and progress, compared to the existing ones. Teaching deontology is based on a system of rights, obligations, and responsibilities specific to the teaching staff both from a moral and legal point of view. The activity is regulated by the National Education Law, ROFUIP, Law 272/2004 on the protection and promotion of children's rights (republished in 2014), ministerial orders, methodologies, procedures, etc. [6].

Having a more or less prestigious social status, the teaching profession remains by its nature one of the most "evaluated" professions. The teacher is permanently subject to subjective value judgments (students, parents, colleagues, community), but also objective ones (inspections, final or degree exams). In this profession, perhaps more than in others, psychosocial knowledge and skills are as important as specialized ones. The personality of the teacher has a greater influence on the students than the knowledge taught by him. The person of the teacher exudes respect and fear, affection and adoration, sympathy or antipathy both through what he says, but especially through the way he says it, through attitudes and behavior, through the ideas he conveys, the teaching profession presupposing, above all, dedication, work and responsibility. For optimal functioning, organizations need a frame of reference (code of ethics) to guide their goals, actions and behaviors in balance with the social realities of the moment.

The existence of ethics as a field of reflection led to the emergence of social demands so that each field of activity has specific laws and regulations. Professional ethics establishes the practices, rights and duties of the members of a professional group, and criticizes and sanctions professional malpractices [1].

The duties of the teacher in the didactic activity are the subject of deontology, considered to be a branch of ethics. The code of ethics and professional deontology is part of the mechanisms aimed at ensuring quality at the institutional level and contributes to the improvement of the professional, moral and civic training process based on academic integrity. In Romania, the development of the code of ethics is done under the provisions of the Constitution and the legislation in the field of education and work, with respect for fundamental individual rights, but also with the requirements of the exercise of personal responsibilities provided for in the Education Law. The code of ethics is based on the following fundamental principles: academic freedom, competence and professionalism; integrity; intellectual honesty; collegiality and loyalty; justice and equity; responsibility

To distinguish it from other professions, the teaching profession requires continuous training, and being one of the most complex and challenging professions. In this context, the continuous increase in the quality of education and the professionalization of the teaching career through the implementation of professional standards is required. European policies highlight that education and professional training play a crucial role in solving many social, economic, demographic, environmental and technological difficulties, highlighting the importance of education and the role of the teacher in the achievement of a sustainable society, which is precisely why there is a need to develop active policies regarding training future teachers.

We believe that gender norms, which guide and constrain male and female behavior, are at the basis of the choice of profession. Having the same properties as social norms, gender norms impose what is acceptable or unacceptable at the behavioral level, so that men and women arrive in the teaching profession to learn and adopt the roles that are accepted in the organizational culture.

Each person's engagement with the gender system is lifelong, through social learning, social interactions, and social performance. Young adolescents' increasing ability to engage in social interactions with a growing social network also contributes to reinforcing the role that socialization plays in shaping their gender beliefs [2].

While gender norms are internalized and enforced throughout life, research suggests an intensification in early adolescence [3], marked by an expansion of young people's ability to adapt and engage in a variety of social interactions, although still dependent on the knowledge, power and resources of others. Such interactions are critical to how individuals construct their belief systems that, in turn, inform their behavior and self-understanding as emerging adults.

The teaching profession is a noble profession, which must be regarded by the community and the entire society with responsibility and trust, requiring high standards of professionalism. As a result, the teaching staff accepts on the one hand the public trust, and on the other hand the responsibility of carrying out professional activity and career development according to the highest possible degree of ethical conduct. The professional conduct of the staff of educational institutions is guided by a system of values that prioritize the social role of the teaching staff: the primacy of the public interest, ensuring equality, professionalism, efficiency and conscientiousness, moral and professional integrity, impartiality, objectivity, transparency, non-discrimination, moral, social and professional responsibility, self-requirement.

MATERIALS AND METHODS

Identifying the dimensions of teaching behavior is an important activity in the training and preparation of future teachers. We have in mind a system of behaviors and attitudes that will allow future teachers to carry out an effective activities within the limits of academic ethics. Our study aimed to establish the personality factors, gender stereotypes and value dimensions involved in the vocational orientation of students opting for a teaching career.

The research focused on the following specific objectives:

1. Assessment of dominant types of professional interests.
2. Determining the level of intensity of aspirations for students enrolled in the psychopedagogical training program.
3. Identifying the personality traits of young people who opted for a teaching career.
4. Establishing the value system that determines the choice of teaching career.

We started from the hypothesis that vocational choices are an expression of personality, and work environments, like human personalities, can be structured into well-defined and determined categories. The decision regarding the choice of a teaching career depends on certain personality traits and compliance with gender norms. We believe that there is a positive correlation between personality traits and young people's aspirations. Rogers highlighted how people and especially young people (students) tend to choose careers that correspond to self-images they would like to have and the kind of person they would like to be. Differential psychology shows that interests vary according to individuals, having both individual and social causes. The most obvious interests are found in the sphere of aspirations and professional choice. The level of aspiration refers to the level that an individual wants and hopes to reach, either in carrying out a task or in a field related to his entire existence, such as, for example, his profession. Values are considered standards or criteria that guide actions and choices and have a direct effect on behavior, attitudes, and perceptions.

Several 100 subjects participated in the study, students of the UOC, who follow psychopedagogical training courses to obtain the skills of the teaching profession, years I, II, and III from different specializations. The choice of subjects was made by invitation to participate, and participation was voluntary. The research stopped at the age period of 20-25 years, the period of transit to the age of youth.

Today's youth is characterized by special attention paid to social and political life as well as by integration into the profession.

The social and political upheavals and the frequent economic incertitudes in the contemporary world increase the difficulties faced by the youth and erode some of the aspirations and mentalities formed during adolescence.

The characteristics of the group of subjects can be seen in the fig. 1.

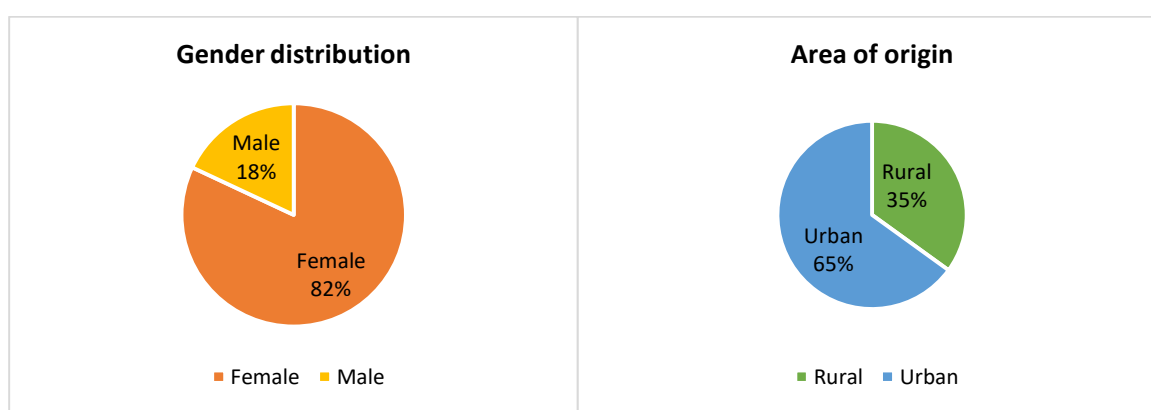


Fig.1 Gender distribution and area of origin of subjects

The characteristics of the group of subjects can be seen in the following graphs. We can see a large number of women, this being explained by the gender stereotypes that tend to consider the teaching profession more suitable for women than men. We can also observe a greater number of subjects from the urban area, 65%. The city offers several advantages to the teaching profession, therefore this profession is better represented socially.

The following tools were used in the research:

-The 5-factor Personality Questionnaire (CP5F Questionnaire) is intended to evaluate the five superfactors of the Big Five model (Extraversion, Emotional Stability, Conscientiousness, Kindness, and Autonomy).

-The Professional Interests Questionnaire with the help of which 6 personality types can be identified: realist, investigator, artist, sociable, enterprising, and conventional.

-The Work Values Inventory measures nine personal values that may be relevant for students' career guidance and counseling. The inventory consists of 45 items, evenly distributed in 15 scales. Each scale assesses a professional value: altruism, aesthetic sense, creativity, intellectual stimulation, objective achievement, independence, prestige, leadership of others, material advantages, safety, atmosphere, relations with superiors, relations with colleagues, lifestyle, and variety.

RESULTS

Analyzing the results of the CP5F questionnaire (fig.2), we observe that the first three dimensions in descending order of scores are: conscientiousness (56 %) kindness 55.35% and extraversion (48.15%).

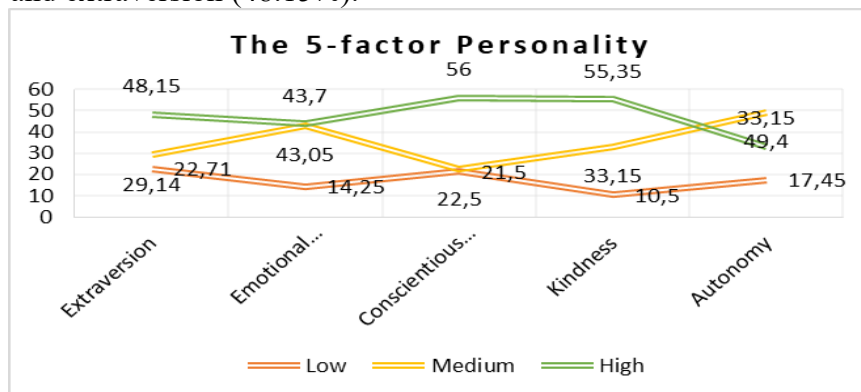


Fig. 2: The results of the CP5F questionnaire

In the results of The Professional Interests Questionnaire, it can be observed that the predominant type of personality is Social (S=29%), then Artistic (A=25%), Investigator (I=24%), Realist (R=9%), Enterprising (E=7%) and Conventional (C=6%).

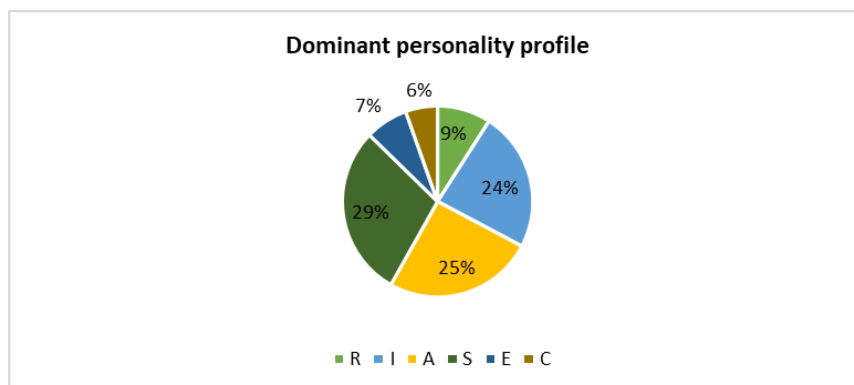


Fig. 3: Dominant personality profile

The last dimension in our analysis, the axiological dimension, is reflected in the following graph (fig.4).

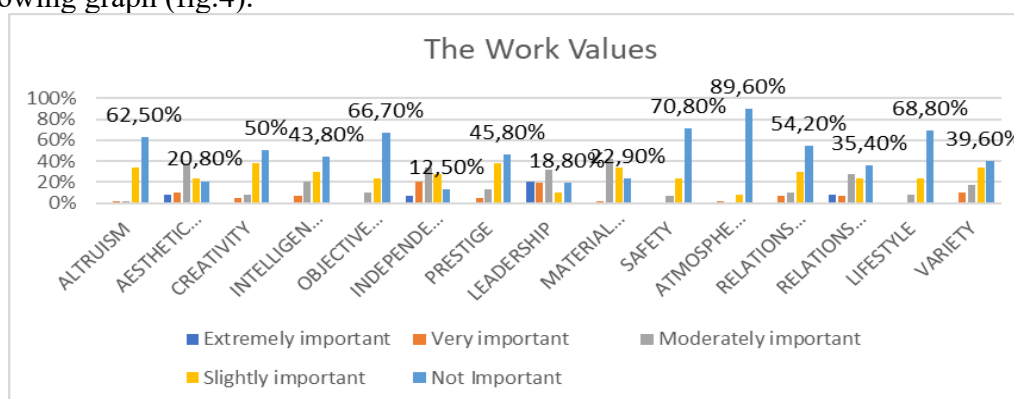


Fig. 4: The results of the Work Values Inventory

Analyzing the values underlying the choice of a teaching career, the first four identified values are in order: work environment (89,60%), safety 70,80%, lifestyle 68,80% and objective success 66,70%.

DISCUSSION

The teacher's personality is an interpersonal system, it exists only through his social interactions with others. Considering the object of activity of the profession for which they are preparing, but also the specifics of the future profession, we can consider the following:

- conscientiousness shows us rigor, exactingness and meticulousness in carrying out tasks. We can consider that this dimension is closely related to compliance with social and professional norms and values, through awareness and acceptance. The didactic activity requires consistency and demands the quality of the work.

- kindness shows us the readiness of the subjects to establish positive relations with other participants in social life. The high score, 55.35%, demonstrates dominant acceptance, gentleness and politeness, goodwill. We consider these attributes very valuable for the didactic activity that involves permanent and diverse relationships with those around us.

- extraversion is an important element of personality that supports the achievement of increased performance in activities. Those characterized by this dimension manage to communicate without difficulty, easily establish relationships, and show openness. We believe that the didactic activity requires the acceptance of change, the elements of novelty, and orientation towards others.

The lower scores obtained on emotional stability and autonomy can be explained by the age of the participants and their social status, still dependent on their parents. Those who belong to this type, are used to doing safe things, have verbal and interpersonal skills, are socially oriented, and accept feminine impulses. Their preferences go towards those activities that involve information, training, development, and care for other people.

Acquire skills in establishing a good relationship with other people. A high score also registers the artistic (aesthetic) type. Subjects prefer indirect personal relationships, through self-expression specific to the artistic environment. Preferences are focused on unstructured activities that involve manipulating materials to create new artistic forms. We can consider the didactic activity as a form of artistic manifestation because it allows the teacher to develop a personal, original pedagogical approach. And the realistic-investigative type is present in the identification types. He shows task orientation, the ability to analyze problematic situations, and anchoring in reality.

On the other hand, students from the human profile obtained higher scores than students from the real profile in S (social interests) and A (artistic interests), which means that they are interested in activities that involve both interpersonal relationships and creativity and the latter's freedom of expression. We did not obtain significant differences in I (intellectual interests) and E (entrepreneurial interests).

The data showed us a balance in the answers recorded in the investigation of the inventory of professional values among all subjects, the emphasis being on the workplace climate (comfort, relations with superiors, relations with colleagues) and on

the lifestyle (healthy, balanced, etc.). We believe that the subjects tend to aspire to carry out the didactic activity in optimal conditions, cleanliness and comfort. The work environment positively influences people by giving them more confidence, security, and respect from the employer, which leads to the need for love and belonging. The formation of value systems and their transposition in educational practice is closely related to self-esteem. Attempting self-improvement can prove a difficult process for an individual with a weak personality, especially in a profession where excellence is achieved. High goals in the professional field can only be achieved by people with strong self-confidence, bringing benefits and increasing self-confidence.

CONCLUSION

The personality factors represent the cornerstone of each individual, determining their behavior, attitude, and the way they look at themselves, others, and the surrounding reality. It is easy to understand that the dominant personality factors also affect interests, of any kind, not only professional, and ultimately guide the individual in his important life choices. Personality traits play a significant role in the professional results obtained by them, influencing the size of the performance. The highlighted professional values show the level of aspiration, expectations, goals, and claims of a teacher regarding his future achievement in the teaching career. The attitudes and interests of a teacher are strongly influenced by the environment through the situations arising in the social and family environment.

The ethics of the teaching profession require that, in the optimal functioning of the profession, it should be adopted a minimum set of moral requirements for collective activity to ensure the integration of members into collective life and, if necessary, correcting those inappropriate behaviors times, inconsistent with the code of ethics of the profession

The research allowed us to determine the dimensions that make up the profile of students who opt for the teaching career and also to determine to what extent they correlate with the ethical and deontological aspects of the profession.

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THE PLAYER'S TECHNICAL-TACTICAL SKILLS AT THE JUNIOR B TEAM LEVEL (16–17 YEARS OLD)

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ABSTRACT

One of the motivations for selecting this issue was the ongoing development of the training approach, particularly at the technical-tactical component level, which was supported by the underwhelming results of the Romanian football teams abroad. In this way, by endorsing specific technical-tactical models that aid Romanian football teams in playing their games more effectively, our approach also serves to increase the value level.

Exploratory research was used to support our examination of the technical-tactical behavior of a junior B football club in Romania. From this research, we were able to extract a number of pieces of data that would be used in the creation of game models.

In order to examine areas of behavioral evolution, efficiency, and performance impact, the article set out to investigate and identify organizational trends at the technical-tactical level of junior B teams. These crucial details and information were kept in order to formulate some suggestions and recommendations, which marks a significant advancement in the creation of models for collective behavior that are technical-tactical throughout both the assault and defense phases.

Keywords: training, efficiency, performance, defense phases

INTRODUCTION

Thanks to increasingly complex training techniques based on the contributions of general and specialized sciences, football—a sport that has a big impact on physical activity—has developed to a high degree of development (biomechanics, physiology, and biology) [3]. When we monitor the problems with this game from a performance standpoint, we observe an increasing pattern of professional worries concerning younger players and kids. The evolution of football provides a special context for the anticipation of junior models [2]. There was conflict between attack and defense, which altered the rules and created a new style of play. As a result, modifications have been made to both the actual training itself and the structure and content of the instructional-educational process as a whole. It was a strategy and tactic driven by the need to practice a logical game without chance or risk [6].

Athletes' structural makeup and the highest level of motor proficiency resulting from the appropriate development of both basic and specialized motor abilities are two criteria that determine exceptional performance [4].

Football transcends all boundaries of culture, society, politics, geography, and religion. It helps people connect with one another and provides a variety of forms of satisfaction in various contexts, including the athlete's enjoyment of the game, the spectator's delight in experiencing the intensity of the match, and the expert's passion and interest in conducting a thorough, scientific analysis of each stage that is played out [2].

Football has been given a special status due to the significance that society places on this phenomenon, which has caused it to evolve and increased concern from experts for the ongoing enhancement of the caliber of the training process [8]. Football is becoming a more and more tactical game at the performance level. The match between the teams is a mental duel between two different ways of thinking, preparing, and philosophizing; it's like a game of chess where the teams plan their moves well in advance [7].

One of the reasons this issue was chosen was the ongoing development of training technique, particularly at the technical-tactical component level, which was supported by the underwhelming external performances of Romanian football teams.

In this way, by endorsing specific technical-tactical models that aid Romanian football teams in playing their games more effectively, our approach also serves to increase the value level [5].

Exploratory research was used to support our examination regarding the technical-tactical behavior of a junior B football club in Romania. From this research, we were able to extract a number of pieces of data that would be used in the creation of game models.

We conducted a comparison analysis between teams in order to highlight the differences or similarities that exist in this particular game component. Our goal was to identify the primary factors that contribute to the Romanian club teams' lower performance.

Our research's application extended beyond behavioral analysis and the determination of the underlying causes of the Romanian teams' low potential expression. In order to investigate and pinpoint operational trends at the technical-tactical level of junior B teams, our research used a methodology that allowed us to investigate potential areas of behavioral evolution, efficiency, and performance impact. These crucial details and information were kept in order to formulate some suggestions and recommendations, which marks a significant advancement in the creation of models for collective behavior that are technical-tactical throughout both the assault and defense phases.

The promotion of various approaches, strategies, and tools for analyzing technical-tactical behavior—aspects crucial to raising performance levels—gives this work its usefulness [1].

In addition to having many other skills, a coach in today's football environment must also be a skilled analyst with a keen eye for detail and the ability to diagnose and assess the game. Improved knowledge of the phenomena, its explanation, and the presentation of reasons in favor of the aforementioned were also established with the intention of making the Romanian teams' football matches more accessible, usable, and beneficial [6].

MATERIALS AND METHODS

The goal of the work is to develop innovative techniques and tailored training programs that will enable midfielders to learn particular mechanisms during training that can be used with optimal efficiency in the game.

In football, everything can be improved, particularly if a player possesses certain skills and abilities. This is especially true when there is genuine drive for both the player and the coach to perform well and behave sportsmanlike.

An individual training program can be created with the best outcomes if the technical data about the midfielders is accurate and objective and the players' details are as detailed as possible.

Eliminating individual errors that regularly occur in games and boosting midfielders' effectiveness through active participation in the team's tactical planning and automatisms are two key benefits of differentiation, both as a concept and as a strategy.

The development of all training components—technical, tactical, theoretical, mental, and physical—defines modern performance football. The only sport where individual improvisation may become collective is football.

The following training techniques are used in the yearly training plan:

We shall employ the conventional training approach, which entails training separately for anthropometric, metric, physical, and technical characteristics, during the pre-competitive phases.

The drills listed below were chosen based on the training session; if the central midfield players used two of them in each training session, there might be over 100 distinct training sessions.

However, depending on the goals of the team coach, such as coaching aggressive or defensive play in possession versus out of possession, some of the most play-related drills can also be used in different ways.

Important training concepts are deconstructed to illustrate the various applications for every activity.

Exercise no. 1. General heating of the property:

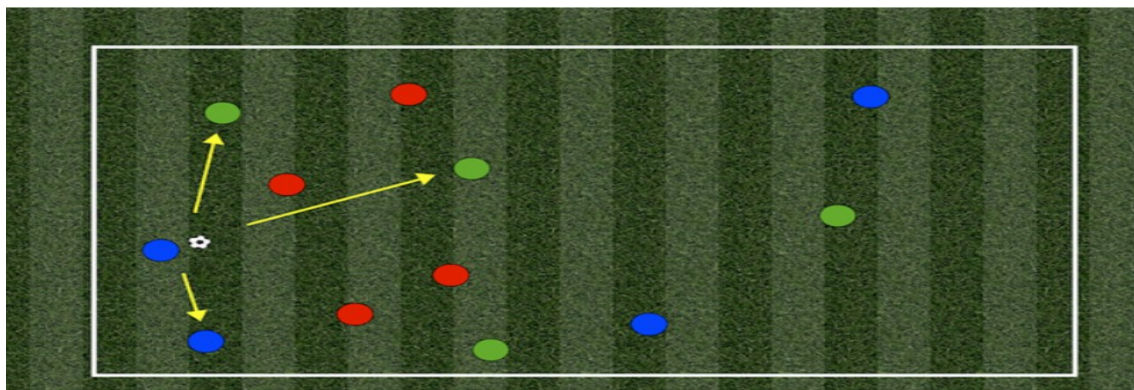


Figure 1 Exercise no. 1

Exercise no. 2. Possession and switch heating:

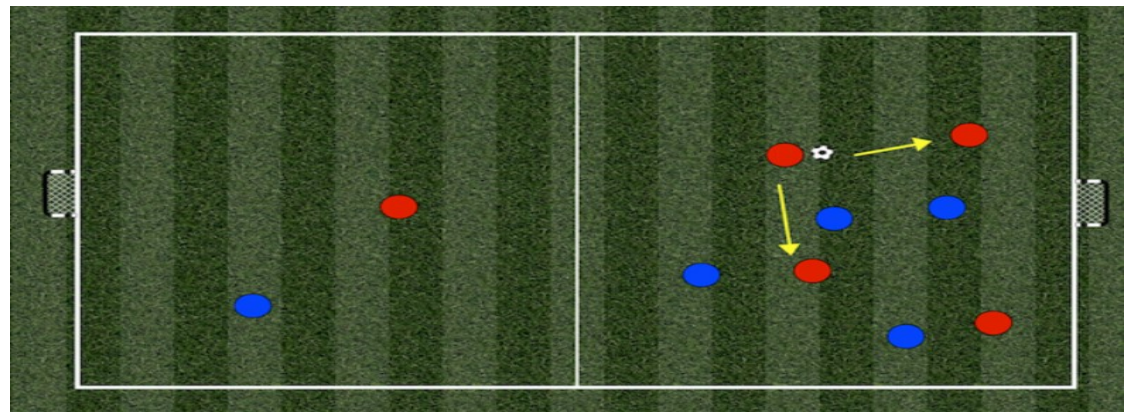


Figure 2 Exercise no. 2

Exercise no. 3. Form of heating:

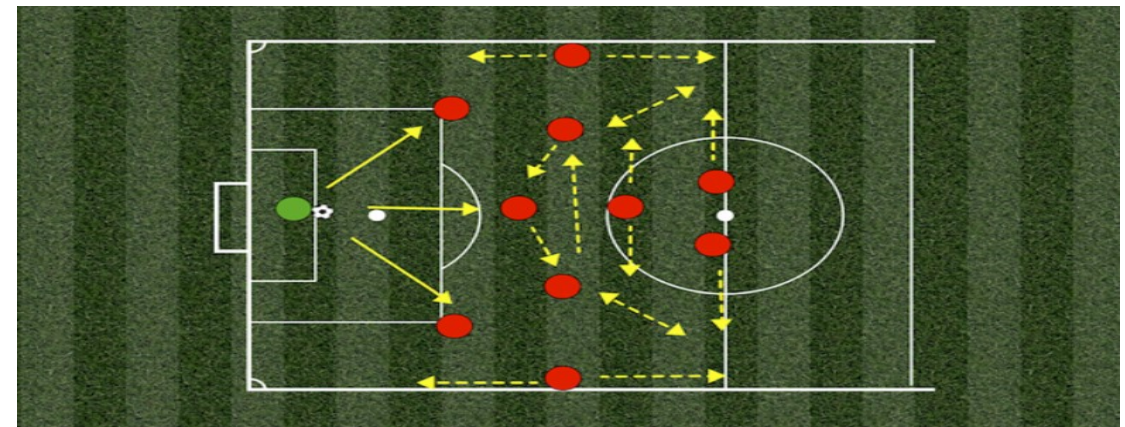


Figure 3 Exercise no. 3

RESULTS

Data were recorded at the time of each test and recorded as follows:

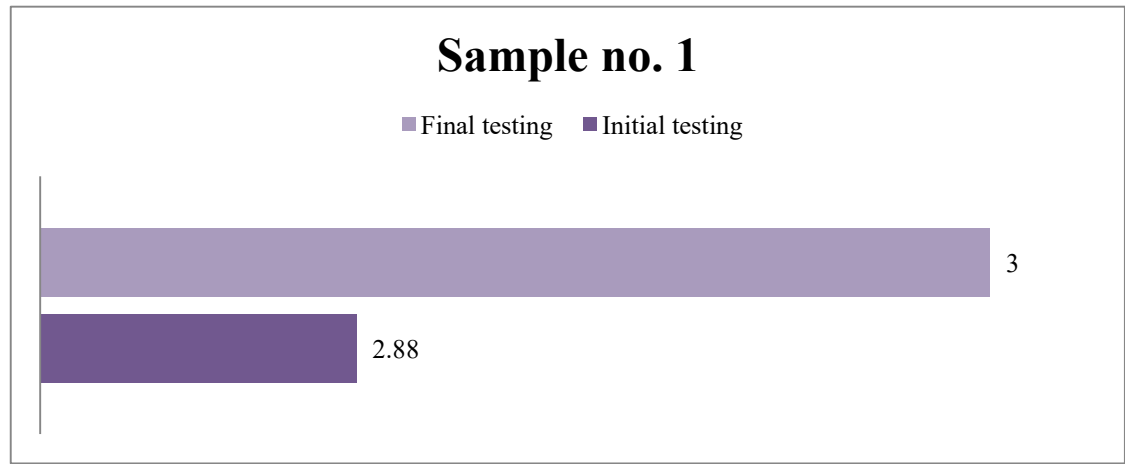


Figure 4 Comparative analysis of the initial and final tests of sample no. 1

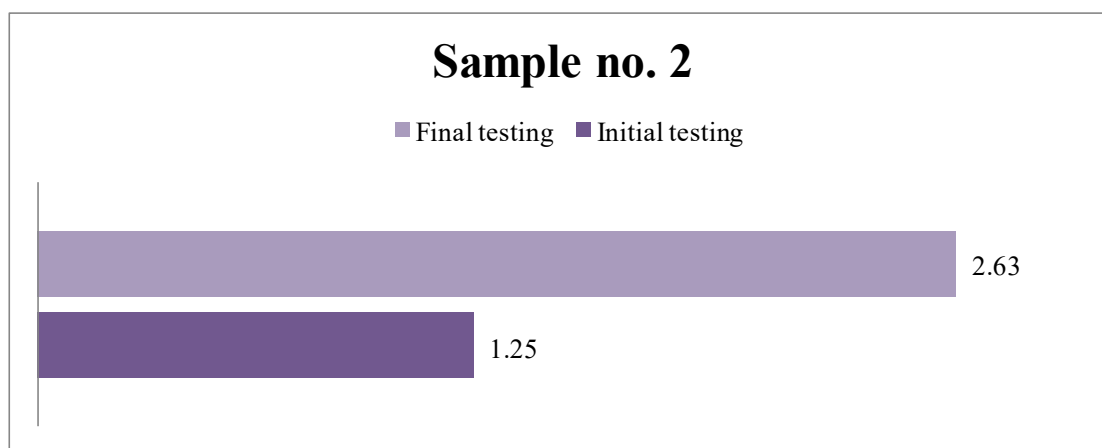


Figure 5 Comparative analysis of the initial and final tests of sample no. 2

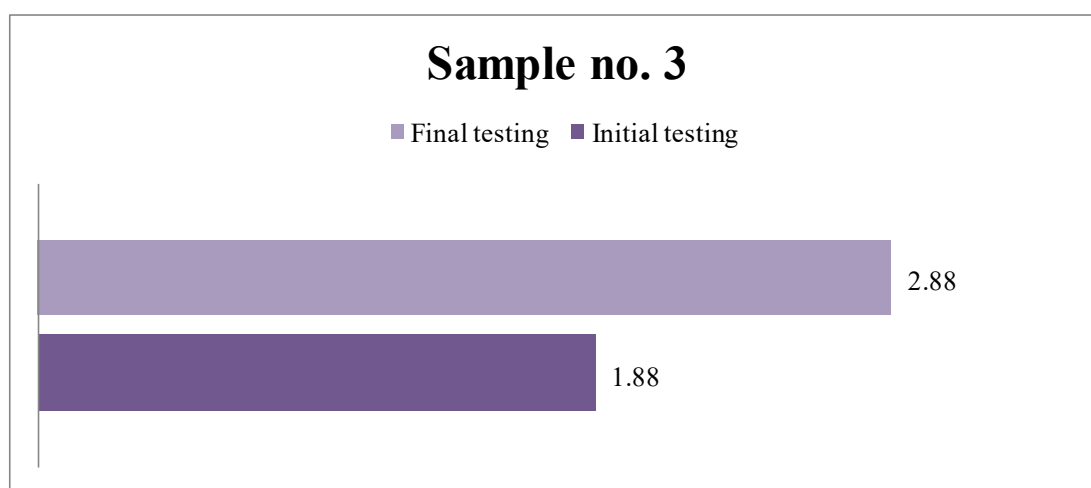


Figure 6 Comparative analysis of the initial and final tests of sample no. 3

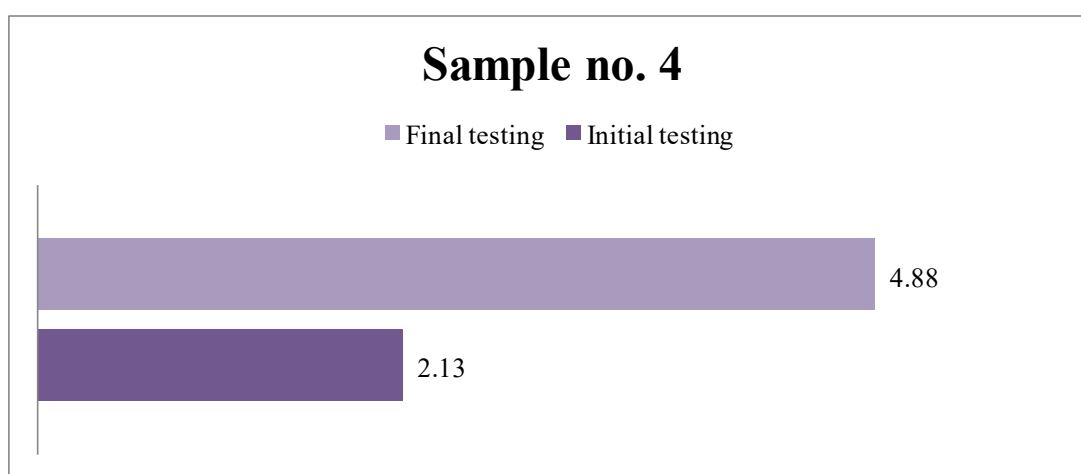


Figure 7 Comparative analysis of the initial and final tests of sample no. 4

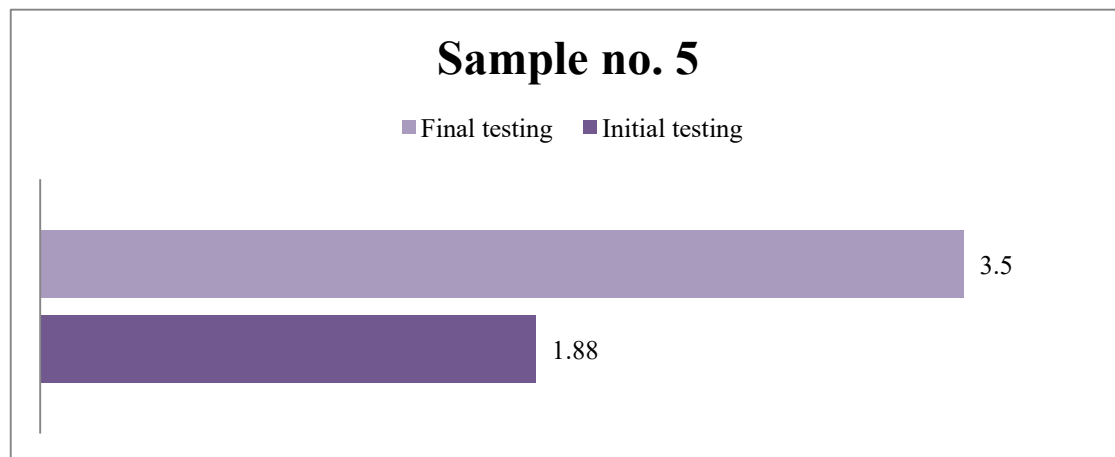


Figure 8 Comparative analysis of the initial and final tests of sample no. 5

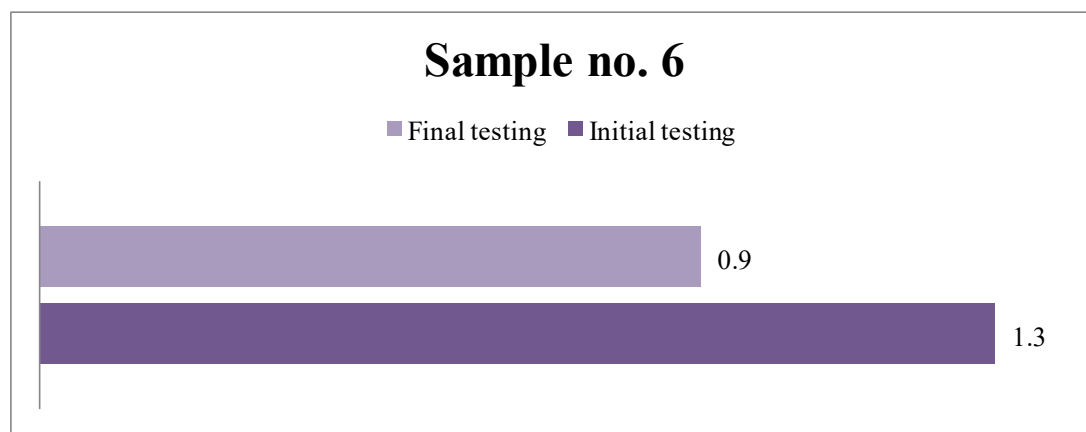


Figure 9 Comparative analysis of the initial and final tests of sample no. 6

DISCUSSION

For young soccer players, a long-term training program should emphasize the development of sportsmanship, the adaptation of various functional systems to training as well as competitive stimuli, and the inclusion of age ranges that are optimal for various phases of athletic advancement. It should also consider the peculiarities of football as a game. [2]

To fully realize athletes' natural inclinations and ensure that they reach the highest level of sports within an age range that best suits their demonstration, long-term training plans for junior B football players must be based on patterns as well as principles of establishing the highest standards in competition.

Building motor skills that promote physical activity for the well-being of the personality and fostering a competitive atmosphere that instills values to attain football performance are the two main goals of training [4].

In terms of how technical procedures are conducted, all sports, including football, are "situational" sports [7].

CONCLUSION

There is relatively little actual opportunity to observe the technical-tactical training of junior B teams. These trainings are "real secrets" that are fiercely guarded and are only accessible to specialists and the general public [1].

Since "open to the public" training activities mostly consist of physical training sessions, assessments, or games with a recovery theme, they are not pertinent to the points addressed [5].

The dearth of reflection on the analysis of technical-tactical conduct in the regional specialist literature is another factor that motivated me to pursue this research issue. The present context dictates that identifying feasible approaches for technical-tactical analysis, prioritizing crucial elements, conducting comparative analysis, and merging qualitative and quantitative research will yield valuable insights and enhance the work's degree of utility and relevance.

As a result, we started our work by researching and gathering data regarding the theoretical ideas and concepts applied to the subject under discussion.

The last tests were used to wrap up the experiment. Using the particular instruments of our study, the acquired results will be examined and evaluated, with the theoretical framework providing assistance.

Based on these factors and the research that was done, we were able to draw the following conclusions:

For sample no. 1, there is a 0.12 successful action difference between the arithmetic mean determined after the application of the initial test and that of the final test after data collection, analysis, and interpretation.

For sample no. 2: After the data was gathered, examined, and interpreted from the administered tests, a 1.38 successful action difference was noted between the arithmetic mean that was determined by utilizing the initial test and that of the final test.

For sample no. 3, there is a difference of 1.00 successful actions between the arithmetic mean derived after applying the initial test and that of the final test, as a result of data collection, analysis, and interpretation from the applied tests.

For sample no. 4, the arithmetic mean computed after applying the initial test and that of the final test varied by 2.75 successful actions after the data was collected, analyzed, and interpreted from the applied tests.

Regarding sample no. 5, there is a 1.62 successful action difference between the arithmetic mean derived after the initial test and that of the final test after data collection, analysis, and interpretation have been completed.

For sample no. 6, the arithmetic mean computed after applying the initial test and that of the final test differ by 1.37 successful actions after the data was collected, analyzed, and interpreted from the applied tests.

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THE ROLE OF BLENDED LEARNING IN INCREASING STUDENTS' EMPLOYABILITY

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ABSTRACT

The swift evolution of education, catalyzed by the global pandemic, has driven the infusion of advanced technologies into higher education. As student expectations evolve amid global trends, a paradigm shift in pedagogical strategies is underway. This paper explores the realm of international business education and investigates the influence of Blended Learning in International Contexts (BLIC) on increasing students' employability. This study analyzes the motivating factors propelling student participation in virtual collaborations across international management, strategic management, and cross-cultural management disciplines, spanning diverse countries and business schools.

Keywords: Blended Learning, Student Employability, Global Virtual Teams, Business Education

INTRODUCTION

The dynamic transformation of education, accelerated by the global pandemic, has compelled the integration of cutting-edge technologies into higher education. This paper probes the transformative impact of Blended Learning in International Contexts (BLIC) on student employability within international business and management courses. The emergence of global virtual teams (GVTs) within experiential learning models has become a vital catalyst, fostering cross-border collaboration. This study sheds light on the drivers prompting students across diverse business schools to participate actively in virtual cooperation, particularly within the international management domain.

The rapid evolution of education, catalyzed by the unprecedented challenges posed by the global pandemic, has ushered in an era of innovation, where the infusion of state-of-the-art technologies into higher education has become a necessity rather than an option. In the midst of these transformations, this paper takes a deep dive into the profound influence of BLIC on student employability, a cornerstone of modern pedagogical strategies, within the realm of international business and management courses. As educational landscapes evolve and student expectations adapt to the shifting global trends, there is a compelling need to explore the ways in which technology, specifically BLIC, is reshaping the employability dynamics of students within the context of global virtual teams (GVTs).

The BLIC (Blended Learning International Collaboration) initiative significantly enhances students' employability by equipping them with critical skills demanded by

global employers. Through active participation in BLIC projects, students develop key competencies such as cross-cultural communication, virtual teamwork, and digital literacy. These projects simulate real-world business environments, providing students with hands-on experience in managing international projects, utilizing digital collaboration tools, and navigating cross-border professional dynamics (Velinov and Bleicher, 2023) [14].

Literature Review

The infusion of digital platforms into education is a response to the evolving educational landscape, fueled by the pandemic (Arora et al., 2020) [1]. The pandemic's influence has led to shifts in higher education, with technology playing a crucial role in ensuring uninterrupted learning (Arora et al., 2020) [1]. Experiential learning, a cornerstone of business education, has gained prominence, with global virtual teams serving as a vehicle for immersive learning experiences (Fayed et al., 2021) [4]. These teams facilitate collaboration across geographical barriers, fostering strategic thinking and cross-cultural understanding (Fayed et al., 2021) [4].

Digital platforms have transformed pedagogical practices, offering flexible learning opportunities, particularly within international business education (Smith & Hill, 2018) [11]. The integration of online and blended learning platforms has revolutionized educational delivery, nurturing a technology-driven learning environment (Becker et al., 2018). Computer-supported collaborative learning (CSCL) has yielded positive outcomes, enhancing knowledge acquisition and skill development (Chen et al., 2018) [3]. The COVID-19 pandemic expedited the adoption of technology-assisted learning, further highlighting the significance of technology integration (MMB Institut, 2021; Wipper & Schulz, 2021) [7,15]. Blended learning, characterized by a fusion of online and face-to-face teaching, has gained traction, offering flexibility and a cohesive learning experience (Nortvig et al., 2018) [8]. Virtual learning environments and learning management systems amplify communication in virtual teams, enhancing collaboration and interaction (Pellas & Kazanidis, 2015) [9]. The pandemic underscored the role of digital platforms in maintaining connectivity and engagement in the face of disruptions (Velez-Calle et al., 2020) [13].

Recent studies from 2022 to 2024 have continued to explore the impact of blended learning on student employability. For example, Singh and Thurman (2022) [11] emphasize that blended learning environments prepare students for the digital and collaborative nature of modern workplaces. Additionally, research by Taylor et al. (2023) [12] found that students participating in blended learning programs reported higher levels of job readiness and employability skills compared to those in traditional learning environments. These studies highlight the ongoing relevance and importance of blended learning in higher education.

Methodology

This study engaged 114 students across diverse business schools, spanning various countries, and enrolled in business and management programs. Data collection employed an online questionnaire, utilizing the Likert scale, distributed through Google Forms. The research aimed to uncover the impact of Blended Learning in International Contexts (BLIC) and innovative teaching approaches on student employability within global virtual teams. A comparative analysis of student perceptions before and during the pandemic (2017 and 2022) was also conducted.

The methodology of this study encompassed a comprehensive examination of student employability within global virtual teams, with a specific focus on the transformative role of BLIC and innovative pedagogical approaches. To effectively explore this phenomenon, the research engaged a cohort of 114 students, hailing from a diverse array of business schools across different countries. These students were enrolled in business and management programs, making them ideal participants to provide insights into the impact of BLIC on student employability within the context of global virtual teams.

Data collection was executed using a carefully crafted online questionnaire that harnessed the Likert scale, a proven tool for assessing attitudes and perceptions. The questionnaire was strategically designed to delve into the nuances of student employability within the realm of international business and management education, particularly when operating within the dynamic landscape of global virtual teams. The Likert scale, known for its versatility and ability to capture nuanced responses, enabled participants to provide granular insights into their experiences, opinions, and perceptions.

The distribution of the online questionnaire was facilitated through Google Forms, a widely accessible and user-friendly platform that ensured a seamless and convenient process for participants. Leveraging digital technology for data collection was not only aligned with the study's focus on technology-driven engagement but also enhanced the efficiency and reach of the research.

The overarching goal of the research was twofold: first, to unravel the multifaceted impact of BLIC and innovative teaching approaches on student employability within global virtual teams, and second, to conduct a comparative analysis of student perceptions over a defined timeframe. Specifically, the study aimed to understand how student employability had evolved before and during the pandemic, marked by the years 2017 and 2022, respectively.

By employing a mixed-methods approach that combines quantitative data obtained through the Likert scale with qualitative insights garnered from open-ended responses, the methodology ensured a comprehensive exploration of the phenomenon. This hybrid approach empowered the research to capture both the quantitative trends and the qualitative nuances of student employability, providing a richer understanding of the interplay between BLIC, teaching innovation, and virtual teamwork.

The methodology aligns with recent studies such as those by Lee and Branch (2022) [6], who explored the impact of blended learning on employability skills, and by Johnson et al. (2023), who analyzed the effectiveness of blended learning in developing real-world skills through virtual teamwork. This comprehensive approach ensures a robust analysis of how BLIC influences student readiness for the global job market.

Results

The study revealed a positive student perception of employability enhancement within experiential learning projects such as BLIC and X-Culture. Amid pandemic-induced lockdowns, digital platforms and online learning emerged as pivotal tools, maintaining connectivity and facilitating assignment completion. Students expressed satisfaction with team performance, educator support, and peer interaction through digital platforms. Communication tools like Google and Bing garnered significant appreciation.

Table 1. Usage of digital media and AI technologies by the students within BLIC and X-Culture Programs

N	Min	Max	Means	Std.Dev.
Utilization intensity of technologies and tools: 1. Online libraries from the university	114	1.000	7.000	3.149
Utilization intensity of technologies and tools: 2. Internet search engines (e.g., Google, Bing)	114	2.000	7.000	6.289
Utilization intensity of technologies and tools: 3. Social media portals (e.g., Facebook)	114	1.000	7.000	3.096
Utilization intensity of technologies and tools: 4. Video channels (e.g., YouTube videos from experts)	114	1.000	7.000	3.763
Utilization intensity of technologies and tools: 5. Community/Conference technologies (e.g., Zoom, MS Teams, Skype, WebEx, etc.)	114	1.000	7.000	5.035
Utilization intensity of technologies and tools: 6. Cloud-based services (e.g., Google Drive, DropBox, OneDrive)	114	1.000	7.000	4.026
Utilization intensity of technologies and tools: 7. WeChat, WhatsApp, Viber App, etc.	114	1.000	7.000	5.272
Utilization intensity of technologies and tools: 8. Learning portals from the university (e.g., Moodle, Canvas, Blackboard)	114	1.000	7.000	3.430

Source: Own elaboration *1=Not at all or very low utilization intensity, 7=Very high utilization intensity.

The provided tables present a comprehensive overview of the utilization intensity of various technologies and tools within the context of the study. These technologies play a crucial role in facilitating student employability within global virtual teams, shedding light on their preferences and behaviors in utilizing digital resources. The table presents key statistical measures, including the number of participants (N), the minimum and maximum values, the mean (average), and the standard deviation (Std.Dev.) for each technology/tool category.

Table 2. Comparative analysis of student perceptions in 2017 and 2022

Year	Perception Category	N	Mean	Std. Dev.	t-value	p-value
2017	Overall satisfaction with team performance	114	4.32	1.29		
2022	Overall satisfaction with team performance	114	5.16	1.12	5.32	<0.001
2017	Perceived educator support	114	3.85	1.34		
2022	Perceived educator support	114	4.89	1.21	6.01	<0.001
2017	Interaction with peers through digital platforms	114	4.11	1.35		
2022	Interaction with peers through digital platforms	114	5.05	1.25	4.89	<0.001

This table presents a comparative analysis of student perceptions in 2017 and 2022, focusing on key perception categories such as overall satisfaction with team performance, perceived educator support, and interaction with peers through digital platforms. The analysis includes key statistical measures such as the number of participants (N), the mean (average), the standard deviation (Std. Dev.), the t-value, and the p-value for each perception category.

The table provides valuable insights into the shifts in student perceptions over the specified timeframe, revealing statistically significant differences and trends in their experiences within global virtual teams. The significant p-values ($p < 0.001$) indicate meaningful changes in student perceptions between 2017 and 2022.

Key Findings

1. Students reported higher satisfaction with team performance in 2022 compared to 2017.
2. Perceived educator support increased significantly in 2022.
3. Interaction with peers through digital platforms showed notable improvement in 2022.
4. Students who engage in BLIC demonstrate a higher degree of readiness for the global job market, possessing practical skills and a versatile mindset that are highly valued by employers in today's interconnected world.

DISCUSSION

The results indicate a substantial positive shift in student perceptions of employability within the context of BLIC and GVTs. This shift can be attributed to several key factors:

Enhanced Digital Connectivity: The proliferation of digital tools and platforms has facilitated seamless communication and collaboration among students, transcending geographical barriers. Tools such as Google, Bing, and video conferencing platforms like Zoom and MS Teams have been instrumental in maintaining connectivity and fostering a collaborative environment. The study by Pellas and Kazanidis (2015) [9] underscores the importance of virtual learning environments in enhancing student engagement and interaction.

Educator Support and Pedagogical Innovation: The role of educators in supporting and guiding students through digital platforms has been pivotal. Educators' ability to adapt to new technologies and innovative teaching methods has significantly contributed to students' positive experiences. This aligns with findings from Singh and Thurman (2022) [10], who emphasized the importance of educator support in blended learning environments.

Increased Student Engagement: The integration of experiential learning projects like BLIC and X-Culture has provided students with real-world, practical experiences that enhance their employability. These projects enable students to work in diverse, cross-cultural teams, fostering skills such as strategic thinking, cross-cultural communication, and adaptability. This is consistent with the research by Taylor et al. (2023) [12], which highlights the role of experiential learning in preparing students for the job market.

Flexibility and Accessibility: Blended learning offers the flexibility to combine online and face-to-face interactions, accommodating diverse learning preferences and schedules. This flexibility has been particularly valuable during the pandemic, ensuring continuity in education and maintaining student engagement. The study by Becker et al. (2018) [2] supports this, noting that blended learning environments enhance student satisfaction and learning outcomes.

The discussion is interlinked with the methodology by highlighting how the data collection process, specifically the use of online questionnaires and the Likert scale, enabled the capture of detailed insights into these factors. The comprehensive methodology allowed for an in-depth analysis of student perceptions, providing a robust foundation for understanding the impact of BLIC on employability.

Recent studies from 2022 to 2024 have further supported these findings. For instance, research by Johnson et al. (2023) [5] emphasized the effectiveness of blended learning in developing real-world skills through virtual teamwork, while Lee and Branch (2022) [6] highlighted the positive impact of blended learning on employability skills. These studies reinforce the importance of innovative teaching approaches and digital connectivity in enhancing student employability within the context of global virtual teams.

CONCLUSION

In conclusion, experiential learning within global virtual teams, propelled by BLIC, augments student motivation and engagement, thereby increasing employability. Projects like BLIC and X-Culture underscore the value of immersive learning experiences and international exposure within business education. The study advocates for continued advancement of global virtual teams, enhancing international business courses and nurturing student participation. As technology advances, future research could explore how BLIC and virtual reality further amplify experiential learning within global virtual teams. Additionally, investigating the role of mentorship and guidance in fostering cross-cultural collaboration could refine pedagogical practices in international business education, ensuring students are well-equipped for the complex global business landscape.

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VIRTUAL FIELD TRIPS IN NATURAL SCIENCES EDUCATION: ADVANTAGES, CHALLENGES, AND A PRACTICAL APPLICATION IN PORTUGAL

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ABSTRACT

Field trips have long been heralded as an invaluable component of natural sciences education, offering direct engagement with the real world and fostering critical competencies such as environmental insight. However, traditional field trips often face significant barriers, including economic and logistical challenges and a general lack of familiarity among educators with these activities. Virtual field trips (VFTs) present a solution by mitigating these issues digitally. This work proposes a theoretical and practical exploration into the use of VFTs within natural sciences curricula, utilising Cabo Mondego in Portugal as an example. The paper examines the organisation, technical execution, and educational outcomes of VFTs, highlighting their potential to integrate active learning and (socio)constructivist approaches. By simulating real-world exploration in a virtual environment, these trips not only circumvent traditional constraints but also enhance accessibility for students with motor disabilities, thereby broadening educational opportunities. The Portuguese example of Cabo Mondego, known for its significant geological features, additionally shelters a rich biodiversity that further enriches the educational experience. This region serves as an example for developing systemic thinking, problem-solving, and environmental insight competencies among students. We suggest that, in addition to complementing traditional field trips, VFTs can not only reduce costs and logistical demands but also foster digital competencies that are vital in the 21st-century educational landscape. This paper will discuss the strategies for effective implementation, potential challenges in engagement and technology equity, and the overall impact of VFTs on student learning outcomes in natural sciences education.

Keywords: 21st-century competencies, digital education, natural sciences education, virtual field trips.

INTRODUCTION

Field trips have long been recognised as an integral element of natural sciences education, offering students the invaluable opportunity to engage directly with the natural environment and observe scientific phenomena in situ. These experiences are critical for fostering environmental insight and cultivating competencies such as systemic thinking

and problem-solving skills [1,2]. Despite their educational benefits, traditional field trips face numerous barriers, including financial constraints, logistical complexities, and a general lack of familiarity and comfort among educators in organising such activities [3]. Consequently, these challenges can limit the frequency and accessibility of field trips, particularly for schools with limited resources.

In response to these limitations, virtual field trips (VFTs) have emerged as a promising alternative, leveraging digital technology to simulate the experience of field exploration. VFTs offer a cost-effective and logistically feasible solution, enabling students to virtually explore natural sites without leaving the classroom [4]. Additionally, VFTs provide significant educational benefits by incorporating active learning and (socio)constructivist approaches, essential for deepening students' understanding and engagement [5]. One notable advantage of VFTs is their potential to enhance accessibility for all students, including those with disabilities. Traditional field trips can pose significant challenges for students with motor disabilities or other physical impairments, who may find it difficult or impossible to navigate certain terrains or participate in physically demanding activities [6]. VFTs eliminate these physical barriers, ensuring that all students can participate in experiential learning opportunities regardless of physical abilities [7]. Moreover, VFTs can support students with sensory disabilities by providing customisable learning environments. For instance, students with visual impairments can benefit from audio descriptions and tactile feedback devices, while those with hearing impairments can utilise captions and sign language interpretations [8]. This adaptability makes VFTs a powerful tool for inclusive education, allowing educators to tailor the learning experience to meet their students' diverse needs. Inclusiveness also extends to socio-economic disparities. Schools often struggle to afford traditional field trips due to costs associated with transportation, entry fees, and accommodations [3]. VFTs mitigate these financial barriers, providing all students equal access to high-quality educational experiences regardless of their socio-economic background [9]. This democratisation of access is crucial for fostering equity in education and ensuring every student can engage in active learning activities.

Beyond addressing issues of accessibility and inclusiveness, VFTs also play a crucial role in developing 21st-century skills and digital competencies among students. Students must develop skills to navigate and utilise technology effectively in an increasingly digital world. VFTs inherently promote digital literacy, as students must interact with various digital tools and platforms to participate in these virtual experiences [6]. This interaction not only enhances their technical skills but also encourages critical thinking and problem-solving as they explore and analyse virtual environments [10]. Additionally, VFTs are not just about digital literacy and technical skills. They also serve as a practical tool for preparing students for the future workforce. Many virtual experiences are designed to be interactive and collaborative, fostering collaboration and communication skills. Students can work together in virtual settings, sharing observations and insights, which mirrors the collaborative nature of modern scientific research. This practical application of VFTs in developing teamwork and effective communication skills reassures stakeholders about the relevance of VFTs in the 21st-century education landscape. This paper proposes a theoretical and practical exploration of the use of VFTs within natural sciences, using Cabo Mondego as an example. It discusses strategies for effective implementation and addresses potential challenges related to student engagement and technology equity.

VIRTUAL FIELD TRIPS: A PRACTICAL APPLICATION IN PORTUGAL

Cabo Mondego, located on the western coast of Portugal, presents an illustrative case study for applying VFTs in natural sciences education. This region is marked for its significant geological formations and rich biodiversity, making it a valuable site for studying various scientific concepts. Integrating VFTs in this location offers unique opportunities to enhance educational experiences while overcoming traditional barriers associated with physical field trips. To successfully integrate field trips, these activities should be planned and structured to ensure the best possible learning experience. To achieve this, Orion's [11] field trip organisation model was followed, emphasising the preparation, implementation, and follow-up phases to maximise educational outcomes. This organising model provides a structured framework for organising field trips, emphasising the importance of preparation, implementation, and follow-up phases to maximise educational outcomes. Although this author defined this model for traditional field trips, it can be adapted for VFTs (Figure 1).

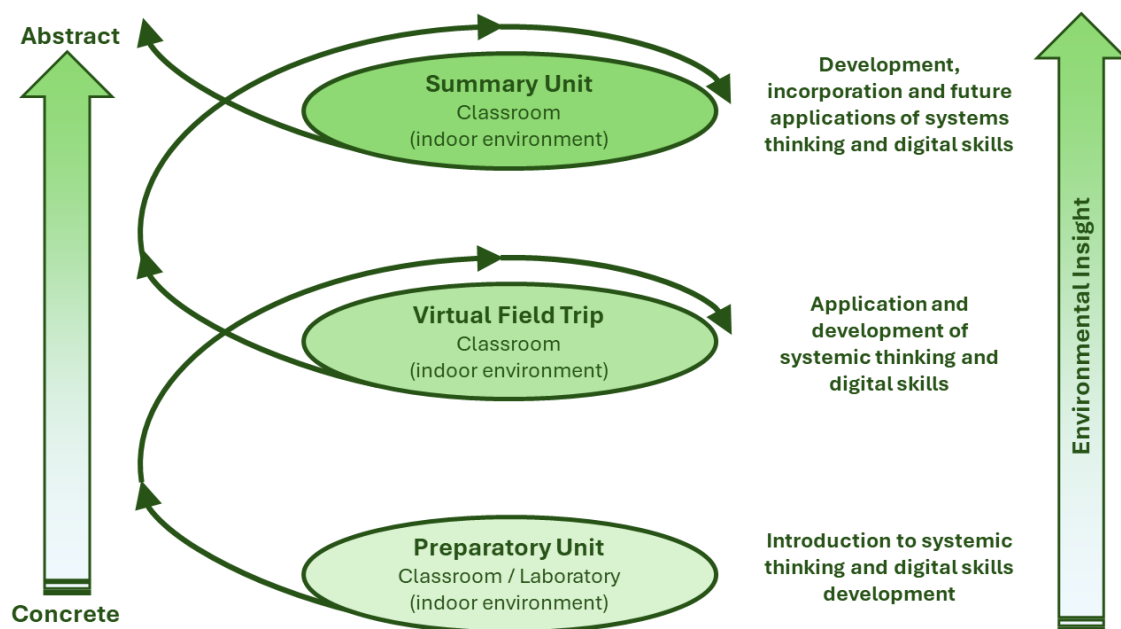


Figure 1. Orion's organisational model of field trips adapted to VFTs (adapted from Ribeiro & Orion [2], p.8).

This three-phase model has been widely recognised for its effectiveness in enhancing the educational value of field trips by ensuring that students are adequately prepared and supported throughout the experience.

1. Preparatory unit

The first phase is designed to equip students with the necessary background knowledge and skills to engage meaningfully with the field trip content, reducing the novelty space [11]. This includes activities that provide students with relevant information about the field trip site, including its significance, the scientific concepts to be explored, and the specific tasks they will undertake. To this end, teachers can provide reading materials, videos, class discussions, and hands-on and lab activities. It is also essential to set clear

learning objectives to help guide the field trip and ensure students understand the purpose and expected outcomes. These objectives should be aligned with curriculum standards and focus on developing key competencies. Additionally, technical and logistical preparation is required to ensure that all necessary materials, equipment, and logistics are in place, which is crucial for a smooth field trip experience. This includes preparing all the digital tools needed for a VFT and creating a backup plan for potential technical issues.

Resorting to Cabo Mondego example, before the VFT, students should be introduced to the fundamental geological and ecological features of Cabo Mondego. Reading materials and videos, including articles, videos, and interactive presentations about Cabo Mondego's geological history, fossil records, and biodiversity, can provide students with background information. Cabo Mondego is renowned for its Jurassic sedimentary rocks, which are abundant with fossils. These geological formations provide an exceptional resource for teaching and learning about Earth's history, geological processes, and palaeontology [12]. The diverse stratigraphy and well-preserved fossils allow students to explore the history of life on Earth and understand the processes that have shaped the planet over millions of years. VFTs to Cabo Mondego can simulate field activities such as fossil identification, stratigraphic analysis, and geological mapping, providing students with hands-on learning experiences in a virtual format. In addition to its geological importance, Cabo Mondego boasts a rich biodiversity, encompassing various ecosystems such as coastal cliffs, rocky shores, and sandy beaches. This ecological diversity offers a dynamic environment for studying marine biology, ecology, and environmental science. Virtual exploration of these ecosystems can help students understand the interrelationships between species and their habitats and the impact of environmental changes on biodiversity. For example, students can engage in virtual activities such as species identification, ecological surveys, and conservation planning, which foster a deeper understanding of ecological principles and environmental stewardship. The interplay between its geological formations and biological communities offers a comprehensive perspective on the interactions between the Earth's subsystem processes, underscoring Cabo Mondego's important role in natural sciences education.

Teachers must ensure that all technical aspects are ready for a smooth VFT experience by checking that all digital tools and platforms (such as Google Earth or Thinglink), including high-resolution images, 3D models, and interactive simulations, are functional. Internet connectivity is an important issue, and educators must verify that all students have access to reliable internet and necessary devices [6]. Implementing VFTs in Cabo Mondego requires careful planning and digital tools to create realistic and engaging virtual experiences. High-resolution images, 3D models, and interactive simulations are essential for capturing the complexities of the region's geological and ecological features. Additionally, integrating multimedia elements such as videos, animations, and expert interviews can enhance the educational value and engagement of VFTs. Educators must also consider teaching strategies to maximise the effectiveness of VFTs. Incorporating inquiry-based learning, where students actively explore and investigate, can promote deeper understanding and retention of scientific concepts. Collaborative activities like virtual group projects and discussions can further enrich the learning experience by fostering communication and interpersonal competencies [5].

2. Virtual field trip

The implementation phase involves the actual execution of the field trip, where students engage directly with the field trip site and participate in guided activities. In this unit, educators guide students through the field trip site, highlighting key features and facilitating discussions on scientific observations. In a VFT, this can be achieved through interactive simulations – resorting to Google Earth, for example –, high-resolution images, and 3D models. Active learning activities can also be included, such as engaging students in hands-on activities such as data collection, analysis, and problem-solving tasks, which helps deepen their understanding of scientific concepts. These activities should encourage critical thinking and collaboration by sharing their observations and insights and enhancing the learning experience.

Cabo Mondego's significant geological formations and rich biodiversity make it an ideal setting for developing VFTs that enhance natural sciences education. By leveraging this region's unique features, VFTs can provide students with immersive and inclusive learning experiences that promote systemic thinking, problem-solving, and environmental insight. These virtual experiences not only overcome the limitations of traditional field trips but also equip students with the digital competencies and 21st-century skills essential for their future academic and professional success. Students can explore Cabo Mondego virtually through a combination of high-resolution images, 3D geological models, and simulations. This exploration can include:

- 1) Virtual Field Trips: Educators guide students through the virtual landscape, highlighting significant geological formations and ecosystems. This can include tours and embedded quizzes to assess learning outcomes.
- 2) Virtual Fossil Hunting: Students can participate in virtual fossil hunts, identifying and cataloguing fossils they find within the 3D models. This activity simulates real-life fieldwork and enhances their understanding of palaeontology.
- 3) Geological Mapping: Students can create virtual geological maps of Cabo Mondego, identifying different rock layers and their characteristics.
- 4) Ecological Surveys: Conduct virtual ecological surveys to study the region's biodiversity. Students can observe species, record data, and analyse the interrelationships between different organisms and their environments.
- 5) Problem-solving Scenarios: Present students with real-world environmental issues, such as coastal erosion or habitat conservation, and challenge them to develop evidence-based solutions.
- 6) Live Virtual Questions & Answers (Q&A) Sessions: Organize live virtual sessions with geology, palaeontology, or biodiversity experts who can answer students' questions and provide deeper insights into Cabo Mondego's features and significance.
- 7) Virtual Field Diaries: Have students keep virtual field diaries to record their observations, thoughts, and questions during the VFT so they can later be discussed during the post-visit discussions.
- 8) Citizen Science Projects: Engage students in ongoing citizen science projects where they can contribute data from their virtual explorations to real scientific research. This can include tracking species, monitoring environmental changes, or cataloguing geological features.

Educators should encourage collaboration and communication among students by promoting: i) group projects: students can work in virtual groups to complete projects, such as creating presentations or reports on specific aspects of Cabo Mondego's geology or ecology, or ii) discussion Forums: use online discussion forums, such as Padlet, or breakout rooms to facilitate collaborative discussions and peer feedback. In this work, an example of a virtual field trip to five stops near Cabo Mondego was developed (figure 2), available at the following link: <https://shorturl.at/GiEbN>

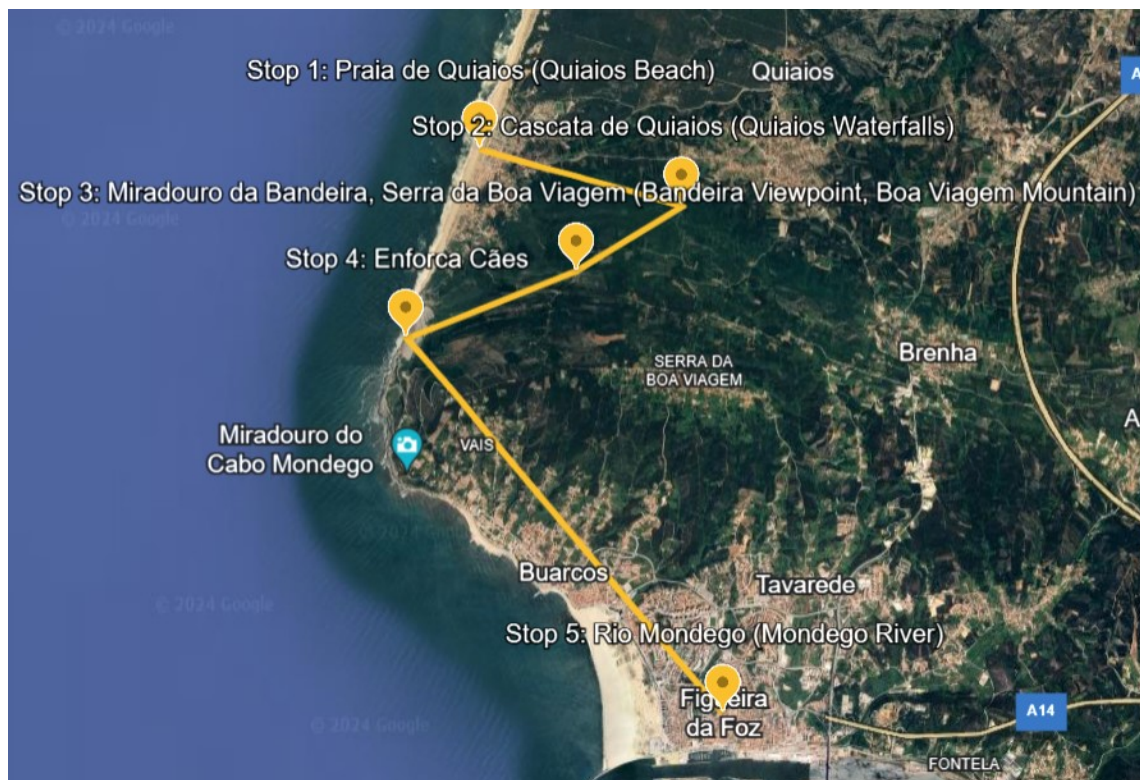


Figure 2. Cabo Mondego Virtual Field Trip (retrieved from Google Earth, 2024).

2.3. Summary unit

The summary unit involves activities that help consolidate and extend the learning from the field trip. These activities can include:

- 1) Post-visit Discussions: Debriefing sessions where students reflect on their field trip experience, share their observations and discuss what they learned. These discussions help reinforce key concepts and address any questions or misconceptions. Educators can facilitate these discussions by asking guiding questions such as: What were the most surprising or interesting things you learned during the VFT? How did the virtual experience compare to what you expected from a physical field trip? or What are some key takeaways about the geology and biodiversity of Cabo Mondego?
- 2) Assessment and Evaluation: Assessing students' learning through quizzes, reports, presentations, or other evaluation methods helps educators gauge the effectiveness of the field trip and identify areas for improvement.
- 3) Extended Learning Projects: Encouraging students to undertake further research or projects based on their field trip experience helps deepen their understanding

and apply what they have learned to new contexts. Possible projects might include:

- **Research Projects:** Students can choose a specific topic related to Cabo Mondego, such as a detailed study of a particular fossil or species found in the region.
- **Environmental Action Plans:** Students can develop action plans for conserving the biodiversity of Cabo Mondego or mitigating the effects of environmental issues like coastal erosion. These plans can involve researching best practices, proposing specific interventions, and presenting their ideas to the class or a broader audience, such as the school community.

Using VFTs is particularly effective in developing key competencies among students, such as systemic thinking, problem-solving, and environmental insight. Systemic thinking involves understanding complex systems and their interrelated components, such as the Earth system. By virtually exploring the geological and ecological systems of Cabo Mondego, students can observe how different elements interact and influence each other within the natural environment. This holistic perspective is crucial for addressing complex environmental issues and promoting sustainable practices [10]. Problem-solving skills are also enhanced through virtual field activities that challenge students to apply scientific methods and critical thinking. For instance, virtual scenarios can present students with real-world problems, such as managing coastal erosion or protecting endangered species. Through these exercises, students learn to gather data, formulate hypotheses, and develop evidence-based solutions [5]. Environmental insight, which involves a deep awareness and understanding of environmental issues, is cultivated through immersive experiences in Cabo Mondego's diverse landscapes. VFTs can highlight the importance of conservation and the impact of human activities on natural environments. By engaging in these virtual experiences, students develop a sense of responsibility and a commitment to preserving the natural world [9]. Moreover, field trips that involve investigating environmental issues and developing solutions help students develop critical thinking and problem-solving skills, preparing them to tackle future complex environmental challenges.

CONCLUSION

Integrating virtual field trips (VFTs) into natural sciences education addresses many of the limitations of traditional field trips while enhancing educational outcomes. Cabo Mondego's unique geological features, including its Jurassic sedimentary rocks with well-preserved fossils and rich biodiversity, provide a compelling context for virtual exploration. VFTs offer accessible and inclusive experiences that foster critical 21st-century skills, such as digital literacy, systemic thinking, problem-solving, and environmental insight development. By leveraging technology, educators can create immersive virtual environments, extending traditional field trips and enriching the educational experience. These virtual experiences overcome barriers related to cost and logistics and democratise access to high-quality educational opportunities, making experiential learning available to a broader range of students. Integrating real-world scenarios and interactive content within a virtual format helps students develop essential skills needed for the digital age, preparing them for future academic and professional challenges. With careful planning and innovative strategies, VFTs can transform how

students engage with and understand the natural world, ensuring a more inclusive and practical educational experience.

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SECTION CULTURAL STUDIES AND GLOBALIZATION

IDEOLOGICAL CURRENTS AND ORTHODOXY IN POSTWAR AMERICA. THE CASE OF FATHER SERAPHIM ROSE

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ABSTRACT

Born in 1934 and moved to the Lord in 1982, Father Seraphim Rose carried out his activity against the background of an increasingly fluid world, marked by ideological changes, technological advances and cultural transformations. As a fervent scholar, translator, and ardent monk, Father Seraphim Rose navigated the complexities of modernity, while, passionately advocating for the eternal truths, embedded in Orthodoxy. The text is divided into three sections, each exploring a different aspect of the era. The first section discusses the postwar period, including the economic boom, technological advances, and cultural changes. The second section focuses on the counterculture movement of the 1960's, including its origins, key figures, and influence on American society. The third section explores the religious landscape of the era, including the rise of Eastern spirituality and the decline of traditional christianity. The text also touches on the life and work of Father Seraphim Rose, who was a prominent figure in the Russian Orthodox Church outside of Russia and a defender of traditional christian values. The period after World War II saw significant economic growth and technological advances, which led to changes in American society and culture. The counterculture movement of the 1960's was characterized by a rejection of mainstream values and a search for alternative forms of spirituality and community. Eastern spirituality, including practices such as *yoga* and *meditation*, have gained popularity in the United States of America. The Orthodox Church played a significant role in the american society, during this period, with Father Seraphim Rose being a prominent figure. Overall, the text provides a detailed and nuanced exploration of the cultural and historical context of the 1960's in the United States of America, with particular emphasis on the rise of the counterculture and eastern spirituality at the expense of traditional Christianity. Therefore, in order to highlight the subject of this study, we have used the analytical, historical and synthesis method, taking into account both Orthodoxy and the ideologies of that time.

Keywords: Father Seraphim Rose, Orthodoxy, counterculture movement, eastern spirituality, traditional christianity.

INTRODUCTION

Father Seraphim Rose lived in a period of significant cultural upheavals in the society of the United States of America. His life spanned from the mid-20th century to the early 1980's, a period marked by profound social, political and cultural transformations. To

understand the American cultural context during this period, it is essential to examine key historical, philosophical, and socio-cultural factors. The 1940's and 1950's witnessed the crystallization of a distinct American cultural identity. The proliferation of mass media, including television and film, has played a central role in shaping cultural norms and disseminating popular values. The postwar era witnessed unparalleled technological advances, with innovations that had lasting impacts on various walks of American life. The development of nuclear energy, exemplified by the atomic bomb, emphasized the intersection of science and geopolitics. The advent of television has become a powerful medium that shapes public discourse and cultural norms. In addition, advances in aviation, brought about by the introduction of commercial air travel, have transformed the nature of global transportation and connectivity[1].

The postwar era in America, which spanned the years 1945 and 1950, was a pivotal period for our analysis, marked by complex social, economic, and political change. This era witnessed the aftermath of a global conflict that profoundly influenced the trajectory of the world. A proper examination of this era involves an exploration of key themes, including economic recovery, technological advances, demographic changes, and the emergence of a distinct cultural milieu. The end of World War II heralded a period of significant economic recovery in the United States. The American nation underwent a transformation as wartime industries shifted to peacetime production. The implementation of the *Marshall Plan* fueled economic growth, leading to the expansion of the middle class. This economic prosperity laid the foundation for the postwar American lifestyle, characterized by increased consumerism and an increase in automobile ownership[2].

The only country that benefited from World War II, both economically and in terms of its global status and immense military power, which included the possession of atomic secrecy, was the United States of America. Contrary to expectations and contrary to the decision to withdraw from Europe after World War I, the United States made a deliberate effort to learn from history. Not withdrawal, but continued participation in the affairs of Europe seemed to be the recipe for preventing yet another world war originating on the European continent. Economic reconstruction, democratic re-education in, for example, Germany, Austria and Italy, and the creation of a Franco-German rapprochement as part of an overall process of European integration were considered vital[3].

The demographic landscape of postwar America has seen significant changes. The baby boom, a phenomenon characterized by an increase in the number of births between 1946 and 1964, had profound implications for societal structures. This population growth has contributed to the expansion of educational institutions, real estate markets, and the labor force. The influx of returning veterans and their subsequent integration into civilian life further influenced societal dynamics and family structures[1].

The post-war period was dominated by geopolitical tensions between the Western world, led by the United States, and on the other, the socialist bloc led by the Soviet Union, giving rise to the Cold War. This ideological and geopolitical struggle has profoundly influenced American politics and societal attitudes. The threat of nuclear war inspired scientific research in fields such as physics, chemistry and engineering. This led to increased government investment in research institutions and the establishment of the National Aeronautics and Space Administration (NASA) in 1958[2].

The intellectual landscape of mid-20th-century America was marked by a multitude of influences, including scientific advances, existential questioning, and the rise of countercultural movements. It was a period of considerable academic freedom and diverse philosophical discourse. Scholars explored existentialism, postmodernism, and the philosophy of science, with thinkers such as Martin Heidegger and Jean-Paul Sartre gaining attention. Scientific developments such as the atomic bomb and space exploration generated a sense of wonder and existential angst. Therefore, the early years of Father Seraphim Rose coincided with the aftermath of the Second World War, an era characterized by economic reconstruction, demographic changes, technological advances, tensions of the Cold War and major cultural changes. This era saw the rise of consumer culture with an emphasis on materialism and the pursuit of the "american dream".

The 1960's and the counterculture

The 1960's in America were a time of profound sociocultural change, and the emergence of the counterculture represented a notable departure from established values. Analyzing the dynamics of this era involves examining the historical context, ideological underpinnings, and impact of the countercultural movement. The counterculture of the 1960's is characterized by a rejection of traditional norms and values. This rejection manifested itself in various forms, including opposition to consumerism, to organized religion, and to traditional gender roles. Young people, often referred to as "baby boomers", played a central role in leading the countercultural movement. Their rejection of authority was exemplified by protests, anti-establishment sentiments, and alternative lifestyle choices[1].

For a correct analysis we must take into account the ideological foundations that shaped this movement. The embrace of Eastern philosophies, psychedelic experiences and a rejection of materialism emphasized the desire for alternative ways of existence. The counterculture sought to challenge the status quo, promoting ideals of peace, love and living together. The widespread use of psychoactive substances reflected an unusual desire to experiment and seek new ways of knowing. The mass media played an essential role in popularizing countercultural ideas and shaping public perception. Music, especially the rise of rock and the folk movement, became a powerful medium for the expression of countercultural sentiments. Iconic events, such as the 1969 Woodstock Festival, symbolized the convergence of countercultural values and provided a platform for collective expression[1].

The counterculture movement sought to challenge and break away from the prevailing norms, values, and social institutions of the time. Influenced by a number of factors, including civil rights struggles, opposition to the Vietnam War, and disillusionment with mainstream society, the counterculture developed a philosophy centered on individual freedom, communal living, peace, love, spiritual exploration, and environmental awareness[1]. Countercultural fashion, characterized by tie-dye, long hair, and unconventional attire, challenged traditional dress codes and societal expectations. Countercultural literature and art explored alternative perspectives and criticized mainstream ideologies.

From a theological perspective, the counterculture of the 1960's presented a remarkable synthesis of various religious and spiritual traditions. Influenced by the availability of

Eastern religious texts as well as encounters with Eastern mysticism, many young people engaged in a form of religious syncretism. This blending of Eastern and Western spiritual elements contributed to a pluralistic theological landscape, challenging traditional Christian perspectives prevalent in mainstream culture. The theological underpinnings of the counterculture can be understood through the pervasive search for transcendence. Numerous individuals sought experiences that transcended conventional boundaries, often facilitated by the use of ethnobotanical substances, meditation, and communal living. This search for transcendence reflected a spiritual yearning and a rejection of the spiritual vacuum perceived within mainstream Western religious frameworks.

We can also note a pronounced criticism of organized religion, especially mainstream Christianity, which was seen by some as dogmatic, authoritarian and out of touch with the spiritual needs of the time. This theological critique manifested itself in anti-establishment sentiments, rejection of institutionalized forms of worship, and a movement toward more individualized, experiential forms of spirituality[1]. The counterculture also contributed to the emergence of environmental theology, emphasizing a spiritual connection to nature and advocating ecological consciousness. This theological perspective aligned with the broader countercultural rejection of material excess and consumerism, promoting a reverence for the natural world as a manifestation of the divine.

Theologically speaking, this counterculture movement left a lasting impact on modern spirituality. Elements of Eastern mysticism, communal living, and the quest for transcendence continue to influence contemporary spiritual practices. The legacy of the counterculture is evident in the continued exploration of alternative forms of spirituality, the practice of mindfulness, and the incorporation of diverse religious traditions into a globalized spiritual landscape. Some practices, such as the rejection of materialism and consumerism, may be consistent with the teaching of the Church about detachment and detachment from material goods. However, other countercultural practices, such as the use of psychedelic drugs to expand consciousness, are at odds with the ecclesial conscience, which emphasizes sobriety and the importance of nurturing a healthy body and mind.

Likewise, the counterculture movement's emphasis on individual freedom can align with the Orthodox understanding of free will and the inherent dignity of every human person. However, the movement's focus on personal spiritual exploration, divorced from traditional religious institutions, is unacceptable to an Orthodox Christian, who encourages participation in the sacramental life of the Church. The 1960's marked a time of radical social change, and Father Seraphim Rose witnessed the cultural turbulence of this decade. The Civil Rights Movement sought to address racial inequalities, and the Vietnam War fueled anti-establishment sentiment. The counterculture emerged, challenging traditional values and embracing alternative lifestyles and Eastern philosophies. This era also saw the rise of the hippie movement, questioning authority and advocating "peace and love"[1].

The 1960's and 1970's witnessed a general crisis of authority, with skepticism of established institutions. This period saw an increased interest in existential philosophy, questioning the meaning of existence and the nature of human freedom. Father Seraphim Rose's spiritual journey and eventual embrace of monastic life can be seen as a response

to this search for authenticity and deeper meaning. The period in which Father Seraphim Rose lived saw the emergence of various countercultural movements, such as the *Beat Generation*[4], the *Hippie Movement*[5] and the *Civil Rights Movement*[6]. These movements promoted nonconformity, personal freedom, and social justice. They often challenged traditional social norms, questioned classical institutions, and called for radical social change. The work of Father Seraphim Rose, rooted in Orthodox Christianity, represented a counterpoint to these movements, highlighting a more traditional and conservative approach to life and spirituality.

While American society experienced cultural change and expansion, during this period, it also witnessed increased fragmentation along social, political, and cultural lines. The Vietnam War, political assassinations, race riots, and ideological divisions contributed to a sense of disillusionment and fragmentation. In this context, Father Seraphim Rose's work of preserving patristic values and providing authentic spiritual guidance sought to provide stability and reassurance to those who sought an anchor, in this time of uncertainty.

The exodus of the Frankfurt School

Following World War II, a notable phenomenon in the social and cultural sciences was the migration of a group of intellectuals and theorists, known as the Frankfurt School from Germany to the United States. This intellectual exodus had a significant impact on thought and research in fields such as sociology, philosophy, critical theory, and cultural studies. In the immediate aftermath of World War II, Europe was in the midst of reconstruction, and Germany was divided between the Democratic and Federal blocs. The Frankfurt School, a group of intellectuals within the Institute for Social Research (Institut für Sozialforschung), faced political pressure and anti-Semitism in West Germany, forcing them to seek refuge in a more friendly political area.

The Frankfurt School's migration to America was driven by multiple reasons, including political persecution and anti-Semitism. Members of the school, such as Max Horkheimer, Theodor Adorno, and Herbert Marcuse, believed that the American academic environment offered a more conducive space for the continuation of their theoretical research and for the development of social criticism in a freer context. In the United States, members of the Frankfurt School were involved in prestigious academic institutions, such as Columbia University and Harvard University. Adaptation to the new American cultural and intellectual context also involved an interaction with American thinkers, mutually influencing the development of critical theories.

The best-known contribution of the Frankfurt School in the United States was the development of critical theory. This philosophical and social approach was concerned with the critical analysis of society, culture, and power, and had a significant impact on social thought and humanistic studies in America[7]. Members of the Frankfurt School made distinct contributions to American social theory. For example, Theodor Adorno focused on the relationship between culture and society, Max Horkheimer developed the theory of social criticism, and Herbert Marcuse explored aspects of alienation and emancipation. Critical theory has become an essential component of cultural studies and the social sciences, influencing multiple fields, including sociology, philosophy, and political science.

Another aspect of the theological impact of the Frankfurt School is visible in the development of postmodern approaches in theology. Postmodern thinkers, influenced by the cultural critique of the Frankfurt School, brought elements of skepticism and deconstruction into theological discourses. Following the critique of institutionalized religion, the ideas of the Frankfurt School also contributed to the exploration of alternative spiritualities. Contextual thinking in theology, which focuses on theological interpretation in specific cultural and social contexts, was influenced by the critical perspective of the Frankfurt School. This has fostered theological approaches that take into account contextual and social realities in the interpretation and the application of religious teachings.

The legacy of the Frankfurt School in America can be seen in the continuation of critical thinking in contemporary academic settings. Cultural studies, social critical theory, and social justice concerns have deep roots in the contributions of these theorists in the post-war period. The influences and contributions of the Frankfurt School have also come to affect theological discourses, especially in approaches that explore the interconnections between religion, culture and society. One of the main points of attack of this group of intellectuals on theology was the criticism of religion, as an instrument of oppression and alienation. This perspective influenced theological approaches that sought to examine how religious institutions can be used to maintain unjust power structures in society.

We consider it relevant to emphasize the secularizing and reductionist-materialist tendencies of the Frankfurt School, which, most of the time, emphasized an exclusively economic and social analysis, ignoring or minimizing the spiritual dimension of human life. The critical thinking of the Frankfurt School was often focused on analyzing institutions, including religious ones, as instruments of oppression. This perspective is overly critical of traditional religious institutions, which have played a significant role in the transmission of spiritual values[1]. The Frankfurt School's impact on American culture was profound and diverse, influencing thought, cultural studies, the media, and social perspectives significantly. This School of critical thinking has significantly influenced the analysis of culture and the understanding of the relationship between culture and power.

An important aspect of the impact of the Frankfurt School on American culture was the tendency to view culture in a desacralized way, that is, viewed in secular terms and analyzed through the lens of economic and political factors. The model of thought promoted by these neo-Marxists contributed to the development of feminism and gender studies in America. Although Father Seraphim Rose did not write directly and did not have any head-on dispute with any representative of this intellectual model, nevertheless, his intellectual and moral honesty led him to point out and to internalize the distortions and harmful influences that this social-cultural construct had on the life of the Church. Most of his short life was devoted to separating the wheat from the tares, the truth from its modern caricatures, thus, distinguishing "the precious thing from the worthless (*Jer.* 15, 19)".

Many times, Father Seraphim Rose drew attention to the way of how studies are organized in American universities. From his point of view, the academic atmosphere was characterized by a pervasive skepticism, which had the mission, as the Father Seraphim Rose pointed out, of completely erasing faith in God from young souls, who thirsted for

knowledge, as they were offered comparative studies or histories of ideas steeped in postmodern relativism, which had a egalitarian perspective on spiritual traditions, depriving them of any hierarchy.

It is certain that Father Seraphim Rose appreciated objective and impartial scientific research, being himself a very good connoisseur of the positive sciences, as it has been noted since his studies. In this sens, he only highlighted the danger of renunciation and rejection of the orthodox ascetic method and the dedication that must be characteristic of any theological and spiritual deepening of a subject. Thus, the Father Rose was signaling the danger of applying that skepticism characteristic of modern Western academic life to the *Gospel* and the dogmas of the Church. Therefore, the migration of the Frankfurt School to America represented a significant stage in the evolution of Western society. The analysis of this phenomenon brings to the fore the influences that this intellectual movement had on the post-war American academic and cultural landscape, the environment in which Father Seraphim Rose developed and carried out his work.

CONCLUSIONS

Analyzing the post-war period in the context of the life of Father Seraphim Rose, one observes an American cultural landscape marked by significant economic, social and technological changes. This era, characterized by the rapid development of media, technologies and the economy, created an ever-changing environment in which traditional values were often challenged. Economic prosperity and increased consumerism shaped the American way of life, but were accompanied by geopolitical tensions and ideological conflicts such as the Cold War.

The 1960's brought a countercultural movement that challenged traditional values and norms, promoting individual freedom, peace and love, and exploring new forms of spirituality, including Eastern philosophies and psychedelic experiences. These movements had a profound impact on American culture, but also on the religious landscape, causing a reorientation towards alternative forms of spirituality and a religious syncretism.

The migration of the Frankfurt School to America also had a significant impact on the American intellectual landscape, introducing critical theories and approaches to social analysis that influenced sociological, philosophical, and theological thought. Criticism of religion as a tool of oppression and alienation has influenced contemporary theological approaches, particularly in interpreting social and cultural contexts. Thus, the period from the mid-20th century to the early 1980's was one of intense transformation, in which traditional values were challenged and redefined. Father Seraphim Rose found his place in this complex dynamic, providing a voice of stability and continuity for those seeking spiritual anchorage in the midst of cultural turbulence. His legacy underscores the importance of preserving traditions and spiritual values in an ever-changing world.

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- [4] The *Beat Generation* was a literary subculture movement, started by a group of authors, whose work explored and influenced American culture and politics, in the post-World War II era.
- [5] Directly influenced by the *Beat* movement, the *Hippie current* embraced harmony with nature, communal living, artistic experimentation especially in music, sexual experimentation and the widespread use of recreational drugs as fundamental values. It spread throughout the world, during the counterculture of the 1960's, which became closely associated with the subculture.
- [6] *The civil rights movement* was a social movement and campaign from 1954 to 1968, in the United States, to abolish legalized racial segregation, discrimination, and disenfranchisement. The major social movement campaigns of nonviolent resistance and civil disobedience eventually secured new protections in federal law for the civil rights of all Americans.
- [7] Andrei MARGA, *Școala de la Frankfurt în fața istoriei*, Meteor Press, București, RO, 2023, p. 12.

THE BEAUTY OF CREATION GUIDES US TO GOD!

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ABSTRACT

This study investigates the teachings of Saint Porphyrios the Kafsokalivite on how the appreciation of beauty in creation can lead believers closer to God. Despite his lack of formal theological training, Saint Porphyrios offered profound experiential insights into divine beauty manifest in nature, art, and music. He passionately argued that the beauty surrounding us is a reflection of divine grace, urging believers to perceive these manifestations as direct links to the Creator. Saint Porphyrios highlighted the spiritual dimensions of beauty, fostering gratitude and reverence for God's gifts. This study employs a qualitative methodology, analyzing primary sources such as the writings and recorded teachings of Saint Porphyrios, alongside secondary sources including theological commentaries and contemporary scholarly interpretations. The study's findings reveal that engaging with the world's beauty cultivates a closer relationship with Christ and enriches spiritual life through continuous praise and glorification of God. By articulating the role of beauty in the spiritual journey, this paper emphasizes its importance in drawing the soul toward higher realms of divine reality. The contribution to the field lies in demonstrating that recognizing and valuing beauty in creation is both an act of worship and a method of theological reflection, leading to a deeper union with the divine. Therefore, in order to emphasize the subject of this study, in addition to the above-mentioned method, we have used both the analytical and the synthesis method, in accordance with the values of Orthodoxy in general.

Keywords: God, Saint Porphyrios the Kafsokalivite, beauty, creation, doxology.

INTRODUCTION

Exploring the profound and complex universe of Orthodox Christian theology, we encounter the emblematic figure of Saint Porphyrios the Kafsokalivite, a luminary among contemporary Holy Church Fathers, an apostolic witness for the entire Orthodox world. His life, lived in perfect harmony with Christian doctrines and his authentic teaching in Christ, deeply rooted in everyday realities, makes this great Saint of the Orthodox Church a profound theologian, with a high comprehension and transposition of Orthodox Christian faith truths for the contemporary world.

This study investigates how the appreciation of the beauty of creation, according to the teachings of Saint Porphyrios of Kafsokalyvia, can lead us closer to God, as it reflects divine grace and love manifested in the world. Through the contemplation and recognition of the beauty of nature, aesthetics, art, and music, the believer profoundly

connects with the Creator, acknowledging His presence and majesty in every detail of creation. This appreciation not only strengthens faith and devotion to God, but also encourages a life lived in harmony with the divine laws, cultivating a sense of gratitude and reverence for the received gifts. Thus, the beauty of creation becomes a pathway through which the soul can ascend to higher spiritual dimensions, enriching the spiritual life and personal relationship with the Divine.

The research methodology employed in this study includes the analysis of primary sources, such as the writings from the audio recordings of Saint Porphyrios, as well as secondary sources from the notes of his spiritual children, including theological commentaries and contemporary testimonies about his life and miracles. In the theological analysis of the beauty of God's creation, we also utilized the dogmatic writings of several distinguished Holy Fathers and contemporary theologians. Examining this theme through the lens of Saint Porphyrios's teachings, this paper not only highlights the timeless relevance of his teachings, but also connects theological wisdom with contemporary challenges, offering a model for believers seeking to live a life rooted in divine love and wisdom.

THEOLOGICAL PERSPECTIVES ON THE BEAUTY OF CREATION ACCORDING TO THE TEACHINGS OF SAINT PORPHYRIOS

Saint Porphyrios the Kafsokalivite was born into a modest family in Greece, at the beginning of the 20th century, in a context that did not allow him access to formal education. Nonetheless, his fervent aspiration to embrace the monastic life opened the path to divine illumination and wisdom, receiving various divine charisms, such as clairvoyance and foresight. At the age of twelve, he entered the monastic life on Mount Athos, where he cultivated a profound love for the beauty of divine creation. He strained in the southern part of the Athos peninsula, in the area of Kafsokalyvia (the Burnt Huts), in the wilderness of the Holy Mountain. This area offered him stunning views of the sea, rocks, islands, sunrises, and sunsets, as well as the stars adorning the infinite sky – all of which became sources of spiritual meditation and continuous doxology to God. As he himself testifies: "I climbed alone to the mountain, to the peak of Athos, about eight hundred meters high. I had with me the *Scriptures of the Old Testament*, and I looked at the clear blue sky, the endless, boundless sea, the trees, the birds, the butterflies, all the beauties, and I cried out with great fervor: «Christ is risen!» While shouting, without realizing it, I opened my arms and held them out; I stood there frozen. A kind of [spiritual] madness had seized me"[1].

The Athonite Saint, manifesting a hesychastic character, was a lover of the wilderness and serenity, living in deep communion with all creation. Nevertheless, illness forced him to leave the Holy Mountain, but his desire to find peace and solitude in the midst of beautiful nature remained steadfast wherever he lived[2]. Throughout his life, Saint Porphyrios loved traveling in nature, preferring to spend his evenings under the starry sky and waking up in the morning to listen to the birds' songs and to contemplate the beauty of the sky adorned in the purple light of the sun. He loved venturing into the forests near Athens, in Evia or in Kerasia (Holy Mountain), immersing himself in silence to praise God in solitude[3]. If he had the opportunity, he never missed a sunset walk, whether alone or accompanied by a few spiritual children, admiring the evening colors and the birds' dance in the sky, resembling Angels rolling around God's throne. "The Father [Porphyrios] felt the creation, spoke with God's creatures, with rocks, with

birds, felt the prayers, understood the birds' chant, the smell of flowers, rejoiced in the colors, in the harmony that exists in the universe. He was a truly normal man, who enjoyed God's Creation and glorified Him, having been freed from any passion"[2]. Through these direct experiences, Saint Porphyrios left his spiritual children's precious teachings on the relevance of appreciating the beauty of God's creation.

In his writings, the Athonite Saint explains how nature and art reflect divine grace and urges us to view them as manifestations of the Creator, with the beauty of creation being a spiritual invitation to draw closer to God, according to the Holy Fathers[4]. This theological perspective emphasizes that the appreciation of beauty is not merely an aesthetic experience, but also a spiritual one that directs our hearts and minds toward God. Saint Porphyrios passionately describes how every element of nature, from the smallest flowers to the greatness of the mountains, is an expression of God's love for us. "Enjoy all that surrounds us. All things teach and guide us to God. Everything around us is a drop that springs from God's love. The living and the inert, the plants, the animals, the birds, the mountains, the seas, the sunsets, and the starry sky. They are the small loves through which we reach the Great Love, Christ"[1]. This vision aligns with the patristic tradition, which sees creation as "filled with the presence of its Creator; it reflects and reveals Him through its perfections"[5].

Moreover, correspondingly, Saint Dionysius the Areopagite emphasizes that all beautiful things in creation have the divine beauty as their foundation: "This good is praised by the sacred theologians both as beautiful and as beauty, as love and as beloved, and through all the other divine names conforming the beauty that makes beauty and is full of grace. [...] From this beauty, all beings derive their beauty, each according to its own reason. [...] Beauty is the goal of all and is loved as a final cause, for all things exist for its sake, as well as an exemplary cause, for all things are determined according to it"[6]. He argues that the beauty and goodness of God are the sources of any form of existence and movement, emphasizing that all creatures, whether rational or irrational, owe their life and essence to divine goodness. Both Saint Porphyrios and Saint Dionysius use images and metaphors to describe the beauty of creation, as a reflection of divine love and grace. While Saint Porphyrios emphasizes the personal and intimate connection with creation, showing how each natural element can become an occasion for doxology and thanksgiving, Saint Dionysius approaches the subject more systematically, expounding a theology of beauty that explains the origin and purpose of all beautiful things in God. This complementarity between the mystical experience of Saint Porphyrios and the theological analysis of Saint Dionysius offers us a comprehensive and profound understanding of how the beauty of creation leads us to a deeper communion with God.

Another important aspect found in the teaching of the Kafsokalivite Saint is that natural revelation, although useful, is insufficient in the absence of supernatural revelation. Thus, he emphasizes that contemplating the creation, although a mystery of the *Gospel*, is not sufficient and cannot lead the soul to Heaven without inner grace: "nature awakens us, but it cannot take us to Paradise"[1]. In the same sense, the great Romanian theologian, Father Dumitru Stăniloae, explains that supernatural revelation strengthens and completes natural faith, providing man with the knowledge, and help necessary to overcome the unnatural state of existence marked by sin: "supernatural revelation represents a return of human nature to its true state, giving it, at the same time, the power to reach its final goal, to which it naturally aspires"[7]. Both theologians, Saint

Porphyrios and Father Stăniloae, converge on the idea that although nature can awaken in man the desire for transcendence, only through the supernatural intervention of divine grace can salvation and true spiritual fulfillment be realized.

It can be observed that the theology of Saint Porphyrios of Kafsokalyvia regarding the beauty of creation is deeply anchored in the Orthodox tradition, and aligned with the teachings of the Holy Fathers. Creation is seen as a direct manifestation of divine love and grace, with each natural element being an invitation to contemplation and doxology. Although the beauty of nature can awaken the soul towards transcendence, Saint Porphyrios emphasizes that spiritual ascension and transformation are possible only through God's grace. This theological vision not only reflects patristic teachings, but also reaffirms the importance of integrating natural and spiritual experiences in the quest for communion with God.

HOW THE SPIRITUAL PRACTICE OF APPRECIATING THE BEAUTY OF CREATION GUIDES US TO GOD

The teaching of Saint Porphyrios the Kafsokalivite regarding the beauty of creation emphasizes the necessity of a spiritual life to truly appreciate the splendors of nature. He insists that only through the grace of God we can become sensitive to the beauty that surrounds us, thus, avoiding insensitivity and indifference. The spiritual man, enlightened by the Holy Spirit, is attentive to everything that surrounds him, having awakened senses capable of perceiving the depths of divine creation: "the spiritual man, the man who has the Spirit of God, is attentive wherever he goes; he is all eyes, he feels everything. All his senses are awake; they are awake in the Spirit of God. He is different. He sees everything and hears everything; he sees the birds, the stones, the butterflies... When he passes somewhere, he feels everything, a scent, for example. He lives in the midst of everything – butterflies, bees, and so on. Grace makes him attentive. He wants to be in communion with all things"[8]. This appreciation of aesthetics deepens within a person, as the relationship with Christ, also gains new depths, completely transforming the soul: "we, poor souls, read some word or sermon and say beautiful, very beautiful. And yet we remain in our lethargy and indifference. We live without Christ. Christ is something else. When Christ comes into a person, when He comes into our soul, when He enters into a person, the soul becomes different. It lives everywhere, it lives in the stars, it lives in the spiritual world, it lives in the universe"[9]. Thus, as we admire the beauty of creation and see in it the work of God, we receive divine grace, and as we enrich ourselves even more with divine grace, we become even more capable of appreciating and deeply contemplating the beauty of creation, in a reciprocity that leads us to a deeper communion with the Creator. This transformation can be seen how it enveloped Saint Porphyrios, allowing him to observe and contemplate the divine beauties with intensity, transforming every element of nature into a source of spiritual joy and wisdom: "everything related to nature helps us greatly in the spiritual life, when it is with the grace of God. When I feel the incant of nature, I cry continuously. Why should we not have an appetite for life? Let us live it in the Spirit of God, in the Spirit of truth. He who has the Spirit of God, who has divine wisdom, sees everything with God's love, and is aware of everything. God's wisdom makes him rule over all and enjoy everything"[1].

When we receive the grace of God, our spiritual eyes see how all created things glorify God, "everything prays: the earth, the sky, the stars, the flowers that spread good fragrance, the murmuring brooks, the foaming waters, the singing nightingales, the flying butterflies, all sing «Christ is risen!». And thus, we are urged to take their example and glorify God with our whole being"[1]. Because nature, created out of God's love for man, drives us to doxology. When we look at the beauty of the horizon at sunrise or admire enchanting landscapes, we are called to go beyond mere aesthetic contemplation and glorify God, recognizing in all beautiful things the reflection of the Creator. Moments of admiration and joy in front of nature predispose our soul to prayer and deeper communion with God, teaching us to thank and love Him, cultivating this activity as a spiritual practice: "Make use of beautiful moments. Beautiful moments predispose the soul to prayer, they make it delicate, politely, poetic. Wake up in the morning to see the sun-emperor rising purple from the sea. When a beautiful landscape, a little church, something beautiful excites you, do not stay there, go beyond it, move on to the glorification of all that is beautiful, to experience the only Beautiful One. Enjoy everything. Everything enriches us, everything leads us to great Love, everything leads us to Christ"[10].

The great benefit of the appreciation of aesthetics, according to Saint Porphyrios, is that it opens us to growing in love for God: "seeing nature, trees, flowers, birds, bees, the sea, the fish, the stars, the moon, the sun, and other wonderful creations of His, we turn our minds to God and, glorifying Him through them, we try to understand how beautiful and wonderful they are, and strive to love them. When we love all these, love ascends to our Creator and, in this way, we truly love Him"[11]. Moreover, Saint Porphyrios, through his personal example, advised his spiritual children to love and respect all of God's creation, including plants, animals, and birds. He showed them how each element of nature can become an opportunity to glorify the Creator. For example, he admired the divine wisdom through the way plants were constituted, saying: "look, my child, how wonderfully God's wisdom arranges everything. Due to its weight, the banana tree does not direct its petiole upwards, but towards the ground, thus, being able to hold the banana bunch. Otherwise, due to the weight of the bunch, the tree would be uprooted"[12].

Additionally, his love for God's animals and birds was profound and materialized in actions. The Saint subdued eagles, tamed and trained parrots to say prayers, demonstrating how all creatures can participate in doxology. "The Father [Porphyrios] was not only a doctor. He was also a veterinarian. He loved animals. He tamed furious parrots and taught them the *Jesus prayer*. I was amazed when I heard a parrot repeating the prayer in his cell. «He is more spiritual than me», the Father said. «I stop and fall asleep, but he is awake»"[2]. Furthermore, he loved caring for the forest birds, planning to build watering places for them, and marveled at the songs of the nightingales, considering them as invitations to prayer[1]. Naturally, the Saint believed that we show our love for God by loving His creation, however the most important love we must manifest is for our neighbor: "an indispensable condition is the love for His creatures, but even stronger must be our love for our fellow human beings. That is why we must visit hospitals, prisons, orphanages, old people's homes, etc. Then, our love is sincere"[2]. The fact that we dedicate ourselves to the love of God's creation and nature has rich consequences for us, the Athonite Saint testified, including the acquisition of divine grace, spiritual peace, and much serenity: "he did not recommend renouncing or

withdrawing from activities, but insisted on the simple way of life in the countryside. He considered a mountain walk an important means of recreation"[9].

Saint Porphyrios urges us to appreciate the beauty not only of nature, but also of human achievements, seeing in them the reflection of God's wisdom. He emphasizes the importance of appreciating the beauty of buildings, cities, our culture and civilization, considering them opportunities to deepen our understanding of the relationship between man and God. By observing these human achievements, we are called to use them as opportunities to connect with all and with everyone, to enrich our knowledge and not remain indifferent. Hence, every aspect of our life becomes an occasion to recognize and glorify the greatness of the Creator, acknowledging in all our works the grace and wisdom of God. Additionally, for the development of the spiritual life, the aesthetic from art, poetry, writings, and music is essential, according to Saint Porphyrios, all of which contribute to elevating the soul to God and cultivating a distinct spiritual sensitivity. The Athonite Saint had a sensitivity to the aesthetic in art, and he was convinced that this form of artistic expression was one of the means by which the Christian soul could be cultivated. He urged all those aspiring to an authentic Christian life to develop a poetic sensitivity: "to become a Christian, one must have a poetic soul, one must be a poet. Christ does not want «vulgar» souls near Him. The Christian, even when he loves, is a poet, he dwells in poetry. Poetic hearts embrace love, place it within themselves, feel it in their depths"[1]. "The Christian's soul should be tender, delicate, sensitive, always flying, living among dreams. To fly infinitely, among the stars, among the greatness of God, in silence. He who wants to become a Christian must first become a poet. That's it! To feel the pain. To love and endure"[13]. This vision reflects the conviction that the Christian soul must be delicate and sensitive, capable of living in a world of divine beauty.

Saint Porphyrios not only appreciated art and poetry, but also had a profound love for music, considering it an essential factor of elevating the soul to God. He studied music at the Conservatory of Athens and learned to play the piano and organ, appreciating, in particular, Byzantine music: "Byzantine church music is an education. It softens the soul and raises it, little by little, to other spiritual worlds; it sows joy, delight, and fulfillment"[14]. "It is good to listen to music. But above all is Byzantine music, because it does not disturb the soul, but unites it with God and gives it rest. If you still insist, you can listen to secular music, but I say it is preferable to listen to music without words"[15]. The Athonite Saint encouraged everyone to engage in hymns of praise and poetic canons, emphasizing that these help sanctify the soul in a gentle and mysterious way: "Engage in hymns of praise, in poetic canons, in the adoration of God and divine eros. All the holy books of our Church – *Octoechos*, *Horologion*, *Psalter*, *Menaion* – contain holy, tender words addressed to Christ"[8]. Through his personal example, Saint Porphyrios demonstrated how art, music, and poetry can be integrated into the spiritual life, becoming means of bringing the soul closer to God and cultivating a profound spiritual sensitivity.

Last but not least, Saint Porphyrios emphasizes the importance of inner beauty, of a pure and loving soul. He taught that true beauty comes from within and is reflected in the way we live and interact with others, because a beautiful, pure and loving soul will see beauty in all things and reflect that beauty in all its actions[1]. This inner beauty is essential for living a life full of grace and blessing.

CONCLUSIONS

This study has investigated the teachings of Saint Porphyrios the Kafsokalivite on how the appreciation of the beauty of creation can lead believers closer to God. Through the contemplation of nature, art, poetry, and music, one is called to recognize the reflection of divine grace in all things and to be guided towards a deeper communion with the Creator.

The findings of this research emphasize that, in order to truly perceive the beauty of creation, it is necessary to acquire the grace of God, which awakens our spiritual senses and opens our eyes to the wonders of the surrounding world. This reciprocity between grace and aesthetic appreciation leads us to a deeper spiritual life, where every element of creation becomes an occasion for doxology and thanksgiving. Furthermore, Saint Porphyrios underscores the importance of integrating the beauty created by human hands and art into spiritual life. Music, poetry, and art are seen as means to cultivate spiritual sensitivity and elevate the soul towards God. Through his personal example, the Athonite Saint demonstrated how these forms of artistic expression can become pathways to glorify God and deepen spiritual life.

The contribution of this study lies in demonstrating that recognizing and valuing the beauty of creation is both an act of worship and a method of theological reflection, leading to a deeper union with the Triune God. Saint Porphyrios teaches us that the beauty of creation is not merely an aesthetic aspect of life, but a means through which we can better experience and understand the love and grace of God. Hence, this appreciation of beauty becomes a path to sanctification and union with the Creator.

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**SECTION MEDIA, COMMUNICATIONS, AND
MISINFORMATION IN THE DIGITAL AGE**

DO CLOTHES MAKE A (WO)MAN

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ABSTRACT

The intricate interplay between fashion and culture has been a subject of extensive scholarly inquiry. This research delves into the perceptions and attitudes of Generation Z, a cohort significantly shaped by the pervasive influence of online media. Exposed to a complex tapestry of societal trends, including the rise of neo-conservatism and the growing LGBTQIA+ rights movement, Generation Z presents a unique lens through which to examine not only contemporary fashion and culture but, more important, ability and inclination of future generations for critical thinking. This generation's inclination to trust online influencers without critical analysis, coupled with their apparent disengagement from traditional political processes, makes them important intriguing subject of study. This preliminary research presents the findings of a survey conducted among 708 students of engineering, journalism, and kinesiology. The aim of this study is to provide a foundational understanding of the complex relationship between fashion, culture, and generational attitudes, paving the way for more in-depth future investigations. The results indicate that clothes (fashion elements) do seem to make an impression of a woman.

Keywords: gender, fashion, culture, critical thinking, generation z, LGBTQIA

INTRODUCTION

„Clothes do not make a man” is a phrase repeated many times throughout human history, it is a sort of wisdom. It emphasizes that a person's true character and worth are not determined by their outward appearance or material possessions, but rather by their inner qualities, actions and values [1].

But still, when we meet someone, we subconsciously scan the person for crucial data: sex/gender, age, nationality/language and education/profession [2]. This is not wrong because it helps us to gauge how to interact with the person.

However, by attaching these categories, classes to a person, we also limit our expectations from the person; what we „allow” the person to do, to be and our ability to see their true, full personality [3].

Gender of a person is the first characteristic we try to determine. But in doing so, clothing, makeup and hairstyle significantly influence our judgement [4], [5]. And these

factors are subject to current fashion which is a cultural construct and is changing with time.

In addition, frequently, items of male fashion become female fashion. For example, high heels were first used by Persian cavalry in 10th century and adopted by European aristocracy in 17th century, most prominent of which was Louis XIV and knee high boots were worn by men till 1950-ies. It is seldom the other way around, but, for example, corsets worn by women from ancient times, became part of male fashion in 18th and 19th century, even part of military uniform.

Today, the Generation Z [6] is exposed to two opposing waves: “neo Victorian morale” and “gender freedom movement”. Politically “right”, conservative and religious circles insist that sex is equal to gender and that there are only two genders: masculine and feminine, male and female. LGBTQIA+ community, feminists and gender theorists, on the other side, claim that sex is biological trait while gender is a social, cultural construct and that neither sex nor gender are binary but rather have multiple variations and subcategories [7]. Some even believe that “boxes” should be avoided and both, especially gender, should be considered to be multidimensional continuums [8].

In this context, new generations receive two simplified messages. One is: “If you wear a female attire, you are dressing INTO a woman”. i.e. your intention is to become a woman. The other is: “By (merely) wearing a dress you are NOT a woman.”, i.e. there is much more than clothing that makes a person to be a woman.

Thus a research was conducted among students about their attitudes on this topic and their ability to differentiate men and women regardless of their fashion expression.

MATERIALS AND METHODS

The survey has been conducted during the winter semester at the University of Zagreb with 708 students at three schools: Faculty of Electrical Engineering and Computing (650 freshmen and 91 seniors), Faculty of political sciences – journalism (80 students) and Faculty of Kinesiology (126 students).

Survey was conducted at the end of a regular lecture. It was anonymous and students did not receive any credits for answering. Survey had five multiple choice questions about students’ attitudes towards what is appropriate to be worn by men and women:

1. Do clothes make a (wo)man
2. Do people send a message by their clothes?
3. Do clothes make a person a man or a woman?
4. What kind of clothes may a woman wear?
5. What kind of clothes may a man wear?

There were also two questions about their confidence to be able to recognize a man or a woman:

- Can you recognize a woman no matter what she wears?
- Can you recognize a man no matter what he wears?

Then, students were asked to recognize a woman in five tests where they were presented with two photographs each time. Next students were asked to choose the photograph of a more feminine person in six series of two photographs.

RESULTS

58% students believe clothes do not make a man. 19% believe we always send a message, 79% sometimes. 57% believe clothes do make a man or a woman. 57% would allow a woman to wear whatever she wants and 28% what makes her look good. For men numbers are similar, but twice as many (30% vs, 14%) would limit a man to what is sold for men or depicts them masculine. 81% believe they would always or mostly recognize a woman and 87% a man.

When students were asked to recognize a woman in five pairs of photographs of: a woman and a man (Figure 1), two women (Figure 2), a woman and a male crossdresser (Figure 3) and two male crossdressers (Figure 4 and Figure 5) 14% couldn't distinguish an obvious man and woman; 27% couldn't recognize both women; 47% couldn't distinguish a woman and a male crossdresser; only 29% recognized a male crossdresser.

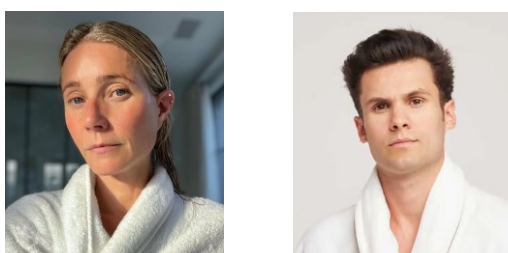


Figure 1: Choose a woman test #1 - A woman and a man

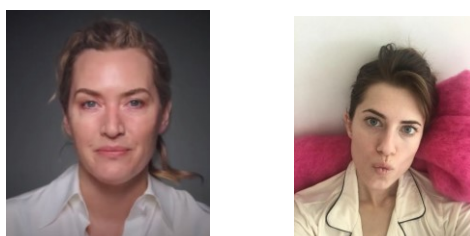


Figure 2: Choose a woman test #2 - Two women



Figure 3: Choose a woman test #3 - A woman and a male crossdresser



Figure 4: Choose a woman test #4 - Two male crossdressers



Figure 5: Choose a woman test #4 - Two male crossdressers

In the second series of six photograph pairs students' perception of femininity was tested.



Figure 6: Who is more feminine test #1: Two women



Figure 7: Who is more feminine test #2: Two women



Figure 8: Who is more feminine test #3: Two women



Figure 9: Who is more feminine test #4: A woman and a male crossdresser

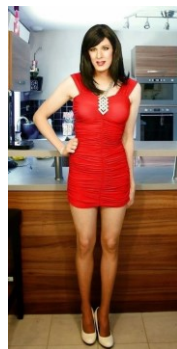


Figure 10: Who is more feminine test #5: Two male crossdressers

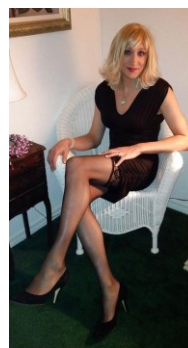


Figure 11: Who is more feminine test #6: Two male crossdresser

65% of students have found a male crossdresser to be as feminine (35%) or more feminine (30%) than a woman. 74% found two male crossdressers to be feminine.

DISCUSSION

This initial study lays the groundwork for future research. To enhance the reliability and robustness of findings, a preliminary study is recommended. This pre-study should involve a careful selection of photographs, considering factors such as the students' aesthetic preferences and cultural backgrounds.

However, these results indicate that clothes (fashion elements) do seem to make an impression of a woman. Students at University of Zagreb are influenced by societal interpretations of sex and gender. They are allowing more freedom of fashion expression to women than to men. They are overly confident in their ability to attribute gender to a person, but this survey indicates that their judgement dominantly depends on the fashion expression of a person.

Important is an unexpected outcome that as many as 14% of students couldn't distinguish an obvious man and woman. This may indicate that students were expecting trick questions. Therefore it should be taken carefully in further studies.

Students were also asked about their sex as assigned at birth as well as their present gender identification. They could choose not to answer these questions. 61% responded to the question about sex, out of which 34% declared as female, 60% as male and 6% as other. 60% responded to the question about gender out of which 32% declared as woman, 52% as man and 6% as other. The correlation of answers to these question with their other answers will be investigated in the future.

In addition, in this survey students were also asked:

- What do you use as a reliable source of information?
 - 7% use newspaper (printed media)
 - 18% radio and TV
 - 27% info portals
 - 14% social networks
 - 2% influencers
 - 9% word of mouth from acquaintances
 - 13% something else
 - 10% nothing
- Do you trust influencers?
 - 1% trust fully, totally, completely
 - 1% more than “official” sources including scientific
 - 7% equally as “official” sources including scientific
 - 60% less than “official” sources including scientific
 - 29% none at all
 - 2% did not respond

- Do you believe in conspiracy theories?
 - 6% yes, all is practically true
 - 3% most are true
 - 58% some make sense
 - 22% no, all are without any true foundation
 - 11% I don't know

The correlation of answers to these question with their other answers will be investigated in the future.

Further correlation of student's study topic and their results in the survey should be looked into, as well.

CONCLUSION

The results of this introductory study indicate influence of fashion on ability to determine a person's gender and that further studies might be beneficial.

Additional data on student's gender and sources of information have been collected but were out of the scope of this initial analysis. Correlation of these data to students' answers to basic research questions will be investigated in the continuation of the research. After that, a new, longitudinal, over the course of five study years, survey would be beneficial.

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FLEXIBLE WORKING SCHEMES AND THE IDENTITY OF CULTURAL JOURNALISTS IN LATVIA

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ABSTRACT

Cultural journalism is a sub-field of journalism characterized by specific knowledge and education required from the journalists working as both reporters and reviewers and often close interaction with arts and cultural industries. The importance of cultural journalism lies in its role of providing for society a self-reflective discourse describing values and modeling patterns of behaviour and thought through journalistic practices such as reporting and reviewing on everyday culture and arts. However, the role of cultural journalism in the context of contemporary media environment is diminishing. This pushes for finding of new models of work in this field that at the same time puts under question professional identity of those working in cultural journalism. Until now cultural journalism is an underresearched domain in journalism studies, especially, from the media management and economics as well as work organisations/conditions point of view. This paper contributes to the reseatch on the roles and identity of cultural journalism focusing on exactly these aspects of journalistic practice. The purpose of this paper is to explore flexible working models in the field of cultural media in Latvia in connection with reflection of professional role and corporate identity. To achieve this, 12 in depth interviews were conducted with editors and journalists of Latvian media companies. The findings show that professionals interviewed see the goal of their professional activity broader, often combining their role in journalism with other roles in the field of culture. They can more or less be aware of their professional identity as journalists, tend to experiment deliberately with working schemes, but mostly recognize their corporate identity.

Keywords: cultural journalism, professional role, flexible working model, corporate identity

INTRODUCTION

Theoretical literature on cultural (and arts) journalism developed in the first decades of the 21st century is driven by the theoretical reflection of the specificity of cultural journalism described as “difference”[1], [11]. That difference shows itself not only in the content or object specificity (that often requires additional competences from a cultural journalist) and genres and methods of journalistic work, but also can be observed along the dimensions such as goal of activity, role of the audience, means of reflections, system of reference, place of sources, concept of time and personal identity that tend towards either more journalistic or aesthetic paradigm [2]. Media outlets and individual journalists working in the field differently understand the role and goals of their activity. In part this is determined by the close involvement into respective field of arts or cultural industry. They also differ in their understanding of what culture is [3]. Nevertheless, cultural journalist has a significant role in the legitimization of artefacts as

culture and creation of symbolic capital in the field of culture [4] [5] [6] [7]. In their everyday selection and representation work, along with other areas of social existence contemporary media define culture by informing, interpreting, translating, adapting, evaluating, reflecting work of creative production. The meaning-making role positions cultural journalists as key figures in cultural discourse [1]. This role often involves navigating the perceived boundaries of high culture versus mass culture, sometimes positioning themselves as guardians of cultural standards [8]. At the same time, a broader understanding of culture including traditional, subcultural, and everyday practices make cultural journalism's boundaries are often unclear [9]. Last decades were marked by the diminishing of the importance of the cultural journalism among all other subfields of journalism [8], [10], undergoing managerial logics [11], so that what was once the domain of philosophical reflection and analysis in the tradition of cultural criticism, became merely reporting, description and translation of cultural events "newsification" [12] or even "churnalism" [13]. However, the role of cultural journalist as both observer and participant in the cultural (meta)discourse remains crucial in shaping public understanding of culture and arts. Hovden and Kristensen underline three aspects that prove the importance of the focused study of the cultural journalism. First, cultural journalism and reflection on culture is playing a significant role in the everyday production processes in media business, in particular, maintaining taste and quality standards. Second, there is an influence of cultural journalism styles and logics on the change in practices and ideas in other fields of journalism. Third, the interaction between journalism and arts /culture typical for cultural journalism can be seen as both an opportunity for media business and the risks of influence of market interests [14].

The decrease of importance with accompanying loss of focus in the activity of cultural journalism are most important factors behind the changes in working models of cultural journalists and the organization of work in cultural media. Many cultural journalists are only part time workers with shifting professional identity [3]. It must be noted that for many Latvians of the older generation printed cultural newspapers and magazines were important part of their media repertoires since they served as a territory of increased level of freedom during years of Soviet occupation. This tradition was lost in the market based media culture of the late 1990ies, and, even more during financial crisis 2009-2009 [3]. The flexible work combined with part time and freelance working models was seen as optimal solution in hard and changing times to support the organisation's corporate identity. Innovative paradigms of work and new business models expanded their field of activity in order to achieve sustainability [15] and strengthen corporate identity. However, it strongly contributed to the loss or clarity of professional identity and even work in cultural media itself transforming it into creative activity inside the cultural field in broader sense. Flexibility as a paradigm of change lays in the very philosophy that makes it possible, including flexible forms and models of work.

Flexible working schemes and practices are increasingly discussed, especially, in the context of digitalization [16], by pointing out also negative aspects such as stress, work overload and burnout of employees [17]. The research on professional identity of flexible workers shows that the group of flexible workers in media industry is not homogenous in terms of perception of their identity. Galpin and Sims propose to consider them in two groups - knowledge workers (who prioritize their expertise in the field and form their identity around it) and operators (who obtain their identity through the specifics of goals and tasks in their work) [18]

Corporate identity, distinct from the previously prevalent understanding of visual identity in marketing or branding contexts, is today discussed as a complex concept that includes organizational strategy, mission, philosophy, values, communication, visual identity, design, culture, behavior and perception. Within this framework, Melewar and Karaosmanoglu identify seven dimensions that allow differentiation between companies, including ‘what the organization is,’ ‘what it stands for,’ ‘what it does,’ ‘how it does it,’ and ‘where it is going.’ They conclude that corporate identity “is the presentation of an organization to every stakeholder” [19]. Balmer emphasizes the need to understand corporate identity as a continuum capable of change in order to achieve sustainability and longevity [20]. Flexible work as part of organizational strategy based on corporate values can be seen as an element of this change.

MATERIALS AND METHODS

This article aims at showing the relationship between flexible working models, perception of professional roles of cultural journalists and corporate identity of cultural media and media having cultural content as part of its corporate strategy in Latvia. The main research question of this article is: how flexible working models as part of the corporate identity of a media outlet are contributing to the identity construction of cultural journalists while practicing their professional roles? The discussion is based on 12 in-depth semi-structured interviews with journalists and editors. In order to achieve wider variety of the sample professionals from both national wide non-specialized news outlets (6) as well as specialized media (6) working as journalists and editors (many of them work as journalists elsewhere in addition to their work as editors). They also represent media outlets working (primarily) in print (3), broadcasting (4) and on-line (5). All interviews were conducted in person or via zoom in September / November, 2024. In the interview blocks of questions related to 1) identity, 2) working conditions and 3) experience made were asked including overall evaluation and critical conclusions on the flexibility in working models.

The narratives of working conditions, personal goals, professional values and norms as well as the corporative identity were analysed in the text of interviews. The methodology allowed to compare the experiences made by cultural journalists and editors with flexible working models and their self-reflection including threads and opportunities provided by this model.

RESULTS

The identity of a cultural journalist is complex, transforming in time or can be considered as a myriad of identities that the journalist recognizes as his or her own while working during her professional life in different roles in either journalism or cultural (sub)field, or both. There are journalists that come from other branches of journalistic production and now work mainly with culture related content. The work in cultural journalism is special to them: “*My task is to make people feel more rich spiritually.*” (R11) “*I think, in cultural journalism You get different energy.*” (R8) However, this group identifying themselves as journalists is minority among the sample. Majority have an arts background and continue to hold this connection.

Widely shared opinion expressed in interviews points on economic difficulties in the cultural journalism field in Latvia: “*The salaries are marginal.*” (R8). This is why the biggest group of journalists state that they have at least two or more different jobs or

take on other part time jobs occasionally: *"I think that there is a very little number of editors who work in only one medium and one position. In our editorial board, all the people have always worked elsewhere mostly in their main job. The work of an editor is then more like a hobby.[...] there is this manipulation between the jobs. And it is a big problem."* (R9) Several respondents mentioned their involvement in the activities for change of regulation to make working and payment conditions more socially and economically save. Still, *"[...] no one has a time to invest the work and time, and if there is no motor behind it stops like it is."* (R3)

The multiple job situation means also that the management of time is a big challenge for a journalist and the flexible working scheme is seen here as a big opportunity: *"Of course, this is not the only job of those who produce our journal. I would not be able to link all the jobs and life responsibilities, if I had to stay there all the working time. I am myself a target oriented person. I try to go through all steps of organizing and editing work harmonically. It can be both on 10 o'clock a.m. and on 10 o'clock p.m."* (R3)

The unstable economic situation and connected diminished importance of cultural journalism that often results in sharing of the time between different working positions, tasks and roles makes the professional identity of cultural journalists perceived as "liquid". Most of the professionals interviewed do not identify themselves as cultural journalists. However, there is a difference between those coming to cultural journalism from a other fields of journalism and/or working in news media for general audiences with stable full time contracts (those groups often overlap since one way of becoming cultural journalism is to apply for a stable payed working position offered in this kind of media) and those who are experts in fields like literature, theatre, music, philosophy etc. and then come to work in media reporting and reviewing of the respective field or even have developed their own media in the field. The first speak of themselves as cultural journalists (even if often are educated in art related fields), for example: *"I worked as a theatre critic [in a newspaper], but a theatre critic cannot make money for life with review writing, this is why I gradually evolved to broader scope of cultural journalism."* (R4) The second group have problems with this description of the role and identity. Some of the interviewees declare: *"I was never thinking of myself as a cultural journalist, because many years ago I came to cultural field as a prose writer, then I stopped. I expressed myself as an editor. But this is not a cultural journalism."* (R3). It is interesting that the work of an editor in specialized printed and on-line media that requires a lot of time to prepare text is put in opposition to cultural journalism as part time occupation: *"I do not think that I am a cultural journalist, to think so I would have to work in cultural journalism all the time. Now[...] I feel more like a cultural journalist when writing not as an editor [of our magazine]"* (R1). Others are looking for a special description of this position between media and field represented: *"I have a difficulty to identify myself, but maybe the most precise description is "cultural publicist", because it includes journalism and the work of editor as well – this in-depth work with text."* (R9) The biggest part of interviewees had education in humanities with journalism learned in practice: *"Ideally, it would be both, but the education in journalism can be obtained in the practical way."* (R8)

An extra time is needed to read, search for information, visit cultural locations and events partly as an interested audience, but also performing their duties. The leisure and cultural enjoyment converge with work, and the stable working plan is impossible: *"This is one of the things I like the best in cultural journalism, and in media work in*

general. *There is no one formula or plan, how the working day is spent.*”(R10) The working hours are often behind the borders of working day: *“I often work after theatre performances at night.”* (R4). *“It is an opportunity – to do time planning for myself. For a person with certain tendency, it is important to feel free. However, I keep myself working for 24/7/ So it is kind of deception.”* R3

In terms of time cultural journalist like a journalist is “always at work”. *“The leisure time and work converge in a certain manner. In the aspect, that with many authors I have personal relationship, they are in the lives of my friends, but they are persons which are asked to write at some point. Or you meet them in the exhibitions because they go to and you discuss...”* (R5)

In cultural journalism unlike traditional reporting, the time is enjoyed as deeper and wider time – in terms of historical and philosophical inquiry, research and analysis that is typical for many genres of cultural journalism, but also open for critical discussion. The preparation time, time for thinking, finding ideas is often sought during other activities of everyday life: *“There is no free time, because when you are not doing the work for journal you do some other work. The ideas for my magazine I find during walking, but also dish washing.”* (R3) Here again we see that the clear separation of the work and personal life and leisure is rather difficult. This thinking of culture through everyday practice comes with risk of stress and burnout of journalists, but is, in opposite, mainly regarded by them as a positive feature - the flow of time perceived that way gives meaning for journalists’ work itself that deserves attention: *“I like in this field something like “holding my hand of the pulse. You need to be always on line. You can not be like a journalist who just sits behind the table, because it is not a job from nine in the morning till five in the evening.”* (R7)

Because of depth and importance of this work the planning and organizing of time in fixed routines in cultural journalism is rather difficult. *“My working time is very flexible. I can decide about intensity of work, but I have to meet deadlines, however, they are relative as well”* (R1) However, the media and types of tasks are different. Especially, in electronic media one must be ready for broadcasting in time, but also meeting deadlines in the press is a challenge, and as a responsible editor *“You must jump in. writing an article for a daily in two hours if an author has not written it”,* (R6). From another side cultural journalism as a meaning making practice requires a lot of additional time for thinking, interpreting, argumentation:

“Nobody is interested where I am thinking. In my head, I take always my work home. [,] Theoretically, you should not take it home. Practically, it is impossible not to take [,] The space of cultural journalism is so big, to organize time is difficult.”(R8)

Thus, within flexibility frame, the time for (different types and phases of) work is extended outside typical working time and place. In part, it is also because the space of work is often the cultural space of the cultural field reviewed – space of exhibitions, concerts, book presentations, theatre performances. Becoming part of this space cultural journalist gains credibility, but from another side, the professional integrity asks from him being clearly separated from at least artefacts he or she is involved in the production or linked to producers. It is a vulnerable question, however, journalists interviewed refer the organization and personal ethics that regulates practice: *“It is a real problem, in fact, determined by the poverty where we are doing so much that sometimes it is difficult to draw a border. For me, it is clear that I am not going to write*

about the exhibitions I make myself. [...] I think, it is very difficult to keep position here. I would not quit the curating because I work in cultural medium. Life is too short. If I position it so that I don't write, we don't publish and actually it is not our focus. It is more difficult with books, because we are publishing books ourselves." [R9]

It is interesting that some of the editors admit that the production of artefacts (books, concerts, art and literature festivals) is becoming part of the activities of their organization – it can be seen as a development of their organizational goals in the context of the sustainability. Then, the identity of the media outlet is becoming most important definer of the identity of the respondent: *"I don't think that it is bad, because it gives some intimate knowledge which can remain hidden for others"*. (R1)

DISCUSSION

Interviews conducted with the professionals working in Latvian cultural media sector show that their professional identity form in the triangle between 1) practices and routines of everyday work evolving because of economical difficulties in to direction of flexibility, 2) the cultural field they review, report and evaluate in order to make sense and interpret it for actors of the field as well as wider audiences and 3) their perception of corporate identities. In the theoretical literature corporate identity is identified through seven dimensions, including 'what the organization is,' 'what it stands for,' 'what it does,' 'how it does it,' and 'where it is going', forming "the presentation of an organization to every stakeholder" [19]. Many cultural media outlets not only play an important role in defining borders of taste and values of a field or sub-field of culture, but are directly developed by the actors of the field or subfield. They remain in part heavily linked, in part, acting from the perspective of the field even if claiming to hold principles that include neutrality along with in-depth insight and strong moral (and aesthetic) values. It is notable that, in cultural journalism, increased flexibility in terms of working schemes is supported and enjoyed as increased level of freedom of a journalist. However, in order to escape work overload and negative mental consequences, there is a need of more time and space for thinking and reflection, including spaces other than office – in public events and home. Paradoxically, it develops the feeling of belonging to media outlet, sharing its way of working, attitude, values and taste. This mechanism of flexibility in the name of sustainability and corporate identity is becoming an important part of professional identity of a cultural journalist in Latvia. It is important, especially, for the specialized media that become part of the scene. Working as editors those professionals often devote to the work all free moments of life (like for a hobby), and do not identify themselves as journalists, but guardians of the values of the subfield of culture while one has to be paid on the very clear contract conditions (especially full time positions) in order to recognize a cultural journalist's journalistic identity. In the last case, as it is mostly in the general interest media, professional journalistic values and norms are more reflected, regarded and referred, but the difference and importance of cultural journalism is underlined, in part, explaining management attitude towards flexible working schemes (remote work and free planning of time). However, this can also be understood as a difference in uses of the freedom connected to flexible work between those who define their identity around their expertise (knowledge workers) and those whose professional identity is framed by the working tasks and goals (operators)) [18].

However, in the interaction with other fields of journalism as well as respective fields of cultural production and arts [14] create in Latvian cultural journalism a way to innovative models for [15] that often challenge the perception and understanding of professional role, but are based on strong corporate identity.

CONCLUSION

The main research question of the paper was - how flexible working models as part of the corporate identity of a media outlet are contributing to the identity construction of cultural journalists while practicing their professional roles? The results of the research show that practically all interviewed professionals stated they enjoy relatively free and flexible work in terms of time planning and place of work, especially, after COVID 19 pandemics when some of the activities like planning meetings were never brought back into the office. Most of the interviewees said they like this situation, other experience difficulty of planning and especially, regulating the working/leisure balance. Nevertheless, it can be said that the flexible work indirectly defines both the difference of cultural journalism and the closeness of cultural journalists to the arts and culture field that sets specific rules for cultural journalist's time planning and work specifics (late evening/weekend performances, long and "deep" readings etc.). Thus, the professional self-identification of the cultural journalist becomes more complex and sometimes difficult. However, from another side, media outlets, especially, those who tend to search for new ways of work and organizational principles, remain even more important identity defining element. Paradox is that those companies that offer more clear contract conditions seem to provide the identity of (operating) cultural journalist, while those often rather small players in Latvian cultural journalism market who mostly cannot allow extended staff, frames through strings of corporate identity and belonging the identity of the expert of the field for their knowledge workers, and they form its corporate identity in return.

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IMPACT OF VIRTUAL WORLDS IN COLLECTIVE MENTALITY. FROM PHANTASMAGORICAL PLACES AND WHIMSICAL MUSIC TO TANGENT, LIVELY ASPECTS

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ABSTRACT

In a world where technology has risen dramatically and every aspect of our lives include technology one way or another, there are many aspects to mention when it comes to the virtual world. Virtual worlds contain many unbelievable places, incredible sceneries, colorful areas and fantastic creatures and NPCs (non-player characters). The problem arises when people forget which is reality and which is phantasmagory. Many teenagers get trapped in these whimsical worlds and fall prey to their gaming device that takes a toll on them eventually, especially on their mental health and even physical health and well-being overall. It is of utmost importance, curiosity, and interest to assess these aspects and establish a reasonable motive for why this is happening and why it isn't necessarily healthy where there is no restriction involved. Players always tend to lose themselves in virtual worlds and become negligent in real life towards their families, jobs and so on. This increasing concern and problem pose a significant threat for both children, teenagers and adults alike.

Keywords: virtual, worlds, gaming, phantasmagorical, virtual journey

INTRODUCTION

Virtual worlds represent a quintessential part of people's lives nowadays and gaming as well. Video games are a suite of interactive games specialized in electronic gaming on a computer, mobile phone, television, or any other type of device programmed and capable of running games. Also, video games control the graphics in order to reproduce as faithfully as possible and in the most attractive and interactive way the experience in which the player participates.

The idea of using digital technology for games originated in the late 1950s, when an engineer named Will Higinbotham developed a tennis game to run on an oscilloscope at Brookhaven National Laboratory. The first digital game, however, was

Spacewar, which appeared in the early 60s and was run on the DEC-PDP-1 at the Artificial Intelligence Laboratory.

The term "video game" appeared in the early 1970s, with the first commercial arcade video game being Computer Space by Nutting Associates, which was introduced in 1971. In 1972, Atari introduced the game, Pong. Interestingly, Atari was formed by Nolan Bushnell, who also developed Computer Space. Bushnell left Nutting Associates and joined Atari, where Pong was the first successful arcade game. Pong was a simple but popular game. The object of the game was to reflect a white cube from one white rectangle to the other white rectangle on a black surface. If you dropped the cube, you were declared a loser, and as you progressed, the process became faster and faster.

Over time, video games gained momentum and developed rapidly. The first video game console was called the Magnavox Odyssey, on this console the game Pong also found success. The variety of games increased and from a generalization, the virtual environment became more and more particularized, each game thus even acquiring its own personality. Games can be played today on several platforms such as: personal computer/laptop, console (Playstation, Xbox, Nintendo Wii, etc.), mobile phone/tablet, PSP (Portable Playstation), on arcade machines which usually they contain only one game and are operated by buttons and joysticks in which you have to insert coins or tokens to work and finally on the web browser (Facebook).

Video games are classified into several types, for example casual games provide an interface and experience that is easy to navigate and accessible with easy-to-understand rules for the user. The more complex (serious) games have the role of conveying a lesson to the player, teaching him or assigning a moral character to the game. Educational games put the user's mind to the test, have a mental development character, contain exercises, lessons and learning.

Games have never been treated as an expressive genre like poetry, theater or folk songs. But their symbolic, social and evolutionary value has been recognized in psychological, anthropological and sociological studies. One obstacle to this disciplinary study is the immense difficulty of defining games [1]. Wittgenstein presents his point of view and believes that games play an important role both in our development and in the social-cultural branches.

MATERIALS AND METHODS

Some theorists consider video games to be an art form, although this is controversial. One theory I have noted is that of ludologists, game experts who argue that digital games can best be understood as abstract systems of rules, drawn from another cultural and symbolic context. Lara Croft's body sizes and shapes have already been analyzed by film experts, sexual attraction to the fictional character in the game Lara Croft will not make me play differently or in a different style, in a different form, they are irrelevant to me. When I play, I don't even pay attention to her body, I see through it or over it. The narrative thread but even happy or sad endings are irrelevant to the experience the game offers [2]. Espen Aarseth argues that video games are simply and primarily games that can be understood by the rules, the interface, and the concept that each represents. Aarseth argues that although the game has an action in which characters participate and has traditional aspects, these aspects are incidental. In short,

ludologists reject traditional theories and argue that the social and artistic branches of video games are determined by the set of rules, expectations, and demands placed on the player.

With the development of games, two big dangers have appeared that can lead to particularly serious situations. The first danger is that most video games are addictive, and thus social problems such as isolation, the breakdown of social relationships and the encapsulation of the user in a closed, contactless universe arise. In addition, health problems arise due to the abuse of games, such as weakening of vision, lack of oxygen to the brain, sedentary lifestyle, adopting an unhealthy lifestyle, skipping important meals of the day and even death.

A second danger to consider is, like programs broadcast on television, especially movies, violence in games. Some games have graphic content that can negatively affect children's behaviors and mentality. Although most games of this genre, especially shooters or horror games, contain warnings about the content, these warnings are rarely followed. For example, in a game full of blood, drugs, violence, sexuality and vulgar language, all kinds of images and ideas are imprinted in the child's mind that unfortunately make him apply them in real life sooner or later. With the thinking still in the development stage, the child will consider violence as a good thing and will treat it as such, therefore it is always recommended and ultimately necessary for a parent to supervise his child, especially in such situations. A theory of aggression by Albert Bandura illustrates that when violence is applied to video games, social learning theory shows that exposure to video game violence evokes behavioral mimicry, reinforces already existing aggressive habits, and increases internal will. In short, internal will can be interpreted as anger, which increases the chance of aggression.

Finally, video games have developed so much that they have acquired a status of culture, it has even become a lifestyle for some people, through which they earn money. Games have appeared in which you can get married, raise children, start a family and make many virtual friends, help your neighbors and get a virtual job, these are the so-called simulators, the best example of this kind being the Sims series, for example. On various games, especially MMORPGs (massively multiplayer online role-playing games), guilds, guilds and factions appeared: World of Warcraft, Runescape, EverQuest, etc. Currently, the games that make money the best by organizing world championships are Counter Strike: Global Offensive, Dota 2, Hearthstone and League of Legends. In this case, depending on the type of championship, the prizes can reach several tens of thousands of dollars.

New terms have also appeared in the online language, the best known, especially in online games, being the term "noob", which means beginner, inexperienced, ignorant. Finally, video games took on a form that took shape over time, evolved, gained popularity, developed and became what they are today due to the evolution of technology and new means of playing and enhancing. From a simple moving beam of light on an oscilloscope to the complexity and detail of the environments, textures, details and fluidity of today's games has taken a lot of work, effort and research over the decades. Who knows, maybe in the future, at how rapidly technology evolves, we may end up living in a virtual universe, in the most "realistic game".

Content analysis helps us to better understand this phenomenon that takes a toll slowly but surely on people's lives, unfortunately. It acts like a trap that you can not get out of. We are going to analyze different videogames and manifestations happening in them.

RESULTS

We've decided to represent, firstly, a SWOT analysis done on videogames just to showcase the various perks as well as obstacles when it comes to playing them:

Table no. 1 – SWOT analysis of games

Strengths	Weaknesses
Developing attention and alertness, the sense of presence, dexterity, and reaction times; Can and may help an individual relax themselves; Gives a realistic impression of real-life situations, enhances learning, puts the player in a unique experience; Sense of independence, freedom, problem solving consolidation.	Extreme violence and gore, foul language, bullying; Danger of losing everything, risk of bullying (picking on beginners who are weak in terms of villages and power); Some games may transfer violent tendencies and beliefs to players.
Opportunities	Threats
Might pursue (the player) a career in e-sports that is very well respected and very well paid; May convince them to pursue a career in IT and game development as graphic or character designer, game architect, etc.	Can easily fall into negative and toxic communities that can change the player's behavior and verbal behavior; Can develop stress and anxiety; Can start gambling and lose money and possessions; Ruins eyesight and can encourage obesity.

Note: table generated by authors

Daniel Petric case

Daniel Petric was born on 24 August 1991, and he is an American convicted murderer from Wellington, Ohio. This tragic case involves Daniel, who murdered his parents when he was only 16 years of age after his parents confiscated his copy of the video game Halo 3. His mother died but his father managed to recover from a critical injury.

Daniel Petric is incarcerated for life with a chance of parole later in life. The motive of his murder, say researchers and many studies that often mention Petric, is video game addiction and increasing anger towards his parents who confiscated a simple game from him. He allegedly shot his parents with a 9mm Taurus PT92 handgun. His official convictions are aggravated murder, attempted aggravated murder and tampering with evidence.

Many cases are like Petric's (see OG McSkillet case) and many others. Another case involves a Hong Kong student name Rocky Rambo Wei Nam Kam, who cold-bloodedly murdered a Canadian elderly couple and all that he could think about and ask the police was when can he leave the interrogation room to go home and play videogames.

These are only a few examples of videogames being involved in tragic actions and led to people getting hurt or killed. Of course, *hikikomori* phenomenon has strong links to videogame addiction, since it isolates the so-called *hikikomoris* from the rest of society. According to Science Direct, 0.87 % to 1.2 % in Japan, 6.6 % in China, 1.9 % in Hong Kong, 2.3 % in South Korea, 20.9 % in Singapore, 9.5 % in Nigeria, 2.7 % in the United States, and 9% in Taiwan respectively, are *hikikomori*, or social recluses. Many of them suffer from severe mental illnesses such as schizophrenia, multiple personality disorder, mood disorder and others.

Many people marry other people in simple videogames and forget about reality, one good example in this case is Metin2, a once very popular MMORPG (Massive Multiplayer Online Role Playing Game), where you could officiate a marriage between two characters (a man and a woman) in a game and invite other players. The couple needed to buy or find an engagement ring, to spend some in-game currency (yang coins) and to speak to an NPC (non-playable character) to arrange the event.

You can also marry in SIMS, another very popular game. Nowadays players opt to marry, in case of men, a *waifu*, which represents a Japanese anime woman that doesn't exist but with the help of software and A.I., she becomes a bit more „realistic”.

DISCUSSION

Interestingly, parents, teachers, politicians have generally condemned the “blood and gore” that they see graphically demonstrated in these games [4]. Furthermore, Typically, a gaming addict will have a level of severity resulting in significant impairment in personal, family, social, educational, occupational, or other important areas of functioning [5]. Many authors comment on these behaviors and tragic situations appeared from videogames only nurture and grow the prevalence of writing about these modern-day problems. Videogames are becoming increasingly popular and will never lose popularity. Like already mentioned, many authors inspect and analyse these phenomena and take Daniel Petric as case study and discuss his behavior that is mimicked by others as well.

CONCLUSION

Apparently, starting since 2007 when Daniel Petric's case emerged, violent and hostile behaviors started to develop. Nowadays, when games are extremely advanced, for example, developed in Unreal Engine 5, such as the game *Bodycam*, a game that supposedly is so realistic that it gives PTSD to players, even young ones, the chances of a player becoming increasingly violent grow exponentially.

Another conclusion and problem is that almost no game has protection against it (for example not allowing young players to play unless they are of a certain age), this could be verified through ID cards or by taking a photo or with a passport, etc. Unfortunately, filters to stop video game addiction are almost nonexistent. Many parents are increasingly negligent towards their children and do not spend time to protect or at least instruct their children that media and videogame consumption can have long term consequences and could potentially pose a threat not only to the children themselves but also to other people. The biggest problem with videogames and virtual worlds is that they become so realistic and believable that people, especially young children, start to confuse real life with simple videogames made from pixels. This could pose a real threat to future generations that can become aggressors or even worse, murderers.

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MEDIATING MEDIA PRACTICES AND CRITICAL THINKING

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ABSTRACT

Creating and consuming media products in a self-reflective mode is possible through and as a result of critical thinking. Meanwhile being part of media practices that reflect on their medial aspects develops the sense of critical thinking. Social technologies can be understood with help of different media practices. While mediatization refers to the increasing influence of media in various aspects of society, there are instances when media practices can work against this trend.

Arguments and examples will be presented that as media literacy education improves, people learn to critically evaluate media content. Research data indicate that media literacy encourages questioning, which can work against powerless exposure to mediatization. Training individuals to be media literate allows them to critically perceive and evaluate information conveyed through media, reducing negative effects. Moreover, different media platforms cater to specific audiences with varying interests, and do that in qualitatively different ways. The fragmentation can limit the overall influence of media by preventing a cohesive narrative across all channels.

Keywords: mediatization, self-reflective mode, critical thinking

INTRODUCTION

Media products, content and practice enabled by social media are often considered as a threat towards our sense of reality, scientific truth and feelings of presence. With help of addictive features media nowadays manipulates reality, presents beliefs not facts, exaggerates about the importance of certain events, distracts from the important things, and/or makes it impossible to make a difference between important and negligible aspects. Our goal was to prove that these effects of media and deep mediatization [1] are caused but also defeated by means of media products and practices.

MATERIALS AND METHODS

Media context

With the reals of information society the ubiquity of screens [2] [3] [4] created different degrees of distraction, amusement, inability to concentrate, and intensification of experience and presence. When a one-to-one conversation is repeatedly interrupted by the flashing of a mobile phone, tablet or smartwatch screen, it can feel like we are fighting an information overload and sometimes we are being overwhelmed. But when, at a concert, the giant screen magnifies what is happening on stage, and we can see what we would not be able to perceive because of the distance, our feelings move towards immersion in the moment, involvement, fuller presence. [5] [6] Live events are more

and more saturated by the phenomena of mediatization, and it is increasingly difficult to separate the mediatized from the live.

In the educational environment, in classrooms teachers are confronted with the increasing problem of lack of concentration from the part of the students. Students use their phones, tablets and laptops to “survive” the classes that are not interesting, not informative, not distractive enough for them. They are distracted from the educational material because of personal messages, sometimes work, sometimes another task to be completed for another class. Students reported also about the help of their screens when it comes to a very frustrating, boring situation especially when one of the students tries to make a presentation on their own. In those cases, the phones are vital, they are lifesaving, they said.

Teachers acknowledge the important function of electric media on a personal level, but the mediatization, the deep impregnation with media content through different media devices is not seriously taken in consideration. Even if the classroom environment facilitates concentration (fixed seats, frontal position of the teacher, static position of the students), involvement, immersion with social media work against critical thinking. Critical detachment and media awareness are much more highlighted by fragmentation, co-presence of several channels serving with partial information, so that the student, the audience is constrained to consciously reflect on the connections between different fragments, and to assemble an own version of the presented, discussed material. Elwes speaks about installations and how moving images in galleries are consumed in a more critical way than movies in movie theaters. [7]

In Ildikó Ungvári Zrínyi’s categorization the fourth type of audiences related to the postdramatic theater is the mediatized spectator, who becomes an active participant in the interpretative reading and watching of the performance. [8] We can assume, that we have mediatized audience also in the classroom, because the presence, the body, the attention, the skills of concentration of the students are equally exposed to the influence of mediatization. In fact, it could be a goal to transform students to an acknowledged mediatized audience, who is aware of the mediatization and can work with it.

The mediatization means that today there are a wide range of possibilities one can choose from: different channels, different media, different platforms, different prices. It is also true, that even in the new media context of our times, one can consume media in a conservative way, as if the context is still one coherent, unified, integrated. However, in the context of new media, whatever the receiver’s choice is from a book to a VR-experience, there are some common characteristics, that should be discussed. Media consumed for entertainment and against boredom is: transmedial, serial, infotainment-like, personal, participatory, affective.

Transmedial means, that the content appears on many platforms, is connected to a wide variety of texts, pictures or multimedia. *Serial* means that the content can be continued and is continued, so we have series instead of stand-alone volumes or movies. Media content is also spreadable, elements of it can go viral using but also creating the receptive network, where users participate actively in the circulation of content. *Infotainment-like* means that there is a constant blending and mixing of documentary and fiction, of news and entertainment. Media promises today, that it brings us everything worth knowing, and nothing is more entertaining, than everyday life unfolding before our eyes in a fantastic synchronicity. *Personal* means that media

platforms today are responsive to the choices of the users, creating the illusion, that every recommended item is exactly what they need. *Participatory* means that users are invited to engage with content in an active, creative, personal, shareable way. *Affective* means that users are responding with their feelings and attitudes. Entertainment is achieving a special mood of relaxation, but also of experiencing intense emotions.

All these characteristics urge the audiences to handle media content with a healthy suspicion, with critical distance, but also draws attention to the fact, that students today consider all the mentioned media characteristics as normal, as something self-evident. Only with help of a critical attitude is it possible to gain a perspective on these characteristics, and to be aware of our absorption in the media-world. Once experienced in action, metacognition and self-reflective mode can be reactivated more easily. [9]

Methodology

Researchers from five Higher Education Institutes (Sapientia Hungarian University of Transylvania, Romania, Aristotle University, Greece, Pedagogical University of Cracow, Poland, Burgas Free University, Bulgaria and Vilnius University, Lithuania) worked together in a project to develop educational material covering the discipline Critical Thinking and Media Literacy. The project is funded by the Erasmus+ Strategic Partnership Program. In the frame of the CTIS (Critical Thinking and Media Literacy) project there will be covered 20 subjects with 10-15 min. pre-class educational videos (narrated in English), pre-class tests with 8 closed questions (to be completed after watching the videos), post-class tests with 4 open-ended questions and a guide for teachers. All the materials will be available in seven languages (English, Hungarian, Greek, Romanian, Polish, Bulgarian and Lithuanian), and will be available to download from the project's website (ctis-erasmus.info). [10]

At the Sapientia Hungarian University of Transylvania two participant teachers were able to test the educational materials and the flipped classroom method. The students were involved in the process of testing, they were informed about the project and the selected method. Most of them did not work with this method previously, but some of them knew already the specificities of this particular learning method. The key concept presented to them was the student-centered design of the activities.

During the first semester of the university year 2023-2024, students enrolled to the Digital competencies course either formed the *experimental group* and watched pre-class videos and completed the pre-class and post-class tests (working with the flipped classroom method), or formed a *control group* where students were asked to hold mini presentations regarding the same topics (a regular form of seminar activities in higher education institutions, but also very common in high schools). The topics were: Introduction to Media Literacy through Critical Thinking (CT), Wonder, Doubt, Decide. A possible way through the labyrinth of information society, Developing active learning and critical reading skills, Analyzing arguments and recognizing inferences and fallacies in media, Propaganda in media: playing with emotions, CT in relation to entertainment-content, Digital skills, cultural cooperation, creativity and entrepreneurship, Advertising and critical thinking, Personality and different thinking types in media, The Ethics of Information.

We assumed that the self-reflective mode of the group working with the flipped classroom method will bring more intense discussions, and the students will be more engaged, more motivated.

The pre-class videos were designed within the Renderforest application and all the authors used the same design elements from the 3D Explainer Video Toolkit. This frame served as a guarantee that the videos will be recognized as elements of the same educational material, that they will have enough repetition to form characteristics that help the students concentrate on the new information, or to give motivation to observe how the videos are made (self-reflective mode). They will be encouraged also to observe themselves, trying to figure it out, what impact design decision have on them as users.

RESULTS

Teacher's experiences

Following each seminar activity with the experimental group, the teacher completed a report on the interactive methods employed in the flipped classroom. This report also included her overall impressions of the teaching process and the students' reactions, highlighting spontaneous feedback related to the classroom activities and tasks (collected from the experimental group).

Analyzing the impressions of the teacher it is clear that student's engagement is higher when the lesson's structure, basic notions contradict the expectations. After all, the videos presented topics that were already familiar at some degree for the students. In cases where the video did not explain very detailed the basic notions, when it was more difficult to follow the train of thoughts, the students came to class with questions, complaints, shortages on explanation. These constituted a very fruitful starting point for discussion. Opinions had been presented and arguments and examples looked for.

It should be mentioned also the fact that students wanted to have feedback (to be even graded) based on their performance on the pre-tests. In the case of good answers, they considered that they have done their work, and were difficult to engaged in discussions.

Student's impressions

According to the students feedback as presented in the after class reports they were content with the introduction offered by the pre-class video-lesson. All the students considered that every information worth knowing is included in the video, and the test will show that they completed the "home-work" for the class.

However, this didn't stop them to criticize the video: the complaints were not so much about the content of the video materials but the form of them. Students considered that audiovisual materials should be more professional, more immersive. They were annoyed by the fact, that the pre-class videos were slow, had editing mistakes, inexplicable breaks or disruptions. The narration part was also disturbing for them, because it was not the voice of a professional narrator, and it was not recorded under professional circumstances without the background noises and other disturbing sound effects.

Students were also bothered by the visual repetitions. They reported that it was annoying to them that sound, voice and visuals were not in a tight connection, they were not always synchronized. Because of this the images used were not helping them to remember the content of the videos better.

Student's feedback

Students were asked to fill a questionnaire online, and to evaluate the program. Both groups were asked to answer the same questions. The findings show that the method gives motivation to the classroom, despite to the fact, that students evaluated the educational videos as unprofessional. [10] Further, in the discussion part we will argue, that there is a possibility to interpret these findings differently, so that the students were motivated *because* they found mistakes and inaccuracies.

DISCUSSION

The original question of the paper was about media literacy and how it can work against the effects of mediatization. We assumed that the process of mediatization is apprehended better in a self-reflective mode. The self-reflective mode would be activated either by self-reflective media (i.e., media content that thematizes itself, the decisions made by the creators, the effect intended etc.), or by discussions where different point of views are presented, compared, consolidated.

The data provided by the perception of the educational materials used within the flipped classroom method for developing critical thinking shows that the self-reflective mode is better activated by the mistakes, code-disruptions, inconveniences, disturbing features present in the educational process. Materials perceived by the students as non-professional tools tend to be more enthusiastically discussed. Students reflected on the construction of media messages, they brought arguments on how audiences nowadays find important to consume perfect, professionally executed and presented content. Paradoxically, exactly these discussions were the most convincing ones about the critical thinking abilities of the students. Our conclusion is, that fragmentation caused by mistakes and non-professional execution can limit the overall influence of media by preventing a cohesive narrative across all channels, and by activating self-reflection in audiences.

CONCLUSION

The analyzed educational process Critical Thinking and Media Literacy can be considered as one that thematizes the educational process itself. Students were made aware of the experimental part of the project, they knew about the testing of the flipped classroom method, and were willing to participate. Despite of these circumstances, discussions become more engaging when students reflected on the quality of the educational videos.

We can conclude that being part of media practices (in our case educational videos in a learning environment) that reflect on their medial aspects (the task to give feedback about the educational process) develops the sense of critical thinking. The content was about critical thinking, and it was interesting for the students, but classroom activity was stimulated more when they could practice critical thinking exactly towards the videos about critical thinking.

Our data shows that students would be more satisfied with professional videos, executed by professional video creator teams, and it would be recommended to include real-life examples of provoking nature [10]. However, the perfection of the learning material could work against the critical thinking, against the self-reflective mode, and could accentuate the effects of mediatization.

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NUTRITIONAL HABITS REFLECTED IN MASS-MEDIA

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ABSTRACT

Mass-media has always been a place where many types of actions and changes materialize. In regard to nutritional habits, they have been quite destabilized lately and many people choose to eat unhealthy foods and products without taking into account much of the consequences that accompany this type of eating behavior. We would like to highlight the role of mass-media when it comes to creating nutritional habits and putting the impact of mass-media into perspective. For example, many children and teens alike follow certain influencers and/or opinion leaders that could irreversibly affect or even change their eating habits, which might not always be ideal or advisable. Mass-media, in essence, is an important actor in today's society that activates as a decision-making tool.

Keywords: mass-media, nutrition, habits, eating, promoting

INTRODUCTION

Mass media plays a significant role in shaping eating behavior and attitudes towards food. Through various channels such as television, social media, magazines, and advertisements, mass media has the power to influence what we eat, how much we eat, and when we eat. The portrayal of food in the media can impact our perceptions of what is considered healthy, desirable, or normal when it comes to food choices.

Television shows, cooking programs, and commercials often depict tantalizing images of delicious and often unhealthy foods, which can trigger cravings and lead to overeating. On the other hand, mass media also promotes certain diets, superfoods, or weight loss trends, which can influence individuals to adopt new eating habits or restrict their food intake. Social media platforms like Facebook, Instagram and TikTok are increasingly popular channels for food-related content. Influencers, bloggers and celebrities often showcase their meals, recipes and eating habits, which can influence their followers' dietary choices and behaviors. The rise of food photography and "food porn" on social media has also been linked to increased food consumption and potentially disordered eating patterns.

Photoshopped images of unrealistic body standards, diet products and endorsements by celebrities can create pressure to conform to certain beauty ideals and dietary norms. This can lead to body dissatisfaction, unhealthy dieting practices and a distorted relationship with food. Mass media plays a significant role in shaping eating behavior in individuals and society as a whole. Through various channels such as television, social

media, magazines and advertisements, mass media exerts a powerful influence on how people perceive food, body image and nutrition. This influence can impact dietary choices, attitudes towards eating, and even contribute to the development of eating disorders. Mass media often portrays unrealistic body standards and promotes idealized images of beauty that can lead to body dissatisfaction and low self-esteem in viewers. This can, in turn, influence eating habits as individuals may strive to attain these unattainable standards through extreme dieting or disordered eating patterns. Additionally, the constant bombardment of food advertisements showcasing unhealthy, processed foods can contribute to poor dietary choices and overconsumption of high-calorie, low-nutrient foods. Moreover, mass media can also shape societal norms and values surrounding food and eating. For example, the glorification of certain diets or food trends in the media can influence people's perceptions of what is considered healthy or desirable to eat. On the other hand, the stigmatization of certain foods or body types in media portrayals can create a negative impact on individuals' relationships with food and their bodies. It is essential for individuals to be critical consumers of media messages related to food and body image to mitigate the potential negative impact on their eating habits and overall well-being.

MATERIALS AND METHODS

Imitation of the models offered by television has been intensively researched over time, and as a result of this research it has emerged that exposure to the models offered by television leads to three types of behavioral effects on the receiver:

- a. the effects of modeling (the behavior of the model in a certain situation is appropriated by the receiver who later in a similar situation will show the same type of behavior);
- b. inhibitory and disinhibitory effects (the consequences of the model's behavior can stop or trigger similar reactions from the receiver);
- c. facilitation effects (when the model's behavior stimulates the receiver to perform similar behaviors that are already part of the receiver's repertoire and are socially accepted behaviors).

According to the report, approximately 58% of Romanian adults suffer from overweight, the percentage being slightly below the average of the European Union member states.

The data indicate that, in fact, the lack of education would not be the main cause of obesity in Romania, because the proportion of people who have graduated from higher education and suffer from obesity is the same as that of people without higher education. In other states (like Georgia), more educated people are, surprisingly, more prone to obesity. This may also be due to the access to resources and food determined by the poor-rich discrepancy. In other countries, especially developed ones in Europe, people with an average or low level of education are more likely to become obese. In a ranking of Eastern and Southeastern European states, Romania is in the middle of the table - between Belarus and Poland - when it comes to overweight among children under 5 years of age - approximately 7%. The highest rate of overweight among children in this age group is found in Ukraine – around 17%.

Understanding Eating Behavior

Understanding eating behavior is a complex and multifaceted area of study that involves examining the various factors that influence an individual's food choices and consumption patterns. One key aspect of understanding eating behavior is recognizing the interplay between biological, psychological, social and environmental factors.

Biologically, factors such as genetics, hormones and brain chemistry can significantly impact an individual's eating behavior. For example, genetic predispositions may influence food preferences or the body's response to certain foods. Hormones like leptin and ghrelin play a role in regulating appetite and satiety, while neurotransmitters in the brain, such as dopamine, can influence food reward pathways.

Psychologically, emotions, stress, and mental health can also play a significant role in eating behavior. Emotional eating, for instance, refers to the tendency to eat in response to emotions rather than hunger, while stress can lead to both overeating and undereating in different individuals. Mental health conditions like depression or anxiety can also impact eating behaviors and food choices.

Social factors, including cultural norms, family influences, peer pressure, and societal expectations, can shape an individual's eating behavior. Cultural practices and traditions often dictate food choices and meal patterns, while family dynamics and peer relationships can influence attitudes towards food and eating habits. Moreover, societal factors like media portrayals of food, diet trends, and body image ideals can impact how individuals perceive food and eating.

Environmental influences, such as food availability, accessibility, and marketing strategies, also play a crucial role in shaping eating behavior. The obesogenic environment, characterized by easy access to high-calorie foods and sedentary lifestyles, can contribute to overeating and weight gain. Food marketing tactics, including advertising and product placement, can influence food preferences and consumption patterns, particularly among children and adolescents.

Impact of Mass Media on Eating Habits

Mass media plays a significant role in shaping our eating habits in today's society. With the constant bombardment of advertisements, articles and social media posts promoting various food products and diets, individuals are often influenced to make certain food choices. The portrayal of ideal body images and the promotion of certain diets can lead to individuals feeling pressured to conform to these standards, ultimately impacting their eating behaviors.

Moreover, the way food is presented in mass media can influence perceptions of portion sizes, meal composition and cooking methods. Food styling and photography techniques used in advertisements can make unhealthy foods appear more appealing, while also distorting portion sizes. This can lead individuals to underestimate the amount of food they should consume or to crave specific foods based on their visual appeal.

Influence of Advertisements on Food Choices

Advertisements play a significant role in shaping the eating habits of individuals. They create powerful messages that influence consumer behavior and food choices. By strategically showcasing certain foods as desirable, delicious and convenient,

advertisers can sway people towards making unhealthy dietary decisions. For example, fast food commercials often highlight mouth-watering visuals of burgers, fries and sodas, enticing viewers to crave these items.

Moreover, advertisements frequently promote processed and sugary foods that are high in calories and low in nutritional value. These ads create a sense of urgency and desirability around such products, leading consumers to opt for convenience over health. The constant exposure to these messages can normalize unhealthy eating patterns and contribute to the rise of issues like obesity and other diet-related diseases.

Advertisers also target children through colorful and engaging ads that promote sugary cereals, snacks and beverages. These advertisements create brand loyalty from a young age and establish unhealthy eating habits that can persist into adulthood. Children often influence family food choices, leading to the consumption of products that may not align with a balanced diet.

The portrayal of body image in the media is a significant factor influencing eating habits. Media platforms often showcase unrealistic and idealized body types, promoting beauty standards that may not be attainable for the majority of the population. This constant exposure to a narrow definition of beauty can lead to body dissatisfaction and low self-esteem among individuals, ultimately impacting their eating behaviors.

Images of thin models and celebrities flood magazines, television, social media, and advertisements, creating a culture that equates thinness with success, happiness and attractiveness. This can trigger feelings of inadequacy and drive individuals to engage in unhealthy eating habits in an attempt to attain the perceived ideal body shape.

Moreover, the constant bombardment of these unrealistic body ideals can contribute to the development of eating disorders such as anorexia nervosa, bulimia nervosa and binge-eating disorder. Individuals, especially young people, may internalize these images and strive for unattainable standards of thinness, leading to disordered eating patterns and negative body image.

Conversely, the media's recent efforts to promote body positivity and diversity in body shapes and sizes are slowly starting to challenge traditional beauty norms. By showcasing a more inclusive range of bodies, the media can help foster a healthier relationship with food and body image. Encouraging messages of self-acceptance and body diversity can empower individuals to embrace their unique bodies and make positive choices regarding their eating habits.

RESULTS

Famous YouTuber Nikocado Avocado, known as Nicholas Perry, an Ukrainian born man that has been adopted by an American family (as far as he tells his audience) started as a vegan *mukbanger*, cooking and eating only vegan products and promoting healthy lifestyles. Unfortunately, he turned from being a kind, softspoken young man, to a violent, aggressive and hostile individual. Not to mention that he was about 76 kgs when he started doing *mukbangs*, and he reached a peak of 136 kgs (300 pounds), in approximately 2 years. We mention here the materialism and consumption habits aspects, which are of interest.

Nikocado went through a breaking point which changed his life almost irreversibly. We note that It is important to note that „behavioral addictions literature is reporting that individuals' motivation for escaping their reality and negative mental state [...]” [1]. It is imperative to mention the fact that „there is a growing concern about adolescence psychological health” [2]. Individuals such as Nikocado Avocado influence the masses through channels of communication, such as YouTube, Patreon, Cameo and other platforms. We mention that Certainly, „there isn't a shortage of social media platforms that you can participate in” [3]. This is why new media poses a potential threat or at least negative example for various people, especially young people.

Social media influencers are individuals who have established credibility in a specific industry or niche and have a large following on social media platforms. They use their influence to promote products, services or causes to their audience. These influencers create content that resonates with their followers, whether it's through photos, videos, blog posts or live streams.

Influencers can be found on various social media platforms such as Instagram, YouTube, TikTok and Twitter. They often collaborate with brands to create sponsored content or partnerships that help the brands reach a larger audience in a more authentic way. Influencers are seen as relatable figures by their followers, making their recommendations and endorsements highly influential.

The relationship between influencers and their followers is built on trust and authenticity. Followers see influencers as peers rather than celebrities, making their recommendations more impactful. Influencers often share personal stories, experiences, and opinions, creating a sense of intimacy with their audience.

In recent years, the influencer marketing industry has grown significantly, with brands allocating larger budgets to work with influencers. This form of marketing is perceived as more organic and less intrusive than traditional advertising, as it leverages the relationship between influencers and their followers.

Their ability to create engaging content and connect with their audience makes them valuable partners for brands looking to increase their online presence and reach a targeted demographic.

Social media has significantly influenced dietary preferences in recent years. With the rise of platforms like Instagram, Facebook and Twitter, individuals are constantly exposed to a plethora of food-related content. This exposure has led to a shift in people's eating habits and food choices. Food bloggers, influencers, and brands promote various diets, recipes, and food products, shaping consumers' preferences.

One of the notable impacts of social media on dietary preferences is the popularization of specific food trends. For instance, the avocado toast craze gained momentum through social media posts featuring this trendy dish, leading to its widespread adoption. Similarly, the promotion of plant-based diets, smoothie bowls, and other health-focused food trends has been fueled by influencers and bloggers sharing their experiences and recipes online.

Moreover, social media has made it easier for individuals to discover new foods and cuisines from around the world. Through food bloggers and influencers sharing their culinary adventures, people are exposed to diverse dishes and flavors, inspiring them to

try new foods and expand their dietary preferences. This has led to a greater appreciation for global cuisines and a willingness to experiment with different foods.

On the other hand, social media has also been criticized for promoting unrealistic body standards and unhealthy eating habits. The prevalence of photoshopped images, fad diets, and detox teas endorsed by influencers can negatively impact individuals' relationships with food and their bodies. This aspect of social media highlights the importance of promoting balanced and realistic messages about food and nutrition.

Strategies for Promoting Healthy Eating through Media

Promoting healthy eating through media can be a powerful tool in influencing public behavior and encouraging positive dietary choices. One effective strategy is to utilize social media platforms to disseminate information about the benefits of healthy eating. This can include creating engaging posts about nutritious recipes, the importance of various food groups and tips for making healthier food choices.

Another strategy is to collaborate with influencers or celebrities who have a large following on social media. By partnering with these individuals, organizations can reach a wider audience and leverage their influence to promote healthy eating messages. This can include sponsored content, cooking demonstrations or endorsements of healthy food products. In addition to social media, traditional media channels such as television and radio can also be used to promote healthy eating. This can involve airing public service announcements, hosting cooking shows that focus on healthy recipes, or featuring experts who can provide information about nutrition and healthy eating practices.

Furthermore, organizations can work with advertising agencies to create targeted marketing campaigns that promote healthy foods and beverages. These campaigns can use persuasive messaging and imagery to encourage consumers to make healthier choices when it comes to their diets.

Utilizing Social Media Platforms

Utilizing social media platforms for promoting healthy eating has become increasingly popular due to their widespread reach and influence. One effective strategy is to collaborate with social media influencers who have large followings interested in health and wellness. These influencers can create engaging content such as recipe videos, meal prep tutorials, and product reviews that showcase healthy eating in a relatable way. There must be noted that „within the realm of marketing, the use of social media is gaining an increasing amount of popularity” [4].

Another approach is to run targeted advertising campaigns on platforms like Facebook and Instagram. By using demographic and interest-based targeting, advertisers can reach specific audiences with content tailored to their preferences. This can include promoting healthy eating tips, recipes, or showcasing the benefits of a balanced diet.

Creating engaging and shareable content is key to success on social media. This can involve running challenges or contests related to healthy eating, sharing user-generated content, or posting visually appealing images of nutritious meals. By encouraging interaction and participation, social media can be a powerful tool for promoting healthy eating habits. Engaging with followers through live videos, Q&A sessions, or polls can also help create a sense of community around healthy eating. This interaction allows for direct communication with the audience, providing an opportunity to address questions,

dispel myths, and share valuable information about nutrition. Collaborating with health professionals, nutritionists, or dietitians can lend credibility to social media campaigns promoting healthy eating. These experts can provide evidence-based information, answer questions, and offer personalized advice to followers seeking guidance on their dietary choices.

DISCUSSION

Social media influencers play a crucial role in promoting healthy eating habits to a wide audience. By leveraging their large following and engaging content, influencers have the power to influence and inspire people to make positive changes in their diets. These influencers can create visually appealing and informative posts about nutritious foods, balanced meals, and healthy eating tips that resonate with their followers.

In the realm of health promotion, social media influencers act as relatable role models who showcase their own healthy lifestyles and dietary choices. Their authenticity and personal stories can make healthy eating more accessible and appealing to their audience. Through sponsored posts, product endorsements, recipe collaborations, and wellness challenges, influencers can effectively raise awareness about the importance of nutrition and encourage their followers to adopt healthier eating habits. Moreover, influencers can debunk myths, provide evidence-based information and share practical advice on how to make healthier food choices in various social media platforms like Instagram, YouTube, TikTok and Facebook. They can also engage with their audience by hosting live Q&A sessions, conducting cooking tutorials, and sharing before-and-after transformation stories that demonstrate the positive impact of a nutritious diet.

Partnering with influencers for healthy eating campaigns can offer a multitude of benefits. Firstly, influencers have a loyal and engaged following, which can help reach a broader audience interested in health and wellness. Their authenticity and credibility can lend trust to the campaign, making their audience more likely to engage with the message. Influencers also bring creativity and a fresh perspective to the table. Their ability to create visually appealing content and craft compelling narratives can make the campaign more appealing and shareable. This can lead to increased brand awareness and engagement with the target audience. Moreover, influencers often have a deep understanding of social media algorithms and trends, which can help optimize the reach and impact of the campaign. By leveraging their expertise, brands can ensure that their message is being seen by the right people at the right time.

CONCLUSIONS

Eating healthy can be part of a normal diet that is not too strict or constricting on your mental health and body. The problem is that social media nowadays promotes unhealthy behavior when it comes to consuming food products. With their appealing aspect and delicious taste, it is very easy to fall into addiction, that is why mass-media should learn how to control these aspects and try to institute healthy eating behavior.

The problem is that not many children and teenagers are watching the TV anymore, and if they do, it's streaming services such as Netflix, HBO MAX or/and others. Social media, unfortunately, is rather uncontrollable without any useful barriers and cannot show controlled videos and/or posts, because there isn't much that the government can do regarding the control of social media and its posts for the public. Therefore, there

must exist and educational aspect that the higher authority must adopt in order to expose. Additionally, partnering with influencers can provide valuable insights into the preferences and behaviors of the target audience. Influencers are in touch with their followers on a daily basis and can offer feedback and data that can inform future campaign strategies.

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TIKTOK: AGGRESSION, BULLYING, AND CYBERBULLYING AMONG HIGH SCHOOL TEENS

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ABSTRACT

TikTok is undoubtedly one of the Teens' favorite social networks. Introduced by Byte Dance in 2016, its huge success has turned it into a true phenomenon with a boomerang effect on human society. It allows users to create and share short videos, with audio effects and emojis though becoming a highly engaging platform for millions of high school teens worldwide. Researchers from all fields, authorities, celebrities, as well as ordinary people, all discuss the effects that the TikTok phenomenon produces on teenagers. Regarding the research topic, this article explores how TikTok impacts school teens by potentially inducing aggressive behaviors and exacerbating tendencies toward violence, bullying, and cyberbullying. The issue stems from TikTok's rich content of unsecured video clips, alongside the algorithmically generated video feed tailored to user searches, the presence of potentially unsafe posts in the public feed, and the act of content creation itself that brings more negatives than positives, ranging from cyberbullying to aggression. The study will focus on a semi-structured face-to-face interview survey with a subset of 100 high school students from Brasov. Nonetheless, this research aims to identify levers to counteract the harmful effects produced by this network on High School teens and to offer a complex sociological approach through which High School teens can adopt a social behavior capable of supporting a healthy society.

Keywords: TikTok, Aggression, Bullying, Cyberbullying, Highschool Teens

INTRODUCTION

TikTok, a short-form video platform launched in 2016, has quickly become one of teenagers' most popular social media apps. As of 2024, TikTok has over 1 billion active users worldwide, a 390% increase from 2018, the year of its launch. It is expected that by 2025, the number of TikTok users will reach 2.13 billion, with teenagers constituting a significant segment of its audience. While TikTok provides a platform for creative expression and social interaction, concerns have been raised about its potential to facilitate aggression and cyberbullying among teenagers.

Adolescence is a critical period for social and emotional development. Social media platforms like TikTok play a significant role in shaping teens' social experiences and self-perceptions. Twenge [1] shows in his research that excessive social media use can

negatively impact mental health, leading to issues such as anxiety, depression, and low self-esteem.

TikTok's interactive nature, which includes comments, duets, and challenges, can encourage positive and negative behavior. While many teens use TikTok to showcase talents and connect with peers, others engage in or become victims of aggressive behavior and cyberbullying.

By exploring how the TikTok app can become a source of aggression and cyberbullying for young people, this paper aims to contribute to a global research project focused on identifying the harmful effects of the TikTok app on Generation Z.

Violence in schools and the extent to which the bullying phenomenon, psychological violence (cyberbullying), combined with physical violence, has become a serious problem in contemporary society.

As the authors of "Cyberbullying and Values Education" [2] explain, cyberbullying, also known as technology-facilitated violence (TFV), poses a significant danger to young people in online environments, increasing as children approach adolescence and peaking around the age of 15. It involves the use of electronic communication technologies to threaten, harass or humiliate others through repeated, intentional harmful acts. Examples include posting hateful comments, setting up derogatory websites, sending negative private messages, sharing images without consent, and making direct threats. While the Internet offers benefits such as communication and identity development, it also poses risks, making it a double-edged sword for Generation Z youth who must navigate it at a psychologically vulnerable developmental stage.

Several studies indicate a rise in cyberbullying incidents linked to TikTok. A survey conducted by the Cyberbullying Research Center (2022) found that 41% of teens reported experiencing cyberbullying on TikTok, compared to 37% on Instagram and 31% on Snapchat. Common forms of cyberbullying on TikTok include harmful comments, harassment through direct messages, and the creation of videos intended to embarrass or mock individuals.

According to Smith [3] approximately 30% of teenagers reported experiencing or witnessing cyberbullying on the platform. These behaviors range from direct threats and insults to more subtle forms of harassment, such as exclusion and spreading rumors.

Williams et al. [4] noted that video-based content can amplify the impact of these behaviors, as visual and audio elements can make the harassment more personal and damaging.

The impacts of aggression and cyberbullying on TikTok can be profound and long-lasting. Victims often experience emotional distress, anxiety, and depression. In severe cases, cyberbullying has been linked to self-harm and suicidal ideation. Johnson and Myers [5] found that teens who are cyberbullied on TikTok are more likely to report feelings of loneliness and decreased self-esteem compared to those who are not bullied.

Recent research indicates a worrying trend in cyberbullying on TikTok. A study by Anderson and Jiang [6] found that 59% of teenagers in the United States have been bullied or harassed online. Another study by the Cyberbullying Research Center (2020) reported that 21% of students aged 12-17 have experienced cyberbullying specifically on TikTok.

MATERIALS AND METHODS

Focused on Romanian high school students from Brasov, this study aims to conduct a preliminary survey through interviews to observe the Teens' capacity to identify violent content received on TikTok, the number of situations of cyberbullying they encountered while using this app, the degree in which teens perceive Tik Tok as a dangerous app, and their availability to discuss the issue of cyberbullying.

The empirical research method used in this study is based on a popular method of data collection that is: the semi-structured interview. One of the key benefits of face-to-face interviews is the opportunity for personal interaction. This direct contact allows both the interviewer and the candidate to engage in a more meaningful dialogue, facilitating a better understanding of each other's personalities, communication styles, and cultural fit within the organization. According to a study published in the *Journal of Applied Psychology* [7], non-verbal cues such as body language, eye contact, and facial expressions play an important role in conveying information during an interview, aspects that are often lost or diminished in virtual environments.

The main purpose of this interview is to determine the extent to which the TikTok app provides violent content and is a source of bullying, cyberbullying, and aggression among teenagers in high school. This research aims to identify Generation Z's attitude towards experiencing cyberbullying, aggression, and managing violent content while using the TikTok app. Moreover, this study seeks to identify the victims of cyberbullying on TikTok and the teens' conscious or unconscious reactions toward violent content received on TikTok.

The research focused on image analysis through semi-structured face-to-face interviews with 100 high school students in Romania. The study was applied to 100 high school teenagers aged 14-18 years, including boys and girls, from February to May 2024, using an interview guide consisting of 11 questions. 60% of the participants were girls and 40% were boys. The human subjects were interviewed taking into account major ethical considerations related to informed consent, confidentiality, autonomy, integrity, and respect for persons. Only 2% of the teenagers asked to participate in the interview refused.

The interview guide consists of several open-ended questions, including follow-up questions. It begins with general questions about the use of the TikTok app, the time spent on the app, and the purpose beyond the use of the TikTok app. Further questions aim to identify situations in which the respondents, namely high school teenagers, have experienced cyberbullying, and their reactions when receiving violent content on TikTok. The survey of these one hundred teenagers also focuses on another important issue: the fear of becoming a victim of cyberbullying and the consequences of this attitude. The direct impact of the TikTok app on teens is also explored during the

interview. Scaling the violent content received on TikTok from 1 to 10 is an objective way to get a broad perception of whether or not TikTok is a source of violence. The interviews were recorded for later analysis of the data. Analyzing the data, I tried to identify common themes, patterns, and significant findings. The purpose of the data analysis was to determine teenagers' perceptions of cyberbullying, bullying, and aggression while using the TikTok app and to measure the violent content they encountered as active TikTok users.

RESULTS

Before presenting the results of the interviews applied during this study I would like to draw attention to what some of the latest studies on this issue revealed and why this app is discussed more than any other app in terms of violent content. It's worth discussing the extent to which young people believe that this platform could increase their tendency towards aggression and cyberbullying more than other social networks in use.

In his study, Patchin [8] aimed to determine the prevalence of cyberbullying among tweens (ages 9 to 12) and their helping behaviors when witnessing cyberbullying. An online survey of 1,034 American tweens (mean age 10.52) revealed that about one in five had experienced cyberbullying as a victim, offender, or witness.

Recent studies indicate that many teens encounter aggressive behavior on TikTok. According to a 2023 survey by the Cyberbullying Research Center [9], approximately 37% of high school students reported experiencing or witnessing bullying on TikTok. Cyberbullying, characterized by the use of digital devices to harass, threaten, or humiliate, was reported by 28% of respondents.

A survey of 422 adolescents, conducted by Tahir [10] found that younger participants watched significantly more television, with varying effects from violent content. After watching violent media, 36.3% of respondents felt stressed and 5.7% felt aggressive, particularly when exposed to scenes of fighting, stealing, or property destruction, all showing significant links to aggression. Regression analysis confirmed a strong positive association between exposure to violent content and increased aggression levels among adolescents.

I would like to start presenting the results of my study by analyzing the first three questions, which focused on the general use of the TIK TOK app. The TikTok app was not strange to any of the respondents. 95% of the teenagers surveyed used the app at least 2 hours daily, mainly for entertainment and hobbies. Users on TikTok have mentioned that they spend an average of 4 hours per day on the platform. The user who spends the most time on TikTok clocks in at 10 hours per day, while the user who spends the least amount of time reported 1 hour per day.

The questions about experiences of bullying and cyberbullying revealed some unexpected answers and plenty of interesting facts. Surprisingly, respondents found it difficult to talk about cyberbullying, experiencing cyberbullying was more of a taboo topic. More than 60% avoided talking about such experiences. They expressed fear of becoming a victim of cyberbullying when using TikTok. 80% admitted that they do not

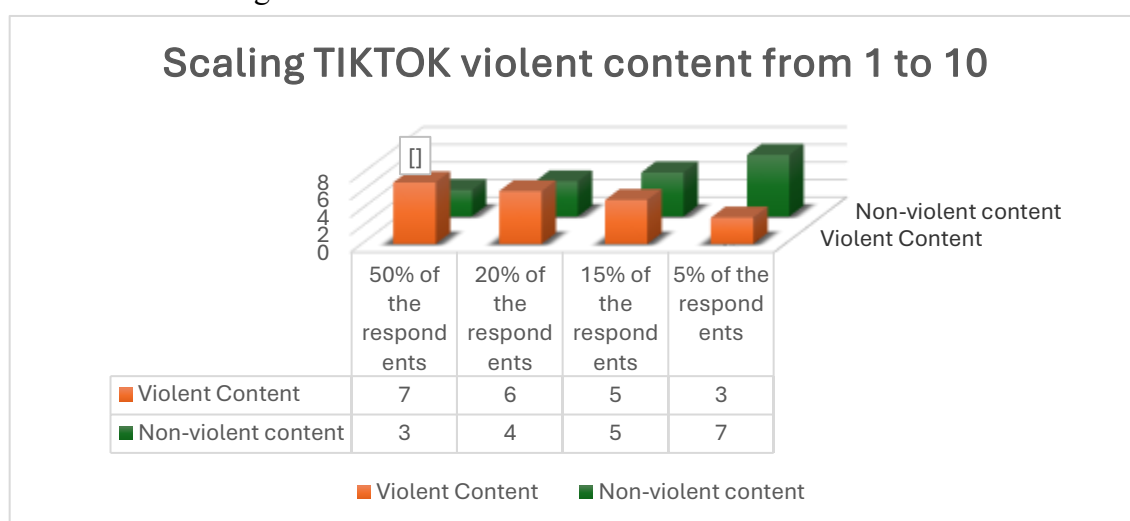
post on TikTok, they avoid posting for fear of being bullied. In other words, 70% admitted that this was the reason they avoided posting. 80% of those who post all the time added that they double-checked before uploading something to avoid being cyberbullied.

When asked if they had received violent content while using the TikTok app, most weren't able to distinguish between violent and non-violent content. More than 50% of the teens surveyed hesitated to give an accurate answer. They seemed confused about what should be considered violent and aggressive. More than 70% of respondents couldn't identify the violent content they received on TikTok. They seemed confused when asked how often they received violent content on TikTok. They gave the false impression that the app was controlled and monitored. Nevertheless, further empirical research is needed to understand young people's perceptions of violent content and their ability to identify it.

60% of participants admitted that they had tried things they had seen on TikTok and that, they sometimes had been influenced negatively by using the app.

Furthermore, when asked how they would rate TikTok's violent content on a scale of 1-10, more than 50% of respondents rated it at least 7. Thus, the study found that most of the teenagers surveyed (90%) considered TikTok to be an app with violent content, even though they were unable to identify the type of violent content they were receiving.

Table 1. Scaling violent content on TikTok



DISCUSSION

The survey results show that cyberbullying has a significant impact on social media behavior, particularly on TikTok, where over 60% of respondents find it difficult to discuss their experiences, indicating a stigma around the issue. Fear of cyberbullying deters 80% of users from posting, with 70% citing it as their main reason for avoidance. Among regular posters, 80% check their content to prevent cyberbullying, reflecting widespread fear and self-censorship. These findings highlight the urgent need for robust anti-bullying policies and safer online environments to encourage more open and active participation on social media platforms. As Abderahman [11] shows in his study there is

little research on the TikTok app as a source of cyberbullying and aggression among high school teenagers.

Following Bozzola study [12] Cyberbullying involves hostile or aggressive behavior through digital media, making it potentially more dangerous than traditional bullying due to the ability to target victims anytime and anonymously. This phenomenon is rising, with significant increases in reported cases among adolescents, leading to severe mental health issues like depression, anxiety, and suicide. Social media use and frequent online contact with strangers are linked to higher risks of cyberbullying, especially among younger teenagers, but social support can mitigate its impact.

The perception of violent content on TikTok is high among teens, with over 50% rating it at least 7 out of 10. In addition, 90% of respondents considered TikTok to contain violent content, indicating a general sense of discomfort or awareness of harmful material that they may not fully understand or articulate. This discrepancy between awareness of violent content and the ability to identify it may indicate that violent content on TikTok is pervasive but subtle, or normalized to the extent that young people cannot easily identify specific examples. It may also reflect a broader issue of content moderation and the types of content that are allowed to circulate on the platform.

Overall, these findings highlight significant concerns about the content teens are exposed to on TikTok and the potential negative influence it can have. They highlight the need for improved content moderation, clearer guidelines on what constitutes violent content, and better education for users on how to identify and report harmful material. It also suggests that parents and guardians need to be more aware of the content their children are exposed to on social media platforms.

According to Sobkin [13] cyberbullying, driven by a sense of superiority and aggression, can cause severe psychological and emotional harm, necessitating parental supervision to prevent and mitigate such incidents. Research conducted on secondary school students shows that social media, including TikTok, is a common ground for aggressive interactions.

In his recent review on youth roles in cyberbullying (cyber-victims, bullies, and bystanders) Leung [14] discussed the effectiveness of intervention programs and suggested a multidisciplinary approach to combat cyberbullying. Strategies include moral education, strengthening the 5Cs of Positive Youth Development, and promoting exposure to natural environments. Future studies should focus on utilizing individual, social, and natural environments to foster positive youth development.

As Englander [15] states bullying has evolved from physical to psychological attacks, with cyberbullying often involving cruel digital behavior that is perceived as bullying when it is deliberately cruel. It is essential to focus on early gateway behaviors, provide education on digital social cues, encourage social skills, and assist parents in prioritizing children's well-being over academics.

CONCLUSION

While TikTok offers many benefits for creativity and social interaction, its diverse content strongly influences teenagers who are still forming their values. This study

proved once again the delicate nature of this thankless age, characterized by innocence and hesitancy, and a limited ability to recognize potential threats. Teenagers imitating behaviors seen on TikTok, such as seeking attention and following trends, can lead to premature maturity and hinder the development of critical thinking skills. Concerns about negative effects often outweigh the positive ones, as the platform's ease of video uploading and lack of strict content monitoring raises questions about potential harm to young people's mental health and value formation.

Aggression and cyberbullying on TikTok pose significant challenges for teens and have a significant impact on their mental health and well-being. Despite extensive efforts to combat cyberbullying, this study has shown that cyberbullying remains a taboo subject, and the fact that the majority of respondents avoided talking about how they had experienced cyberbullying suggests that there is an urgent need to deeply examine the matter aiming to uncover the root causes behind their hesitance to address the issue. Additionally, the study highlights the psychological impact of cyberbullying on teens, necessitating more comprehensive prevention and intervention strategies. By understanding the dynamics of these behaviors and implementing effective interventions, we can help ensure that TikTok remains a positive and creative space for all users.

Teens perceive TikTok as more aggressive than other social networks due to its algorithm, which exposes users to a higher volume of controversial or violent content. The study revealed that high school teens consider TikTok as a platform with significant violent content, yet they struggle to identify specific examples of such content. The current study reveals an intriguing finding: while many participants claimed that TikTok rarely features violent material, a significant number of them rated the level of violence in TikTok above 7 out of 10 points, suggesting a contrasting viewpoint. Therefore, further research is needed for additional empirical research on how Generation Z perceives and characterizes violent content.

Considering the research's ultimate goal, this study seeks to uncover causal links between the addictive use of TikTok and its impact on Teenagers' behavior in an attempt to mitigate these risks and create a safer online environment, improved moderation tools should be implemented to detect and remove harmful content promptly. Schools and parents should implement Education and awareness programs to inform young people about the consequences of cyberbullying and to promote digital literacy. Support systems for victims of cyberbullying, including counseling and reporting mechanisms, are essential. Ongoing research and proactive measures are necessary to address the multifaceted issue of TikTok's influence on teenagers.

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SECTION HUMAN GEOGRAPHY AND DEMOGRAPHY

ITALIAN EMIGRATION TO LONDON

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ABSTRACT

The object of this paper is an historical-economic analysis of the European demographic dynamics in the XIX century, with particular reference to the Italian emigration to London and the birth of Little Italy. The analysis will focus on the first settlements and on the development of the first Italian community in London and highlights the different sort of skilled and unskilled workers within the economic and social environment, an aspect that arouses great interest in the scientific debate, due to the fear of a depletion of human capital in our country, with its negative consequences on the economy. In both cases the strong sense of identity and belonging to the community helped many commercial activities, set up by skilled workers, to survive over the decades, and allowed the flow of unskilled and poor one to survive, despite having to face extremely difficult daily life conditions.

Keywords: emigration, social problems, identity, prejudices.

INTRODUCTION

The object of this paper is an historical-economic analysis of the European demographic dynamics in the XIX century, with particular reference to the Italian emigration to London and the birth of Little Italy¹. The analysis will focus on the first settlements and on the development of the first Italian community in London². At that time Europe registered a demographic development of high proportions. The economic changes caused by “the second industrial revolution” led to a massive territorial redistribution of the population all over Europe.

Italian history has a complex tradition of migratory route, internal and international, a social phenomenon, that for almost a century after political Unification, made Italy into one of the world’s leading labor exporters: between 1870 and 1970, around 25 million people left Italy to work in other European countries, a number similar to that of the resident population³.

¹ T. Allen, *Little Italy, The Story of London’s Italian quarter*, London, Camden Local Studies Archives Centre, 2008.

² T. Colpi, *The Italian factor*, Edinburgh, Mainstream Publishing, 1991.

³ C. Bonifazi, *L’Italia delle migrazioni*, Bologna, il Mulino, 2013; A. Bernabei, *Esuli ed emigrati Italiani nel Regno Unito*, Milano, Mursia, 1997.

MATERIALS

The sources used are documents kept at the National Archives in London and at the Camden Local Studies and Archives Centre, located in the heart of the London district of Holborn, where the first "Little Italy" was born at the beginning of the XIX century, as well as articles from scientific texts and Journals on the life of the Italian community in London.

EMIGRATION FROM EUROPE

The greatest migratory flow of peoples within European boundaries and overseas involved about 50 million people that left Europe, between the beginning of the XIX century and the early 1900s. From Italy people emigrated permanently to the European capitals and to more distant countries overseas, such as Canada, United States, Brazil and Argentina⁴.

This flow, favored by the economic crises that involved Europe during the last quarter of the Nineteenth Century, caused the fusion of peoples of different nationalities on the same territory of emigration, sometime the mixing of peoples gave rise to the "melting pot" or to the establishment of ethnic communities. In Italy, in addition to the deep agricultural crisis, the increase in tax pressure, the deforestation of the mountain valleys, which irreparably damaged the lands dedicated to pastoralism, causing hydrogeological disruptions, made living and survival conditions prohibitive for the most deprived population of many Italian regions, leading from seasonal emigration to permanent emigration. Flows of seasonal workers, moved from all the Italian regions looking for better living and working conditions⁵. The work in the fields was exhausting and pushed workers to take the path of inter-European emigration, heading to the countries of Central and Northern Europe, where job offers were more and better⁶.

EUROPEAN MIGRATION TO LONDON

In 1815, with the end of Napoleon's continental blockade, many Italians, including political refugees, moved to London. In addition to illustrious men such as Gabriele Dante Rosetti, Antonio Panizzi, director general of the British Museum Library from 1856 to 1866, and Giuseppe Mazzini, specialized craftsmen and itinerant musicians began to populate the streets of central London in the same period. Italian communities created the first "Little Italy's", neighborhoods inhabited exclusively by Italian emigrants⁷. Most of them came from the central-northern regions of the Italian peninsula, in particular from the rural areas of Lombardy and Piedmont, but also from the South, where the modest incomes from agricultural activities did not allow the subsistence of their families.

⁴R. Foerster, *The Italian emigration of our times*, Boston, Harvard University Press, 1919.

⁵ D. R. Gabaccia, *Italy's many diasporas*, Seattle, University of Washington Press, 2000.

⁶ J. Greenwood, *Low Life Deeps*, London, Chatto & Windus Piccadilly, 1881

⁷ T. Burke, *The London Spy, a book of town travels*, London, Chatto & Windus Piccadilly, 1889.

Starting from 1840, Italian emigration to England grew exponentially. The first censuses, from 1850 onwards, shows how the Italian community in Great Britain doubled in just a few decades. Most of the emigrants settled in London, where a neighborhood exclusively inhabited by Italians was established in the city center, in the district of Holborn, the first “Little Italy” developed between Leather Lane and Hatton Gardens. The area was previously inhabited by wealthy English merchants who later moved to other parts of the capital due to the sudden increase in the construction of warehouses and activities which transformed the area from residential into a commercial area.

Within Little Italy the skilled artisans lived in places like Hatton Garden and Charles Street in fairly comfortable conditions, while the poorer unskilled and often illiterate emigrants lived in streets like Eyre Street Hill and Saffron Hill, still in the same neighborhood of Holborn, in unhealthy and miserable conditions⁸.

PERCEPTION OF THE IMMIGRANTS BY THE ENGLISH

In the first decades of the nineteenth century integration into Anglo-Saxon society was very difficult, especially for the poorest component of the immigrants, illiterate and unskilled⁹, while artisans and professionals entered the social life of the city and were respected for their cultural and professional skills¹⁰. From the English people Italians were described as characters "with an innate dislike for water and soap" who lived in ignorance and were unable to fit into the English community¹¹.

In 1817 was established in Sardinia Street the first popular school dedicated to Italian emigrants who lived in the neighboring streets. It was financed by the Kingdom of Piedmont and it was under the protection of the Catholic Church located in Lincoln Inn and known as "The Sardinian Chapel". In the second half of the 19th century it was taken over by the Pallottine fathers Raffaele Melia and Giuseppe Fa¹². At the same time was established, by the patriot Giuseppe Mazzini, the free Italian school for young workers in Greville Street. The lessons there took place in the evenings, to encourage workers to attend them. Different topics were taught from Monday to Saturday: Italian grammar, geography, arithmetic, geometry and mechanics; on Sundays were taught Italian History and English Language.

Between 1842 and 1843 was also printed a newspaper written in Italian, entitled “Il Pellegrino”, a magazine delivered free of charge to the students of the Mazzinian

⁸ J. Bates, *Minutes of Evidence: Royal Commission on the Housing of the working classes*, London, House of Commons, 1885.

⁹ H. Mayhew, *London labour and the London poor (1851)*, London, Oxford University Press, 2010.

¹⁰ L. Sponza, *Italian Immigrants in Nineteenth Century Britain: Realities and Images*, Leicester, Leicester University Press, 1988; Id., *Gli Italiani in Gran Bretagna*, Londra, Altreitalie, 2005.

¹¹ D. Green, *Camden History Review*, London, Camden History Society, 1988.

¹² G. Faa, *Registri delle Entrate e delle Uscite*, Londra, 1872; R. Melia, *Lettera al Pallotti n.100*, Roma, 1844; Id., *Lettere a Frasoni*, Roma, 1846; Id., *Lettera a Pio IX*, Città Del Vaticano, 1846; Id., *Lettera al Cardinale Barnabo*, Città Del Vaticano, 1863.

school, which dealt with scientific topics and Italian historical-literary themes¹³. The aim of the school was to educate the young generation of Italian emigrants, trying to inspire the sense of belonging to Italy. The newspaper, now kept in the British Library, helped to improve the living conditions in the Holborn district and gave social and professional acknowledgment to the Italian community.

The school made the request, in 1846, for the approval of a specific law to protect young people from exploitation. Charles Dickens participated into financing the school and in his book "Oliver Twist" the main characters were inspired from the Little Italy neighborhood. Unfortunately the school was suspected of being a "nest of young conspirators" and forced to close in 1861.

SKILLED AND UNSKILLED IMMIGRANTS

Some Italian immigrants were skilled in the construction of technically high-precision instruments such as thermometers and barometers, like Enrico Negretti and Giuseppe Zambra, they managed to create a company for the creation of very sophisticated objects like the theodolite, to carry out topographical surveys and studies on geodetic phenomena of the planet. They produced the first cameras, telescopes, glasses and thermometers, but focused their research on barometers, thanks to which they became famous worldwide and their company was purchased in 1981 by the Western Scientific.

Also Onorato Comitti, the son of a wealthy Italian entrepreneur, moved to London in 1845 and, exploiting the progressive technological development, started to produce ornamental clocks and barometers for the homes of the rich and powerful new British industrialists of the Victorian era. He established the company "O. Comitti & Son Limited" which gained international reputation and for the celebrations of the 50th year of reign of Queen Elizabeth the second, Diamond Jubilee, she was given a wonderful wall clock¹⁴.

SOCIAL PROBLEMS

The uncontrolled increase of the immigration to London grew considerably towards the end of the XIX and the beginning of the XX century, the Census of 1911 estimated that the population of Italian origin settled in the city had exceeded the 2000 units. The phenomenon of "chain emigration" caused mass displacement from small towns, especially from the most isolated and poor rural Italian areas¹⁵.

Some British journalists, including Charles Booth, focused on life and working conditions in the poorest neighborhoods of Holborn, where the streets were crowded with street vendors and begging children¹⁶. Furthermore, due to the continuing overcrowding in the unhealthy houses of Clerkenwell Road and surrounding areas, the

¹³ L. Bucalossi, *Il Pellegrino*, London, Henry Court, 1842.

¹⁴ O. Bersagni, *A Better Life*, London, Camden History Society, 2011.

¹⁵ C. Booth, *Life and Labour 2nd Series, IV*, London, London Press, 1889.

¹⁶ *Ibidem*.

living conditions of the poorest fringes of Italian emigrants worsened dramatically. There were many more mouths to feed, earnings were very low¹⁷.

Despite the social and professional progress achieved by the skilled workers of the Italian community, the unskilled struggled to survive, also due to the widespread illiteracy among the poorest who had just arrived in the neighborhood. The English Parliament established a commission of inquiry for the analysis of the living conditions of Italian immigrants, which revealed the unhealthy conditions in which were forced to live the poorest itinerant workers, with families and children.

The visit of the famous English playwright George Robert Sims to the slums adjacent to Clerkenwell Road greatly shocked local public opinion¹⁸. His description showed how daily survival in that area became increasingly difficult, particularly for newborns and children under 5 years of age, whose mortality rate was very high. Reports to the Government by doctors such as Septimus Gibbon, also led the Government to intervene to stem the situation¹⁹.

GOVERNMENT INTERVENTION

The government started the implementation of basic infrastructural interventions, to improve housing conditions in working-class neighborhoods, above all to avoid the risks of epidemics and social disturbances. They made improvements for the creation of sewage services and for the complete distribution of running water in the homes, which would have reduced premature deaths and epidemic diseases²⁰. In this climate of awareness and investment of resources to improve the living conditions of the poorest immigrants, was also realized the first free hospital, designed mainly for the poorest and neediest Italians, incapable of being able to undergo any type of healthcare: the Italian Hospital of Queen's Square²¹.

The hospital was started in 1889, but the expansion of the building was finally completed in 1900, offering to many poor people the possibility to receive free treatment in its 50 available rooms²². It was immediately called the "Italian Hospital" and became a point of reference for the entire Italian community, not only in London but also in southern Great Britain. Mainly doctors from Italy worked there or people able to speak a good level of Italian and the nursing staff was made up of a group of specialized nuns²³.

¹⁷ "The Lancet", London, Volume n.114, 1879, pp. 590-592.

¹⁸ G. R. Sims, *How the poor live, horrible London*, London, Chatto & Windus Piccadilly, 1889.

¹⁹ D. E. Watkins, *The English Revolution in Social Medicine, 1889-1911*, London, University of London PHD Thesis, 1984.

²⁰ P. Talling, *Derelect of London*, London, Random House, 2008.

²¹ I. MacDonald, *The British Journal of Nursing. The Hospital World*, London, 1933.

²² M. Avon, *The Italian Hospital in London*, London, London Press, 1966.

²³ J. Turner, *New Society*, London, London Press, 1978; King's Edward's Hospital Fund for London, *The Italian Hospital, Queen's Square*, London Metropolitan Archives, 1897-1926.

CONCLUSIONS

The complex historical-economic history of the Italian community in London would definitively require further investigation, but here we intended above all to highlight that Italy has been a country of emigration in the past, before becoming a country of immigration nowadays and Italian emigrants experienced themselves difficulties and deprivations, that so many people today are suffering, coming from other countries. The history of Italian migration was made up of two different flows distinct and complementary: the one of skilled workers, often coming from the urban areas of our country, and the one of less skilled individuals, with low social background, who mostly came from internal areas. In both cases the strong sense of identity and belonging to the community helped many commercial activities, set up by skilled workers, to survive over the decades, and allowed the flow of unskilled and poor one to survive, find a job and become part of the British society, despite having to face temporarily extremely difficult daily life conditions.

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**SECTION DIGITAL SOCIETIES, TRANSFORMATIONS
AND HEALTHCARE**

CREATING AN EXTRAORDINARY EVERYDAY: EXPLORING AREAS OF ARTIFICATION RESEARCH

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ABSTRACT

The paper will focus on the phenomenon of artification [1] in the context of well-being of seniors. We will discuss various backgrounds, especially therapeutic ones, of using this natural human ability to make everyday life exceptional. We will look at how searching for artifacts and symbols in everyday life, isolating and moving an object from its original context, giving it a different role, character, unusual meaning, symbolic actions and activating metaphorical thinking based on symbols can affect human well-being. We will cite examples from our work using art (and artification) in a group of seniors in hospice care and the University of the Third Age. We will present the concept of activities based on artification, which take the form of a workshop consisting of the following stages: preparation, observation in action, presentation, artifying activity, verbalization - summary. The actions and products of research participants will be subjected to a special type of analysis in the context of psychological flexibility and selected artification categories. These categories are: formalization (in the sense of perfecting the form, changing the shape, organization, composition, forming a scheme, pattern, creating a whole), repetition (meanings, lines, motifs in a regular manner, rhythmic, different from the existing form), emphasis and exaggeration, elaboration (dynamic variation), manipulation of the recipient's expectations (e.g. the element of surprise). We will consider other potential scientific methods of capturing this phenomenon.

Keywords: artification, well-being, art-based research

INTRODUCTION

Dissanayake introduced the concept of artification as part of her theory that art is a universal, evolved human behavior rooted in biology and primitive activities [1]. Artification refers to the process by which something not originally considered art is transformed into something regarded as aesthetic or artistic. Dissanayake suggests that from the earliest stages of development, humans are naturally attuned to proto-aesthetic sensory (visual and auditory) and cognitive aspects of their surroundings, which they find sufficiently pleasant and satisfying to motivate engagement with them [1]. She argues that art is not confined to elite or high cultural forms but is instead a natural human impulse with origins in prehistoric rituals and communal activities. She describes art as a way to „make things special” - a fundamental aspect of artification. This process involves attributing aesthetic qualities or significance to objects, actions, or ideas that were not previously considered art, thereby making them worthy of attention or artistic appreciation [1]. It is important to note that artification is not a synonym of „making art” - it emphasizes the process of creation rather than the final product [1]. This conceptualization is a fascinating lens for understanding art, especially in how it reframes artistic expression as a fundamental, human behavior. Rather than limiting art

to elite or specialized activities (like traditional Western fine arts), Dissanayake proposes that art originates from an innate human capacity. The idea of artification contrasts with the conventional view of art as a product or a fixed category, instead emphasizing the process of making art—the doing rather than the final product. It suggests that art is not limited to formal artworks but is accessible to everyone, in everyday contexts. This could include everything from domestic crafts and children's play to cultural practices of body decoration and storytelling.

Anything can serve as a source of artification—everyday activities can be viewed through the lens of art [2]. The extraordinariness of artification is achieved through at least five „aesthetic operations” (also referred to as „proto-aesthetic operations”) employed by all creators. These operations are: 1) Formalization – shaping, composing, organizing, or simplifying to create a pattern or coherent whole, rather than leaving the natural surface; 2) Repetition – repeating elements, such as lines or motifs, often in a rhythmic or regularized way, distinct from natural markings; 3) Exaggeration – enlarging or deepening lines or motifs to emphasize them; 4) Elaboration – dynamically varying lines or motifs, adding stripes, colors, or ornaments; 5) Manipulation of expectations – placing a mark in an unexpected location or creating a strong contrast with neighboring marks [1].

Artification can play a crucial role in enhancing well-being among older adults by offering opportunities for creative expression, social engagement, and cognitive stimulation. As people age, they often face challenges such as loneliness, loss of purpose, and declining physical or cognitive abilities. Engaging in art-related activities, or simply participating in the process of artification can counteract these challenges. Dissanayake's theory suggests that art has deep evolutionary roots and can help individuals feel connected and purposeful [1]. Participating in creative activities, not only fosters emotional expression but also improves mental agility and provides a sense of accomplishment for seniors. Studies have shown that creative activities can enhance mood, reduce anxiety, and even improve memory and cognitive function in older adults [3, 4]. Additionally, artification can serve as a powerful tool for social bonding; group art projects or cultural practices can reduce feelings of isolation, creating a sense of community and belonging that is vital for emotional resilience and overall well-being in later life [5]. By transforming routine tasks into meaningful experiences, artification allows people to cultivate mindfulness and develop psychological flexibility [6] and can contribute to a more fulfilling, joyful aging process.

In the following sections of the article, we aim to present two various approaches we have taken to study the phenomenon of artification, based on our observations of workshops conducted for seniors. By analyzing these diverse contexts, we seek to understand how artification manifests in these settings and the impact it has on participants' experiences.

MATERIALS

The materials analyzed in this study were gathered during workshops which were focused on artification with senior groups. Specifically, the data included materials collected from six workshops held in 2022 at Cordis Hospice in Katowice and Dar Serca Hospice in Częstochowa, and three held in 2024 with participants from the University of the Third Age - two conducted at the Łukasiewicz Research Network – Institute of Innovative Technologies EMAG and one took place as part of the „Close-up

Views” exhibition at the Contemporary Art Gallery BWA in Katowice (3.04.2024). The lead facilitator of the workshops was Jolanta Jastrząb (professor of art, Academy of Fine Arts in Katowice) and authors of the article were co-facilitators and observers.

The preparation and execution of sessions introducing artification can be based on the individual project of the therapist undertaking this task. Although there is no need to follow any specific templates, as long as the focus is on presenting, materializing, and discussing the process of artification with the workshop participants, we have developed our vision for such sessions, which may serve as a guide or inspiration. We envision the implementation of artification-based activities as a five-step process [7]. Table 1 presents the individual stages of the workshops and their brief descriptions. The workshops from which the analyzed materials were collected followed this established procedure.

Table 1. Proposed stages of artification workshop

Stage	Description
1. Preparation for session and session preparation	A necessary part of any group artification initiative, often determining the success of the entire endeavor. It requires addressing the following components: 1) thorough knowledge of the target group (eg. motor abilities, intellectual capacities, degree of familiarity among participants, extent of group homogeneity); 2) understanding the venue (workspace and experience opportunities, necessary resources; 3) searching for personal inspiration.
2. Observation in action	Inviting participants to observe and encouraging experimentation with reality. Participants are encouraged to engage in observations by tapping into their visual, auditory, and olfactory perceptions, as well as physical sensations—rooted in the "here and now," referring specifically to the current moment, space where the activities take place, such as the objects, colors, and surrounding light. Participants are invited to actively experiment with the existing environment, focusing on elements such as light and shadow, traces, spatial composition, views, and scents. It is usually crucial moment in the session, as it provides stimuli for engaging in artification. It encourages participants to focus on themselves and their feelings, and to explore the associations that arise with the various elements of the perceived space.
3. Presentation of examples of artification	The aim of this stage is to invite inspiration through the arts and to create a space for discussion. Participants are invited to draw inspiration from the realm of fine arts. This includes referencing well-known and popular works that directly relate to the themes we wish to highlight for the participants and presenting unconventional and non-obvious approaches to the topic to stimulate creative thinking and encouraging critical reflection on what is observed during the presentation. A space for discussion is established regarding the presented content, allowing participants to share their perceptions of these activities.
4. The act of artifying	The central part of the workshops. At this stage, the facilitator invites participants to engage in primary activities focused on artification—searching for artifacts and symbols in everyday objects, giving them new roles and unusual meanings, and extracting them from their usual contexts. The therapist encourages exploration of important themes through symbolic actions and metaphorical language, promoting creative thinking.
5. Conclusion and summary of activities	In this part of the workshop, the facilitator encourages participants to reflect on their actions and articulate their thoughts, allowing them to experience a sense of closure regarding their activities. A useful practice during the summary phase is to place all participants' works on the ground side by side. This arrangement enables both the participants and the facilitator to view the pieces from a different perspective and to discuss them with one another.

METHODS

We aim to present two selected approaches to researching artification based on qualitative research, related to theory-driven analysis exploring two perspectives: one focused on the definition of the attributes of artification, second connected to the concept of psychological flexibility. To capture the details of how artification manifests during workshops, we firstly referred to aesthetic operations as a theoretical framework [1]. Categories employed were: forming (shaping, transforming, juxtaposing), repetition (multiplication, rhythimization, patterning), exaggeration, elaboration (highlighting, elaborating) and manipulation of expectations (surprising), extraordinariness, admiration and attention, surprise, empathizing. To address the challenges associated with difficult experiences faced by seniors, we turned to the concept of psychological flexibility [8]. At its core, psychological flexibility involves a person's capacity to make independent choices that align with their values, regardless of the emotions or attitudes they may be experiencing and encourages individuals to continue engaging in meaningful activities despite any challenges they may face. Psychological flexibility is shaped by six core processes: acceptance, cognitive defusion, present-focused attention, self-as-context, values, and committed action [8], which served as a foundational element in our exploration and the development of artification sessions [6]. The analysis was conducted qualitatively, utilizing two separate sheets designed for examining the aesthetic operations and psychological flexibility in artification process during group sessions.

RESULTS

We have chosen to present four selected cases from the workshops we conducted, which will subsequently be analyzed in relation to the categories of artification and psychological flexibility that we identified. In Table 2, we present selected categories of aesthetic operations and indicate in which of the examples referenced below we identify elements of these categories. In Table 3, we present the processes of psychological flexibility and indicate in which of the examples referenced below we identify elements of these categories.

Case 1. During the observation in action stage, we suggested that the participants leave their own trace using charcoal on a paper rolled out on the ground. All participants marked the soles of their shoes with charcoal and walked across the paper. One participant, exceptionally for himself, did not take part in the exercise in a wheelchair, but walked across the paper using a walker. During the walk, he stopped, touched the charcoal with his hand and left a trace of his hand on the paper, which was certainly an additional great effort for him in overcoming his physical limitations. Another participant took off her shoes and ran through full of enthusiasm with bare feet marked with charcoal. Both of them marked their presence in a unique way, highlighting the importance of their identity, leaving something behind. Then, during artifying stage, participants created a symbolic garden for the plants they had planted. For this purpose, they used a roll of paper on which they had previously stamped the traces with charcoal, thus creating a symbolic substrate, ground for the flowers. participant, who previously marked his presence with his hand, surrounded his handprint in the shape of heart, other participants also adorned the garden with hearts, suns, floral ornaments. He also playfully recognized (artified) a flower with some paper stuck with a stick - named the flower and treated it as a ship, saying „*Sail the seas and oceans*”. Participants built a

certain stage setting by arranging flower pots, adding decorations with paints, arranging and combining with other elements, and this work was accompanied by cooperation full of joy and fun. Ordinary plants became a symbol of life, duration, cyclicity, surrounded by symbols of hearts, and suns, human existence and presence, making them artifacts of extraordinary importance.



Figure 1. Photograph illustrating case 1

Case 2. During the workshop, in which participants placed plants by themselves in cardboard boxes and observed them using the light of a flashlight, while the artification process was being completed, the participant asked for a knife. There was no such tool offered to the participants, so the hospice carer brought a knife, probably from the kitchen. Using the knife, the participant began to energetically make holes in the cardboard, letting sunlight into the plant inside it. Many people observed his action with surprise and curiosity, at the same time it aroused reflection, and the discovery of the uniqueness of his intentions aroused delight, as if it were a kind of performative action.

Case 3. During the workshop, in which we took up the topic of travel, the participants decided to artify jointly. They used train tickets, polaroid photographs that they took during observations in action and transformed them into an image of a train and carriages, symbolic stages of the journey. In their work, one can notice the repetitions that appear, the rhythm that the train carriages build, the numerous decorations of the symbolic train.



Figure 2. Photograph illustrating case 3

Case 4. During the workshop, in the stage of observation in action, the workshop participants walked around the area in pairs. One person in the pair was blindfolded, the other led her and encouraged her to explore the surroundings with senses other than sight. The participants' actions showed gentleness, care for the other person, in the way they walked, in explaining subsequent steps, the participants tried to give their partner a sense of security.

Table 2. Manifestations of artification in aesthetic operations

Categories of aesthetic operations	Best examples describing acts of artification
Forming (shaping, transforming, juxtaposing)	case 1
Repetition (multiplication, rythmization, patterning)	case 3
Exaggeration	case 1
Elaboration (highlighting, adornnemt)	case 2
Surprising	case 2
Extraordinariness	case 2
Admiration and attention	case 2
Empathizing	case 4

Table 3. Manifestations of artification in psychological flexibility

Psychological flexibility process	Observations
Acceptance of inner experiences	Case 1. Stanisław used his hand to leave his mark on the ground, which required exceptional physical effort from him. With this gesture, one of many of this kind, he showed how important participation in workshops and artistic exploration are to him, but also gave example that in the face of values, one can overcome difficult internal experiences.
Defusion/ intersubjectivity of one's thoughts (ideas)	Case 1. Stanisław's statements indicated the ability to separate the thoughts from their referents and give them a symbolic meaning like he did for example with the plant-ship.
Attention/ focus on the "here and now"	Case 4. In pairs, both the leader, guided by the values of empathy and care, made constant observations of what is here-and-now, in order to share these experiences with other person. The blindfolded person submitted to the experience of here-and-now constantly, experiencing the surroundings multi-sensorily.
Self-observation/ distancing oneself from rigid self-image realization	Case 1. When Stanisław surrounded his handprint with the shape of the heart, he made a hierarchical framing - embraced himself with affection and importance from the perspective.
Clarification of values	Case 2. Stanisław, who previously stated his values in direct manner (he wrote on the sheet " <i>I love Nature.</i> "), was the only one who made holes in the box so that his plant could have light. it was very touching in the context of another sentence he said "Light is life". See also: Attention
Committed action	See: Acceptance

DISCUSSION AND CONCLUSION

In this article we have outlined two approaches to researching artification during group sessions. The task of categorizing artification is an extremely challenging endeavor, primarily due to the fact that the category of artification, as a human universal, is exceedingly broad. Capturing the essence of artifying actions and defining what art is can be a daunting task. However, we believe that such a „close-up” view of artification may aid in its understanding and in transforming the recognition that artification is an overlooked yet pervasive process [1] into actions that aim to integrate it into practice, particularly in therapeutic and support-oriented work with individuals.

The categories of aesthetic operations appear to be useful frameworks for organizing and understanding the finer details of artifying actions. We were able to observe each of these forms in the actions of the workshop participants. One challenge we encountered was the intertwining of our observations of „art” as a product, or outcome, with our observations of the participants' verbalizations and behaviors during the workshop. It is worth considering whether separating the analysis of the product itself from the analysis of the action-verbalization categories we identified might bring more order to the observation structure, though this risks reinforcing a more traditional view of art as a static form [1].

The categories of psychological flexibility provide an interesting framework for thinking about artification, even though these categories are traditionally associated with therapeutic interventions. Perhaps due to our backgrounds in psychotherapy and art

therapy, we incorporated elements of psychological flexibility and Acceptance and Commitment Therapy into the workshops from the design stage. We find it intriguing to explore the possibility of expanding this concept in the future, with the aim of designing interventions targeting specific elements of psychological flexibility, based on artification.

Given the broad nature of artification, we assume it can be measured in countless ways. In other study (currently in preparation for publication), for example, we adopt an art-based research perspective, which helps us explore artification from yet another angle through prose, poetry, and visual arts.

Like Dissanayake, we believe that the concept of artification touches upon a critical aspect of human functioning, one that has not been sufficiently recognized within the social sciences, particularly in the fields of therapy that we are most closely connected to. A key open question remains: how can this concept be further developed to enhance both the practice and theory of therapeutic interventions, including art therapy and psychotherapy?

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EFFECTIVENESS OF REHABILITATION MEASURES FOR SCHOOLCHILDREN WITH MYOPIA

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ABSTRACT

The purpose of the study - to find out how a physical rehabilitation program affects the physical growth, level of training and visual clarity of children aged 9-10 years with myopia. In the article we use empirical research methods, sociological surveys, pedagogical experiment as well as analysis and generalisation of scientific literature on the issues of correction of physical development and physical fitness of visually impaired children. The assessment of changes in the condition of schoolchildren with myopia in the main group before and after the application of rehabilitation measures was measured by indicators of speed, flexibility, agility, and endurance. According to the assessment of the physical development of schoolchildren of the main group after the course of physical rehabilitation, positive changes are noted: on average, schoolchildren experienced a 10% improvement in visual clarity with correction and a 9% improvement without correction, the proposed program had a proper impact on the somatic health, physical fitness and visual acuity of myopic children.

Keywords: myopia, schoolchildren, life history, observation, rehabilitation measures.

INTRODUCTION

In the era of constant technological advancement and the digital world, myopia, or nearsightedness, has become a common vision problem among schoolchildren. In recent decades, the prevalence of myopia has increased dramatically, especially in urban areas, affecting the lives of millions of schoolchildren worldwide. As the prevalence of myopia continues to rise, it is becoming imperative for educators, parents, and healthcare professionals to explore effective rehabilitation interventions that can mitigate its impact on health, student achievement, social interactions, and overall well-being.

Myopia is characterized by difficulty seeing objects clearly at a distance while maintaining adequate up-close vision, and is already present in 3% of children in the early years of schooling [1]. Prolonged periods of work, such as reading, using digital

devices and focusing on screens, are associated with the development and progression of myopia [2]. As schoolchildren spend a significant number of hours engaged in learning activities that mostly involve visual strain, they are particularly vulnerable to the development of myopia and its potential consequences. There is widespread recognition of the urgency of the current problem of myopia as an important medical and social issue. The physical rehabilitation of these children is a multifaceted and extended measure that requires the methodical and gradual application of various approaches.

METHODOLOGY

Methodological approaches to the study: theoretical research involves the analysis and synthesis of scientific literature on the correction of physical development and fitness of visually impaired children; empirical research involves the study and consolidation of the practice of specialized educational institutions serving visually impaired children, using methods such as sociological surveys and pedagogical experiments; measured parameters include physical development and fitness level of visually impaired children.

RESULTS

1. General characteristics of schoolchildren aged 9-10 years with myopia.

We conducted an observation of 20 schoolchildren aged 9 to 10 years, including 12 boys and 8 girls. Upon admission for outpatient treatment, patients underwent a thorough examination. At the beginning of the study, a comprehensive survey of patients was conducted to collect information about complaints, medical history and medical data. Outpatient treatment lasted two months. Patients were divided into two groups: treatment and control, 10 people each, equal in terms of key indicators.

Based on the life and medical history of the patients, it was found that a smaller proportion of schoolchildren, namely 20.0% in the main group and 10.0% in the control group, were engaged in sports. The indicators of physical development obtained before rehabilitation were as follows: the body weight of schoolchildren in the main group was 25.3 ± 4.05 kg; in the control group, this figure was 25.7 ± 3.89 kg. When determining the pulse on the radial artery in schoolchildren with myopia, the average pulse rate was 95.41 ± 3.01 beats per minute for patients in the main group and 93.38 ± 4.15 beats per minute for the control group.

The average chest circumference before rehabilitation in pupils of the main group was 61.0 ± 3.0 cm, in the control group - 61.4 ± 2.8 cm; Measurement of muscle strength of both arms was performed using a hand dynamometer. Assessment of hand muscle strength was performed sitting with arms spread apart. Measurements were made three times with each hand and the best average result was recorded. The study found that in schoolchildren of the main group this indicator was 11.13 ± 4.21 kg, in children of the control group - 11.30 ± 5.25 kg. In practically healthy schoolchildren of the corresponding age this index was higher and amounted to 15.2 ± 1.12 kg for boys and 13.5 ± 1.14 kg for girls. Strength index is estimated as low.

It has been established that a significant measure of external respiration is the vital capacity of the lungs (hereinafter - VC), which is estimated to reflect the functional

capabilities of the respiratory system in children at rest. According to the literature, children with visual pathology have lower vital capacity than healthy children. Our studies have shown that the average value of VC in schoolchildren of the main group with visual impairment was 1500.0 ± 210.0 ml, in patients of the control group this figure was 1560.0 ± 200.0 ml. The assessment of the functional state of the respiratory system includes a vital aspect - the identification of its reserve capacities. These potentials were assessed by analyzing the correlation between VC and body weight, which resulted in a vital index. According to the observations, in children of the main group with myopia it was 59.28 ± 6.66 ml/kg, in pupils of the control group, respectively, 58.45 ± 7.24 ml/kg.

The groups were identical in terms of the main indicators of physical development. Schoolchildren with myopia had significantly lower physical development indicators than practically healthy children of the corresponding age.

To estimate physical fitness of schoolchildren with myopia for application of physical rehabilitation means we used such indicators, with the help of which we could estimate speed, flexibility, agility and endurance, which constitute main motor qualities of children.

Our studies of the level of development of primary schoolchildren with myopia's basic physical qualities showed that indicators of running on the spot for 5 s. for children of the main group were 15.36 ± 2.58 s, for children of the control group these data were 15.40 ± 2.33 . Indicators of shuttle running were 13.42 ± 2.48 s and 13.39 ± 2.06 s, respectively, and are estimated as low. In practically healthy children this index was higher and amounted to 12.1 ± 2.13 s. Throwing a ball at a target before rehabilitation amounted to 5.6 ± 2.83 times for pupils of the main group, for children of the control group this index also amounted to 5.7 ± 2.75 times. In practically healthy children this index was higher.

Indicators of performance according to the Ruffier test for patients in the main group were 8.17 ± 3.01 , for children in the control group with myopia this figure was 8.21 ± 2.68 . These indicators in the main and control groups are assessed as poor performance

Thus, the studies have shown that primary school children with myopia lag behind in physical development compared to their peers who see well. This is evidenced by indicators of hand muscle strength. In pupils of the main and control groups, this indicator was 11.13 ± 4.21 kg and 11.30 ± 5.25 kg, respectively. In practically healthy pupils this indicator was 15.2 ± 1.12 kg for boys and 13.5 ± 1.14 kg for girls. Indicators of physical fitness and performance are also lower than those of practically healthy pupils, as evidenced by the data of shuttle run and Ruffier test.

2. Rehabilitation program for children aged 9-10 years with myopia

The development of a physical rehabilitation program aimed at primary school children with myopia was based on the results of the analysis of scientific and methodological literature, study of medical records, and examination of physical development, physical performance, and visual acuity. The patients were divided into two equal groups: the main group, where the comprehensive rehabilitation program developed by us was applied, and the control group. The control group of patients was trained according to

the traditional method. The traditional method of rehabilitation involves, in addition to medication, physical therapy with a general strengthening effect.

When implementing rehabilitation measures, including physical education for children with visual impairments, it is extremely important to take into account their unique cognitive and physical aspects of development and adhere to generally accepted principles: 1) adjusting the approach and intensity of physical activity to take into account the primary impairment and subsequent developmental disabilities; 2) methodical implementation, which involves the selection of specific exercises (taking into account the state of vision and the possible use of residual vision) and a structured procedure for their implementation; 3) constant engagement in physical activity, promoting the improvement of body functions and the acquisition of basic ideas about objects, movement or exercises. These mental images later serve as the basis for conceptual development. Studies have shown that the preservation of these representations depends on the clarity of vision; 4) Restoration of impaired functions and fundamental body systems requires long and constant repetition of physical exercises, as memory images in blind and visually impaired people tend to deteriorate without consistent reinforcement. Even short periods of time (1-3 months) have a negative impact on their perception [4]; 5) increase physical activity during the school year. It is important to note that a large number of children often experience a decrease in physical activity during vacations; 6) introduction of variety and innovation in the choice and performance of physical exercises (10-15% of exercises are updated, and 85-90% are repeated to consolidate previously acquired skills and abilities). This takes into account the fact that visually impaired people usually need 8-10 repetitions to memorize precise and simple movements, while their peers with normal vision often need 6-8 repetitions; 7) moderate effect of physical exercises. Moderate, but longer or more intense physical activity is used, taking into account the limitations of certain diseases and the rapid fatigue of children with visual impairments; 8) adherence to a cyclic scheme, alternating activities with rest periods (including eye exercises, lessons in proper breathing, relaxation, involvement in role-playing games, etc.) Children with visual impairments get tired faster than their peers with typical vision; 9) a comprehensive intervention aimed at activating the neurohumoral mechanism of regulation and promoting the adaptive development of the body; 10) taking into account the age (functional, physiological, development of the muscular apparatus of the eye) and specific characteristics of primary school children with visual impairment.

The rehabilitation regimen included several components: morning hygienic exercises, therapeutic gymnastics, segmental reflex and targeted massage in combination with classical massage, therapeutic walking, outdoor games, swimming.

3. Influence of rehabilitation measures on physical development, physical fitness of children aged 9-10 years with myopia

According to the results of our research it was found that the height of myopic boys before the beginning of rehabilitation interventions was 126.3 ± 5.5 cm. During the experiment, pupils' height increased, reaching 127.4 ± 4.7 cm.

As can be seen from the data, the average body weight of children with visual impairments in the main group was 25.3 ± 4.05 kg before the experiment and 26.3 ± 3.67 kg after the experiment. The average value of the chest circumference before the

experiment was 61.0 ± 3.0 cm, and after the experiment it was 62.5 ± 2.5 cm, which reflects a difference of 1.5 cm between the two values.

It is recognized that a significant indicator of external respiration is the vital capacity of the lungs, estimated to reflect the functional capabilities of the respiratory systems of children at rest. This indicator is influenced by factors such as gender, age, physique, and physical fitness. According to scientists, visually impaired children have a lung capacity that is 10-20% lower than that of healthy children. The study found that the average value of the lung capacity in visually impaired children before the experiment was 1500.0 ± 210.0 ml. After completion of the rehabilitation program, the average value of VC increased to 1700.0 ± 190.0 ml, which indicates an increase in these indicators by 200.0 ml.

Assessment of the functional state of the respiratory system includes a vital aspect - the identification of its reserve capacity. We evaluated these potentials by analyzing the ratio of VC to body weight, forming a vital index. According to our findings, this index was 59.28 ± 6.66 ml/kg before the experiment and increased to 64.63 ± 8.37 ml/kg after the experiment, indicating a difference of 5.35 ml/kg. Our interpretation suggests that this difference in the values of the vital index may be due to the fact that children with myopia had a more sedentary lifestyle before the experiment.

The average resting heart rate before rehabilitation was 95.41 ± 3.01 beats/min. After rehabilitation with the children, this indicator showed a decrease of 8.09 beats per minute, reaching 87.32 ± 5.14 beats per minute. This decrease emphasizes the ability of the boys' body to adapt to constant and appropriate physical activity.

An important aspect of assessing children's physical development is measuring muscle strength. Our observations showed that the average strength of the right and left arms showed an increase of 2.22 kg each after the experiment, reaching 13.35 ± 6.27 kg.

Nevertheless, the use of absolute measurements of muscle strength lacks full understanding because subjects have different weights and body composition. Thus, when assessing the potential of the muscular system, a strength index is used that relates the strength of the stronger arm to body weight. Based on our findings, the average strength index for 9-10-year-old boys with myopia was $43.99 \pm 8.17\%$ before the experiment and increased to $46.95 \pm 12.07\%$ after the experiment, which is a difference of 2.96%.

To summarize, based on the assessment of physical development of myopic schoolchildren, it can be concluded that the proposed program had an appropriate impact on the level of somatic health of children, which emphasizes the need for a comprehensive set of corrective measures. It is noteworthy that there was a marked increase in strength and vital signs.

Patients in the control group also showed positive dynamics, but these indicators are much lower. The average VC in children with myopia of the control group before the experiment was 1560.0 ± 200.0 ml. After completion of the rehabilitation program, the mean value of EV reached 1680.0 ± 180.0 ml, which reflects an increase of 120.0 ml in these measurements. This improvement is much less than in the patients of the main group.

The vital index in children of the control group with myopia before rehabilitation was 58.45 be due 7.24 ml/kg, after rehabilitation it increased to 62.51 be due 7.54 ml/kg.

The difference is 3.94 ml/kg, while in pupils of the main group this indicator is 5.35 ml/kg. The strength index in patients of the control group increased by 1.74%. In patients of the main group, this figure was 2.96%.

In assessing the physical fitness of schoolchildren, tests were used to evaluate basic motor skills, such as speed, flexibility, agility, endurance.

Let's take a look at the results of motor assessments that outline the physical fitness of boys aged 9-10 years who are myopic. The results of our study indicate that the progression of fundamental physical attributes in patients with myopia in the primary group showed favorable results both before and after rehabilitation. Thus, after the implementation of a rehabilitation regimen aimed at improving the physical well-being of younger visually impaired students, the results showed an increase of 0.62 movements per minute in test "in the run of 5 second in place".

Many authors emphasize that the age range from 7 to 12 years is particularly favorable for the development of agility. After the rehabilitation program, the children of the primary group demonstrated an acceleration of 0.41 seconds in the 4×9 m shuttle run and a 0.2-fold increase in the accuracy of throwing the ball at the target compared to the level before rehabilitation. Extremely noticeable progress was observed in the development of flexibility, where the torso tilt from a sitting position improved by 0.62 cm. The endurance indicators assessed by the Ruffier test showed a post-rehabilitation increase of 0.24 points, which corresponds to the standard of average performance.

Key motor skills of children, including speed, flexibility, agility and endurance, also showed improvement among the control group.

However, these indicators are somewhat lower. After the rehabilitation measures, the indicators of running on the spot for 5 seconds improved by 0.44 movements/min. In patients of the main group, this figure was 0.62 movements/min.

Children of the control group after rehabilitation performed 4×9 m shuttle run by 0.25 seconds faster than before rehabilitation; indicators of throwing the ball at the target improved by 0.1 times. In patients of the main group, these indicators were 0.41s and 0.2 times, respectively. The children improved the torso tilt from a sitting position by 0.42 cm, while in the main group this indicator was 0.62 cm. The endurance indicators of the Ruffier test improved after rehabilitation by 0.18 units, the index score corresponds to the value of average working capacity.

Thus, after the completion of the physical rehabilitation program, positive changes in the assessment of physical development of 9-10-year-old schoolchildren with myopia are observed: the average value of VC increased by 200.0 ml, there was a spread of 1.5 cm in the chest circumference after the experiment, and the measurement of right arm strength showed an increase of 1.22 kg.

Physical fitness indicators showed improvement after applying the proposed regimen, which led to an increase in running efficiency by 0.62 movements per minute. Particularly notable progress was seen in the development of flexibility, where children achieved 0.62 cm improvement in body bending.

The results of our study confirm the effectiveness of the comprehensive physical rehabilitation program that we have implemented for primary school children with myopia. The most noticeable results were observed in the main group of children.

4. Effect of physical rehabilitation means on children's visual acuity

Visual acuity assessment by Orlova's method was conducted in both the experimental and control groups before and after the physical rehabilitation process. This assessment included children with and without corrective measures, and the results are presented as decimal percentages. For example, if the visual acuity of the right eye is 0.5, it means that the visual acuity is 50%, if 0.35 - 35%, etc.

A comparative analysis of the average visual acuity in children of the main and control groups before and after physical rehabilitation showed the following.

After physical rehabilitation in the control group there was a decrease in uncorrected visual acuity of children, while during corrective measures the visual acuity did not change.

Comparing the values of both groups, we came to the conclusion that in the main group after the use of special therapeutic physical culture, visual acuity with and without correction increased, that is, there was an improvement.

Thus, based on the results in the main group, the state of visual acuity in schoolchildren with correction improved by an average of 0.1 (10%), without correction - by 0.09 (9%). In the control group the state of children's vision with correction improved insignificantly, on average by 0.01 (1%), and without correction - worsened, as evidenced by a negative value of -0.02 (-2%).

Thus, dosed physical exercises in the form of special therapeutic gymnastics and the use of other means of physical rehabilitation increase the level of physical development of children, reserves of the cardiorespiratory system, physical performance, and the state of the visual analyzer. During the study, in the main group, the visual acuity of schoolchildren showed an average increase of 10% with correction and 9% without correction. On the contrary, in the control group, visual acuity for children with correction showed a slight improvement by an average of 1%, while children without correction showed a decrease, as indicated by a negative value of -2%. The implemented program effectively influenced the state of somatic health, physical fitness and visual acuity of myopic boys, which indicates the need for a comprehensive set of corrective measures for these children.

The above methods can be more effective in combination with such a method of myopia control as refractive therapy with orthokeratology lenses [3] and the use of modern devices for measuring time spent in the classroom and outdoors [5].

CONCLUSION

During the study, in the main group, the visual acuity of schoolchildren showed an increase of 10% with correction and 9% without correction. On the contrary, in the control group, visual acuity for children with correction showed a slight improvement by an average of 1%, while children without correction showed a decrease, as indicated by a negative value of -2%. The implemented program effectively influenced the state of somatic health, physical fitness and visual acuity of myopic boys, which indicates the need for a comprehensive set of corrective measures for these children.

Thus, the main focus in preparing visually impaired students for their educational needs is to improve the rehabilitation procedure. This improvement aims to increase the readiness level of visually impaired children by strengthening their physical and cognitive abilities, developing basic vocational physical qualities, teaching them to perform basic movements accurately and eliminating any other deviations in physical development. This rationale was the basis for the choice of the topic.

The researcher observed a group of 20 schoolchildren aged 9 to 10 years, including 12 boys and 8 girls. Upon admission for outpatient treatment, thorough examinations were conducted. At the beginning of the study, a comprehensive survey was conducted to collect information about their problems, life history and medical education. The outpatient treatment lasted two months. Then the patients were divided into two groups, namely the treatment and control groups, each consisting of 10 people with comparable baseline characteristics.

The rehabilitation regimen included the following components: morning hygienic gymnastics, therapeutic gymnastics, segmental reflex and directed massage, which was performed along with classical massage, therapeutic walking, outdoor games, and swimming.

After completion of the physical rehabilitation regimen, favorable changes were observed: the average vital capacity (VC) increased by 200.0 ml, there was a deviation in the chest circumference after the experiment by 1.5 cm, and the measurement of the right arm strength showed an increase. 1.22 kg. The implementation of the proposed program led to an improvement in physical fitness, as evidenced by an increase in running performance by 0.62 movements per minute. Particularly significant progress was noted in the development of flexibility, as children improved their body bend by 0.62 cm. Throughout the study, conducted in the main group, the visual acuity of schoolchildren increased by an average of 10% with correction and 9% without correction. In the control group, there was a slight improvement in visual acuity among children with correction, on average by 1%, while children without correction showed a decrease, which is manifested by a negative value of -2%.

Given the above, we can draw the following conclusions:

1. After reviewing various sources, we found a strong correlation between changes in a child's well-being and his or her visual abilities. Studies show that children with visual impairments show slower progress in both motor and physical development compared to their peers with normal vision. This discrepancy is explained by the limitations imposed on the child's all-round growth due to impaired visual and visual processing functions.
2. Correction of compromised functions and fundamental body systems requires long and continuous repetition of physical exercises, as memory representations in blind and visually impaired people tend to fade without consistent reinforcement. Even short periods of time (1-3 months) have a negative impact on their conceptual understanding.
3. When assessing the physical development of 9-10 year old pupils of the primary group with myopia, positive changes were found after the completion of the physical rehabilitation program. A particularly significant increase was observed in the development of flexibility, as the torso inclination in the group of younger pupils improved by 0.62 cm. In addition, the average vital capacity (VC) increased by 200.0

ml. In the control group, this figure was 0.42 cm. The best results were found in children of the main group.

4. During the examination conducted in the initial group, schoolchildren showed an increase in visual acuity with correction by an average of 10% and without correction by 9%. In the control group, children experienced a slight improvement in visual acuity of about 1% with correction, while their visual acuity deteriorated without correction, as evidenced by a negative value of -2%.

5. Thus, the proposed program had a significant impact on the somatic health, physical fitness and visual acuity of myopic boys, which emphasizes the need for a comprehensive set of corrective measures for these children. The results of our research substantiate the effectiveness of the comprehensive program of physical rehabilitation of primary school children with myopia.

The proposed comprehensive program of physical rehabilitation can be used by physical exercise instructors, physical rehabilitation specialists at the outpatient stage of rehabilitation and prevention of children with myopia. One of the main tasks of corrective gymnastics is to strengthen the muscles of the collar zone, chest, special exercises for the eyes, exercises to improve the functioning of the eye muscles, to develop resistance to fatigue in alternation with breathing exercises. In addition, a set of special exercises of therapeutic gymnastics can be performed by schoolchildren at home as an additional method of strengthening and improving visual acuity.

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PERSPECTIVES REGARDING THE RIGHT TO HEALTH AND THE ACCESS TO MEDICAL EMERGENCY SERVICES

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ABSTRACT

The article contains general aspects regarding the right to health and analyzes the European and national regulations in this regard, outlining certain elements specific to this right. Although the research starts from these generalities, it continues with particular aspects of access to emergency medical services for citizens, exemplifying concrete statistics from one of Romania's counties and the difficulties faced by the emergency medical system during the COVID-19 pandemics.

The research is based on certain specialized bibliographic resources, but also on information from the written press from that time, but especially on the findings contained in the Special Report of the Romanian Ombudsman in the field of health, which captures very well these deficiencies from the pandemic period and not only.

By comparing the situation of the existing ambulances in the inventory of the Brasov County Ambulance Service in 2020 and in 2021, it can be seen that the situation did not improve during the pandemics. Even now, there is no integrated solution at the national level to improve private individuals' access to emergency medical services.

Keywords: right to health, medical emergency services, pandemics, medical care.

INTRODUCTION

The right to health is part of a larger set of rights that has been reached by consensus at the international level regarding human rights standards and is treated as being in fact an inseparable right, "indivisible" from other rights.

Specifically the regulation of the right to health is both correlated with other rights and dependent on some of them, such as the right to food, housing, work, education, information and participation. These rights are not only valid for adults, but are also part of the "children rights".

The right to health correlates with:

- The freedom of the individual to have control over his own body and health, for example sexually and reproductively, prohibition of torture, prohibition of medical treatment or participation in clinical studies/tests without consent.
- The individuals have the right to the protection offered by a health care system, according to the principle of equality of rights [1].

The right to health is based on a series of elements that must be respected by states [2]:

- availability
- accessibility
- acceptability
- quality

Thus, health institutions, goods and services must be sufficient at the level of a state, and be available to all individuals, without discrimination, taking into account aspects such as geographical availability, economic condition and accessibility for marginalized groups that must not be financially burdened [3].

States' obligation to respect the right to health also has implications for the determinants of health, namely access to drinking water, food, hygiene, housing, information and health education [4].

From an international legislative perspective, the European Union complements national health policies, supporting member state governments to achieve common goals, pool resources and overcome common challenges.

The European Union develops European norms and standards for medical products and services and provides funding for health projects across the Union.

At European level there are two agencies created specifically to support national governments in health matters: The European Centre for Disease Prevention and Control (ECDC), responsible for assessing and monitoring emerging health threats, to coordinate responses, and the European Medicines Agency (EMA), respectively, which manages the scientific evaluation of the quality, safety and effectiveness of all medicines from the Union.

Also, article 12 from the International Covenant on Economic, Social and Cultural Rights provides the right to health, recognizing the right of every person to enjoy the best possible state of physical and mental health [5].

It refers to both freedoms and rights, such as everyone's right to access health services, equally. The right to health is an inclusive right that also refers to factors influencing health, such as access to safe drinking water and sanitation, food, nutrition and housing, access to education and health information, including sexual and reproductive health.

According to article 8 and article 11 of General Comment no.14 of the Committee for Economic, Social and Civil Rights, an essential aspect is the participation of the population in the decision-making process at community, national and international level [6].

In Romania, the right to health protection is provided for in article 34 of the fundamental law, the Constitution of Romania [7]:

- (1) The right to health protection is guaranteed.
- (2) The state is obliged to take measures to ensure hygiene and public health.

The Constitution therefore enshrines a complex right to health protection. This right pertains to the human condition at the level of current life requirements, through its content ensuring the citizen the preservation and development of his physical and mental qualities that allow him a real and effective participation in political, economic, social and cultural life.

MATERIALS AND METHODS OF THE RESEARCH

Through the presented article, we try to highlight the legal aspects that are closely and directly related to the right to health, through the methodology of information identification, interpretation, descriptive methods and research, explanatory methods and research, as well as comparative.

The research refers to the legal effects of the implementation of the European and national Romanian legislation regarding the public health and the access to emergency medical services. The analysis considers the identification of legal regulations in the matter, both at the European and national level, and the development of proposals for its improvement.

The purpose of this research is to emphasize the need to find solutions to respect the right to health, concretely, as an internationally recognized individual right and presents, through relevant information, a comparison between the 2020 and the 2021 year situation of ambulances in one of the most important counties in Romania, namely Brasov.

DISCUSSION

As it follows from the provisions of international legal instruments in this field, the realization of the right to health involves the obligations and efforts of the state to: decrease the mortality of new-borns and infant mortality, as well as the healthy development of the child; improving all aspects of environmental and industrial hygiene; prophylaxis and treatment of epidemic, endemic, occupational and other diseases, as well as the fight against these diseases; creating conditions to ensure medical services and medical aid in case of illness, etc.

In this matter, the patient's rights and the right to health protection are also stipulated in the Law no. 46 of January 21, 2003, regarding patient rights. Article 2 stipulates the following: "The patients have the right to the highest quality medical care available to society, in accordance with human, financial and material resources."

Last but not least, the Charter of Fundamental Rights of the European Union, in Article 35 - Health protection, specifies [10]:

"Every person has the right of access to preventive medical assistance and to benefit from medical care under the conditions established by national legislation and practices. A high level of protection of human health shall be ensured in the definition and implementation of all policies and actions of the Union".

Regarding access to emergency medical services, during the COVID-19 pandemics, the Brasov County Ambulance Service faced several problems caused by the increase in the number of people with SARS-Cov-2 infection in serious condition:

1. increasing response and intervention times (in urban areas from 15 minutes to 24 minutes and in rural areas from 20 minutes to 25 minutes);
2. the increase in the number of patients who refuse to be transported to the hospital (out of 7000 cases, 3000 refuse to be transported to the hospital);
3. the increase in oxygen consumption (from 77 tubes in November 2019 to 244 tubes in November 2020)[11].

On the other hand, by issuing the Order of the Action Commander no. 4649281/02.11.2020 by the Head of the Emergency Situations Department, the obligation was established for the emergency units from hospitals to take over adult patients from ambulances, regardless of the situation of available places in the hospital wards to which they belong and, at the same time, to take over the patients in the shortest time, in order to provide them with emergency medical assistance, releasing the crew within one hour at the most of their arrival in the emergency hospital unit.

Under this aspect, since both hospital and pre-hospital resources are limited, when the number of patients exceeded the number of resources, an overcrowding was generated and the medical system reaching a critical point.

For example, at the Brasov Clinical Hospital for Infectious Diseases (Covid hospital, phase I) no specialized medical assistance is provided for non-Covid patients. The sanitary unit does not have an emergency reception compartment. In overcrowding situations, the waiting time for the ambulance was 60 minutes, during which the National Intervention Management and Coordination Center was looking for an available place in other hospitals in the county or in the country [12].

Regarding the state of the ambulance "park" at the level of the service, it was found the need to purchase new ambulances, as the fleet of ambulances was out-dated in proportion to 2/3, and 54 ambulances in the equipment of The Brasov County Emergency Service from the period 2007-2008 would be had to be replaced in the period 2017-2020, taking into account the specifics of the activity and to prevent the decrease of the ambulances required for the intervention.

Table 1. The situation of ambulances at the level of the Brasov County Ambulance Service at the end of 2020 [10]:

Compartment	Ambulance type	Total patrimony	Fabrication year 2007-2008	Fabrication year 2018-2019	Functional	Unfunctional / proposed for scrapping
Medical Emergency Assistance	C2	6	3	3	4	1/1
Medical Emergency Assistance	B1/B2	51	31	20	29	9/13
Unassisted sanitary transport	A1	11	11	-	6	5/-
Unassisted sanitary transport	A2	8	4	4	7	-/1
Unassisted sanitary transport	ACD	5	5	-	4	1/-
Total		81	54	27	50	16/15

Table 2, The situation of ambulances at the level of the Brasov County Ambulance Service at the end of 2021 [10]:

Compartment	Ambulance type	Total patrimony	Fabrication year 2007-2008	Fabrication year 2018-2019	Functional	Unfunctional /proposed for scrapping
Medical Emergency Assistance	C2	6	3	3	4	1/1
Medical Emergency Assistance	B1/B2	49	31	20	29	10/10
Unassisted sanitary transport	A1	11	11	-	6	1/4
Unassisted sanitary transport	A2	8	4	4	~~7~~ 4	1/3
Unassisted sanitary transport	ACD	5	5	-	4	1/-
Total		79	52	27	47	14/18

RESULTS

Regarding the state of the ambulance "park" at the level of the service, it was found the need to purchase new ambulances, as the fleet of ambulances was out-dated in proportion to 2/3, and 54 ambulances in the equipment of The Brasov County Emergency Service from the period 2007-2008 would be had to be replaced in the period 2017-2020, taking into account the specifics of the activity and to prevent the decrease of the ambulances required for the intervention.

A year away from the above findings, in the 4th wave of the COVID-19 pandemics, "the eight crews of the central station in Brasov, working in a shift, have to divide day and night between the hundreds of patients who ask for help at 112. In recent months, residents of Brasov suspected or infected with Covid-19 have become a priority. Once taken from home, the sick must go to the hospital. Except that here the ambulances sit in line and wait to hand over the patients. Because of this, the waiting time for the other cases exceeds even seven hours, in some cases" [13].

Thus, the following were found:

- the increase in the number of cases and implicitly the numerous requests in conjunction with the overcrowding of hospitals;
- the increased consumption of specific medication (oxygen) led to the need to supplement this product;

- due to the physical exhaustion of operative personnel, it was not possible to ensure the increase of intervention crews by supplementing the shifts.

CONCLUSION

In conclusion, the ambulance fleet has not improved, with the number of non-functional ambulances increasing.

There is no information regarding the number of ambulances that will be purchased and when the improvement of the ambulance park can be expected.

The purchase of ambulances is necessary, in order to improve access to the ambulance pick-up of patients who call 112.

Following the proceedings of the People's Advocate institution, it was decided by the Interministerial Commission for Technical Support to purchase type B2 (4x4) ambulances, through the implementation projects, instead of type A2 ambulances and The General Inspection for Emergency Situations requested their purchase within the available budget, the same commission was unanimously agree with the assignment of 2 more ambulances type B2 to the Brasov County Emergency Service.

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SPORT AS A TOOL FOR DEVELOPING SOCIAL SKILLS: IMPLICATIONS FOR CONTEMPORARY SOCIAL AGENDAS AND A SUSTAINABLE FUTURE

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ABSTRACT

The article addresses the critical role of sport in the development of social skills and its deep involvement in contemporary social agendas, highlighting its contribution to achieving a sustainable future. Through a detailed review of existing literature and case studies, the research highlights how sports activities promote cooperation, effective communication and mutual respect, vital skills in modern society. The report also looks at the impact of adapted and inclusive sports programs, which encourage the participation of diverse social groups, thus helping to reduce inequalities and promote social inclusion. The article argues that sport, as a universal platform for learning and interaction, can and should be a key component in social and sustainable development strategies, providing equal and accessible opportunities for all members of the community. Finally, recommendations are provided for the formulation of public policies and the implementation of sports programs that maximize social benefits and contribute to the Sustainable Development Goals. This analysis highlights the need to integrate sport into social development agendas and global strategic planning for a fairer and more sustainable future.

Keywords: Sport, social skills, inclusion, sustainable development, public policies

INTRODUCTION

In a world characterized by globalization and interconnectivity, sport stands out as a powerful tool for the development of social skills. These skills, such as cooperation, effective communication and mutual respect, are essential for harmonious function of society [1]. In addition, sport plays a crucial role in contemporary social agendas, contributing to achieving a sustainable future by promoting social inclusion and reducing inequalities [2].

Participation in sports activities facilitates the learning of essential skills for social cohesion. For example, team games require cooperation and coordination between team members, thus promoting collaboration and leadership skills [3]. Effective communication is vital in sports, whether it's game strategies or mutual

motivation [4]. Mutual respect is cultivated by following the rules of the game and recognizing the efforts and abilities of other participants [5].

Recent studies have shown that sport contributes significantly to contemporary social agendas by promoting inclusion and reducing inequalities [6]. Adapted sports programs, which encourage the participation of various social groups, are essential in this regard [7]. Initiatives aimed at integrating people with disabilities or ethnic minorities into sports activities promote social inclusion and equal opportunities [8].

Participation in sports activities can significantly improve individuals' quality of life and facilitate their integration into the community [1]. Additionally, sport can serve as a catalyst for social change, inspiring solidarity and social cohesion [9]. Inclusive sports programs have a profound impact on reducing social inequalities [10]. These programs are designed to provide equal access to sports activities for all categories of people, regardless of socioeconomic status, gender, or physical abilities [11].

MATERIALS AND METHODS

To maximise the social benefits of sport, it is essential that authorities implement public policies that support the development and accessibility of sports programs [12]. These policies should include funding sports infrastructure, supporting community sports initiatives, and promoting physical education in schools [11]. It is also important to create partnerships between the public and private sectors to ensure the necessary resources and promote a culture of inclusion through sport [13].

Sport is recognized for its ability to develop essential social skills. Participating in sports activities facilitates the learning of skills such as cooperation, communication and mutual respect. For example, team games require cooperation and coordination between team members, thus promoting collaboration and leadership skills [10]. Effective communication is also vital in sports, whether it's game strategies or mutual motivation [4]. Mutual respect is cultivated by following the rules of the game and recognizing the efforts and abilities of other participants [5].

Sport contributes significantly to contemporary social agendas by promoting inclusion and reducing inequalities. Adapted sports programs, which encourage the participation of diverse social groups, are essential in this regard [6]. For example, initiatives aimed at integrating people with disabilities or ethnic minorities in sports activities promote social inclusion and equal opportunities [7].

This paper aims to investigate how sport can be effectively integrated into contemporary social agendas to promote social competences and inclusion. The impact of sports programmes on various social groups will be analysed, with a particular focus on reducing inequalities and facilitating social cohesion. It will also identify and recommend public policies and strategies that can maximise the social benefits of sport, thus contributing to the achievement of the Sustainable Development Goals. The research will provide a solid empirical basis for formulating concrete recommendations on the implementation of inclusive and sustainable sports programmes.

Materials & Methods: This section describes the materials and methods used to investigate the role of sport in the development of social competences and its impact on

contemporary social agendas. The research is based on a mixed approach, which combines qualitative and quantitative analysis of data collected from various sources.

This section describes the materials and methods used to investigate the role of sport in the development of social competences and its impact on contemporary social agendas. The research is based on a mixed approach, which combines qualitative and quantitative analysis of data collected from various sources.

The study was designed to examine the impact of sports programmes on the development of social skills and social inclusion. It involved two main components: a systematic literature review and case studies of current sports programmes.

The literature review involved a detailed analysis of existing research on sport and social skills, using academic databases such as PubMed, Google Scholar and JSTOR. Articles published between 2018 and 2024 were selected to ensure the relevance and timeliness of the information. The selection criteria included studies investigating the impact of sport on cooperation, communication, mutual respect and social inclusion.

To complete the literature review, case studies were conducted on various sports programs implemented in local and international communities. These case studies included: interviews with program coordinators and participants, direct observations of sports activities, analysis of sports program documents and reports.

Data were collected through a variety of methods, including semi-structured interviews, questionnaires and direct observations. Interviews and questionnaires were used to obtain participants' perspectives on the social benefits of participating in sport. Direct observations were used to understand the dynamics of social interactions in the context of sports activities.

The collected data were analyzed using thematic analysis methods for qualitative data and descriptive statistics for quantitative data. NVivo software was used to manage and analyze qualitative data, making it easier to identify recurring themes and interaction patterns. For quantitative data, statistical programs such as SPSS were used to calculate frequencies and averages, as well as to test correlations between variables.

Table 1: Impact of participation in sports activities on the development of social skills

Social competence	Percentage of participants with improvements
Cooperation	85 %
Communicate	88 %
Mutual respect	82 %

Table 2: Effects of sports programmes on social inclusion

Social Group	Improved sense of belonging	Improved self-esteem
Ethnic minorities	70 %	65 %
People with disabilities	75 %	78 %

RESULTS AND DISCUSSION

Data analysis revealed that participation in sports activities contributes significantly to the development of essential social skills, such as cooperation, effective communication and mutual respect. From the interviews conducted, 85% of participants reported notable improvements in their ability to work in a team and communicate more effectively with others [3]. Direct observations confirmed these findings, showing that sports activities promote positive interactions and mutual respect between participants [4].

Case studies have shown that tailored and inclusive sports programmes have had a significant impact on reducing social inequalities. For example, the "Sport for All" program demonstrated that 70% of participants from minority groups felt an increase in their sense of belonging and social inclusion [7]. Also, initiatives aimed at integrating people with disabilities were highly effective, with 78% of participants reporting an improvement in self-esteem and quality of life [8].

The results showed that sport plays a crucial role in contemporary social agendas, helping to promote inclusion and reduce inequalities. Sports programs have been identified as effective platforms for learning and social interaction, facilitating cohesion and solidarity in diverse communities [6]. Case studies have shown that sport can serve as a catalyst for social change, inspiring a sense of solidarity and social cohesion among participants [9].

The results obtained confirm the literature, which emphasizes the importance of sport in the development of social skills [1]. Participation in sports activities provides valuable opportunities for learning the skills of cooperation, communication and mutual respect, which are essential for the harmonious functioning of modern society. These skills are fundamental for the personal and professional development of the individual, contributing to better integration into the community and success in various areas of life [3].

Adapted and inclusive sports programmes have demonstrated significant potential in reducing social inequalities and promoting inclusion. These initiatives not only provide equal opportunities for all members of the community, but also create an enabling environment for positive interaction and social integration [7]. Additionally, sport promotes values such as respect, tolerance, and solidarity, helping to build more cohesive and inclusive communities [8].

In order to maximise the social benefits of sport, it is essential that authorities develop and implement public policies that support the development and accessibility of sports programmes. These policies should include adequate funding for sports infrastructure, supporting community initiatives, and promoting physical education in schools [12]. Public-private partnerships can also provide the necessary resources to develop sustainable and inclusive sports programmes [11].

The study has several limitations that should be noted. First, the samples of participants were geographically limited, which may influence the generalizability of the results. Second, the relatively short duration of the case studies may not fully reflect the long-term impact of participation in sport activities. Future research should include more diverse samples and follow participants over longer periods to get a more complete picture of the impact of sport on social skills and inclusion.

CONCLUSION

This study highlighted the key role of sport in developing social skills and promoting social inclusion. Participation in sports activities has shown significant improvements in skills such as cooperation, communication and mutual respect. Adapted sports programmes have also had a positive impact on various social groups, helping to reduce inequalities and increase the sense of belonging and inclusion.

Integrating sport into contemporary social agendas is crucial to achieving a fair and sustainable future. In order to maximise the social benefits of sport, it is essential that authorities implement public policies that support the development and accessibility of sports programmes. These policies should include funding sports infrastructure, supporting community initiatives and promoting physical education in schools.

The authors would like to express gratitude to all participants and sports program coordinators who contributed to this study. We also thank the academic institutions and non-governmental organizations that provided logistical support and access to relevant data. We acknowledge the valuable contribution of research colleagues to the critical review and suggestions provided during the development of this study.

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THE GREAT PLAGUE VS COVID 19 – REPRESENTATIONS OF CULTURAL, SOCIAL AND ECONOMIC TRANSFORMATIONS DURING PANDEMIC TIMES

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ABSTRACT

The aim of our paper is to account for the changes that occurred during the Great Plague of London (1665) and the restrictions imposed by authorities, as recorded by (neo)classics such as Daniel Defoe in his *Journal of the Plague Year* (1722) and Samuel Pepys's diary (1660-1669) which only came out in the 19th century. Furthermore, we purport to compare them to the most recent pandemic of our times, i.e., COVID 19, seen through the lenses of (post)modern Romanian authors (Jan Cornelius – *Aventurile unui calator naiv, intre miscare si izolare/ The Adventures of A Naive Traveler, Between Movement and Isolation*, 2020) and filmmakers (Dan Chisu's *9 povesti de dragoste si ura in izolare/ 9 Stories of Love and Hate in Isolation*, 2020). The contrasting of the two historical periods will hopefully allow us to gain a better understanding of two distinct eras in crisis and the manifestations in two different geographical spaces (the English and Romanian one, respectively). Furthermore, our purpose is to distinguish the mechanisms that led to cultural, social and economic transformation and their outcome, considering communication breakdowns between people, their loved ones and authorities, not to mention despair.

Keywords: pandemic literature and film, restrictions, social, economic and cultural changes.

FROM THE GREAT PLAGUE TO COVID 19 IN DIARIES AND FILM

Labelled as “both the most ordinary and the most extraordinary writer you will ever meet” by one of his award-winning biographers (Claire Tomalin, cited by Ronder and Thompson, 2012: 36), Pepys affords his readers, in general and Restoration England students, in particular to glance at London's daily life during the period. Not intended for publication and written in shorthand, a feature that gained him another label, that of a tachygraphist, he stirred interest “on two points, first why he used such a device instead of ordinary script, and then whether his style in the great diary is influenced in any way by his use of this medium.” (Matthews 1934: 397) It was eventually agreed on that it was no code of the time, but simply a popular manner of fast writing (Matthews, *ibidem, passim*). The plague which began in May 1665 caught Pepys there, commentators arguing that “The disease spread with frightening speed in the narrow, smelly streets and rat-infested slums of London. In the summer heat, thousands of people died every month, and all who could afford to fled from the city. But Pepys stayed and observed what was happening with appalled fascination. Houses where the plague had struck were closed up and a red cross painted on the door with the inscription ‘Lord have mercy on us’. At night, carts rumbled through the deserted streets, gathering up the dead and dumping them into pits for common burial. One of Pepys' diary entries in late August 1665 begins on this haunting note: ‘But now, how few people I see, and those walking like people that have taken leave of the world’.” (Ronder and Thompson, 2012: 37) Even before, the plague is

brought into play when people feel guilty about themselves for living or eating well, which could be construed as breaking the law in certain contexts, as a diary entry from 1662 reads: “15th. Mr. Berkenshaw [Mr. Pepys’s music master.] asked me whether we had not committed a fault in eating to-day; telling me that it is a fast day ordered by the Parliament, to pray for more seasonable weather; it having hitherto been summer weather, that it is, both as to warmth and every other thing, just as if it were the middle of May or June, which do threaten a plague (as all men think) to follow, for so it was almost the last winter; and the whole year after hath been a very sickly time to this day.” (Pepys 2002: 114)

Daniel Defoe’s *Journal of the Plague Year*, completely titled “Being Observations or Memorials Of the most Remarkable Occurrences, As well Publick as Private, Which happened in London During the last Great Visitation In 1665. *Written by a Citizen who continued all the while in London.*” first came out in 1722 and “was long accepted at its face value as a genuine account by a contemporary of the events of 1665.” (Bastian 1965: 151) Misunderstood even later by critics that did not realize the author was only a child at the moment of the unfortunate event and could not have held positions asserted in the text, it was noted that “Defoe continued in London during the whole of that time; and for some part of it was one of those Officers, who, under the Appellation of *Examiners*, were appointed to shut up infected houses & c.” (*ibidem*). Critics analyzing the theme of survival in the work found out that “H. R, the narrator, gains his authority from being a survivor of the plague who has seen what no one else has. He is an eyewitness whose experience of the plague serves to guarantee his authority. This is the authority of the last man standing, and the reader is presented with a value system which coincides with this form of authority. H. F. survived by isolating himself from the plague, becoming an island of health in infected London, and he presents himself as an example of how to survive a future visitation. (...) On the other hand, H. F.’s narrative is constantly interrupted by reported speech about the severity of the plague in London and H. F. repeatedly and insistently emphasizes his opposition to the claim that, in London, there were not enough living to bury the dead. H. F. insists on the ability of Londoners to care for their own dead, and it is in the continued performance of this duty that a minimal social bond survives the time of the plague. Importantly, the insistence that the dead must be buried brings the value of individual solitude into question, as the isolated individual, when he dies, would have to remain unburied.” (DeGabriele 2010: 8) It is further argued that the plague is seen as something horrific for the nation, opportunity for mischief and “also productive of a modern community” (*ibidem*). Wickedness is one the states of mind that end the Journal since the author feels that the account should stop not to become ‘censorious’ or ‘unjust’ praising his spared life through humorous verse: “A dreadful plague in London was/ In the year sixty-five,/ Which swept an hundred thousand souls/ Away; yet I alive!” (Defoe 2023)

Dan Chisu’s *9 povesti de dragoste si ura in izolare/ Nine Stories of Love and Hate in Isolation*, explores the states of mind and attitudes resulting from the restrictions imposed by the COVID-19 pandemic. The movie grasps reality shown in unconventional movie directing and the plot itself, a story in which various characters and typologies surface during quarantine. It begins by displaying the dissatisfaction of the directors with the amateurish material they received for the film by the actors, an aspect that was lightly improved in cases where there was less communication breakdown. A couple of days earlier, an actor is called to be proposed a role in a movie. Reluctantly, he starts

complaining about the view from his window, namely a dog being taken to a shelter probably because owners could not cope with his disturbing presence during the hard times. He would end up playing a dog as the gratitude in the animal is expected by the director when he approached the actor. Thus, we have the perspective of a pet that is marginalized by a couple after their baby is born, he is no longer fed and beaten whenever he does something stupid only to be finally wished away. After having felt mocked at, Dan Chisu includes the part in the movie.

The director's intention is to make a movie that is sort of tragic, similar to Hamlet as in the pandemic people had already started to die. A model of fictional representation as denial can be seen in the exercise of alienation, a manifestation of depersonalized history. Herein, the production of the movie, as form of evasion from reality can be (cor)related to a native tendency specific to the human being in which a shaping, annihilating conscience needs to be sought in an activity that leads to expenditure as in the socio-economic action envisaged by the theorist Georges Bataille (cited by Cutitaru 1997: 24, *passim*). In this context, Hamlet is interpreted from the viewpoint of the end of history, against the background of a phenomenology of the 'seen' and the 'unseen' in which the audience witnesses a physical and metaphysical level of events (Cutitaru 1997: 112, *passim*). The director, Chisu himself in the movie, lays emphasis on the process, not the end product as not too much can be expected from an actor filming himself/ herself with the personal smartphone. So, it is the journey, not the destination that matters approach and the first actor called does not want to get the girlfriend involved given that the pandemic has already affected their relationship. The second actor called, a recent star known to the public from a light comedy movie (Miami Bici), is ready to accept any role that would make him more popular than he has already become. The third actor presented to us believes that the COVID 19 pandemic is a conspiracy meant to lead to a paradigm shift that would involve the world finances. He is arguing with his girlfriend on the topic, refuses to work online and waits for everything to end. There is mistrust between the two, she would film him if he wanted to work, whereas he feels she has no role in the matter, hence the dispute. In a phone conversation with the previous actor introduced to the public, he complains about the situation that seems to take away his creativity as only low mass culture spreads during the period like mushrooms after the rain. He is willing to work with mask and gloves on, yet this would prevent him from actually starring in a movie like before the pandemic. In 'The Addiction – 40 Days of Isolation', another actor decides that a video game addict would suit him and takes distance from his wife only to sink deeper into a virtual world despite knowing that it would eventually lead to the end of their relationship. He finds reasons not to see her, invoking the fear of catching the virus, supposedly air-borne and is satisfied with online intercourse that she finds disgusting but does it to please him. An actress is offended by the director's opinions on stand-up and directs him towards an award-winning colleague. In a queer story, two women, ex partners, talk to each other online, one willing to help the other who suffered so much after their break-up that went out a lot, helping neighbours, buying them groceries, in an attempt to catch the virus and end her life. She stopped so as not to contaminate and hurt the others around her. In 'One-Room Flat, 25 Days of Isolation', a woman answers a phone that is borrowed from someone else, is accused of having stolen the device, then she calls the friend that lent it to her to complain about her condition: she was unaware of the restrictions during COVID 19, she has just got out of jail to find herself in a flat that her ex-boyfriend emptied by selling everything to go to Spain with another woman. She missed her life in jail where she was well provided for, had cigarettes

and pals among female inmates. 'The Online Consultation – 60 Days of Isolation' brings together a lawyer and his client that shares his misfortunes during the pandemic, a wife that wishes to divorce him against his will as he rediscovered her qualities during the quarantine (her well-cooked meals). He admits having cheated on her before the period, but they had agreed to tell each other everything so, from his viewpoint, only omissions of truth occurred, and white lies were said. We do not find out the resolution, we are simply being shown the lawyer/ counselor before, talking to a friend, bragging about the cases (some of them even accounted for by this film), fearful of going out, catching the virus and getting his daughter sick, especially since his wife is already in hospital. Mockery of online work/ work from home can be grasped at the level of the character's clothes/ suit and tie from waist up and unmentionables only down. In 'The Lie – 45 Days of Isolation', a young actress is asked to play a desperate character based on what she can find on the internet and against the background of people's revolts in Romania and abroad as shown in the footage before. A mother talks to her daughter via skype. The offspring is a heroin addict, home alone as her father is in Spain. The parent is a doctor who quit her job and is desperate to get back to work and save her girl from trouble. She is trying to find help at the hospital, asks for favours from a friend, to break the law and remove her from the list of contaminated people that was about to be sent to the police. We are shown again the ugly face of the pandemic that brings the worst in people. In 'The Pessimist – 180 Days of Isolation', we witness a conversation between brother and sister, the former a university professor of sciences who quitted his job and the latter, a woman that keeps him alive by sending him food. They comfort each other, share gloomy thoughts about the pandemic, he feels that mankind is about to end, whereas she is confident in the vaccine they are going to receive. In 'Pacient I – 200 Days of Isolation', a man full of remorse cries before the camera as he feels guilty for being alive and all those around him that he loved (wife and children) are dead because of the virus. He was accused by the media of having cheated on his wife and in his emotional state, he feels sorry that she departed with this opinion of him. The movie ends with a comment from the director that he wanted to stress the emotional side of the last story, not what the media had already showed.

In his *Adventures of a Naive Traveler, Between Movement and Isolation* (original title, *Aventurile unui calator naiv, intre miscare si izolare*, 2020), the Romanian born author living in Germany, Jan Cornelius, faces with humour the challenges of the pandemic that affected him and his family. He mentions his wife Carmen, all the time; they suffer from insomnia because of the alarming situation caused by the virus and distressing news on the media, he goes out to see that supermarkets are full, and nobody wears a mask. This makes him reflect on the situation in Romania where, according to the internet, shelves are empty in stores. Then he goes to a café, only to see lovers kissing with a bottle of disinfectant next to them they were using constantly. At another table, a father was having a meal, disinfecting the hands of his baby lying in the stroller. All is good in Dusseldorf, the author concludes in his diary entry of February 27 as hope springs with the new upcoming season, wishing his sneezes and coughs were caused by the allergy (Cornelius, 2020: 143-144, *passim*). Generally speaking, the author ironically argues that in Germany there is no panic with respect to the virus, just some extreme characters wearing gas masks, as he could see in a supermarket where the individuals bought what they needed as if they expected the world to end. If the streets are almost empty, the doctors' waiting rooms are full of patients, either standing or sitting (Cornelius, 2020: 145-146, *passim*). The author mentions how he obsessively disinfects his hands, how he stays indoors as

advised by the authorities, talking to neighbours who work online and are less affected (Cornelius, 2020: 164-166). When going out, even simply to dispose of the garbage, he avoids other individuals, keeping the two-meter distance regulated by the authorities. On a humorous stance, he notes that the pandemic has made people go crazy, saw a woman taking the garbage in, not out as supposed to. Another woman, walking the dog, got near him to get her dog back which started following the author; desperately, he climbed a tree only to encounter another neighbour that was already there, as a measure to avoid human contact, too (Cornelius, 2020, 167-168, *passim*). Visiting museums online or reading are the only leisure activities afforded by the pandemic in which people are advised to stay indoors (*idem*, p. 169, *passim*). He and his wife got so bored that they started memory exercises to recognize the flowers on the terrace (*idem*, p. 171, *passim*). He also starts practicing birdwatching from the balcony where an ant he photographs climbs on one of his legs, hence the recollection of a poem by one of our Romanian authors, Tudor Arghezi, in which the insect is said to mistake tree branches for the author's feet (*idem*, pp. 180-181, *passim*). In March, he notes that kindergartens and schools are closed, and online teaching is employed; children enjoy it, and so does his grandchild, David. Yet, pupils can still be noisy and are threatened by their teachers to be put offline if they do not calm down. With a touch of sarcasm, the author claims that, to avoid crowding, he and his wife have a schedule that allows them to take distance from each other, using the toilet at different hours and videoconferencing in the morning as a measure against direct contact (*idem*, pp. 172-173, *passim*). The pandemic determines the author to draw on absurd writers such as Eugene Ionesco's *Bald Soprano*, reflecting on the situation of the character Martin that is very much similar to his (*idem*, p. 186, *passim*). Among the ugly faces of the pandemic, there is death of the old people in (German) retirement homes, where the author's mother also resides. He is unable to visit her, hence the letters and calls; J. Cornelius is happy that his mother is positive about everything, she eats and sleeps well, indulging herself in a mass novel (*idem*, pp. 211-212, *passim*). Some of those that contacted the disease and survived are interviewed by the media; a senior citizen who had an artificial comma induced to him for the cure and was still attached to wires, admitted he would like to have a beer a day for the rest of his life as reward for being alive (*idem*, p. 241, *passim*). Workers take precautions in their tasks, wearing masks, tells us the author who has a haircut at a saloon (*idem*, p. 314, *passim*). Since he is unable to travel because of the restrictions, the author speaks about his journeys from the past (Cuba in July a year before, *idem*, pp. 315-317, *passim*). He ends his diary on a funny apocalyptic note, appreciating the comments of his authors that contributed to his high spirits; last but not least, he draws on Peter Ustinov's foretelling of the future who assessed that an expert would deny the scientific impossibility of the world exploding right before it would happen. The author is looking forward to the deep silence complete that would follow for him to resume his writing in peace (*idem*, p. 350, *passim*).

CONCLUSION

The accounts above allowed us to see how desperate people became in times of crisis, resourcefully changing their ways of working (online as the Romanian accounts of Dan Chisu and Jan Cornelius tell us, as advised/ regulated by the authorities during the pandemic). Some relationships fail because of resurfaced problems, addictions and infidelities (as in Chisu's movie) or thrive due to the good connection between spouses (Jan Cornelius and his wife successfully manage to cope with the pandemic in their home, proposing schedules for distancing themselves, virtual meetings). There is no guilt in

allowing one's pleasures as recorded by neoclassical diarists (Samuel Pepys); yet, similarities regarding the death toll could be found if we consider Daniel Defoe's claim that the number of the dead from the plague overwhelmed the living that were supposed to bury them and Jan Cornelius mentioning the high number of deaths caused by COVID-19 in German retirement homes.

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SECTION URBAN STUDIES AND SMART CITIES

POTENTIAL, RISKS, AND FUTURE OF NEW MEDIA IN URBAN PUBLIC SPACES

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ABSTRACT

New media play a role transforming public spaces into interactive platforms for communication, advertising, art, and social integration (Manuel Castells, 2009) [1]. Technologies such as LED displays and digital interactive installations aim to enhance the functionality of urban spaces, broaden the experience of a place, and attract users' attention. According to Lev Manovich (2001) [2], such technologies not only change the aesthetics of urban spaces but also the way in which people interact with them. Examples of media facades onto shopping malls or audiovisual installations at courtyards of cultural institutions illustrate these trends.

Despite their potential, new media are associated with costs and electrical energy consumption. The technical complexity of their carriers may lead to malfunctions and the generation of electronic waste over time. These challenges result in additional costs and complex recycling, which may exacerbate ecological problems.

This article constitutes a case study analysis of various applications of new media in urban public spaces worldwide after 2000, differing in context. The analysis focuses on the potential impact of new media in the economy and the environment. One of the conclusions of the analysis is that understanding the implications of new media's carriers is crucial for urban planners and designers who aim to shape public spaces minimizing negative effects.

Keywords: urban space, new media, interactive art, sustainable development

INTRODUCTION

New media are digital media, which include the Internet, websites, blogs, social media platforms, online advertisements, email, as well as mobile technologies, digital cameras and camcorders, virtual reality environments, including video games, that enable interaction and content creation exchanged between users (Siapera, 2017) [3]. New media can also be understood as the digital form of recording analog media, often processed through post-production, which has evolved alongside the development of digital technologies (Manovich, 2001) [2]. Unlike analog media, they function based on interactivity, providing a sense of presence, space, and time, and rely on computer, television, and internet technologies. The interactivity of new media is the synchronicity understood as the rate of user response to the sender's offer in real-time (McQuail, 2002) [4]. Unlike traditional media such as the press or radio, new media are delivered through electronic carriers. These include all kinds of displays, electronic devices, LED and LCD screens, VR and AR technologies, servers, and streaming platforms.

Awareness of the potential and threats associated with the application of new media carriers, also known as new media objects, in dynamically developing public spaces is very important in today's world for many reasons, including their potential to manipulate public opinion, the costs of their maintenance, or their environmental impact. In this context, the question arises: what is the future of new media in the public spaces of cities?

This article summarizes an analysis of the impact of LED displays and installations using advanced mechanisms and digital technologies on the functionality and aesthetics of urban spaces. Additionally, the study aimed to provide an approximate assessment of the economic and ecological costs of implementing and maintaining new media objects in the context of urban spaces. Based on the results of this analysis, general recommendations were formulated for urban planners and designers regarding the sustainable use of new media in designing public spaces.

MATERIALS AND METHODS

The primary research method is case study analysis. The research design is based on three steps. In the first step, several implementations from around the world that generally meet the criteria of new media objects in public spaces were selected. In the next step, from these several examples, only those that best meet the criteria of new media objects were chosen, characterized by the application of ambitious, multidimensional solutions in the context of urban planning and architecture and documented in multiple information sources, which allowed for qualitative research to be conducted. In the final step, the specific formal features of the selected examples were compared to find answers to the research questions. Therefore, the study is based on a two-stage selection process, followed by an analysis of the best and most representative new media objects from around the world that have been implemented in the public spaces of cities. Particular attention was paid to those features of new media objects that could potentially generate problems, indirectly or directly impact sustainable development, functionality, and the aesthetics of the urban landscape. The analyzed examples were implemented after the year 2000 and are or were permanently or temporarily available for public observation. The research process also utilized scientific articles, industry publications, and records of personal observations.

Table 1. Compilation of all analyzed features of new media objects.

Analyzed features	The role and impact of the analyzed features
The type and function of the new media object	Description of the primary space features indicating the elements that were to be changed or enriched
Visibility in the urban landscape	
Integration with public space	
Scale of reach and size of the media object	

Frequency of activity	Understanding how the media object achieves its goals and its impact on public space and the environment
Durability of the media object	
Technology, media, mechanisms	
Means of expression, materials	Description of how art integrates with function, enriching the cultural and aesthetic context of the space
Implementation costs	Understanding the impact on the economy and the natural environment
Electricity and natural resource consumption	
Potential disposal costs	

RESULTS

The examples described below are characterized by the application of ambitious, multidimensional solutions in the context of urban planning and architecture. Five selected media objects, considered the most representative and designed specifically for particular urban spaces, were analyzed. Each example description is preceded by a heading following this format: title, author or authors, location, and year of implementation. Most of the presented examples, due to their uniqueness and themes, qualify as new media art, which uses new technologies and digital means of artistic expression as the primary medium.

UNited Tower project at the UNIQA Tower building, Heinz Neumann, Vienna, Austria, 2006

This is a massive video screen, highly visible in the urban landscape, consisting of over 160,000 individually controlled LED pixels. The media used for this installation include LEDs integrated into the building and a structure that serves as the screen's framework, displaying colorful flags of the 18 countries where UNIQUA operates. The screen serves both decorative and informational purposes, acting as a tool for corporate communication. It is a permanent media installation covering an area of 7,000 m² on the entire facade of the building from all sides. The screen is designed to display content continuously [11].

The UNited Tower project received the EU GreenBuilding certification as the first such building in Austria. One-third of the energy consumed comes from renewable sources, including local geothermal sources and heat pumps. Energy-efficient technologies are crucial in this case and significantly reduce the building's carbon footprint. The cost of implementing this digital project amounted to 2.5 million euros, indicating a commitment to creating an eco-friendly and technologically advanced media object.

Megafaces Pavilion, Asif Khan Agency, Sochi, Russia, 2014

This is an interactive, kinetic building facade created specifically for the 2014 Winter Olympics in Sochi. The main function of this interactive facade was to transform into three-dimensional portraits of visitors' faces, which anyone could scan in special 3D cabins inside the building. The project enabled the expression of emotions on a large scale in the urban space and referred to the phenomenon of using faces as a communication shortcut, characteristic of the era of popular social media platforms. The combination of modern technology and programming with traditional sculptural elements resulted in an engaging spectacle. The project included a pavilion facade of 2,000 m², equipped with 11,000 telescopic actuators with LEDs, which could extend up to 2 meters, creating giant portraits 8 meters high. These dimensions made the project highly visible in the city's space. The installation lasted throughout the Olympics, from February to March 2014. The technology used included a 3D face scanning system, computer-programmed actuators, and RGB LED diodes [10].

Precise implementation costs and resource consumption for the *MegaFaces* project were not definitively disclosed, making it difficult to determine the balance of expenditures and environmental impacts. However, the project's scale and complexity suggest significant costs. As far as is known, the project did not have energy-saving systems and likely generated considerable energy and resource consumption, making it environmentally unfriendly. Additionally, in the context of the Sochi Winter Olympics, which were criticized for their negative environmental impact, the *MegaFaces* project likely contributed to increased electricity consumption. Nevertheless, its unique interactivity attracted a large number of viewers and gained wide recognition, confirmed by numerous awards.

Symulakra, collaboration of PanGenerator group and Screen Network group, Warsaw, Poland, 2019

This is a live, interactive, temporary digital sculpture reflecting the city's dynamics. The project combined elements of digital OOH (Out Of Home) technology, such as LED technology, with big data and image recognition technology, allowing for real-time shape changes. Its shape changed in real time based on data collected from various sources, including mobile phones and data read from cameras. *Symulakra* effectively integrated the urban space with its digital counterpart, demonstrating the capabilities of DOOH screens and their function of merging the city with invisible digital data. The project undoubtedly enriched the original public space aesthetically.

Symulakra is a two-dimensional screen covering an area of several square meters. For two weeks, the installation was visible in Warsaw's landscape, reaching almost 2.5 million viewers. The operation took place daily at full hours: 19:00, 20:00, and 21:00 for 15 minutes [9]. Although the exact budget is not publicly disclosed, it is known to have covered the costs of creating the installation, excluding promotional costs. However, thanks to the project's uniqueness and innovation, knowledge of *Symulakra* spread quickly among potential observers and users of the space. The temporary nature of the installation and the limitation of broadcast time to 15 minutes per hour helped minimize energy consumption, reflecting the organizers' conscious decision regarding energy resource savings and environmental protection.

Light the Barricades, Candy Chang, James A. Reeves, Los Angeles, USA, 2019

This is a temporary, three-month interactive public art installation aimed at creating a space for viewers to contemplate their internal emotional barriers. The project was designed to enhance introspection and social dialogue, combining elements such as lightbox billboards with Chinese landscape painting and meditative practices. The lightboxes were powered by solar panels, allowing for the efficient use of renewable energy to illuminate the LEDs [13]. This technology enabled dynamic content display, creating an immersive experience for viewers. The materials used in the installation included Chinese ink, photomontages, aluminum, polycarbonate, vinyl, and concrete. The combination of these materials with LED technology and solar panels created a modern, engaging form of art.

Exact budget information is not publicly available. However, the use of solar panels to power the LED lights indicates an effort to minimize environmental impact.

Wave, d'strict collective, Department of Culture and Tourism Abu Dhabi, COEX K-Pop Square in Seoul, South Korea, 2023

This is a temporary LED screen installation carried out as part of the Public Art Abu Dhabi initiative, aimed at enriching and activating public space through art to engage the local community and attract tourists. The project involves creating an anamorphic illusion effect on two adjacent LED screens at a right angle. The installation mimics the movements of ocean waves, creating the impression of a three-dimensional image. *Wave* is a large-scale installation covering several dozen square meters. The project is displayed from March 2023 to June 2024 and is available for viewing around the clock. The technology used in the project includes advanced LED screens and a system for creating an anamorphic illusion using hyper-realistic 3D animation [12].

Although detailed budget information for the project has not been publicly disclosed, it is known that implementing such a large LED installation is a significant investment and may generate considerable energy consumption. Information on whether the organizers are striving to minimize environmental impact through conscious and responsible sustainable practices was not obtained. However, it is certain that the installation was intended to bring economic and social benefits to Abu Dhabi by attracting tourists and supporting the local economy.

DISCUSSION

Information that would allow for the assessment of the balance of losses in terms of electricity and environmental impact is very difficult to access or ambiguous. In cases where the authors and organizers of the described activities do not provide information about the energy sources or the level of natural resource consumption required for implementation, this raises obvious doubts. However, in the U.S. Department of Energy report "Life-Cycle Assessment of Energy and Environmental Impacts of LED Lighting Products," it is stated that LEDs consume significantly less energy during operation, which translates to a smaller carbon footprint. LED lighting can save up to 75% of energy compared to incandescent bulbs and compact fluorescent lamps (CFL) [5]. The average lifespan of LEDs ranges from 50,000 to 100,000 hours, surpassing traditional light sources by up to 20 times. This longevity not only reduces the frequency of replacements but also minimizes the amount of waste generated from discarded bulbs [6]. By using LED technology, which is more energy-efficient compared to traditional lighting

methods, it is also possible to reduce electricity consumption in most new media carriers used in public spaces.

When evaluating the implementation of interactive installations in public spaces, it is clear that creating such activities requires interdisciplinary knowledge and a team with many technical, strategic, scientific, and artistic competencies. Such a team should include specialists not only from urban planning or architecture but also designers, creative coding programmers, artists, activists, and ecologists.

CONCLUSION

As Kioussis (2002) [7] points out, interactivity means the activation of the senses. This fact alone highlights the potential advantages of new media in public spaces. However, if these activities engage and attract the attention of public space users continuously, the question arises whether they might also potentially cause some harm. This is an area that requires further research to determine how interactive new media affect audiences; whether these activities, besides creating unique spaces, might in some situations become overwhelming and overstimulating for perception. If this were the case, under what circumstances and when does this occur? Installations like Symulakra are potentially less overwhelming because they are displayed only for very limited and short periods of time. But how might long-term installations like UNited Tower affect the perception of adults and children over extended periods?

Although not all organizers and creators of the analyzed media objects in public spaces are indifferent to ecological issues, in some countries around the world, climate care culture is still not a priority. Where organizers are environmentally conscious and act to reduce the carbon footprint, it may also indicate that environmental care is mandated by law. On the other hand, examples show that LED technologies can help create more sustainable projects, introducing a certain compromise.

New media have a positive impact on aesthetics and functionality, but they generate economic costs and may negatively affect the environment [8]. Examples like UNited Tower and Light the Barricades show that sustainable planning can reduce negative ecological impacts, but this often requires higher financial investments. In most analyzed cases, it was not possible to find precise information on costs or allocated budgets, as these data are either unpublished or too general. Information on disposal costs is even more challenging to verify definitively. Economic costs are significant, but in the long run, they can be reduced by using energy-efficient technologies.

The development of new media involves the possibility of enriching communication and access to information. "For the vast majority of contemporary youth, the Internet has become a prosthesis for transactive memory, where information is not directly remembered but 'coded' onto an external resource." This is one of the existing risks of misuse and ethical issues related to data management and digital surveillance, which also affects public spaces.

The future of new media in public spaces undoubtedly depends on the sustainable use of technology, close cooperation among experts from various fields, and responsible planning, which can lead to more ecological and efficient installations. New media significantly transform public spaces, making them more adaptable. It is recommended

to use energy-efficient technologies, plan with sustainable development in mind, and consider the long-term impact on the environment and residents.

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**SECTION REGIONAL AND ECONOMIC
DEVELOPMENT, INFRASTRUCTURE, AND POLICY**

A META-ANALYSIS OF LESOTHO'S FIVE-YEAR DEVELOPMENTAL JOURNEY: INSIGHTS FROM UNICEF COUNTRY OFFICE ANNUAL REPORTS (COAR) 2019-2023

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ABSTRACT

This meta-analysis delves into UNICEF's five-year developmental journey in Lesotho (2019-2023), as documented in the Country Office Annual Reports (COAR). It offers a holistic view of the strategic interventions, challenges faced, and successes achieved in this period. The study employs a comprehensive review methodology, integrating quantitative and qualitative data from the COARs to evaluate the impact and adaptability of UNICEF's programs across various sectors including health, education, child protection, WASH (Water, Sanitation, and Hygiene), and social protection. Key findings illustrate significant advancements in maternal and child health, marked by improved healthcare services and an increased focus on neonatal care. In education, strides were made in digital learning and inclusivity, especially for disabled children, aligning with global educational standards. Child protection initiatives showed progress in combating gender-based violence and establishing protective legal frameworks. WASH programs demonstrated enhanced access to clean water and sanitation, particularly in rural areas, while social protection efforts were strengthened through digitized systems and targeted interventions. The analysis highlights the pivotal role of data-driven decision-making and adaptive strategies, particularly in response to the COVID-19 pandemic. UNICEF's ability to pivot and utilize resources effectively underscores the importance of agility in crisis scenarios. Collaborative efforts with government, civil society, and the private sector were instrumental in aligning initiatives with Lesotho's strategic priorities, ensuring impactful and measurable outcomes. This meta-analysis provides valuable insights into the efficacy of integrated and responsive program strategies and the crucial role of partnerships in developmental work. It contributes to the discourse on development practice in resource-limited and crisis-affected settings, offering lessons on program adaptability, the importance of data in shaping interventions, and the benefits of collaborative approaches. The findings set a precedent for future initiatives, aiming to enhance strategic engagement and maximize developmental impacts in Lesotho.

Keywords: Lesotho Developmental Dynamics, UNICEF Program Evaluation, Adaptive Strategy Implementation, Collaborative Developmental Efforts, Learning and Innovation; Healthcare Services

INTRODUCTION

Lesotho, a mountainous, landlocked nation in Southern Africa, presents a complex landscape of socio-economic challenges that profoundly affect its population, particularly its most vulnerable groups, including children and women and people with disabilities and chronic diseases [1, 2, 3, 4]. The nation grapples with persistent poverty, with over half of its population living below the national poverty line. The endemic poverty is intertwined with significant health disparities, notably high maternal mortality rates, and severely constrained access to essential healthcare services. These challenges are compounded by educational inequities, where access to quality education is hindered by socio-economic barriers and insufficient infrastructure. Furthermore, inadequate access to clean water and sanitation, particularly in rural areas, exacerbates public health risks, creating a cycle of vulnerability that is difficult to break [3, 4, 5, 6, 7]. Lesotho's challenging topography exacerbates these difficulties by complicating infrastructure development and service delivery, especially in remote and rural regions where the majority of the population resides. The nation's dependence on subsistence agriculture makes it highly susceptible to the adverse effects of climate change. The increasing frequency of erratic weather patterns, including droughts and floods, threatens agricultural productivity and food security, further destabilizing the livelihoods of many households and deepening the cycle of poverty. These environmental challenges are not just episodic crises but represent ongoing stressors that undermine the long-term development prospects of the country [4, 5, 6, 7].

The onset of the COVID-19 pandemic magnified these pre-existing vulnerabilities, plunging Lesotho into a humanitarian crisis that severely strained its already fragile health and social systems [8, 9]. The pandemic disrupted essential healthcare services, particularly maternal and child health, as resources were reallocated to manage the immediate health crisis. The widespread closure of schools during the pandemic exacerbated educational inequalities, threatening to reverse gains in human capital development and leaving a generation of children at risk of long-term educational deficits [10,11]. Moreover, the economic fallout from the pandemic has been severe, with widespread job losses and income reductions exacerbating food insecurity and poverty levels across the country, alongside with concerning rates of gender-based violence [12, 13, 14, 15, 16, 17]. In this context, the role of UNICEF in Lesotho has become increasingly critical [14, 15]. UNICEF's strategic approach has been aligned with the broader objectives of the Sustainable Development Goals (SDGs), including those related to health (SDG 3), education (SDG 4), clean water and sanitation (SDG 6), and reducing inequalities (SDG 10). UNICEF has partnered closely with the Government of Lesotho, civil society organizations, and international stakeholders to address the nation's complex challenges. The focus has been on developing sustainable, scalable solutions that can be integrated into national systems, ensuring that the benefits of these interventions are both far-reaching and long-lasting.

This paper presents a comprehensive analysis of UNICEF's strategic interventions in Lesotho from 2019 to 2023, as they are described in the Country Office Annual Reports (COARs) assessing their impact, adaptability, and overall effectiveness in advancing the country's development goals. The findings contribute with valuable insights into effective practices for development in resource-constrained settings like Lesotho and offer a foundation for future initiatives aimed at enhancing the impact and sustainability of UNICEF's efforts in the country.

MATERIALS AND METHODS

This meta-analysis provides an examination of UNICEF's developmental initiatives in Lesotho (2019 to 2023), as documented in the Country Office Annual Reports (COAR). The study offers an in-depth understanding of the strategic interventions, challenges, and achievements across critical sectors such as health, education, child protection, WASH (Water, Sanitation, and Hygiene), and social protection. The analysis explores the impact and adaptability of UNICEF's programs in addressing the complex socio-economic landscape of Lesotho.

1. Data Selection and Evaluation

The foundation of this study is the COARs, chosen for their comprehensive coverage of UNICEF's activities in Lesotho and their relevance to key developmental areas. These reports were thoroughly reviewed to extract relevant data, with particular attention paid to narratives detailing program outcomes, the challenges encountered, and the adaptive strategies implemented. The selection process was guided by the objective of capturing a holistic view of the interventions across thematic areas critical to UNICEF's mission in Lesotho. The reports provided a valuable lens through which the evolution of these initiatives over the five-year period could be examined, offering insights into both their immediate impacts and their alignment with longer-term developmental goals.

2. Analytical Framework

An analytical framework was employed to synthesize the data, emphasizing thematic analysis and the interpretation of narrative accounts. This framework allowed for the identification of patterns and themes related to program adaptability, stakeholder engagement, and the effectiveness of collaborative efforts. Through an in-depth thematic analysis, the study explored how UNICEF's programs responded to the unique challenges posed by Lesotho's varied contexts, particularly in remote and rural areas where access to services is often limited.

3. Ethical Considerations and Standards

The meta-analysis adhered to stringent ethical standards throughout its conduct. The study was based exclusively on publicly available data from UNICEF's COARs, ensuring transparency and integrity in the research process. Objectivity was maintained to avoid any bias that could misrepresent the findings, and the principles of respect and accuracy were upheld to ensure that the insights gained were presented truthfully and constructively.

4. Limitations of the Study

While this meta-analysis offers valuable insights, it is essential to acknowledge its limitations. The reliance on COARs, though providing a rich source of information, inherently limits the scope of the analysis to what was reported in these documents. Consequently, the findings are shaped by the quality and comprehensiveness of the narratives and data presented within the COARs. Additionally, focusing on a five-year period may not fully capture longer-term trends or the cumulative effects of sustained interventions. Moreover, in some areas, the data provided may have been insufficiently detailed, which could affect the depth of the analysis. Despite these limitations, this meta-analysis provides a critical examination of UNICEF's work in Lesotho, offering key lessons and considerations for future strategic planning and program evaluation,

with the goal of enhancing the effectiveness and sustainability of developmental initiatives in similarly challenging contexts.

RESULTS

The results section of this meta-analysis presents a synthesis of the trends, divergences, and evolutions across UNICEF's key thematic interventions in Lesotho (e.g., health, education, child protection, WASH (Water, Sanitation, and Hygiene), and social protection). It is important to note that this section highlights key findings and significant health interventions from the COARs, but it does not encompass a fully comprehensive analysis of all interventions, as such an exhaustive examination would extend beyond the scope of this paper.

1. Health Interventions and Outcomes

UNICEF's health interventions in Lesotho from 2019 to 2023 reflect a dynamic and adaptive approach to tackling the country's pressing health challenges, particularly considering the unforeseen impacts of the COVID-19 pandemic. Throughout this period, UNICEF's strategies evolved in response to both enduring health issues and emerging crises, underscoring its commitment to improving healthcare outcomes for the most vulnerable populations.

In 2019, UNICEF's health programs laid the groundwork for substantial improvements in maternal and child health, as well as HIV/AIDS prevention. The Prevention of Mother-To-Child Transmission (PMTCT) program was a vital initiative, achieving remarkable success by ensuring that "for pregnant women living with HIV who attended antenatal care, 99 per cent received antiretroviral therapy (ART) to prevent mother-to-child transmission (PMTCT) of HIV" (COAR 2019, p. 1). This intervention significantly reduced the risk of HIV transmission to infants, demonstrating UNICEF's focus on critical early interventions. There was a concerted effort to increase antenatal care (ANC) attendance, which began to show promising results as more women attended at least four ANC visits during their pregnancies, laying a solid foundation for improved maternal health outcomes. Other reported achievements concern the Expanded Program on Immunization ("87 per cent coverage of Penta 3, as of October 2019" (COAR 2019, p. 2)) and the nutrition program results ("food fortification with micronutrient powders (MNP) in two districts, Mokhotlong and Butha-Buthe. As of October 2019, 3,039 children out of 8,900; 6–23 months, received adequate MNPs to reduce high levels of anemia among this age group" (COAR 2019, p. 2)).

The arrival of the COVID-19 pandemic presented unprecedented challenges to Lesotho, disrupting health services and straining Lesotho's healthcare infrastructure. UNICEF responded with agility, adapting its programs to maintain essential services amidst the crisis (e.g., "with partners, UNICEF has been providing remote health counselling, COVID-19 information, and psychosocial support through teleconsultations for PBF-AGYW (15-24 years). 325 adolescent mothers (93% of target) and their children have been provided remote teleconsultation services. An additional 250 partners and mothers-in-law (71%) of the targeted mothers received information on SRHR/HIV and COVID-19" (COAR 2020, p. 5)). UNICEF also supported the revision of the Prevention of Mother to Child Transmission of HIV guidelines, in alignment with the new WHO recommendations, by providing capacity building activities to 40 health care workers in 60 health facilities. Furthermore, UNICEF "leveraged partnerships within the UN

Nutrition network and the Food and Nutrition Coordination Office to enhance joint nutrition programming and support high-level advocacy for nutrition and stunting" (UNICEF COAR 2020, p. 7) and intensified its nutrition programs to combat rising stunting rates.

By 2021, as the pandemic persisted, "UNICEF facilitated the procurement and deployment of 1.5 million doses of COVID-19 vaccines and supported the development of the National Deployment and Vaccination Plan (NDVP), district microplanning, and vaccination rollout. As a result, over 635,000 people have been fully vaccinated against Sars-COV-2, representing 45% of the target population by November 2021" (COAR, 2021, p. 3). The programmatic priorities focused also on building resilience within the health system. More specifically, "90% of health facilities were designated to provide basic emergency obstetric and newborn care; Kangaroo Mother Care units were established in 7 hospitals. A total of 30,000 pregnant women received iron-folate supplements as part of ANC" (COAR, 2021, p. 3) a significant achievement given the ongoing challenges posed by the pandemic. Additionally, UNICEF's sustained commitment to the HIV/AIDS epidemic ensured high ART coverage among pregnant women. These outcomes highlighted the effectiveness of the adapted health service delivery models introduced during the pandemic, which played a critical role in maintaining essential health services.

In 2022, UNICEF began transitioning from crisis management to recovery, reinforcing health services to build on the progress made during the pandemic. This year saw continued improvements in maternal and child health outcomes, with ANC attendance rising to 89%, "reflecting the success of ongoing efforts to promote regular healthcare check-ups among pregnant women" (COAR, 2022, p. 19). The resilience of the health system, bolstered by previous adaptations, allowed for these continued gains. Expanded outreach and counselling efforts in nutrition also reached "over 20,479 primary caregivers, exceeding program targets and contributing to better child health outcomes" (COAR, 2022, p. 21).

By 2023, UNICEF's focus was on consolidating the gains made over the past years and ensuring the sustainability of health service delivery. As stated in the report, "UNICEF Lesotho has further cemented its role as a key player in bolstering the quality of integrated maternal neonatal child health (MNCH) services. This commitment has manifested through the enhancement of primary health care and the institutionalization of community health initiatives" (COAR 2023, p. 3). The PMTCT program remained a cornerstone of the HIV/AIDS response, maintaining high ART coverage among pregnant women and further reducing the risk of infant infections. Nutrition integration with maternal and child health services continued to be a priority, addressing malnutrition and improving overall child health outcomes. The innovative strategies developed during the pandemic, such as telehealth services, were further refined and progressively integrated into the standard healthcare framework.

2. Educational Advancements and Setbacks

The annual reports from 2019-2023 detail a journey marked by both challenges and notable progress in the Education sector.

In 2019, UNICEF's educational initiatives had a clear focus on early childhood education. "UNICEF advocated for national scale-up of ECE for all five-year olds and supported the Ministry of Education and Training (MOET) to develop a costed-plan for

universalizing reception classes. An ECE technical working group was established as part of the Local Education Group (LEG) to foster ownership and plans for the ECE scaleup strategy" (COAR 2019, p. 3). Evidence of achievements include "improved teaching capacity of 401 pre-school teachers", the implementation of the #EarlyMomentsMatter campaign, who reached "28,763 parents and 54,607 children in 10 districts with messages on early childhood care and development" (COAR 2019, p. 3). UNICEF also supported the distribution of "36,773 books and 27,910 printed worksheets for all NFE [non-formal education] learners (10,443 learners)" and the launch of the Inclusive Education Policy "paving the way for curriculum review to ensure it is inclusive of learners with disabilities" (COAR 2019, p. 3).

However, the onset of the COVID-19 pandemic in 2020 brought unprecedented challenges to the Education sector. School closures nationwide meant that most children were suddenly without access to in-person education, leading to a significant educational crisis. UNICEF responded swiftly by facilitating the development of remote learning solutions, including radio and television broadcasts, and distributed printed materials to ensure continuity of learning. Despite these efforts, the effectiveness of remote learning was constrained by the widespread lack of digital access, particularly in rural and marginalized communities. The 2020 COAR highlighted that only a small fraction of students could effectively engage with these new learning modalities, revealing deep inequities in access to education. As highlighted in the report, "So far, 165,691 learners, or about 20% of learners, have been reached with radio and TV lessons. Despite these efforts, the partners' capacity to effectively and efficiently coordinate the rollout of these materials was limited, and the development of the learner packs was delayed" (COAR, 2020, pp. 3-4).

As the pandemic persisted into 2021 and beyond, UNICEF shifted its strategy to address these inequities and build greater resilience into the education system. UNICEF has supported the Ministry of Education and Training for the "safe reopening of schools with funding from the Global Partnership for Education (GPE)" (COAR 2021, p. 4), which resulted in phased reopening for ECE, primary, and secondary schools. Other key actions comprised the "procurement of masks (934,370) for half-a-million children in school; installation of handwashing stations in 745 schools covering 40% of the schools in the country to benefit 251,100 learners (130,929 girls), and training of focal points in all the schools on COVID-19 prevention and mitigation protocols" (COAR 2021, p. 4) and training of 851 teachers from 399 schools (23% of all teachers and 22% of schools) on accelerated learning in its efforts towards learning recovery. At the community level, 22% of the planned target of 44,000 most vulnerable children were enrolled in catch-up classes with community learning facilitators. (...) Curriculum resources, radio and TV lessons, and educational modules were developed and disseminated". Moreover, considering the challenges of inequity in access to online platforms and connectivity, UNICEF supported MOET in the development of learner packs (to benefit 135,000 children, 55% of children in pre-primary to grade 4). Also, 3,483 of the most disadvantaged learners from lower secondary were supported with fees subsidies to minimize the negative economic impact of COVID-19. The report also documents a strong emphasis on integrating inclusive education practices, particularly to better serve children with disabilities.

In the year of 2022, UNICEF, in partnership with Lesotho's Ministry of Education and Training (MOET), has made notable progress in strengthening the education system,

ensuring learning continuity and resilience post-COVID-19. The reported actions involved training over 1,227 girls in digital skills, with 36% winning coding competitions, and advocating for the Giga initiative to connect nearly 2,000 schools to the internet, benefiting over 300,000 children. UNICEF also supported the finalization of the 2021 National Learning Assessment Report, revealing below 50% performance in literacy and numeracy for Grades 4 and 6. UNICEF also "continued mainstreaming disability and inclusion in education in collaboration with MOET, the Lesotho National Federation of Organizations of the Disabled (LNFOD), and the Norwegian Agency for Development Cooperation (NORAD). Teachers' guides were converted into braille, and assistive technology devices were distributed to support the teaching and learning of children with disabilities" (COAR, 2022, p. 3). In this push for inclusion, UNICEF provided assistive technology and trained 333 teachers, enhancing education for nearly 9,900 children with disabilities. As the Coordinating Agency for the Education Sector, UNICEF secured a USD 2.5 million grant from the Global Partnership for Education, matched by the Roger Federer Foundation, to support early childhood education. Additionally, UNICEF facilitated private sector engagement in education for the first time and partnered with the Vodacom Foundation to promote digital learning and gender-based violence prevention.

In 2023, UNICEF remained committed to "enhancing educational opportunities and fortifying the infrastructure necessary for the development and well-being of children and youth in Lesotho. Through these multi-faceted partnerships and strategic interventions, UNICEF continues to champion a resilient, inclusive, and evidence-based approach to education, setting the foundation for sustained progress and alignment with Lesotho's National Development Plan" (COAR 2023, p. 5). UNICEF deepened its collaboration with Lesotho's Ministry of Education and Training (MOET) to strengthen education systems and ensure continuity of learning post-COVID-19. Advancing the GIGA project to improve digital connectivity in schools, revealing that only 93 of 1,783 schools are currently connected was one of the key initiatives reported. UNICEF also played a crucial role in deploying the Learning Passport, registering 9,486 users and enhancing digital content creation within MOET. UNICEF's commitment to adolescent development was evident through partnerships that trained youth educators and engaged 2,500 adolescents in life skills programs. The organization also supported the first Early Childhood Care and Development review to inform future planning and improved data quality, completing delayed education statistics and data collection. Also, inclusion and disability mainstreaming remained central, with partnerships driving significant private sector investment in education. Corporations pledged USD 3.4 million to support innovative financing applications through the Global Partnership for Education (GPE).

3. Child Protection and Violence Prevention

UNICEF's child protection efforts in Lesotho reflect a dedicated and evolving approach to addressing violence against children and enhancing legal frameworks to safeguard vulnerable populations. Throughout this period, the organization adapted its strategies in response to emerging challenges, particularly those exacerbated by the COVID-19 pandemic, which significantly increased vulnerabilities among children and disrupted traditional protective systems.

In 2019, UNICEF laid the groundwork for more informed and targeted interventions with the implementation of the Violence Against Children Survey (VACS). This survey

provided critical insights into the prevalence and nature of violence faced by children in Lesotho, laying the groundwork for more informed and targeted interventions (COAR, 2019, p. 22). In partnership with WHO, UNICEF also assisted the Ministry of Home Affairs in conducting a comprehensive assessment of the Civil Registration and Vital Statistics (CRVS) system. This assessment led to the development of a draft action plan to strengthen CRVS information systems.

UNICEF's efforts also contributed to the registration and issuance of birth certificates for 25,690 children across 47 government and church-owned health facilities, a success driven by the close collaboration between the Ministry of Home Affairs and the Ministry of Health, which was enhanced by a UNICEF-supported study tour on e-Birth notification in 2018. UNICEF also supported 12 community campaigns aimed at ending child marriage and violence against children, reaching 15,486 people, including men, women, and children, with awareness and capacity-building initiatives. Additionally, UNICEF aided the Ministry of Social Development in compiling proposed amendments to the Children's Protection and Welfare Act of 2011, further strengthening child protection efforts in Lesotho.

In 2020, to ensure the continuity of essential services during the COVID-19 lockdown, UNICEF provided training to the social welfare workforce in supervision skills. This enabled 1,616 children, representing 53.8% of the annual target, to receive mental health and psychosocial support (MHPSS), while 5,000 children were reached with crucial information on gender-based violence (GBV) during campaigns to end child marriage. UNICEF also provided technical assistance to MOSD in reactivating the Child Help Line and supported the Ministry of Home Affairs in conducting onsite birth registration in hard-to-reach areas. However, due to COVID-19 restrictions, only 24% of children were successfully registered.

As the pandemic continued into 2021, the need for comprehensive psychosocial support became more apparent. UNICEF responded by expanding its programs to integrate mental health and psychosocial services into both community and school settings, addressing the growing need for comprehensive support for children exposed to violence. Another notable development was the introduction of the Nokaneng app, designed as a safe and accessible platform for adolescent girls and young women to report abuse, seek counseling, and access various support services. This digital tool became increasingly important as the pandemic restricted access to traditional support mechanisms.

The 2022 COAR highlights as one of the key achievements for this year, the formal establishment of a "national coordination mechanism to work on the civil registration and vital statistics systems to improve the effectiveness and efficiency of service delivery and achieve targets for the SDGs by 2030. In 2022, 51,486 children (25,992 male and 25,564 female) were issued birth certificates. UNICEF provided technical support and facilitated the convening of the critical line ministries to establish the coordination mechanism" (p. 4). It also documents a significant increase in the number of children receiving mental health and psychosocial services, reflecting the organization's commitment to addressing the long-term impacts of violence and trauma. UNICEF reached 15,679 children and caregivers with mental health and psychosocial support, significantly exceeding the target. Additionally, 10,520 caregivers received training in psychological support and positive parenting skills. UNICEF's efforts with

the Ministry of Home Affairs (MOHA) nearly doubled the birth certificate registration rate for children under five, from 25% in 2020 to 49% in 2021, through community outreach and the use of Early Childhood Care and Development centers and specialized ration equipment at two hospitals.

In collaboration with government partners, UNICEF enhanced the availability of protection services for children by strengthening community-based structures, including teachers, social-service workers, village child justice committees, and key community gatekeepers. This effort resulted in supporting 3,906 children, surpassing the 2021 target, including 2,158 girls who had experienced violence. UNICEF also helped the Ministry of Social Development reactivate the Child Helpline, ensuring 24-hour emergency assistance for children in need of care. As the co-chair of the Interagency Network, UNICEF also led the development of protection messages distributed to 13,400 mobile subscribers through over half a million SMS, which were also utilized by other UN agencies, civil society organizations, and government ministries. Additionally, UNICEF supported the opening of the AU Secretariat of the African Committee on the Rights and Welfare of the Child in Maseru, creating new opportunities to strengthen partnerships for the benefit of children in Lesotho.

UNICEF, in partnership with the Ministry of Gender, Youth, and Social Development (MoGYSD), launched a comprehensive national response plan to end violence against children in Lesotho. This plan, involving multiple ministries, led to a significant increase in children receiving support, with 5,326 children benefiting in 2023, exceeding the annual target. UNICEF also developed guidelines with MoGYSD and the Ministry of Education to prevent School-Related Gender-Based Violence (SRGBV) and partnered with GIZ to enhance gender-based violence (GBV) services, reaching "23,153 girls and women received essential services such as psychosocial support and counseling, enabling GBV survivors to receive assistance efficiently and safely" (COAR 2023, p. 6). Advocacy efforts resulted in the development of the Social Service Workforce (SSW) bill and the near finalization of the Child Protection and Welfare Bill, with both expected to be completed in 2024. UNICEF also initiated Lesotho's first Child Protection Policy and supported the Department of Home Affairs in boosting birth registration rates to 80% for children under five. Efforts to create child-friendly services at police stations and courts are underway, with pilot projects expected to finish in 2024.

4. WASH Initiatives and Environmental Health

UNICEF's WASH (Water, Sanitation, and Hygiene) initiatives in Lesotho were vital in addressing the country's significant challenges related to water scarcity, inadequate sanitation, and the impacts of climate change, particularly frequent droughts. The COARs provide a summarized account of the progress made in these areas, highlighting the strategic shifts and adaptations that characterized UNICEF's approach to improving environmental health in the country.

In 2019, UNICEF significantly increased its technical and financial support to the Water Commission, enhancing coordination and establishing technical working groups to address critical water issues. In response to the drought, UNICEF's efforts reached 70,618 people with hygiene-promotion activities and water trucking, supplying over 1 million liters of water to communities, schools, and health centers in three of the hardest-hit districts. This initiative ensured that the daily water needs of the affected populations were met. Additionally, WASH facilities were constructed in 11 healthcare

centers, benefiting 224,858 people by providing essential water for lifesaving procedures. A UNICEF-supported water quality surveillance exercise in three districts revealed significant contamination in water sources, with 49% of samples scoring high to very high risk. In response, over 14,322 households were educated on proper water treatment and storage methods. UNICEF also implemented school-led total sanitation (SLTS) programs in 20 schools, benefiting 8,640 students. These schools received hygiene promotion, including menstrual hygiene management, and improvements such as new boreholes, sex-separated latrines, and handwashing facilities in several schools.

UNICEF played a critical role in rehabilitating 13 water systems across seven drought-affected districts in Lesotho, ensuring sustainable water access for 7,316 people. Additionally, water trucking services provided essential water to 100,518 people in seven healthcare facilities, achieving 49% of the 2020 target. To ensure water safety, UNICEF conducted water-quality surveillance in seven districts, covering 123 water sources, and distributed water treatment packages to 14,733 households relying on these sources. "To enhance hygiene practices, UNICEF supported communities and healthcare facilities by installing 90 group handwashing facilities in selected priority locations, and rural households constructed "tippy taps" for handwashing and strengthened WASH committees in 50 communities" (COAR 2020, p. 4). Additionally, in response to COVID-19, UNICEF supplied hygiene and environmental cleaning materials to the three main treatment hospitals, benefiting 20,544 people. UNICEF's ongoing technical and financial support to the Water Commission improved sector coordination and contributed to Lesotho's participation in the Sanitation and Water for All Finance Ministers Meeting. Additionally, UNICEF provided key inputs to the final draft of the National Water and Sanitation Policy, with a focus on sanitation and hygiene.

In 2021, UNICEF provided substantial technical and financial support to the Water Commission, enhancing sector coordination and driving policy dialogues on WASH in schools and hand hygiene. As part of its efforts, UNICEF rehabilitated 79 rural water systems across seven drought-affected districts, following climate resilience principles. This initiative benefited 101,321 people, restoring water access to 22 communities, 69 schools, and 12 healthcare facilities. To ensure effective management of these systems, UNICEF trained over 400 community members in climate-resilient water supply practices. In schools, UNICEF improved hand hygiene by installing durable handwashing stations in 40% of schools, reaching 251,100 learners. Additionally, hand-hygiene behavior change workshops were conducted in "858 schools (47% of all schools), reaching over 16,000 learners and 956 teachers and school board members" (COAR 2021, p. 5). In response to COVID-19, UNICEF's efforts extended to rural communities, reaching 152,272 people with hand-hygiene messages and providing hygiene infrastructure and supplies to 113,590 individuals.

The following year (2022), UNICEF played a crucial role in coordinating the water sector by leading thematic discussions and advocacy efforts on key occasions such as World Toilet Day, World Water Day, and Menstrual Hygiene and Management Day. These efforts included technical support to Lesotho's high-level delegates at the Sanitation and Water for All (SWA) Sector Ministers Meeting in Indonesia in May 2022 and support to government meet commitments to the African Ministers' Council on Water (AMCOW) and the SADC Secretariat. UNICEF also supported the Ministry of Education and Training (MOET) in publishing Lesotho's first-ever National WASH

in Schools Guidelines. In collaboration with the Ministry of Water and the Department of Rural Water Supply, UNICEF helped develop a mobile app for monitoring rural water supply systems.

Another significant achievement was the partnership with the Lesotho National Federation of Organizations of the Disabled (LNFOD), through which UNICEF trained 149 stakeholders across all ten districts on disability-inclusive WASH. This included 89 teachers and representatives from various governmental and non-governmental organizations. "For this purpose, UNICEF developed disability-friendly hygiene promotion materials (braille and pictorial)" (COAR 2022, p. 5).

According to COAR 2023, UNICEF has played a critical role in improving sustainable access to Water, Sanitation, and Hygiene (WASH) services in Lesotho by providing essential technical and financial support to the Water Commission. This collaboration has significantly enhanced WASH sector coordination and led to the development of key national guidelines and strategies. A comprehensive Climate Landscape Analysis for Children, conducted by UNICEF, identified crucial engagement points and potential interventions within the climate, energy, and environment sectors. This analysis also mapped stakeholders and funding opportunities for UNICEF's upcoming country program. Building on regional training from 2022, UNICEF trained 20 trainers who, in turn, educated 35 staff members from the Ministry of Natural Resources and the Ministry of Health on the WASH in Healthcare Facilities Improvement Tool (WASHFIT). This methodology has been tailored to Lesotho's needs, informed by assessments in 184 healthcare facilities, and supported by new implementation guidelines developed by UNICEF. In partnership with Catholic Relief Services, UNICEF trained 1,451 community members on climate-resilient WASH strategies, benefiting 10 communities and 15 schools in Semonkong and Ha Mohale, Maseru. These efforts directly impacted 1,699 learners. Furthermore, UNICEF's advocacy for Menstrual Health and Hygiene (MHH), in collaboration with the Queen's Trust, led to a government commitment to expand the MHH program. Additionally, UNICEF facilitated the procurement and distribution of sanitary towels to 5,400 schoolgirls. Overall, these initiatives reflect "UNICEF's dedication to promoting hygiene and health, as well as ensuring the dignity and well-being of children and communities in Lesotho." (COAR 2023, p. 7).

5. Social Protection and Economic Resilience

The Country Office Annual Reports (COARs) chronicle the evolution of social protection initiatives, highlighting the expansion and adaptation of programs like the Child Grant Program (CGP), which provided essential support to the most vulnerable households in the country.

In 2019, UNICEF's social protection efforts were primarily centered on poverty reduction and enhancing child well-being. The 2019 COAR reported that "MoSD increased the coverage of the Child Grant Program (CGP) from 37,738 households (88,800 children) to 41,049 households (90,821 children) between 2018 and 2019. The mobile CGP payment system was scaled up from 10 to 12 community councils, helping to administer payments to 6,694 households in 2019" (COAR 2019, p. 4). The program's focus was not just on providing immediate financial assistance but also on creating a foundation for longer-term economic stability for these families. UNICEF has been instrumental in expanding and enhancing Lesotho's social protection systems.

With its support, the National Information System for Social Assistance (NISSA) now covers 60% of the population across all 64 rural councils and is being extended to urban households for full national coverage by mid-2020. In collaboration with partners like FAO, WFP, and EU-ECHO, UNICEF is ensuring that NISSA and other social protection systems are shock-responsive with strong early warning mechanisms. UNICEF also worked with the Ministry of Finance to improve budget allocation for social sectors. It organized the first-ever community budget consultations in five districts, where 300 citizens prioritized child-focused spending. UNICEF further supported the Ministry in developing a budget transparency plan and trained officials on public finance for children (PF4C). Despite economic challenges, UNICEF prepared a policy brief on fiscal space for social sectors and led efforts to strengthen evidence-based advocacy and budget planning, including capacity-building workshops for UN colleagues.

In 2020, UNICEF "advocated for an increase in the share of public spending as a percent of the gross domestic product in social sectors to increase from 19.3% in 2019/20 to 20.3% in 2020/21, and in social protection from 6.8% to 8.4%" (COAR 2020, p. 4). This enabled the expansion of the Child Grant Program (CGP) to cover 50,321 households in 2020, up from 41,049 in 2019, while continuing support for 23,845 vulnerable children. UNICEF also supported the Ministry of Social Development (MOSD) in creating a framework to improve the coordination and management of emergency cash transfers. This effort also included the expansion of the National Information System for Social Assistance (NISSA) to cover all rural households and the launch of an urban rollout, reaching 36% of urban households. UNICEF secured 5.5 million euros to provide additional support to 55,000 households and enroll 7,000 new families in the CGP. They improved public finance management by facilitating pre-budget consultations and developing budget briefs focused on protecting children and women during COVID-19. Furthermore, UNICEF supported the Bureau of Statistics in collecting and sharing COVID-19 impact data, which informed government responses and strengthened targeting for social protection programs. These efforts in enhancing monitoring and evaluation systems have improved the delivery of critical services to vulnerable populations in Lesotho.

The COAR 2021 highlights UNICEF contributions to strengthening Lesotho's social protection systems, particularly during the COVID-19 pandemic. Advocacy efforts increased public spending on social sectors, boosting the Child Grant Program to cover 121,279 children. UNICEF also supported the finalization of the National Social Protection Strategy and the nationwide expansion of the National Information System for Social Assistance (NISSA). In response to COVID-19, UNICEF mobilized 5.5 million euros, reaching 47,974 child grant beneficiaries and enrolling 8,162 new households. Cash transfers were used primarily for food, with delivery complemented by COVID-19 information and protective equipment. UNICEF helped the Ministry of Finance improve budget transparency, leading to institutionalized pre-budget consultations and supported capacity-building for economic and financial management in key sectors. Additionally, UNICEF facilitated the completion of the Child Poverty Report, driving extensive advocacy efforts.

In 2022, UNICEF enhanced child well-being in Lesotho by strengthening social protection systems and implementing technology to increase efficiency. Key achievements included the launch of the National Social Protection Strategy (NSPS II)

and the Social Assistance Policy, securing legal rights to social assistance. UNICEF also piloted digital payments in the Child Grant Program, with 7,000 households transitioning to mobile payments, supported by improved IT infrastructure. UNICEF played a key role in public financial management reforms, introducing the Medium-Term Expenditure Framework (MTEF) for better budget planning and supporting transparency efforts like the Open Budget Survey 2021. Additionally, UNICEF assisted in gathering data for the Voluntary National Review (VNR) 2022 and provided poverty projection data to the Ministry of Development Planning. "Furthermore, UNICEF helped the GOL produce relevant data on the country's current state of child rights. It promoted evidence and right-based policies to enhance the government's ability to conduct child rights analysis. (...) This timely support helped address the lack of recent national data to inform how much progress had been made in reducing poverty" (COAR 2022, p. 5). UNICEF also empowered the Bureau of Statistics (BOS) to conduct detailed child poverty analysis (MODA),.

The COAR 2023 briefly describes how UNICEF made significant strides in advancing inclusive social protection in Lesotho, contributing to its Strategic Plan's Goal Area 5, which aims to ensure that every child has access to essential services and lives free from poverty. By strengthening the social protection system, UNICEF improved the reach and efficiency of services for vulnerable children. Key efforts included enhancing the social registry, refining targeting mechanisms, and implementing digital payment solutions, which enabled 9,418 households to transition to mobile payments within the Child Grant Program. UNICEF's collaboration with the Ministry of Finance and Development Planning (MoFDP) was instrumental in implementing Public Financial Management Reforms that prioritized child-focused outcomes. These reforms built on the Medium-Term Expenditure Framework (MTEF) established in 2022, with UNICEF providing financial support for district-level budget consultations and producing budget briefs that highlighted crucial allocations for child welfare. In partnership with PARIS21, UNICEF supported the Bureau of Statistics (BOS) in reviewing the Statistics Act, which led to improvements in data quality and timeliness. The 2023 Multidimensional Child Poverty Supplementary Report, enriched with global indicators, offered an in-depth analysis of child poverty, including gender and disability aspects. UNICEF's capacity-building initiatives for BOS staff enhanced their ability to conduct detailed child poverty assessments, equipping policymakers with the insights needed to craft evidence-based, child-centric policies.

DISCUSSION

The narratives within UNICEF's developmental initiatives in Lesotho, as documented in the Country Office Annual Reports (COARs), reveal a dynamic and adaptive response to the complex challenges faced by the country. Over this five-year period, UNICEF's strategic interventions evolved significantly, particularly in response to the COVID-19 pandemic, which brought about unprecedented disruptions across all sectors.

Initially, UNICEF's efforts were focused on addressing urgent, foundational gaps in each sector. However, the pandemic highlighted the deep interdependencies between these sectors, necessitating a strategic shift towards a more integrated, and innovative, approach. This shift was not merely a tactical response to the pandemic but represented a deeper understanding of the complex socio-economic dynamics in Lesotho. For instance, the integration of WASH initiatives into health and education programs

considers the importance of sanitation facilities and the promotion of hygiene in schools in enhancing critical public health and educational outcomes. The accelerated adoption of digital tools and innovations during this period was another critical component of UNICEF's strategy. The implementation of mobile payment systems and online learning platforms was initially driven by the immediate need to maintain service continuity during lockdowns. The success of these digital tools underscored their potential to bridge gaps in service delivery, particularly in remote and underserved areas. Yet, the persistence of the digital divide, especially in rural regions, highlighted the ongoing need for investment in digital infrastructure and literacy to ensure equitable access.

Despite the overall success of these integrated and digital approaches, the effectiveness of interventions varied across sectors. Health and WASH programs benefited from established infrastructures, key government partnerships, and substantial external funding, which facilitated rapid adaptation and scaling during the pandemic. In contrast, the education and child protection sectors encountered more substantial challenges. The transition to remote learning, while necessary, exposed significant inequalities in access to technology, particularly in rural areas. These disparities not only limited the reach of educational programs but also exacerbated existing inequalities, leaving many children, especially those from disadvantaged backgrounds, at a greater risk of falling behind. Similarly, child protection services struggled to adapt to the disruption of community-based support structures, which were crucial for addressing issues such as violence and exploitation. These challenges underscored the need for more targeted investments in infrastructure and community engagement, as well as the importance of maintaining flexible and adaptable support systems in these sectors.

In sum, the strategic evolution and thematic adaptations undertaken by UNICEF in Lesotho from 2019 to 2023 have provided valuable insights into the organization's capacity to respond to complex and evolving challenges. By embracing integrated approaches, leveraging digital innovations, and maintaining a focus on resilience and inclusivity, UNICEF has laid a strong foundation for continued progress in Lesotho.

CONCLUSION

The Country Office Annual Reports (COARs) reveal that despite the significant disruptions caused by the COVID-19 pandemic, UNICEF's adaptive strategies ensured the continuation of essential services, particularly for the most vulnerable populations. The integrated approach across health, education, child protection, WASH (Water, Sanitation, and Hygiene), and social protection sectors has been instrumental in driving progress, yet it also underscores the need for ongoing investment in these areas to address persistent disparities. UNICEF's health initiatives demonstrated resilience in maintaining service delivery amidst the pandemic. However, the need for further strengthening of healthcare infrastructure, especially in remote areas, remains critical. In the education sector, the rapid deployment of remote learning solutions highlighted both the potential and the limitations of digital education in Lesotho, emphasizing the importance of addressing the digital divide to ensure equitable access to quality education. The evolution of child protection efforts, particularly through the introduction of digital tools and expanded psychosocial support, reflects UNICEF's proactive stance in safeguarding children during a period of heightened vulnerability. Yet, systemic issues in child protection require deeper, sustained coordination among stakeholders to fully address underlying challenges. Progress in the WASH sector and

the expansion of social protection programs were crucial in bolstering community resilience, but ensuring the sustainability of these gains will be key to meeting Lesotho's long-term development goals.

The following recommendations are designed to reinforce and expand the impact of UNICEF's interventions in Lesotho.

- **Strengthen Cohesive and Integrated Approaches:** To maximize the impact of its interventions, UNICEF should deepen its commitment to a cohesive, integrated strategy across all sectors. This involves reinforcing the synergies between health, education, WASH, and social protection programs to address the multifaceted needs of vulnerable populations more effectively. For instance, by further integrating WASH practices within health and education initiatives, UNICEF can enhance overall health and learning outcomes, particularly in underserved areas. A more synchronized approach will not only improve efficiency but also create a robust support system that is responsive to the complex challenges faced by communities.
- **Utilize COARs for Enhanced Strategic Planning and Monitoring:** The COARs have been invaluable in documenting progress and identifying challenges. Moving forward, UNICEF should continue to leverage these reports as key tools for strategic planning and continuous program monitoring. Regularly updated COARs can help ensure that interventions remain aligned with evolving needs and that successful strategies are replicated. Utilizing COARs in advocacy efforts can help secure continued investment/support, ensuring that programs are scalable and sustainable.
- **Enhance Partnerships and Stakeholder Coordination:** Effective partnerships with government agencies, NGOs, and community stakeholders are crucial for the success of UNICEF's programs. Strengthening these partnerships, particularly in areas where community engagement is essential, will be vital in overcoming systemic challenges in sectors such as child protection and education. UNICEF should focus on building the capacity of local partners and ensuring alignment of all stakeholders with its strategic objectives. Enhancing collaboration at both national and community levels will not only improve the effectiveness of interventions but also ensure their sustainability, thereby safeguarding the gains made and building resilience.

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GENDER AND INCLUSIVITY IN UNICEF'S 2018-2023 PROGRAMS: A CRITICAL ANALYSIS OF FIVE EVALUATIONS

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ABSTRACT

This paper undertakes a critical analysis of five key evaluations conducted by UNICEF during the period of 2018-2023, with a specific focus on gender and inclusivity. The study aims to assess how effectively gender and inclusivity considerations have been integrated and addressed in these evaluations, contributing to the broader discourse on equitable and inclusive development practices, in Lesotho. The methodology involves a detailed examination of the selected evaluation reports. This approach enables an in-depth exploration of how gender and inclusivity aspects were incorporated within the evaluation frameworks, methodologies, and findings. The analysis pays particular attention to the extent to which these evaluations have adhered to and promoted UNICEF's commitments to gender equality and inclusive development. Each of the five evaluations is scrutinized for its approach to gender sensitivity and inclusivity, examining how issues related to gender and marginalized groups were identified, analyzed, and addressed. This includes evaluating the gender-disaggregated data used, the inclusivity of the evaluation processes, and the consideration of diverse perspectives and experiences in the findings and recommendations. A significant aspect of this research is to identify challenges, gaps, and best practices in incorporating gender and inclusivity lenses in these evaluations. The study aims to uncover any potential biases or oversights and highlight successful strategies for effectively integrating these critical dimensions. The paper concludes with actionable recommendations for enhancing gender and inclusivity considerations in future UNICEF evaluations. These recommendations aim to strengthen the gender responsiveness and inclusivity of evaluation processes, ensuring that all programs are effectively tailored to address the diverse needs and realities of the target populations. Through this analysis, the study aims to contribute to the improvement of evaluation practices, ensuring they are more inclusive and representative, thus aligning more closely with global commitments to gender equality and inclusive development.

Keywords: Gender Equality, Inclusivity, Program Effectiveness, UNICEF, Lesotho

INTRODUCTION

The integration of gender and inclusivity considerations into program evaluations is not merely an operational priority but a fundamental pillar in achieving sustainable and equitable development outcomes. As global development and humanitarian organizations lead efforts to address systemic inequalities, embedding gender and inclusivity within evaluation frameworks has become essential to ensuring that interventions are both effective and equitable. This is particularly vital in regions with pronounced social disparities, such as Lesotho, where marginalized groups, including

women, children, ethnic minorities, and people with disabilities, face significant challenges that limit their participation [1, 2]. This recognition is reflected in the recent guidelines provided by UNICEF, which emphasize the importance of incorporating a gender-transformative approach across all stages of the evaluation process, aligning with the broader objectives of the Sustainable Development Goals (SDGs) [3].

"Advancing gender equality and the empowerment of women and girls is essential to realizing the rights of all children. It is central to UNICEF's work throughout the organization, and clearly articulated in UNICEF's Strategic Plan (SP), Gender Action Plan (GAP), and the United Nations System-Wide Action Plan (UN-SWAP)" [2, p. 3].

UNICEF's commitment to integrating these principles is deeply embedded in its strategic documents, such as the Strategic Plan, Gender Action Plan (GAP), and the United Nations System-Wide Action Plan (UN-SWAP). These frameworks underscore that advancing gender equality and empowering women and girls are central to realizing the rights of all children [4]. However, UNICEF's approach extends beyond gender to include broader aspects of inclusivity, ensuring that all marginalized groups are considered in the design, implementation, and evaluation of development programs [5, 6, 7, 8, 9]. This holistic approach is critical to ensuring that interventions address not only gender disparities but also meet the diverse needs of all, including those facing vulnerabilities and/or exclusion [10].

Lesotho faces significant challenges in advancing gender equality and inclusivity across various dimensions of life, including health, education, economic participation, and social inclusion [7, 8, 9, 11, 12, 139]. The country's deeply rooted patriarchal culture often restricts women's and girls' access to opportunities and resources, perpetuating cycles of poverty and inequality. Economic participation for women in Lesotho is also fraught with challenges. Women are often confined to informal, low-paying jobs with little to no social protection. This economic marginalization is compounded by limited access to financial services, such as credit and savings programs, which are critical for entrepreneurship and economic empowerment. Despite women being the primary caregivers in most households, their contributions to the economy through unpaid domestic labor are often undervalued and unrecognized. Moreover, women's participation in decision-making processes, both at the community and national levels, remains low, further entrenching gender inequalities. Social and cultural norms continue to restrict women's roles to the private sphere, limiting their influence in public life and policymaking [9, 10, 12, 13].

"Despite Lesotho's legal commitments to gender equality, as evidenced by its adherence to international treaties like CEDAW and the Maputo Protocol, there is a significant gap between these formal policies and the lived realities. Traditional norms continue to govern family dynamics and societal structures, often relegating women to subordinate positions. This dichotomy between policy and practice highlights the complex challenge of transcending historical and cultural precedents to achieve genuine gender parity. Economic dependency further complicates this landscape. A substantial portion of Lesotho's female population relies on male family members for financial support, limiting their access to independent economic opportunities. This situation is exacerbated by practices such as early marriages and unions, which impede women's education and economic empowerment. Such socio-economic constraints underline the necessity for

multifaceted strategies that advocate for gender equality while simultaneously addressing these underlying issues" [12, p. 97].

In the realm of education, while there has been progress in enrollment rates for girls, disparities persist in terms of school retention and completion, particularly at higher education levels. Girls are more likely than boys to drop out of school due to factors such as early marriage, teenage pregnancy, and the burden of household responsibilities, which disproportionately fall on female children. Furthermore, in many rural areas, access to quality education is still limited, exacerbating the gender gap in educational attainment and limiting future economic opportunities for girls [7, 8, 11, 13]. Additionally, people with disabilities face significant barriers to inclusion, with limited access to education, healthcare, and employment opportunities. Disability inclusion efforts in Lesotho are still fragile, and many individuals, particularly women and girls, experience compounded discrimination that further isolates them from society and reduces their ability to participate fully in social and economic life [11, 12, 13].

The intersectionality of these challenges highlights the importance of adopting a holistic approach to gender and inclusion in Lesotho. Addressing these issues requires not only targeted interventions, namely in education, healthcare, and economic empowerment, but also broader societal change to challenge and transform the patriarchal norms that underlie gender inequality. This comprehensive approach is essential for creating an environment where all individuals, regardless of gender or disability, have the opportunity to thrive and contribute to the country's development [11, 12, 13].

In sum, there is a critical need for transformative evaluations that not only assess outcomes but also actively contribute to sustainable transformative change. Their studies on fostering gender equality and inclusivity among Lesotho's youth and men emphasize the importance of integrating local cultural dynamics into program evaluations, particularly in areas such as child protection, health, and education, where traditional norms heavily influence outcomes. These insights reinforce the necessity of context-specific evaluation frameworks that can effectively address the unique challenges of Lesotho's marginalized populations.

This paper conducts a critical analysis of five key evaluations conducted between 2018 and 2023. Lesotho's context highlights the critical need for gender-sensitive and inclusive evaluations that can address the unique challenges faced by women and other marginalized groups. By systematically reviewing these evaluations, this study seeks to contribute to the discourse on best practices in development evaluation, with a particular focus on contexts with complex socio-economic and gender dynamics.

MATERIALS AND METHODS

The selection of evaluation reports was based on the comprehensive inclusion of all evaluations conducted within the specified period from 2018 to 2023. These evaluations encompass a diverse range of programmatic areas, including health, education, child protection, and social inclusion, thereby providing a broad spectrum of data for analysis. By including all five evaluations conducted during this period, the study ensures a complete and representative assessment of UNICEF's evaluation practices in Lesotho. A critical component of this meta-analysis was the evaluation of stakeholder engagement and the representation of marginalized voices within the evaluations. The analysis examined the inclusivity of the evaluation processes, assessing the extent to

which diverse stakeholders were involved in decision-making and how their input was reflected in the findings. The study also evaluated the degree to which the evaluations addressed issues of gender and marginalization, ensuring that the perspectives of all relevant groups were considered and represented in the evaluative conclusions.

1. Evaluation final reports revision

Each final report was reviewed to assess how well it incorporated gender-disaggregated data, inclusivity in the evaluation process, and the representation of marginalized groups. This thorough inclusion guarantees that the findings of this meta-analysis are closely aligned with the overarching goals of evaluating the effectiveness of UNICEF's strategies in promoting gender equality and inclusivity.

These evaluations include a wide array of UNICEF initiatives, such as the Integrated HIV/AIDS-Nutrition Project, the Child Grants Program (CGP), the Lesotho Country Program (CPD) 2019-2023, the Child-Friendly Schools (CFS) initiative, and the SPRINGS project. Each evaluation was carefully examined to determine the integration of gender and inclusivity considerations, providing a detailed understanding of their effectiveness in addressing the needs of vulnerable populations in Lesotho.

- Endline Evaluation of the Integrated HIV/AIDS-Nutrition Project in Lesotho (2023): Conducted in 2023, this endline evaluation assessed the outcomes of UNICEF Lesotho's Integrated HIV/AIDS-Nutrition initiative, which was implemented from September 2019 to December 2022. Supported by the UK's Foreign, Commonwealth & Development Office (FCDO), the program aimed to enhance the health and nutrition of women and children, particularly those affected by HIV & AIDS. The evaluation revealed that the initiative was highly relevant, particularly due to its adaptability during challenges like the COVID-19 pandemic. Achievements included increased exclusive breastfeeding rates and improved food consumption scores. The evaluation also identified areas for improvement, such as the need for stronger national-level coordination and recommended enhancing data monitoring systems, community engagement, and upgrading community health workers' skills.
- Evaluation of the Child Grants Program (CGP) (2018): This evaluation focused on the impact, relevance, and sustainability of the Child Grants Program (CGP), which provided unconditional cash transfers to vulnerable households. A mixed-methods approach was used, including a quasi-experimental design to measure the program's effects on beneficiaries and qualitative research to capture the beneficiaries' experiences. The evaluation also involved a process review that examined the operational aspects of the CGP and the partnership between UNICEF and the Ministry of Social Development (MoSD). The findings highlighted the positive impacts of the CGP on household resilience and child well-being while also pointing out areas where the program could be improved for greater efficiency and sustainability.
- Evaluation of Lesotho Country Program (CPD) 2019-2023: This evaluation assessed the UNICEF Lesotho Country Program 2019-2023, covering all UNICEF activities under the Country Program, including emergency and humanitarian responses. The evaluation served both accountability and learning purposes, with the goal of identifying best practices and lessons learned to inform the development of the next Country Program Document (CPD) for 2024-2028. The evaluation focused on the relevance, effectiveness, efficiency, coherence, and sustainability of the program's efforts, particularly in the areas of equity and gender equality. While significant progress was noted in health, education, and social protection, the evaluation recommended greater programmatic convergence to enhance overall impact.

- Evaluation of Child-Friendly Schools (CFS) Implementation in Lesotho (2019): This evaluation examined the adoption and effectiveness of the Child-Friendly Schools (CFS) Framework in Lesotho. The evaluation aimed to identify bottlenecks and barriers to the effective implementation of the CFS initiative and made recommendations for its adaptation, scale-up, and sustainability. A mixed-methods approach was employed, combining quantitative surveys with qualitative interviews and focus groups to gather comprehensive data. The findings demonstrated that while the CFS model significantly improved educational outcomes, particularly in student attendance and engagement, challenges persisted in rural areas. The evaluation recommended enhanced cross-sectoral collaboration and stronger support for rural schools to ensure equitable implementation of the CFS standards.
- Impact Evaluation of the Child Grants Program (CGP) and SPRINGS Project (2018): This impact evaluation focused on the combined impact of the Child Grants Program (CGP) and the Sustainable Poverty Reduction through Income, Nutrition, and Access to Government Services (SPRINGS) project. The CGP, supported by UNICEF and the European Union, provided unconditional cash transfers to vulnerable households, while the SPRINGS project, initiated in 2015, linked these cash transfers to livelihood support interventions. The evaluation employed a mixed-methods approach, including a quasi-experimental design and qualitative research, to assess the impact on household poverty, food security, and economic resilience. Key interventions under SPRINGS included community savings groups, homestead gardening, nutrition training, and market access support. The evaluation provided critical insights into improving the integration of cash transfers with livelihood support to enhance poverty reduction efforts.

2. Meta-Analytical Process

The meta-analysis was conducted using a systematic and structured approach to aggregate, synthesize, and interpret data from the selected evaluation reports. Each evaluation report was thoroughly examined to assess the application of gender and inclusivity frameworks within the evaluation methodologies. This analysis involved scrutinizing narrative descriptions, thematic content, and qualitative data that highlighted gender and inclusivity outcomes. Particular attention was given to how the evaluations captured the experiences and perspectives of marginalized groups, such as women, children, and individuals with disabilities.

3. Ethical Considerations and Standards

This meta-analysis was conducted in strict adherence to ethical standards, ensuring the integrity and credibility of the research process. All evaluations included in the meta-analysis were originally conducted with the informed consent of participants, with a commitment to protecting their rights and dignity. The meta-analysis itself was designed to maintain transparency, confidentiality, and objectivity. Additionally, the synthesis of data was conducted with careful consideration to avoid any harm or misrepresentation of the populations involved.

4. Limitations of the Meta-Analytical Approach

While this meta-analysis provides a robust framework for evaluating the integration of gender and inclusivity in UNICEF's evaluations, it is essential to acknowledge its limitations. The reliance on secondary data sources, such as existing evaluation reports, may introduce biases inherent in the original studies, which could affect the accuracy and generalizability of the findings. Moreover, the scope of the meta-analysis is limited to the five selected evaluations, which may not fully capture the diversity of experiences

and outcomes across all UNICEF programs in Lesotho. The potential for heterogeneity in the methodologies of the original evaluations also presents a challenge in synthesizing the data. Despite these limitations, the meta-analysis offers valuable insights into the strengths and areas for improvement in UNICEF's evaluation practices, particularly concerning gender and inclusivity.

RESULTS

This section presents the findings from the meta-analysis of the five evaluations conducted by UNICEF in Lesotho. Each evaluation was scrutinized with a focus on the integration of gender and inclusivity frameworks, effectiveness in capturing gender-disaggregated data, adherence to UNICEF's commitments to gender equality, inclusivity in evaluation processes, and the identification of best practices and challenges.

1. Gender Sensitivity in Program Design and Implementation

The integration of gender-sensitive strategies in program design and implementation was a key focus across all five evaluations. The Endline Evaluation of the Integrated HIV/AIDS-Nutrition Project emphasized the program's alignment with national and global gender priorities, noting that, among other efforts it "ensured the inclusion of pregnant and breastfeeding women living with HIV" to improve maternal and child health outcomes (p. 47). This gender-sensitive approach was also observed in the Evaluation of the Child Grants Program (CGP), with specific recommendations made to gender and inclusivity in regard to improvement of a feasible and inclusive mobile payments expansion plan.

"The plan should also consider possible unintended negative effects of the expansion, such as exclusionary issues due to the lack of technology needed to receive the payments, as well as gender implications, and should suggest appropriate ways to deal with them, or use alternative payment mechanisms. Specifically, to make sure that CGP payments remain inclusive, it will be important to consider heterogeneous preferences, especially among older and vulnerable beneficiaries, and to develop protocols that decouple case management, grievances, and communication from interactions at pay points" (p. 125).

The Lesotho Country Program Evaluation (CPD) 2019-2023 further highlighted the importance of gender-sensitive design, stating that there is a need for a deeper heterogeneity analysis when evaluating the programs.

"The evaluation found that the Country Program is aligned with UNICEF's Gender Action Plan (2018–2021) and NSDP II priorities to address gender inequality. Examples of UNICEF interventions addressing gender inequality include support to the Ministry of Education and Training to strengthen the gender-responsiveness of national education sector plans and policies; capacity strengthening of law enforcement officials to identify and respond to cases of gender-based violence; and the Joint UN program 2gether 4 SRHR (sexual and reproductive health rights) empowering adolescent girls and young women" (p. x).

In the Evaluation of Child-Friendly Schools (CFS) Implementation, gender-sensitive approaches were embedded in the education system, as the report observed that the CFS model improved educational outcomes for girls, with particular relevance in rural areas where gender disparities were most pronounced, although relevant challenges still persist (e.g., lack of quality education in rural areas). Lastly, the Impact Evaluation of

the Child Grants Program (CGP) and SPRINGS Project demonstrated how linking cash transfers with livelihood support interventions benefited women and girls, noting that among others the program contributed to women empowerment to take more active roles in their communities.

2. Inclusivity of Marginalized Groups

The evaluations consistently emphasized the importance of inclusivity in reaching marginalized groups. The Endline Evaluation of the Integrated HIV/AIDS-Nutrition Project highlighted the program's success in including marginalized communities, including those in remote areas, ensuring that services reached the most vulnerable women and children.

"Among its many value-added facets, a standout feature of the program is its dedicated support to marginalized and underprivileged communities. By providing essential healthcare, along with specialized HIV & AIDS and nutritional services, the program not only addresses immediate needs but also fosters a sense of local ownership and paves the way for long-term sustainability" (p. 71).

Similarly, the Evaluation of the Child Grants Program (CGP) also underscores the added value of inclusivity in regard to program targeting and participation, with specific focus of groups facing multiple vulnerabilities and/or deprivations.

"The findings from the impact evaluation of the Lesotho Child Grants Program (CGP) and the Sustainable Poverty Reduction through Income, Nutrition and access to Government Services (SPRINGS) project reveal a positive story from the added benefits that can be obtained by providing complementary services and support to poor and vulnerable rural households that are already benefiting from a cash transfer. By expanding their homestead gardening activities, attending nutrition sessions and being included into microfinance schemes offered by SPRINGS, CGP beneficiary households were empowered to increase their consumption and diversify" (pp. 57-58).

The Lesotho Country Program Evaluation (CPD) 2019-2023 reports similar findings, noting that the program reached marginalized groups, with relevant outcomes being identified (e.g., in improving health and education outcomes for children from disadvantaged backgrounds). The Impact Evaluation of the Child Grants Program (CGP) and SPRINGS Project further reinforced the importance of inclusivity by demonstrating how the program enhanced the economic resilience of those facing higher levels of poverty and risk of exclusion (e.g., highlighting its added value for female-headed households in rural areas). In the Evaluation of Child-Friendly Schools (CFS) Implementation, inclusivity was a key focus, with the report stating that the program had made progress in including children with disabilities. However, more efforts are still needed to ensure full integration into mainstream educational settings.

3. Adherence to UNICEF's Commitments to Gender Equality and Inclusivity

UNICEF's adherence to its commitments to gender equality and inclusivity was a prominent theme across the evaluations.

The Endline Evaluation of the Integrated HIV/AIDS-Nutrition Project commended the program for its alignment with UNICEF's broader gender equality agenda, noting that the program's design and implementation were consistent with UNICEF's commitments to advancing gender equality and the empowerment of women and girls [e.g., " By

promoting household income, women are taking a more active role in financial decisions, which is a positive step towards gender equality" (p. 14)]. The Evaluation of the Child Grants Program (CGP) similarly mentioned the program's focus on gender equality, highlighting that the program target approach also included female-headed households, thereby advancing UNICEF's goal of reducing gender disparities in access to resources. In the Evaluation of Child-Friendly Schools (CFS) Implementation, the program was noted for promoting gender equality through its efforts to reduce gender disparities in school attendance and participation.

The Lesotho Country Program Evaluation (CPD) 2019-2023 further reinforced this commitment, stating that the program made progress in aligning its objectives with UNICEF's gender equality goals.

"There are several examples of UNICEF interventions addressing gender inequality. UNICEF's support for advocacy to eliminate early, forced and child marriages in Lesotho, which is also a priority reflected in NSDP II, is one such example. Within the education sector, UNICEF supported the Ministry of Education and Training to strengthen gender-responsiveness of national education sector plans and policies. In the case of child protection, UNICEF supports capacity strengthening of law enforcement officials to identify and respond effectively to cases of gender-based violence and prevent violence, as well as supporting the implementation of the Gender and Development Policy Implementation Plan (2019–2024). UNICEF's support in the areas of Sexual Reproductive Health for adolescents and young girls, HIV prevention, and menstrual health all contain elements of addressing gender inequality. The joint UN 2gether 4 SRHR program in Lesotho targeting pregnant and breastfeeding adolescent girls and young women is a major intervention supported by UNICEF to empower adolescent girls. UNICEF is a member of the UN Gender-Based Violence Forum and is tasked with focusing on issues relating to Gender-Based Violence and children" (p. 38).

4. Challenges in Data Collection and Analysis

The collection and analysis of gender-disaggregated data presented challenges across the evaluations. The Endline Evaluation of the Integrated HIV/AIDS-Nutrition Project noted that while the program successfully collected some gender-disaggregated data, challenges remained in analyzing and utilizing this data to inform program adjustments. Similarly, the Evaluation of the Child Grants Program (CGP) identified issues with data collection, stating that relevant gaps persist.

The Lesotho Country Program Evaluation (CPD) 2019-2023 also highlighted challenges in data collection, particularly in capturing the full scope of gender and inclusivity outcomes, noting that there was a need for more robust data collection methodologies to better capture the impacts of the programs. The quotes below illustrates some of the challenges mentioned in the report.

"The EMIS system is not living up to its promise of quality and timely data. There have been serious delays in capturing data and the current data collected in 2020 is, according to the Ministry, becoming outdated, which is limiting its effective use in planning. Connectivity problems and insufficient devices for data collection represent challenges to collecting data at school and district levels" (p. 47).

"Quality, disaggregated data are essential for the effective planning, implementation, monitoring and reporting progress of the Country Program.

National data systems have significant data gaps, and this has presented difficulties for UNICEF to assess progress at the level of program outcomes. The lack of adequate data presents a major challenge to the Government in monitoring progress towards attainment of the SDGs, and a challenge to other UN agencies and development partners for assessing the effectiveness of their contributions to the development of Lesotho" (p. 67).

The Evaluation of Child-Friendly Schools (CFS) Implementation identified similar challenges, stating that data collection methods did not always capture the nuanced experiences, including of girls and children with disabilities, limiting the program's ability to fully assess its impact. The Impact Evaluation of the Child Grants Program (CGP) and SPRINGS Project also noted that gaps in data collection methodologies hindered the program's ability to fully capture the impact on the beneficiaries, including in regard to women's empowerment and economic resilience.

5. Best Practices in Incorporating Gender and Inclusivity

Several best practices in incorporating gender and inclusivity were identified across the evaluations. The Endline Evaluation of the Integrated HIV/AIDS-Nutrition Project highlighted the importance of involving male caregivers in gender-sensitive interventions, noting that engaging men in health-related dialogues supported better health outcomes and promoted more equitable gender dynamics within households.

"UNICEF's partnership with Mantsopa to launch a community-based initiative targeting men in the context of HIV and nutrition is an innovative and strategic approach. This initiative does more than just disseminate health knowledge; it fundamentally addresses gender inequality by empowering men to be enablers in the healthcare journey of their female partners, particularly in accessing antenatal care and PMTCT services. The program's findings confirmed that male support is a key factor in facilitating women's and children's access to health services. Additionally, men could progressively assume a more active role in household nutrition through farming. This dual focus on health and nutrition cultivates an inclusive, sustainable strategy that not only achieves immediate health outcomes but also paves the way for long-term family and community ownership of health and well-being, enhancing its potential for intergenerational impact" (p. 71).

The Evaluation of the Child Grants Program (CGP) emphasized the effectiveness of linking cash transfers with livelihood support interventions, stating that these interventions were relevant in enhancing the economic resilience of female-headed households (p. 29).

The Lesotho Country Program Evaluation (CPD) 2019-2023 identified the importance of community engagement in promoting gender and inclusivity, stating that both local governance and community involvement were critical in ensuring that programs were responsive to the specific needs of women and marginalized groups. In the Evaluation of Child-Friendly Schools (CFS) Implementation, the report noted that the integration of gender-sensitive approaches within the CFS model improved educational outcomes for girls. The Impact Evaluation of the Child Grants Program (CGP) and SPRINGS Project also highlighted the effectiveness of community-based approaches, noting that the program's success in promoting women's economic empowerment was also due to its emphasis on community engagement and support.

6. Potential Biases and Consistency Challenges

Despite the successes, several biases and oversights were identified. The Endline Evaluation of the Integrated HIV/AIDS-Nutrition Project pointed out that while the program was designed to be gender-sensitive, male caregivers were not sufficiently included, limiting the program's impact on promoting gender equality. The Evaluation of the Child Grants Program (CGP) similarly noted that "the program did not fully account for the varying needs of different marginalized groups, particularly those with disabilities.

The Evaluation of Child-Friendly Schools (CFS) Implementation also highlighted oversights, noting that while the program made progress in promoting gender equality, it did not fully address the needs of children with disabilities, particularly in rural areas. The Impact Evaluation of the Child Grants Program (CGP) and SPRINGS Project also noted that "the program's focus on women's empowerment was limited by its limitation to fully engage male stakeholders, who play a critical role in household decision-making.

Lastly, the Lesotho Country Program Evaluation (CPD) 2019-2023 identified biases in the evaluation process, stating that the program's focus on gender equality was less consistent in certain sectors.

"There is no doubt that UNICEF is addressing the issue of gender inequality. However, there appears to be little coherence among these interventions, and they are reported as discrete projects or interventions in UNICEF's annual reports for 2019, 2020 and 2021. The Country Office reports sex-disaggregated results where such data are available. The Country Office does not have an overarching gender strategy. Such a strategy would enable the Country Office to achieve coherence among the various gender-related projects. The evaluation also found that the Country Office does not have a partnership with the Ministry of Gender, Youth, Sport and Recreation" (p. 38).

7. Inclusivity in Evaluation Processes

The inclusivity of the evaluation processes themselves was a critical area of focus. The Endline Evaluation of the Integrated HIV/AIDS-Nutrition Project emphasized the importance of involving diverse stakeholders in the evaluation process, stating that the active participation of community stakeholders, particularly those from marginalized backgrounds, was key to ensuring that the findings were reflective of the broader community's experiences. The Evaluation of the Child Grants Program (CGP) similarly noted that involving beneficiaries in the evaluation process was critical in capturing the nuanced impacts of the program on different population groups.

The Lesotho Country Program Evaluation (CPD) 2019-2023 highlighted the need for inclusive evaluation processes, stating that greater efforts are needed to ensure that the voices of marginalized groups are adequately represented in the evaluation findings and recommendations. As per the Terms of Reference,

"It is expected that the CPE apply a strong equity and gender focus by: i) including equity and gender in evaluation criteria and evaluation questions; ii) making evaluation methodology, data collection and analysis methods equity- and gender-responsive; and iii) reflecting equity and gender analysis in evaluation findings, conclusions, concrete recommendations and action points that can be addressed in the design of the next CPD, both for a better integration of equity and gender in the office and programming efforts, and for strengthened results for children.

The CPE should rely on a mix of quantitative and qualitative information that will need to be triangulated. Primary data gathering from implementing partners via key informant interviews and/or focus group discussions is highly advisable.

Participatory methods, especially those involving adolescents and children, should be considered along with any potential ethical issues and approaches (see section 10 below).

The stakeholders for this evaluation are relevant government partners, NGO partners implementing programs with UNICEF through cooperation agreements and rights holders who are targeted by UNICEF programs. A stakeholder analysis that goes beyond government and NGO implementing partners to ensure the views of all relevant stakeholders are incorporated in the evaluation and the reconstructed theory of change will be part of the approach and will be undertaken during the inception phase" (p. 81).

The Evaluation of Child-Friendly Schools (CFS) Implementation also emphasized the importance of inclusivity, noting that the involvement of teachers, students, and parents in the evaluation process was critical in identifying the barriers to effective implementation. The Impact Evaluation of the Child Grants Program (CGP) and SPRINGS Project also underscored the importance of participatory evaluation methods, stating that engaging all relevant stakeholders in the evaluation process was key to ensuring that the findings were comprehensive and reflective of the diverse experiences of beneficiaries.

8. Recommendations for Future Evaluations

Across the five evaluations conducted by UNICEF in Lesotho, several common recommendations emerged, particularly emphasizing the need for stronger data systems, improved coordination, and more inclusive evaluation methodologies. One of the most prevalent recommendations is the need to enhance data monitoring and analysis systems to better capture gender-disaggregated data and other inclusivity metrics. For instance, the Evaluation of the Child Grants Program (CGP) highlighted the need for more comprehensive data collection tools to capture the multidimensional impacts of interventions on gender and inclusivity outcomes. Similarly, the Endline Evaluation of the Integrated HIV/AIDS-Nutrition Project recommended enhancing data monitoring systems to better capture gender and inclusivity outcomes, suggesting a broader necessity for robust data frameworks that can inform and adjust program strategies in real time. These evaluations collectively suggest that improving data systems is critical for making informed decisions and ensuring that interventions effectively address the needs of all population segments, particularly marginalized groups.

Another recurring recommendation across the evaluations is the call for stronger national-level coordination to support and scale gender-sensitive interventions. The Lesotho Country Program Evaluation (CPD) 2019-2023 emphasized the need for enhanced coordination at the national level, advocating for future programs to focus on converging gender and inclusivity strategies across all sectors. This recommendation aligns with findings from the Evaluation of Child-Friendly Schools (CFS) Implementation, which suggested improving cross-sectoral collaboration to integrate gender and inclusivity considerations into broader educational and social policies. Additionally, the evaluations consistently recommended adopting more participatory evaluation methodologies. For example, the Impact Evaluation of the Child Grants Program (CGP) and SPRINGS Project underscored the importance of actively engaging all relevant stakeholders, particularly marginalized groups, in the evaluation process to

ensure that the findings accurately reflect the diverse needs and experiences of the target populations. Together, these recommendations highlight the importance of data-driven decision-making, coordinated efforts at the national level, and inclusive evaluation practices to enhance the effectiveness of UNICEF's interventions in Lesotho.

DISCUSSION

The meta-analysis of the five evaluations conducted by UNICEF in Lesotho reveals several critical insights into the integration of gender sensitivity and inclusivity within programmatic interventions. These findings underscore the necessity for a more robust and consistent approach to ensuring that all programs effectively address the needs of marginalized populations, particularly women, children, and individuals with disabilities.

Firstly, the consistent incorporation of gender-sensitive strategies across the programs highlights the potential of such approaches to transform outcomes. However, the varying degrees of success across different evaluations suggest that while gender sensitivity was prioritized, its application was not uniform. For instance, the alignment with global gender priorities in the Integrated HIV/AIDS-Nutrition Project illustrates the benefits of targeted interventions. Yet, the challenges observed in the Child Grants Program (CGP) concerning the integration of gender perspectives into broader social protection measures point to a need for more holistic frameworks. This discrepancy suggests that while targeted interventions can yield significant outcomes, there is a risk that without comprehensive integration, the broader structural issues affecting gender equality may persist.

Inclusivity, as highlighted in the evaluations, emerged as both a strength and a challenge. The effective inclusion of marginalized groups in some programs, such as the Child-Friendly Schools initiative, demonstrates the potential for well-designed interventions to bridge existing gaps. However, the ongoing challenges in fully integrating children with disabilities into mainstream education underscore the persistent structural barriers that hinder true inclusivity. This indicates that while programs may be designed with inclusivity in mind, the practical implementation often falls short due to systemic issues, such as inadequate resources or entrenched societal norms. Therefore, future programs must not only focus on inclusive design but also on the structural adjustments necessary to facilitate full participation by all marginalized groups.

The adherence to UNICEF's commitments to gender equality and inclusivity was evident across the evaluations, yet the findings suggest that there remains room for improvement. While the alignment of program objectives with UNICEF's global goals is commendable, the variable success across sectors highlights the challenges of translating high-level commitments into actionable strategies on the ground. For example, the success in promoting gender equality through targeted health and education initiatives contrasts with the less consistent application of these principles in the social protection sector. This disparity points to the need for more integrated approaches that ensure gender and inclusivity considerations are embedded across all sectors and not just in isolated programs.

One of the most significant challenges identified was in the area of data collection and analysis. The consistent identification of gaps in gender-disaggregated and inclusion

related disaggregated data across the evaluations highlights a critical area where improvements are needed. The inability to fully utilize such data to inform program adjustments indicates a missed opportunity to enhance program effectiveness and responsiveness. This challenge is reflective of a broader issue within development programming, where data collection is often treated as a secondary task rather than a fundamental component of program design and evaluation. Addressing this issue will require not only improvements in data collection methodologies but also a shift in how data is perceived and utilized within programs.

Finally, the best practices identified across the evaluations provide valuable lessons for future programming. The successful engagement of male caregivers in health interventions, for instance, underscores the importance of involving all community members in gender-sensitive programs. This finding aligns with broader evidence that suggests gender-transformative approaches, which engage men and boys alongside women and girls, are more likely to result in sustained changes in gender dynamics. However, the identification of biases and oversights, such as the insufficient inclusion of male stakeholders in certain programs, indicates that even well-designed interventions can fall short if they do not fully account for the complexities of gender relations within communities. This calls for a more nuanced understanding of gender dynamics and a commitment to designing programs that are flexible enough to adapt to these complexities.

In conclusion, the findings from these evaluations highlight both the progress made and the challenges that remain in integrating gender and inclusivity into UNICEF's programs in Lesotho. While there are clear successes, particularly in targeted interventions, the variability in outcomes across different sectors and the ongoing challenges in data collection suggest that there is still significant work to be done. Moving forward, it will be essential to build on these findings to develop more integrated, data-driven, and contextually sensitive approaches that can better address the diverse needs of all marginalized populations.

CONCLUSION

The meta-analysis of UNICEF's evaluations in Lesotho, from 2018 to 2023, provides a comprehensive overview of the successes and challenges associated with integrating gender equality and inclusivity into development programs. These evaluations reveal that while UNICEF has made commendable progress in incorporating gender-sensitive strategies and reaching marginalized populations, challenges remain, particularly in ensuring consistent application across all sectors and in addressing systemic barriers that impede true inclusivity.

One of the most notable conclusions from this analysis is the demonstrated effectiveness of gender-sensitive interventions in improving outcomes for women and children. Programs such as the Integrated HIV/AIDS-Nutrition Project showed how targeted approaches that consider the unique needs of women, particularly those living with HIV, can lead to substantial improvements in health outcomes. This aligns with broader evidence suggesting that gender-sensitive health interventions are essential for achieving sustainable development goals related to health, well-being, and equality. However, the variability in success across different programs indicates that gender sensitivity is not yet uniformly applied, suggesting a need for more systematic incorporation of gender perspectives into all programmatic areas.

In terms of inclusivity, the findings underscore the importance of designing programs that effectively reach the most marginalized groups, including children with disabilities, women in rural areas, and other vulnerable populations. The evaluations consistently highlighted the benefits of inclusive programming, such as in the Child-Friendly Schools initiative, which improved educational outcomes for girls and children with disabilities. However, the persistent gaps in fully integrating these populations into mainstream programs point to ongoing structural challenges, including inadequate resources, societal norms, and the limitations of current program frameworks. These findings suggest that while the intent to be inclusive is present, the execution often falls short, requiring a more robust and resource-intensive approach to inclusivity.

The challenges identified in data collection and analysis present another critical area for improvement. The evaluations revealed that while data collection efforts were generally in place, the ability to use this data effectively to inform program design and adjustments was often limited. This limitation hampers the ability to fully understand the impacts of programs on different gender and marginalized groups and to make necessary adjustments in a timely manner. Therefore, there is an urgent need to enhance data collection methodologies and to train program staff in using this data to drive decision-making and improve program outcomes.

Another significant insight from the evaluations is the importance of community engagement in promoting gender equality and inclusivity. Programs that involved local communities in the design and implementation stages were more successful in addressing the specific needs of marginalized groups. This finding highlights the critical role of local ownership and participation in the success of development programs. However, the evaluations also identified instances where community engagement was limited or not sufficiently inclusive, particularly of marginalized voices. This suggests that while community engagement is recognized as important, there is a need to deepen these efforts to ensure that all community members, including the most marginalized, are actively involved and their voices heard.

In light of these conclusions, the following recommendations are proposed to enhance the effectiveness of UNICEF's programs in Lesotho:

1. **Strengthen Data Systems and Analytical Capacities:** UNICEF should prioritize the development of more robust data collection and analysis systems that can provide real-time, disaggregated data on gender and inclusivity outcomes. This includes investing in training for program staff on how to use data to inform program adjustments and decision-making and integrating advanced data analytics tools into program monitoring and evaluation frameworks. Enhanced data systems will ensure that programs are more responsive to the needs of all population segments and can adapt quickly to emerging challenges.
2. **Ensure Comprehensive and Consistent Integration of Gender and Inclusivity Across All Sectors:** To address the variability in the application of gender-sensitive and inclusive approaches, UNICEF should develop a unified framework that embeds these principles into all program areas, including health, education, social protection, and economic empowerment. This framework should provide clear guidelines on how to incorporate gender and inclusivity into program design, implementation, and evaluation, ensuring that these considerations are not treated as add-ons but as core elements of all interventions.

3. Deepen Community Engagement and Empowerment Strategies: Building on the successes of programs that effectively engaged local communities, UNICEF should further enhance its community engagement strategies to ensure that all voices, particularly those of marginalized groups, are included in program planning and decision-making. This involves not only involving men and boys in gender-sensitive programs but also ensuring that women, children, and individuals with disabilities have a platform to contribute to and influence program outcomes. Strengthening community ownership of programs will lead to more sustainable and impactful interventions.

In conclusion, while UNICEF's efforts in Lesotho have led to important gains in gender equality and inclusivity, the findings from these evaluations indicate that there is still significant work to be done. By focusing on improving data systems, ensuring consistent integration of gender and inclusivity across all sectors, and deepening community engagement, UNICEF can build on the successes of the past programs and move closer to achieving its mission of equitable and inclusive development for all. These recommendations are not only aligned with UNICEF's global commitments but are also essential for addressing the specific challenges faced in Lesotho, ensuring that every child, woman, and marginalized individual has the opportunity to thrive.

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SECTION ARTIFICIAL INTELLIGENCE (AI)

AND SOCIETY

ARTIFICIAL INTELLIGENCE IN TERMINOLOGY PROCESSING - TESTING THE ROBUSTNESS OF A CUSTOM GPT

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ABSTRACT

Following the discontinuance of funding of the Croatian national term base – Struna (<http://struna.ihj.hr/>) in 2019. we initiated the development of a new methodology for creating terminological collections independent of field experts' input for the initial terminological data.

A possible solution to our problem of finding a compact and robust source for generating information in the early stages of processing terminology (the 'raw definitions') in various domains could be found in the publicly available AI language model created by OpenAI called ChatGPT-4. ChatGPT is a large language model whose functions include answering questions, text generation, and completing tasks such as translation and summarisation.

A custom GPT is currently being developed that will be used as an assistance module, providing raw information for terminological units to be processed in Struna. Following the initial intensive testing of ChatGPT-4, we have started to develop and train a custom GPT bot (working name: TermAI). The first stage of training consisted of manually providing rules of good practices for terminology management, adapted from the original training of field experts. The second stage consists of feeding the TermAI with modified data exported from Struna.

In this paper, we will present the results of the analysis of generated information from the new domain in comparison to the quality of information that was attained in the domain that TermAI was trained on, as well as information obtained from the actual field experts in the novelty domain.

Keywords: terminology, ChatGPT, Struna, terminology management, Croatian language

INTRODUCTION

In processing terminology for small languages such as Croatian, the involvement of field experts has been repeatedly emphasized as one of the curtailments of producing high-quality definitions and hierarchical structures [1]. In the case of the Croatian national termbase – Struna the role of field experts has been formalized as a fundamental part of the workflow and their involvement has played a big part in setting and maintaining the standard of terminological collections in Struna.

Due to unexpected combinations of circumstances, the original model of processing terminology in Struna is no longer a viable option and we were forced to develop a new model. A new model (yet to be finalized) will no longer include field experts as the main generators of information. To maintain the standard of quality the field experts

will be used, but their role will be shifted more towards the consultations during the final stages of processing.

The possible solution to our problem of finding a compact and robust source for generating information in the early stages of processing terminology in various domains could be found in the publically available AI language model created by OpenAI [2] called ChatGPT – 4 (ChatGPT in further text). ChatGPT is a large language model whose functions include answering questions, text generation and completing tasks such as translation and summarization [3].

The efficiency of ChatGPT in activities that can be comparable to various elements of terminology processing has been supported by studies showing it generating abstracts [4], [5].) as well as creating quality essays on different topics [6]–[9]. Furthermore, studies on using ChatGPT as an assistance in lexicography [10], [11] have shown that it can be successfully used in various tasks while showing low usefulness in others. The identification of senses is by far the weakest element of the tool's performance [12]. Furthermore, Jakubíček and Rundell [11] called to attention the difficulty ChatGPT has with figurative elements of the general language. The consensus seems to be that ChatGPT can be a useful lexicography tool if its limitations are recognized and compensated accordingly [13].

Terminology processing seems to be exempted from just about all tasks that were recognized as problematic for ChatGPT in lexicography. The concepts of senses and figurative use are not part of the classical approach to terminology processing [14] such as employed in Struna. The tasks that ChatGPT exceeds such as answering direct questions, summarizing and translating do appear to be closely matched to tasks the field experts had in the workflow of Struna. Namely, giving exact and concise definitions for a given concept, recognizing hierarchical relations, and providing translation equivalents.

Our long-term goal is to implement ChatGPT into our workflow where it would be used as the main generator of 'raw definitions', conceptual relations and translation equivalents in the early stages of the workflow, mimicking the tasks performed by the field experts in the late model. The information generated by the ChatGPT would be processed by Croatian language experts and trained terminologists followed by conformational editing performed by field experts.

MATERIALS AND METHODS

Following the intensive stage of testing the capabilities and limitations of the general ChatGPT, we have initiated the development of custom GPTs [15] that allow the customization of the ChatGPT for specific purposes by following the list of personalized prompts and instruction sets defined by the user.

The customisation of the TermAI – the custom GPT we are developing is planned to go through three main stages: defining the rules, manual training and finally batch training. Naturally, all the stages of customization include multiple revisions by both trained terminologists and our project coordinator. The first stage of customization which included the logical and theoretical part of the training was based on the workshops we used to train field experts over the last 15 years. During this phase, we have defined the **Cardinal Rules** – a set of instructions and directives that can't be sidestepped or broken. Currently, there are 9. rules for TermAI must follow when interacting with a

user. Most of them are concerning the proper form of the terminological definition, the structure of the answers and the acceptable form of the queries.

Stage two of the training covers the practical part of producing ‘raw definitions’ and is performed by feeding TermAI with a term-definition form of information sourced from Struna. We decided that the first milestone would be 1000 terminological units from the domain of forensic sciences. The domain of forensic sciences was chosen for two reasons: it was the last project in the old model so most of the team members were familiar with terminological collection and were able to pick the “best” terminological units for training TermAI. Secondly, ‘forensic sciences’ was by far the most interdisciplinary collection we have processed in Struna so the terms and definitions processed have a wide semantical field, covering over 20 domains of knowledge.

After the first milestone was reached we initiated a series of testing to evaluate the current state of TermAI and identify problems and areas we need to address in future training. Following the promising results of the first series of tests, where TermAI was given the task of generating definitions from the domain of forensic sciences [16 in press] we proceeded by testing its robustness by introducing queries from the domain of linguistics. The domain of linguistics was chosen for the main reason that all of the project team members are active researchers in the broad domain of linguistics so we expected that their specialised knowledge would serve optimally in the evaluation of the generated raw definitions.

We have selected 20 terminological units that were processed as part of the Struna project “Hrvatsko jezikoslovno nazivlje” [17] Table 1.

Table 1. Queries by sets

Set A	ablative, basilect, subjectless sentence, communication noise, discourse, false friends, lexical functional grammar, metalanguage, feminine/masculine pair*, model-theoretic semantics
Set B	morphologically conditioned alternation, case, palatalization, perlocutionary act, pleonasm, comparative grammar, sentence, redundancy, labiodental

The terms selected represented concepts from the broader domain of linguistics and closely represented the semantical broadness of the terminological units processed in JENA. Selected terms varied on multiple levels: single-word (N11) multi-word (N9); part of general knowledge (subjectively) (N8), and domain expert level knowledge (N12).

The TermAI was given queries in the form of ‘term/domain’ which is the form defined by one of the rules that state that for this form of a query, it should give the response representing the specific semantic field corresponding to the domain in the query, both in English and Croatian. Queries were divided into two sets: set A had all the terms in Croatian language and set B had all the terms in English.

The main goal was to evaluate TermAI’s ability to generate definitions in the novelty domain which would give us a better understanding of its robustness and possible biasness. Our secondary goal was to determine the quality of term translation, both from Croatian to English and from English to Croatian.

Our hypothesis, based on the previous study that showed a mid to high accuracy in generating definitions and term equivalents in the known domain, was that TermAI would be highly accurate on queries that could be characterised as general knowledge linguistic terms. Furthermore, we expected that the accuracy of the definitions and term equivalents for the concepts that are highly specific to Croatian linguistic research and discourse would be below the usable level.

RESULTS

For all the 20 queries given to TermAI (in two sets: A and B), TermAI successfully generated definitions and term equivalents.

Definitions

Generated definitions were analysed on two levels of accuracy. Semantical, where we were comparing the ‘raw definitions’ against the definitions in Struna to evaluate if the definition accurately describes the given concept. On the second level of analysis, we were treating the definitions as if generated by the field expert, and analysing the level of technical form that is standard for terminological definition in Struna.

Of the 20 generated definitions, 15 (75%) of them had an almost perfect semantical alignment with the definitions from Struna. Two of them had a slightly different aspect of the concept as the focus for definition but were not wrong. Two had definitions that weren’t inaccurate but were obviously not defined in the domain of linguistics. And finally, one definition was of a different concept than the one in the query.

For the analysis of the accuracy of the terminological form of the definition, we implemented a scoring system from 5 to 1, where 5 represents an optimal form for the terminological definition and the lowest score 1 marks an unacceptable form and/or structure of the definition. Of the 20 definitions generated by TermAI, 14 (70%) got the highest score. Score 4 was given to one definition, three definitions got a score of 3, and one generated definition got the lowest score of 1.

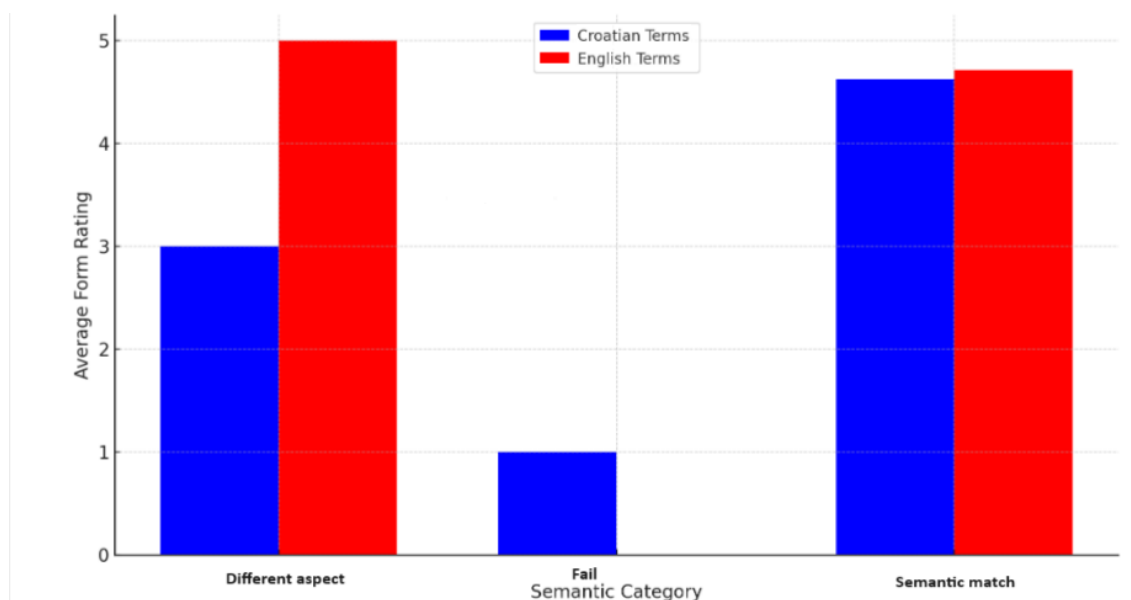


Figure 1. Average Form Rating by Semantic Category for Croatian and English Term Queries

Term equivalents

Of the 10 terms given from set A, 7 (70%) of the equivalents generated by TermAI were exact matches to the equivalents in English in Struna. One equivalent generated in English was not a match but was an older term used in traditional literature. One equivalent, although not wrong was a calque translation of the Croatian term. And lastly, one equivalent was incorrect.

For the set B, TermAI generated 7 (70%) terms in Croatian that were exact matches to the terms in Struna. Three generated terms in Croatian were not exact matches but all of them were synonyms of the preferred term in Struna and can be found in Struna as admitted terms.

DISCUSSION

The results of this study have given us a deeper insight into the current state of the training of our custom GPT TermAI. Given that we hypothesised that TermAI would be able to generate definitions of the concepts that could be characterised as general knowledge (*sentence, case, morpheme...*) we were pleasantly surprised that it showed no handicap while generating highly specialized definitions such as *model-theoretic semantics, morphologically conditioned alternation* or *comparative grammar*.

Interestingly, two generated definitions that were marked as correct but not defined in the domain of linguistics were for *palatalization* and *labiodental*. Both concepts would be characterized as interdisciplinary in the linguistics domain since both, strictly speaking, originate from the domain of phonetics. TermAI provided the definitions that while correct were defined not with the desired semantic shift that would be appropriate for the domain of linguistics, but in their original semantic field of phonetics. This is an indication that further training should emphasise this interdisciplinary aspect of terminology processing, and that we need to ensure that TermAI “understands” how to deal with defining interdisciplinary concepts.

The one completely incorrect answer provided by TermAI was for the query *mocijski parnjak* from set A. Since this concept is not a part of the broader domain of linguistics but a specific concept in research of Croatian language (and possibly other Slavic languages) we have expected that TermAI will have a problem with it. The concept in question is hard to understand and define even to a Croatian linguistic expert and as far as we can tell it doesn't have a confirmed term in English [18]. English term equivalent provided in Struna feminine/masculine pair gives about 500 results in Google search. The generated definition and the English equivalent were for the concept of minimal pair, which can be described as the superordinate concept of *mocijski parnjak*. Substituting queried concepts with related ones, or with any other is not the praxis we would like to have. A better solution would be for TermAI to explicitly say that the queried concept can't be defined, and, optionally, suggest a similar and/or related concept for the next query. This is an aspect of TermAI that we will need to work on in the future, to avoid possible errors in processing terminological units in domains that terminologists are not as comfortable as in linguistics.

On the subject of generating term equivalents, overall TermAI did a noteworthy job. A 70% of exact matches to term equivalents in Struna, assuming the equivalent pairs in Struna are optimal, in a novelty domain is a result beyond our expectations. If we exclude the wrong answer for the previously mentioned *mocijski parnjak*, all of the rest

equivalents that were not an exact match were good translations, that would require minimal, and in most cases stylistic, edits.

Three cases, that were not mentioned in the results section since statistically they are considered outliers, are however interesting enough to mention here. The generated definitions for *ablative*, *metalanguage*, and *pleonasm* were, by Struna's terminographic standard 'better' than the definitions provided in Struna. Namely, the definition in Struna for *ablative* is "the case which expresses separation, origin, ... in Latin" while the TermAI's definition was "a case in some languages that denotes separation, origin, or means" Considering how *ablative* can be found in several language families the TermAI generated definitions should be considered more accurate. In cases of *metalanguage* and *pleonasm* the definitions in Struna weren't wrong, but compared to the ones TermAI generated they could be considered on the "lower level" of expertise.

Finally, while the results of the analysis of the accuracy of the terminological form are higher than expected, it must be noted that aside from the one case of defining the wrong subject, all of the raw definitions generated by TermAI were usable for terminological processing. Furthermore, even though it is hard to objectively compare the 'raw definitions' we used to receive from the trained field experts to the ones we got in this study, the consensus seems to be that the quality of the TermAI's 'raw definitions' are on the same level of terminographic editability.

CONCLUSION

The study's results exceeded our expectations. Anticipating significant challenges in generating definitions and term equivalents in unfamiliar domains, we found that our custom GPT, TermAI, performed remarkably well. An overall accuracy of 70% for generating both definitions and term equivalents with queries from the domain it was not trained on is more than we hoped to gain in this stage of training. Furthermore, if we consider that most of the generated definition-equivalent answers that are excluded from this 70% are not inaccurate or, keeping in mind our primary motivation for developing TermAI, unusable the percentage of hypothetically useful 'raw definitions' and term equivalents can be (subjectively) elevated to 90%.

The objectivity of the analysis can (and must) be addressed. Analysing any kind of written form of information is subjective by default, more so when dealing with the meaning and definitions of specialized knowledge. As we were aware of this, we have consciously "rigged the setup". First of all, definitions generated by TermAI, meant to be 'raw definitions' meaning subjected to further editing by trained terminologists were compared to definitions published in Struna, which were edited by train professionals and should be (in theory) optimal in all aspects. Furthermore, the usual praxis so far has been that we receive the 'raw definitions' from field experts they are from the domain that we, terminologists, are not experts on; physics, engineering, and forensics sciences to name just a few. In this study, we have purposely chosen the domain of linguistics since all of the team members are active researchers in it. Therefore, we were able to ad hoc determine the correctness of the generated answers, which is not the usual praxis. Considering this bias on our part the results are even more promising.

The next stage of training TermAI on 20,000 terminological units provided in domain-based batches, will be introduced following a couple of more studies in which we will

try to identify the limitations and problematic aspects of our custom GPT. Hopefully, with further insides, we will be able to customize the training to refine TermAI capabilities and introduce more features.

The results of this study do indicate that more effort needs to be made in training TermAI to better deal with interdisciplinary concepts to incorporate the specific semantic aspects of the definitions in the query-assigned domain. Furthermore, it is evident that we need to implement a synonyms section into TermAI's answers since limiting the generated equivalents to one, could result in possible problems with future end-users.

At this stage of development and training, the biggest advancement can be noted in the quality of the standardized form of generated definitions. Considering how ChatGPT is generally considered unpredictable concerning its answers both in form and in content, our efforts in training and implementing Cardinal Rules have apparently resulted in a bot that is relatively stable and predictable.

Big language models such as ChatGPT are opening new avenues for language research, and while they present a certain risk in relying on them too much, they can be a useful tool if one is aware of their competencies and limitations. At this stage of our research, despite the promising performance of TermAI, we would be unwilling to grant it absolute autonomy in interaction with end-users. Further research and training will hopefully allow us to develop TermAI to the level where it can complement the content of Struna.

Finally, the ethical implementations of using ChatGPT for a national term-base such as Struna, such as the potential for inaccuracies and bias should be a crucial part of future research.

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CHATBOTS AS A KEY ENGINE OF ARTIFICIAL INTELLIGENCE: TRENDS AND PROSPECTS FOR DEVELOPMENT

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ABSTRACT

Chatbot research, a pertinent and crucial domain within artificial intelligence and information technology, aims to showcase chatbots as pivotal catalysts for advanced artificial intelligence. With the evolution of technology and the burgeoning volume of information, users increasingly seek efficient means of interaction for convenient access to information, thereby facilitating communication. Chatbots, being instrumental in this endeavor, not only serve as key drivers of artificial intelligence but also play a pivotal role in various sectors, particularly in education. The integration of chatbots in education is gaining popularity as they enhance the learning process by providing interactive and engaging experiences. In this context, chatbots can employ game elements and challenges to stimulate active learning among students, offering support for learners, customers, and employees alike. This aligns with the broader trend of artificial intelligence technologies impacting various aspects of life. In education, the practical significance of chatbot research becomes evident as it significantly improves the quality of education, fosters individualization, and enhances convenience for students while optimizing the workflow for teachers. The research contributes substantially to the development of artificial intelligence and enhances the interaction between individuals and technology. Overall, the rapid technological changes, heightened demand for intelligent interaction systems, and the growing interest in communication automation drive the continuous improvement of chatbot functionality and efficiency across diverse domains of human activity.

Keywords: chatbots, artificial intelligence, development trends, communications

INTRODUCTION

Aim of the Research: this comprehensive study aspires to delve deeply into the expansive realm of chatbot development within the dynamic landscape of artificial intelligence (AI). It aims to illuminate the central role that chatbots play in propelling AI forward, positioning them not just as mere conversational interfaces but as key drivers for advancing the broader field of artificial intelligence. The overarching goal is to provide an in-depth exploration of the significance and untapped potential of chatbots, particularly within the educational domain. Concurrently, the study seeks to conduct a thorough examination of the multifaceted advantages and potential drawbacks associated with these intelligent conversational agents. By doing so, the research

endeavors to contribute to a nuanced understanding of the evolving opportunities and challenges inherent in the development and integration of chatbots, thus paving the way for new horizons in artificial intelligence. In the ever-evolving landscape of artificial intelligence (AI), this comprehensive study embarks on a journey to unravel the intricate nuances of chatbot development, transcending conventional perceptions and embracing the transformative power they hold within the broader spectrum of AI. Beyond their role as mere conversational interfaces, chatbots emerge as pivotal catalysts propelling the advancement of artificial intelligence to new heights. The study's overarching aim is to not only underscore this profound role but to meticulously explore the untapped potential that lies within chatbots, particularly in the realm of education. A core focus of the research is to conduct a thorough and exhaustive examination of the advantages and disadvantages that accompany these intelligent conversational agents. By unraveling the intricacies and complexities associated with chatbots, the study aspires to provide a comprehensive understanding of their dynamic capabilities and limitations. The research also aims to shed light on the evolving opportunities and challenges inherent in chatbot development, positioning them as key players in shaping the future of artificial intelligence. Through this expansive exploration, the study seeks to contribute to the ongoing discourse on AI by presenting a nuanced and detailed perspective on chatbots. By doing so, it endeavors to carve out a path towards new horizons in artificial intelligence, offering insights that not only enrich our understanding of chatbot technology but also foster innovation in the broader field of AI.

MATERIALS AND METHODS

It is important to note that successful research in this area requires an interdisciplinary approach, as it combines aspects of computer science, linguistics, psychology, and other fields of knowledge. An interdisciplinary approach to analyzing chatbots and their role in artificial intelligence involves cooperation and integration with various fields of science and technology. 1) Computer science and machine learning promotes the study of machine learning algorithms, deep learning, and natural language processing techniques to develop and improve chatbot architectures. 2) Linguistics and Natural Language Processing (NLP), which focuses on understanding language structure, grammar, semantics, and other linguistic aspects to develop chatbots that interact effectively with users. 3) Psychology and user interfaces is aimed at studying the psychological aspects of communicating with chatbots and developing user interfaces that provide convenient and effective interaction. 4) Ethics and social sciences includes consideration of the ethical aspects of using chatbots, including transparency, privacy, and socio-cultural influences. 5) Information security helps to ensure the security of processing and storage of information transmitted to chatbots and protection against potential cybersecurity threats. 6) Philosophy and history of intellectual technologies promotes the study of the history and evolution of intellectual technologies. This approach allows you to better understand and interact with different aspects of the problem, as well as develop more comprehensive and effective solutions. The transdisciplinary approach considers subject-object relations not on the principle of their opposition or separation, but on the principle of unity formed by the information field they share, which allows it to be represented as a whole in the fullness of connections and relations. The transdisciplinary reflection of such complexity involves the use of the method of theoretical modeling of the anthropological situation, which takes into

account its violation as an ideal, desirable state for a person under the influence of information technologies. The study includes an analysis of the issues that require knowledge of historical, philosophical, legal, socio-economic, information technology, and other aspects. The study envisages the use of a systematic approach that allows us to clarify the very essence of artificial intelligence technologies, the prospects for their development in the twenty-first century, to identify the specifics of their impact on humans, which is constantly in the process of development and allows us to change public decision-making for sustainable development [2]. Deepening of this topic can be concretized by the following methods and approaches: 1. Foster collaboration between experts in computer science, linguistics, psychology, and other relevant fields to create a cohesive research team. Establish regular interdisciplinary meetings and workshops to facilitate knowledge exchange and integration of diverse perspectives. 2. Conduct in-depth studies on machine learning algorithms, deep learning techniques, and natural language processing to enhance chatbot architectures. Experiment with and optimize existing models, keeping abreast of advancements in computer science and machine learning. 3. Analyze language structure, grammar, semantics, and other linguistic aspects to inform the development of chatbots that interact effectively with users. Incorporate insights from linguistics and NLP to improve chatbot language comprehension, generation, and overall communication capabilities. 4. Implement robust information security measures for the processing and storage of data transmitted to chatbots. Collaborate with cybersecurity experts to assess and mitigate potential threats to data integrity and user privacy. 5. Investigate the historical and philosophical dimensions of intellectual technologies, providing insights into their evolution. Develop a comprehensive understanding of the philosophical underpinnings shaping the development and impact of chatbots and AI. 6. Adopt a transdisciplinary perspective that considers subject-object relations not in opposition but as a unified information field. Utilize theoretical modeling of anthropological situations, accounting for ideal states and potential disruptions influenced by information technologies. 7. Implement a systematic approach to analyze artificial intelligence technologies, considering historical, philosophical, legal, socio-economic, and information technology aspects. Employ structured methodologies to clarify the essence of AI technologies, forecast their prospects in the twenty-first century, and identify their specific impacts on human development and decision-making processes.

RESULTS

The research procedure aimed to delve into the overarching trend of artificial intelligence technologies, specifically focusing on the role and impact of chatbots in various aspects of life, particularly in education. The outcomes of the study highlight the substantial potential of chatbots to enhance the quality of education, foster individualization, and provide convenience in learning while simultaneously optimizing the workflow for teachers. One key aspect explored in the research is the place and role of chatbots in education. The study delved into understanding how chatbots, particularly exemplified by ChatGPT, fit into the educational landscape. This involved an examination of both the advantages and disadvantages associated with the integration of chatbots in educational settings. The advantages of ChatGPT in education were identified, including its ability to facilitate interactive and engaging learning experiences. The chatbot's potential to provide personalized support to students, enhance communication, and optimize the learning process for individual needs was

emphasized. However, the research also considered potential disadvantages, such as challenges in ensuring accurate information and maintaining a balance between automation and human interaction. Overall, the research provided insights into the dynamic role that ChatGPT and similar chatbots play in shaping the educational landscape. By understanding their advantages and disadvantages, the study contributes to the broader discourse on the integration of artificial intelligence in education and its implications for the future of learning.

1.The place and role of chatbots in education

The place and role of ChatGPT in education: advantages and disadvantages

The emergence of ChatGPT has attracted the attention of all segments of society, which confirms the need and urgency of the digital transformation of education, becoming the main productive force[1]. Scientific and technological progress significantly increases labour productivity and pushes human society towards a new digital stage of 5G. ChatGPT represents a major breakthrough in artificial intelligence technology, reflects the evolution of a new round of technological revolution, and is able to optimise education based on new concepts. ChatGPT can provide certain support to educational practice and development with its strong comprehensive functions and ease-of-use advantages. ChatGPT meets the requirements of serious education and training strategies, allows to see different possibilities in the future and inspires to better implement the process of digital transformation of education. Educators should be aware that the evolution of technology is accelerating, new paradigms are being formed, new paths are being built, and education will launch a new model for the formation of digital specialists, which is enhanced by the combination of human and machine, human and computer. Generative artificial intelligence, such as ChatGPT, is likely to redefine the role of ICT in education. While in the past it was more of a tool, in the future it will become a new educational element and technology. New technologies will not change education naturally, of course, but must be combined with conceptual transformations, organisational changes and innovative mechanisms to have a revolutionary impact on the development of education [3].

The emergence of ChatGPT digital technology is an opportunity to enhance the quality of education to reconstruct a new ecology of smart education that is knowledge-based, ability-oriented and value-driven. In the 5G era of the Fifth Industrial Revolution, educators must coexist with artificial intelligence technologies, be designers, implementers and evaluators of learning activities, and digital artificial intelligence technologies must serve as a tool for learning activities. ChatGPT can greatly empower teachers and help to realise the goal of "teachers having assistants and students having partners in learning". At the level of teaching practice, the coexistence of teachers and artificial intelligence includes three aspects that aim to: 1) learning artificial intelligence and relevant courses using artificial intelligence technologies, so teachers need to keep up to date and use artificial intelligence technologies to improve their teaching abilities, capacity to develop learning resources and analyse learning data. 2) the use of artificial intelligence for training, assessment and management, aimed at replacing some of its own functions, completing the functions of knowledge transfer in memorisation, understanding and application. Therefore, the focus should be shifted more to teaching abilities, literacy, psychological consulting, and personality development to provide more emotional support. 3) aI-assisted learning is a focus on improving learning effectiveness, providing more personalised learning solutions, enhancing learning efficiency, and realising personalisation in large-scale learning. 4) chatGPT can be a

transactional assistant for teachers, which can generate various texts, assist teachers in standard tasks such as knowledge retrieval, text creation. 5) with the deepening integration of intelligent technology and education, the role of teachers should change, teachers have to focus more on cultivating students' higher-level thinking and complex problem-solving skills, and become a mentor for students' growth. Teachers should learn how to create complementary, collaborative and innovative relationships with intelligent technologies, provide basic knowledge and implement the principles of artificial intelligence. 6) expand learning opportunities by using artificial intelligence for learning to improve cognitive subject abilities; optimise teaching to reveal the actual impact of artificial intelligence on education and teaching [4].

In the face of artificial intelligence, teachers must coexist with machines, with the iterative progress of technology, teachers must take on three roles: that of a doctor, a coach, and a guide who mobilises students' learning initiative through innovative digital experiences. Despite the fact that artificial intelligence technology has powerful algorithms and computing capacity, it is up to teachers to cultivate students' innovative thinking and form emotional values. Teachers should clearly build skills in the age of intelligence, correctly understand and accept the technical advantages of artificial intelligence, and cooperate with artificial intelligence. On the one hand, teachers should actively introduce the concept of AI-based smart learning and learn how to use AI technology to help complete certain professional work; on the other hand, use intelligent technology and promote intelligent education. Thus, the ability to use AI technology to solve problems (even homework) is a kind of information literacy and the ability to demonstrate the potential of a "smart learning assistant" that can effectively enhance students' learning experience. Naturally, educators are concerned that students will use such technologies to find shortcuts and to the detriment of knowledge building and ability development. To avoid such problems, it is necessary to develop new technologies; to introduce good design of regulatory systems to limit the occurrence of such situations as much as possible; and to introduce educational concepts and ethics of educational technologies. If this acquisition of knowledge, improvement of certain abilities and thinking through independent homework is linked to plagiarism, decision-making about further education, ethics and other issues, then supervision of technology and guidance to students on how to use it should be strengthened.

2.Changes in education as a factor of technological development

The research also explored the profound changes in education as a result of technological development, particularly the integration of chatbots. The study unveiled the transformative impact of technology on traditional educational approaches, emphasizing how the advent of chatbots contributes to a paradigm shift in the educational landscape. Technological development, with a focus on chatbots, has led to increased accessibility and convenience in learning. Chatbots offer a personalized and interactive learning experience, catering to individual needs and preferences. The traditional classroom model is evolving, with technology serving as a catalyst for a more dynamic and adaptive educational environment. Moreover, the research underscored the role of chatbots in fostering self-directed learning. With the integration of technology, students have the autonomy to explore educational content at their own pace, reinforcing the idea that technological development is not just about tools but about empowering learners. The study also addressed the challenges associated with these changes, including concerns about data privacy, the need for effective teacher training in technology integration, and the potential for disparities in access to

technology among students. By shedding light on both the positive and challenging aspects, the research contributes to a comprehensive understanding of how technological development, particularly through chatbots, is shaping the future of education. The research also explored the profound changes in education as a result of technological development, particularly the integration of chatbots. The study unveiled the transformative impact of technology on traditional educational approaches, emphasizing how the advent of chatbots contributes to a paradigm shift in the educational landscape. Technological development, with a focus on chatbots, has led to increased accessibility and convenience in learning. Technological developments usually outpace educational changes, so educational needs may not be fully matched with technological availability. Educational governance, including academic ethics, needs to be improved so that students can avoid the potential risks posed by the abuse of tech while enjoying the convenience of technology and enhancing their development opportunities. Specific generative AI technologies, such as ChatGPT, have had a huge impact on the existing learning system, mode and content of challenges. Faced with new generative AI technology, HEIs do not yet have a deep enough understanding and experience to support it. For example, in many parts of the United States, its use is temporarily prohibited. The challenge is to facilitate the legal, compliant and ethical integration of ChatGPT and other AI technologies into education and teaching, to ensure their integration and trust, and to effectively enhance teaching effectiveness [5]. As such, with the support of relevant national departments, educational institutions should develop generative AI technologies that are suitable for teachers and students, and ensure that data privacy and security are protected. Current research is mainly based on the application of Big Data, focusing on the security of public information, while there is little research on risk analysis of intelligent technologies in education. The digital transformation of education is an important part of building a digital society, and it plays a fundamental role in advancing the process of modernising the educational space. ChatGPT is just a wave of a new round of technological revolution and ICT adoption in education, but there will be more technological breakthroughs in the future. To this end, the education sector needs to develop educational strategies that combine tolerance and prudence with creative and critical thinking for generative artificial intelligence such as ChatGPT and the need to develop digital education strategies. The first strategy is to actively engage with new technologies, deeply understand the technical nature of generative artificial intelligence, comprehend the advantages and disadvantages of technologies, incorporate them into the construction of new educational infrastructure, optimise smart education functions, and integrate digital education and technology. The second strategy is to develop and implement recommendations for the use of generative artificial intelligence in education to protect the educational security line, guide teachers and students to use generative artificial intelligence, and prevent modern homework and exam cheating and academic misconduct [6]. The third strategy is to promote transformation for our own use, combine generative artificial intelligence with education and teaching reforms, expand the reach of high-quality educational resources, support and manage new teaching and learning models, and promote effective linkages between education, technology and innovation chains [7]. A new form of digital education that combines virtual reality, human-machine collaboration, and the organic combination of digital education and personalised learning.

3.Chatbot functions as the main trend in artificial intelligence

Table 1 Chatbot functions

Function name and role	Contents and characteristics of the function	Positive/negative
Assistance in studying Reduced costs	Chatbots can help students in the learning process by answering questions and providing necessary information. They can also help students complete assignments and check for correct answers. The use of chatbots in education can help to reduce the cost of education. For example, chatbots can replace traditional teachers in certain tasks, such as checking answers, which can significantly reduce the cost of teacher salaries.	Availability: Chatbots can be accessed anytime and from anywhere, providing continuous access to information and problem solving Limitations: Chatbots may not always be able to provide a complete and accurate response to a user's query, especially if the query is complex or requires additional information.
Personalisation of learning Convenience for teachers	Chatbots can be configured to work with each student individually, taking into account their level of knowledge and individual needs. This allows students to learn material at their own pace and level of difficulty. Chatbots can make teachers' tasks easier, for example, by automatically checking assignments and generating reports on student progress. This allows teachers to focus on the most important tasks, such as planning lessons and curricula.	Efficiency: Chatbots can handle a large volume of requests at once and can quickly provide answers and problem resolution / Training requirements: Chatbots require training and setup before use, which can be time-consuming and costly.
Instant feedback Scalability	Chatbots can provide immediate feedback to students, helping them to quickly assess their progress and correct mistakes. Chatbots can serve a large number of students at the same time, making learning more scalable and allowing for more efficient use of resources.	Saving time: Chatbots can serve many users simultaneously, which reduces waiting times and improves service quality.
Convenience Analytics	Chatbots can be used anytime and anywhere, making learning more accessible to students who have limited access to teachers or resources. Chatbots can	Convenience: Chatbots can be used in different formats and on different devices, which ensures ease of use and accessibility for all users.

	collect data on student behaviour and resource usage, which allows to analyse the effectiveness of curricula and make necessary changes to improve the learning process.	
Saving time: Improving the learning process	Chatbots can process large amounts of information and perform routine tasks automatically, allowing teachers to focus on more important tasks. Chatbots can provide students with additional information and materials, which helps to improve the learning process and expand students' knowledge.	Automation: Chatbots can automate routine tasks and operations, which increases productivity and reduces costs / Limitations of interaction: Chatbots cannot completely replace human interaction, especially in cases where empathy, compassion, or detailed explanations are required.
New opportunities Skills development	Chatbots can provide students with access to new learning formats, such as games and interactive programmes, which makes learning more interesting and engaging. The use of chatbots can help students develop skills such as independence, responsibility and confidence in their knowledge.	Interactivity: Chatbots can provide interactive experiences that can enhance engagement and improve the learning process / Support needs: Chatbots need constant support and updates to ensure proper operation and user satisfaction.

DISCUSSION

The results of our study align with the overarching trend in information technology, emphasizing the active development of chatbots using artificial intelligence (AI). The integration of AI empowers chatbots to be more efficient, adaptive, and capable of learning from user interactions. Machine learning algorithms, particularly neural networks, play a crucial role in enhancing various aspects of chatbot functionality, including speech recognition, contextual understanding, and response generation. Comparatively, our findings resonate with other studies that highlight the importance of integrating chatbots with other systems, such as CRM, ERP, and databases, to maximize their effectiveness. This synergy allows chatbots to provide more comprehensive and tailored interactions with users, contributing to their utility in diverse contexts. Our study echoes the broader discussions within the field, shedding light on critical issues associated with the development of chatbots using AI. The ethical considerations surrounding user data, privacy standards, and the secure integration of chatbots with critical systems are consistent themes across various research endeavors. Addressing these ethical concerns is paramount for ensuring the acceptability and widespread use of chatbots in society. Furthermore, our study reiterates the challenges related to data availability for successful machine learning. Acknowledging that some areas may face limitations in data accessibility, our findings underscore the need for tailored approaches in developing chatbots to ensure adaptability across diverse contexts. The

potential impact of intelligent chatbots and automated systems on employment and job security, as mentioned in our study, aligns with concerns raised in other research. The implications on certain industries and the broader workforce must be carefully considered to mitigate adverse effects on employment.

In summary, our study contributes to the ongoing discourse by reinforcing and expanding upon key findings observed in other research. By addressing ethical issues, cybersecurity concerns, data availability challenges, and potential impacts on employment, our research seeks to enhance the understanding of the multifaceted landscape of chatbot development using artificial intelligence.

CONCLUSION

The essence of our research lies in its significant contribution to the advancement of artificial intelligence and the enhancement of human-technology interaction through the study of chatbots. In a landscape marked by rapid technological changes and a surging demand for intelligent interaction systems, our research delves into the pivotal role of chatbots in addressing these dynamics. Our study unveils the practical significance of chatbot research by demonstrating its transformative impact on various spheres of human activity. Particularly noteworthy is the role of chatbots in making the learning process more interactive and engaging, a facet increasingly recognized in the education sector. As chatbots gain popularity in education, their ability to provide vital support to students, customers, and employees becomes increasingly evident. The novelty of our research lies in its distinct focus on "Chatbots as a Key Engine of Artificial Intelligence: Trends and Prospects for Development." By dissecting current trends and anticipating future developments, our study positions itself at the forefront of understanding the intricate dynamics between chatbot technologies and the ongoing evolution of artificial intelligence. Our research not only highlights the importance of chatbots but also provides valuable insights that contribute to the broader field of research on artificial intelligence technologies and their pervasive impact on various aspects of human life.

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ChatGPT TECHNOLOGY AS A STRATEGIC TOOL IN ECOTOURISM DESTINATION MARKETING: A ROMANIAN CASE STUDY

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ABSTRACT

In the era of digital communication, the utilization of technology in tourism marketing strategies has gained paramount importance. As digital technologies continue to evolve, their impact on marketing strategies across various sectors has become increasingly significant. The practical potential of AI-generated content may be considered by destination marketing practitioners to create personalized, effective campaigns that resonate with diverse audiences, enhancing their connection with travelers. Therefore, this paper specifically examines how advanced artificial intelligence, such as OpenAI's GPT-3, is shaping the future of destination marketing in the ecotourism industry. The main purpose of this study is to ascertain how Destination Marketing Organizations (DMOs) can utilize Chat GPT-3 to produce engaging and targeted content on Facebook, thereby increasing visitor engagement. The methodology involves a mixed approach, starting with the analysis of existing content on selected ecotourism Facebook pages, followed by the creation and evaluation of new GPT-3 generated posts. Data was gathered through secondary research and surveys administered to administrators from seven ecotourism destinations in Romania. The study aims to determine how AI-generated content can influence user interaction and preferences, offering insights into the practical applications of Chat GPT-3 in destination marketing. This research is significant as it provides empirical data on the integration and impact of Chat GPT-3 technology in the promotion of ecotourism, offering actionable insights for DMOs to enhance their digital marketing strategies.

Keywords: ecotourism, destination marketing, social media, artificial intelligence, ChatGPT

1. INTRODUCTION

In the current context, characterized by rapid technological evolution across industries, the tourism sector is no exception, prompting a need to explore technology's potential to revolutionize marketing strategies within ecotourism. One notable innovation in this trajectory is the application of artificial intelligence (AI), exemplified by platforms like ChatGPT, showcasing its prowess in generating high-quality promotional content for diverse tourism destinations [1].

Significantly, social media engagement has become a cornerstone in destination tourism, facilitating interactive practices between businesses and customers while

fostering connections among tourists themselves [2-3]. Literature underscores the growing reliance of tourists on information and interactive experiences garnered from social media pages of tourist destinations during their decision-making processes [4-5]. It is asserted that tourists find resonance with content that is not only relevant and comprehensive but also aids in fulfilling their specific search intentions, thus exerting a notable influence on their purchasing decisions [6-7].

Although the social media impact on consumer behaviour cannot be ignored, many destinations do not know very well how to manage them to reach their target publics, what communications strategies to follow or what information to transmit [8]. Social media usage among top tourism destination is still largely experimental and strategies vary significantly. Most of them use mainly Facebook in their communications [9].

The emergence of AI-generated content, exemplified by language models like GPT-3 [10], presents a transformative paradigm in content creation. This innovation aligns seamlessly with modern travellers' information-seeking behaviour [11]. Considering these dynamics, the main goal of this study is to contribute to the comprehension of the seamless integration of AI-generated content into the marketing strategies employed by tourism and ecotourism destinations. Scholarly insights underscore the ongoing dialogue regarding technology's infusion into ecotourism [12-14]. By integrating technology thoughtfully and aligning it with sustainability principles, ecotourism aims to enrich experiences, engage broader audiences, and uphold its commitment to environmental stewardship.

Integral to this exploration is the engagement of administrators responsible for these Facebook pages, providing invaluable insights into their perceptions regarding the integration of technology. Additionally, their assessment of the efficacy of AI-generated content in enhancing audience engagement and heightening the allure of ecotourism offerings forms a pivotal aspect of this investigation. Thus, this article strives to underscore the latent potential of ChatGPT technology as a transformative instrument for pioneering content creation in the domains of both tourism and ecotourism promotion.

2. Literature review

In the context of this study, the theoretical framework consists of two key concepts: destination marketing and artificial intelligence (AI). These concepts collectively form the foundation upon which your research is built, guiding your exploration of the role of GPT-3 technology in enhancing content creation for ecotourism destinations' social media content.

The interconnections between these concepts are pivotal to the study's premise. Destination marketing seeks to engage travellers and promote destinations, while the introduction of AI, represented by GPT-3, introduces a cutting-edge tool for content creation that aligns with the demands of modern travellers.

2.1 The emergence of Artificial Intelligence (AI) in the tourism industry

In the era of digital technology, AI wields a profound influence and instigates a notable transformation in marketing communication and channels, as acknowledged by Qiao et al. [15]. Within the realm of industry practitioners and academics, there is a consensus that AI is gaining substantial momentum through its application in various

domains, such as big data analysis, machine learning, social media analysis, algorithmic decision-making, simulation modelling, and other techniques. These techniques are instrumental in enhancing brand visibility in the global market, as noted by Syam & Sharma [16].

AI encompasses a collection of algorithm-driven machines, designed, and coded to facilitate individual learning from data, thereby enabling predictions and exceptional performance through artificial neural networks, machine learning, robotic process automation, and text mining, as elucidated by Huang and Rust [17]. Furthermore, AI intelligently collaborates with businesses and marketers to create and organize knowledge in marketing strategies aimed at promoting their brands worldwide, as emphasized by Davenport and Ronanki [18].

AI's role in content generation evolved from rule-based systems to sophisticated models capable of generating human-like text, images, and even videos [19]. This advancement has enabled marketers to create content at scale and with unprecedented precision [20]. Among the prominent AI models, GPT-3 (Generative Pre-trained Transformer 3) has garnered significant attention for its ability to generate coherent and contextually relevant text across diverse domains [10].

ChatGPT, a variant of the GPT-3 model, is specifically designed for natural language conversations. It possesses the capability to engage in dynamic dialogues, making it a promising tool for crafting interactive and engaging content [21]. This technology's potential applications in marketing and content creation are multifaceted, including customer support, chatbots, and personalized content generation [22].

Existing literature highlights the use of AI, including text generation models, for content creation in the broader tourism industry [23]. However, the integration of AI, especially ChatGPT technology, in crafting content tailored to individuals with a distinct interest in ecotourism destinations is a relatively uncharted territory.

Considering the above information, the first research question is: How can GPT-3 technology be used to generate contextually relevant and captivating posts, carefully tailored to individuals with a distinct interest in ecotourism? This research question aligns with the primary objective, as it seeks to explore the practical application of ChatGPT in achieving the goal of creating highly targeted and engaging content for ecotourism destinations.

2.2 Artificial Intelligence (AI) & Destination Marketing

This literature review delves into the connection between AI-generated content and destination marketing, with a specific focus on the perceptions of administrators of ecotourism destination Facebook pages regarding the effectiveness of AI-generated content, such as GPT-3, in attracting and engaging the target audience.

In recent years, AI's role in marketing has gained attention. The integration of AI technologies into conventional marketing approaches is recommended to optimize their impact, as observed by Huang et al. [24]. The adoption of AI among travel and hospitality professionals has been slower compared to other industries, but recent developments indicate a rising relevance of AI in travel and tourism [25]. As AI, particularly GPT-3 technology, assumes an innovative role in connecting destination marketing, this study aims to explore its potential disruption in content creation. AI, like ChatGPT, offers several benefits, such as enhancing user experiences and improving content creation efficiency [22]. However, it's essential to consider the limitations of AI-generated content. AI heavily relies on data and algorithms, potentially lacking the

intended tone and creativity that humans naturally bring to content creation [26]. This dependence on existing data can limit AI's ability to generate fresh and original ideas [27].

In light of these considerations, the second research question that guides this study is: How do administrators of ecotourism destination Facebook pages perceive the AI-generated content, like GPT-3, in attracting and engaging the target audience? This question connects the theoretical knowledge of AI-driven content to its practical application and will be explored through interactions with administrators responsible for managing Facebook pages related to ecotourism destinations. These administrators play a crucial role in crafting and distributing content to captivate their desired audience. Therefore, the second objective of this study was to obtain feedback from the administrators of the Facebook pages of the selected destinations, including opinions about hashtags, the use of emojis, and the proposed text for the posts.

3. Materials and methods

The methodology employed in this scientific investigation consists of a coherent series of interconnected actions aimed at realizing the specified research objectives. It is essential to underscore that this methodology takes on an exploratory character, striving to provide estimation and establish acquaintance with a particular context within a relatively less investigated domain.

The initial step involves the identification of seven distinct ecotourism destinations within Romania that will be subjected to thorough analysis. The designated locations for examination are Tara Dornelor (TD), Băile Tușnad și împrejurimile (BT), Colinele Transilvaniei (CT), Eco Maramureș (EM), Ținutul Zimbrilor (TZ), Pădurea Craiului (PC) and Tara Hațegului și Retezat (TH). The selection of these seven regions was predicated on their capacity to typify Romanian's eco-tourism diversity. The social media channels chosen for examination consisted of the official Facebook pages dedicated to tourism for these designated destinations. Among the chosen destinations, Facebook emerges as the most extensively utilized social media platform. Furthermore, it holds the position of being the most popular social networks worldwide as of January 2023, ranked by number of monthly active users, according to Statista [25]. Consequently, Facebook plays a pivotal role in the realm of social media communication.

Generation of posts using GPT-3 technology was the next step. This part of the methodology is designed to bridge theory and practice, enabling the exploration of the untapped potential of ChatGPT within the ecotourism marketing domain. To achieve this, the capabilities of GPT-3 technology were harnessed to generate posts tailored to the specific characteristics of each ecotourism destination. Leveraging the previously identified interest categories and keywords, the posts were generated to fit the specifics of each destination.

The final methodological step aimed to collect insights from Facebook page administrators regarding a post generated through GPT-3 technology. We performed online structured interviews, between the 1st and 15th of July 2024, to collect primary data from the selected destinations' Facebook page administrators. Invitations to participate in this study were sent to the administrators of the seven ecotourism destinations which had a social media page via Facebook messenger. The interview themes focused on identifying respondents' opinions regarding GPT-3-generated posts

for their destination, covering aspects like general evaluation of the post created with ChatGPT, hashtags, emojis and text content evaluation, as well as intentions to use ChatGPT to create social media content for the destination, as well as barriers and advantages in the use of this generative AI tool. Through this methodology, we aim to shed light on how generative AI-driven content creation can be harnessed to elevate the marketing strategies of ecotourism destinations, contributing valuable insights to the field.

4. Results and discussions

ChatGPT technology was employed in order to create new text content (a post) for each destination, utilizing the identified categories and keywords, with the aim of evaluating the effectiveness of this technology in producing content for the Facebook pages of ecotourism destinations. Seven post contents resulted for each of the studied ecotourism destination, including text, hashtags and emojis. Therefore, the first objective of this study was attained.

After sending them the post content generated by ChatGPT, it was important to evaluate the page administrators' opinions about the material submitted for posting. The second objective of this study was to obtain feedback from the administrators of the Facebook pages of the selected destinations, including opinions about hashtags, the use of emojis, and the proposed text for the posts. In order to keep the confidentiality of their responses, each respondent received a code (e.g. Rx) according to the order of their interview.

The general evaluation of the post created by ChatGPT for each of the analyzed destination was average to low in the case of all interviewed Facebook page administrators. Most interviewed subjects considered the post to be too general or that *“it does not capture the unique selling points of the destination”* (R6) *“it is not necessarily effective for creating hook texts”* (R4). R7 suggested that the content created by ChatGPT *“is not appropriate because the promises that are made in the post, do not exist in reality and the information is not specific to their destination, it could apply to any tourist destination in Romania”*.

4.1. Content evaluation of the proposed post created with ChatGPT

The hashtags created by ChatGPT for each destination post were considered appropriate by most respondents, but one of them specified that they *“are only extracted from the text and they are not common words/terms that followers use to search for ecotourism experiences”* (R4). The emojis proposed by ChatGPT for the created post were considered relevant and useful by most respondents, but *“a bit too abundant”*. Moreover, R5 mentioned that *“they are not used according to the intention of capturing the attention that the text suggests”*.

The text created by generative AI was the least appreciated by the respondents, as it *“has no essence, no personality”* (R3), *“certain phrases are repeated”* (R4), *“it's good if we want to write a technical dissertation about the destination, but it is not appropriate to attract tourists or traffic on the Facebook page”* (R5), *“the tone of the post is too general and superficial”* (R7). Although he considered that the text proposed by ChatGPT needs to be adjusted and cannot be used in the proposed form, R1 declared that *“No text guarantees that it will be the best, they must be tested”*. Another administrator of a destination's Facebook page (R2) mentioned that *“the text is*

rather general, it has nothing specific, particular, that differentiates it from other destinations/posts, it does not bring anything new” while R3 suggested that the text *“does not create emotion”*. A possible explanation for the negative appreciations of the text created by generative AI is that it uses international sources and translates the content into specific languages, so *“there are certain formulations that do not necessarily have a semantic meaning in the Romanian language”*, as one of the respondents outlined. These results indicate that the content generated by AI is considered a tool by ecotourism destinations’ social media creators, but one that needs many adjustments. However, R5 considers that the needed adjustments *“are not possible now, with the existing technology as emotion is not yet mastered by AI well enough”*. She also outlined that *“texts created with AI can still be easily recognized, thanks to a rigid semantics, which does not yet imitate current speech well enough”*. Furthermore, R2 considers that social media content creators *“must deliver to the AI the necessary information to customize and improve the way they communicate/promote tourism destinations on Facebook”*.

4.2. Intentions to use ChatGPT for the creation of destination social media content

In the final part of the interview, respondents were asked to share their future intentions to use ChatGPT to create online content on their destination Facebook page. Two respondents suggested that they will use this technology in the future because they find it *“a very useful tool, which it can be inspiring”* although *“it can't always reflect reality”* or because *“it integrates appropriate emojis into the text, which are catching on well”*. One of them outlined that ChatGPT *“can help you get structure, clarity on text, effectively plan online communication activities, get more perspectives and options to communicate/promote something”* (R2). Moreover, R1 considers that *“in time, this AI tool will surely be more efficient”* in creating dedicated content. Other interviewed subjects mentioned that they intend to use ChatGPT only partially, *“to bring small adjustments to the text they create on their own”* (R6), *“because, in itself, this tool is useful, used properly”* (R2), *“because every young person employed on social media uses this tool and we cannot get rid of it”* (R5). One respondent clearly highlighted that this generative AI tool can be used as *“a text editor, not a full editor”* (R3). Several barriers were indicated by the interviewed persons in the way of creating online content with ChatGPT:

“This tool can be used in the elaboration of some texts, but which, most of the time, sounds like a template.” (R2)

“... it lacks the emotion transmitted in the text” (R5)

“Creating a custom style of communication on a page is mostly up to the content creator. And this must be reflected inclusively in posts made with the support of AI. So it's a more laborious process behind it. It is not enough to let the AI deliver some texts, perhaps beautiful, but empty of content.” (R2)

“Posts created by ChatGPT still don't seem that human” (R1).

“I find it disturbing how he exaggerates everything, everything is superlative, it repeats himself. I mean, it gives me the feeling of fakeness.” (R3)

“There is a limit to which it is useful, and beyond which the text needs to be processed and reformulated” (R7).

However, certain advantages were identified by some respondents in the use of ChatGPT for the creation of online content for social media: *“it is useful in technical aspects related to communication”* (R5), *“it can find information, make correlations”* (R3). Two respondents reported that they have already used this generative AI tool but that they have only used the content partially: *“Until now, the posts I made with the help of ChatGPT were inspired by the results I was getting, or took parts, but I never used a whole text”*, or that *“there is always the human factor that intervenes for semantic and status changes that must be transmitted, depending on the post”*.

5. CONCLUSION

Against the backdrop of a rapidly transforming landscape for modern tourism, one catalyzed by the profound impacts of technology on traveler behavior and destination marketing methodologies, the pursuit of innovative approaches becomes paramount. With the omnipresence of social media platforms, contemporary tourists are increasingly reliant on digital channels to seek information, derive inspiration, and make informed choices regarding their travel plans. This paradigm shift serves as the impetus for our quest to explore novel methodologies that leverage cutting-edge technologies to enhance destination promotion strategies. In this context, the emergence of artificial intelligence (AI), and more specifically AI-generated content, heralds a transformative avenue with considerable potential. In response to evolving traveller expectations [28-29], our research investigates the integration of AI-generated content within ecotourism destinations.

By examining the synergy between destination marketing and AI-generated content, this study contributes to understanding the evolving digital landscape's implications for the Romanian ecotourism sector. This exploration is particularly relevant as ecotourism embraces technology's gradual assimilation to broaden its reach and offer innovative, sustainable experiences. Overall, the content created by ChatGPT for each of the analyzed ecotourism destination was not well evaluated by the administrators of their Facebook pages and several barriers were mentioned in the adoption of this generative AI tool in the creation of social media content.

The practical potential of AI-generated content in enhancing visitor engagement on social media platforms is underscored. This insight empowers destination marketing practitioners to create personalized, effective campaigns that resonate with diverse audiences, enhancing their connection with travellers. However, this study reveals that the administrators of Facebook pages for ecotourism destinations in Romania have not identified all the advantages for brought by the integration of ChatGPT in their social media content creation process. Therefore, we may conclude that this study is not in line with previous researches, which highlighted the following benefits brought by ChatGPT to destination marketing: accelerated content generation [30], diverse content ideas inspiring creativity [31], personalized interaction with users [32], suggestions for novel content formats [33], and the adaptability to tailor customer interactions [30], ultimately enriching satisfaction and loyalty.

As AI-generated content gains prominence in destination marketing, policymakers could consider establishing guidelines that ensure transparency and authenticity. Moreover, they could organize seminars to inform destination managers about the potential and opportunities brought by the use of ChatGPT in the field of online

destination marketing. Moreover, as suggested by certain respondents, respondents' opinions might change with the advancements and improvements of ChatGPT and maybe with the appearance of new generative AI tools which can assist social media content creators.

Despite its contribution to the tourism literature on the emergence and use of AI tools for destination marketing, this paper has several limitations. First, it employs a qualitative research method, which cannot allow researchers to generalize the results. Future studies may consider using quantitative research methods, such as surveys, to collect data from a large number of respondents, e.g. administrators of social media pages for a larger variety of tourist destinations. Second, the present paper is only focusing on a single type of destinations (ecotourism), so other future studies may consider different types of destinations and maybe even perform comparisons among them (e.g. coastal versus mountain destinations) regarding their administrators' opinions regarding the use of generative AI in social media content creation. Moreover, cross-country comparisons might be interesting, as this paper is only focusing on a Romanian context. Thirdly, this research only considers Facebook and other studies may consider including other social media channels in the analysis when studying the opinions of social media content administrators for certain destinations (e.g. Twitter, Instagram, TikTok).

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MANAGING HOSPITAL LOGISTICS USING AI

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ABSTRACT

Artificial intelligence (AI) is becoming increasingly important in various sectors, including healthcare. One of the key areas where AI can significantly improve patient care and hospital efficiency is hospital logistics management. [1], [2] This paper presents the potential of artificial intelligence (AI) to support the strategic management of logistics infrastructure; operational management for hospital supply planning; and operational improvement i.e.: logistics process flows. The paper uses a monographic research method to describe two hospitals using AI in hospital logistics management. The examples show that the management of resources, internal transport, medical waste and patient data are activities that require advanced technological solutions. The examples show that AI is already being successfully implemented in healthcare units.

Keywords: Artificial intelligence (AI), hospital management, logistics

INTRODUCTION

Effective logistics management is one important element in coping with the increasing demands placed on health systems worldwide. Optimising logistics activities leads to a significant reduction in operating costs and allows more resources to be allocated to patient care itself. [3]

Three levels can be distinguished in logistics management: strategic, tactical and operational. Each of these levels requires the implementation of management functions that are key to the quality of patient care and the efficiency of the health unit. [4]

Logistical strategic management involves setting key strategic objectives. Decisions at the strategic level concern the planning, implementation and organisation of the logistics system. [5] One builds a supply chain at this level by establishing and consolidating relationships with business partners, i.e.: suppliers of medical and non-medical goods and external companies that will provide logistics services. In public health units, the selection of co-operators is described by procedures and legally bound. The logistics system (Figure 1) is a permanent element, but can evolve towards a modern one through the implementation of artificial intelligence. Places to implement AI are highlighted in Figure 1.

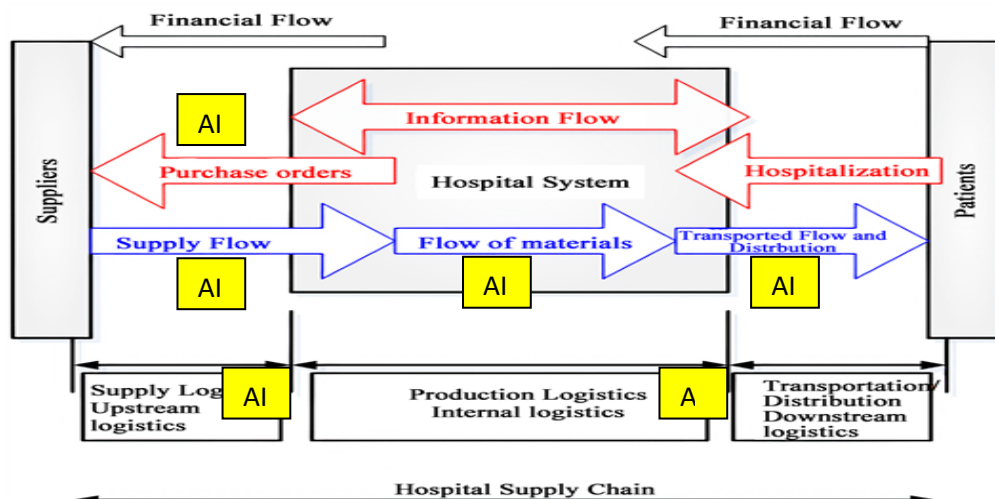


Figure 1: Diagram of the Hospital logistics system with AI application areas

Source: based on: T. Manal et al., Literature Review and Classification of Performance Analysis Methods, Hospital Supply Chain.” (2017).

Tactical logistics management is concerned with the implementation of medium-term plans, based on these: renegotiates contracts with suppliers and customers (e.g. waste), makes decisions on stock holding. It plans or re-engineers/improves medical and non-medical logistics processes. Implement improvements to non-medical logistics processes such as: Movement of patients, staff and visitors; Storage and transport of foodstuffs; Storage and transport of hospital linen; Storage and transport of waste: medical and household, kitchen and secondary waste. Improvements implemented in medical logistic processes such as: Storage and transport of biological material; Storage and transport of blood and blood products; Storage and transport of drugs and medical devices; Storage and transport of infusion fluids: drips, infusions; Storage and transport of sterile materials: surgical instruments, surgical packs; Storage and transport of documents. Logistical management at the operational level means controlling the processes that take place and responding to any shortages and downtime by ensuring the ongoing flow within the hospital and its supply chain. Effective logistics management at every strategic, tactical and operational level can lead to significant reductions in operating costs and allows more resources to be allocated to patient care.

MATERIALS AND METHODS

The article presents a review of the literature on the implementation of artificial intelligence in logistics management in hospitals. A systematic review of the literature allowed us to identify management areas already supported by AI and other Industry 4.0 tools. Then the monographic method was used. Good practices in the functioning of AI were recalled and described. AI solutions already implemented and operating in leading healthcare entities operating in the world (4 hospitals) are described.

I. RESULTS OF THE LITERATURE REVIEW

1. Logistics management in the hospital using AI

1.1. Strategic logistics management in the hospital using AI

Hospitals widely use the latest technologies to build and ensure the efficiency of the logistics system. In particular, there are no uniform guidelines when building hospital logistic systems. Most existing hospitals try to adapt their internal logistics systems to legal requirements and regulations. When building external logistics systems (so-called supply chains), hospitals encounter a number of difficulties, such as: high sensitivity to fluctuations in the consumption of goods resulting from the demand for services dictated by new diseases, pandemics or armed conflicts. Therefore, building efficient logistics systems becomes a challenge. When configuring logistics systems, you need to know the exact characteristics of the products, including their physical attributes, value and flow characteristics. To ensure the continuity of the flow of materials, modern warehouse complexes equipped with specialized equipment are necessary. The challenge is to implement sustainability initiatives by analysing waste and identifying opportunities to reduce, recycle or recover energy from waste. Information flows in logistics systems are dynamic and require constant monitoring.[6] That is why hospitals decide to implement international GS1 standards for identification and data exchange. Legal regulations have already been developed in EU countries for the implementation of GS1. Outside the EU, Great Britain has developed the most efficient solutions. The public health care system in Great Britain, i.e. the National Health Service - NHS [Better Procurement Better Value Better Care: A Procurement Development Program for the NHS 2013], has adopted a special strategy aimed at achieving greater economic efficiency in the functioning of public health care entities. The genesis of the program are financial analyses and projected savings. In the British model, the decision was made to use GS1 standards and solutions to streamline commercial processes and transactions for supply chain management. The special role of GS1 international standards is seen in areas such as: • broadly understood rationalization of intra-hospital logistics processes, • support for centralized inventory management models, • increase in patient safety. In turn, the results of the implementation of GS1 standards in specific areas of logistics in hospitals in Denmark showed the significant importance of these standards for managing the flow of medicines and medical devices. [7] In Japan, GS1 standards supports goal setting, tracking progress and optimizing resource allocation for sustainable resource and waste management. Educational and training programs for hospital staff use GS1 standards, which enable simulation of hospital resource and waste management scenarios.

The GS1 standard for identification and data exchange combined with big data and artificial intelligence improves the sustainability of hospital supply chains. At the tactical level of logistics management, the mentioned Industry 4.0 solutions make it possible to reduce: the work of hospital staff, fuel consumption, carbon dioxide emissions, optimize predictive maintenance work to protect medical equipment, etc.

1.2. Tactical hospital logistics management using AI

The most important thing in the medium-term perspective of hospital management seems to be forecasting the demand for drugs, medical devices, blood, etc. AI can also contribute to optimizing inventory management within hospitals. By analyzing historical data, patient demand patterns, and supply chain information, AI algorithms can predict future demand and optimize inventory levels. This ensures that hospitals have the right amount of medications, supplies, and equipment on hand, minimizing stockouts and wastage. Additionally, AI can automate the replenishment process, streamlining procurement and reducing administrative burdens. [8]

The construction and automation of routine medical and non-medical processes can be supported by AI. AI helps analyze historical process data, define bottlenecks, optimize process costs and shorten process flow times. [9], [10]

1.3. Operational logistics management in a hospital using AI

The use of AI in logistics operational management has the greatest recognition among researchers. Supports staff flow management. One area where AI can enhance operational efficiency is in workforce management. AI algorithms can analyze historical data, staff schedules, patient demand patterns, and other factors to generate optimized staff schedules. By considering factors such as skill levels, workload distribution, and patient needs, AI can ensure that the right staff members are assigned to the right tasks at the right times. This improves overall productivity, reduces staffing gaps, and minimizes staff burnout, leading to better patient care and staff satisfaction. [11]

AI automation of warehouse management. AI can also support the automation of warehouse management processes. Systems integrated with RFID and IoT technology enable real-time inventory tracking. AI analyses this data, identifying potential problems such as expired medicines or approaching expiry dates. This allows hospital staff to react quickly to changes and take appropriate action. [12],[13]

AI automates warehouse management.. Furthermore, AI-powered predictive analytics can assist in optimizing bed management and patient flow within hospitals. By analyzing historical data, patient admission patterns, and clinical information, AI algorithms can predict patient arrivals, length of stay, and discharge patterns. This enables hospitals to proactively manage bed availability, allocate resources efficiently, and reduce patient wait times. Real-time monitoring of patient flow can also help identify bottlenecks and optimize workflows, ensuring smooth transitions between different departments and improving overall patient experience. [14]

AI optimizations internal transport. Internal transport in a hospital includes the transport of patients, medical samples, medicines and other materials. AI can optimize these processes by analyzing data on routes, transport times and resource availability. Intelligent transportation systems can automatically plan and coordinate shipments, minimizing waiting times and increasing operational efficiency. AI supervises hospital robots. Robots equipped with AI can move autonomously around facilities, delivering medicines, samples and meals. Thanks to this, medical staff can focus on patient care, and logistics processes are more effective and less error-prone. [15]

AI supports medical waste management, which is key to ensuring safety and regulatory compliance. AI-based systems can analyze the composition of waste, identifying materials that require special treatment. Thanks to this, hospitals can manage waste more effectively, minimizing the risk of environmental pollution and threats to public health. AI enables monitoring and analysis of medical waste data. Algorithms can identify patterns and trends that help optimize waste management processes. This allows hospitals to implement more effective disposal strategies, which translates into cost reductions and improved safety. AI using computer vision and machine learning algorithms analyzes images or video feeds from garbage bins and classifies waste into appropriate categories. Artificial intelligence-based systems can track and monitor waste generation, disposal and then improve recycling rates. Artificial intelligence algorithms can use historical data on waste generation patterns to predict the future of waste volumes and composition. This can help hospitals optimize waste management

strategies and intelligent container management and emptying. Using sensors and data analysis, artificial intelligence can optimize waste collection routes and reduce unnecessary emptying. Artificial intelligence can help accurately identify hazardous waste, ensuring it is properly handled and disposed of. [16],[17],[18]

II. RESULTS OF THE REVIEW OF IMPLEMENTATION EXAMPLES

Using the monographic method, successful AI implementations in leading hospitals around the world were described. A good example of the use of AI is the Maastricht University Hospital in the Netherlands. Maastricht University Hospital (Maastricht University Medical Center+, MUMC+) is one of the leading medical centers that successfully implements modern technologies to improve the quality and efficiency of its activities. One of the key elements that distinguishes MUMC+ from other medical facilities is the implementation of a system based on artificial intelligence (AI) for resource management and internal transport. The hospital manages resources using AI and optimizes medical and non-medical processes. The AI system analyzes data on inventory levels of medicines and medical supplies, predicting future demand. Thanks to advanced AI algorithms, it is able to accurately forecast what resources will be needed in the coming weeks, which allows for the optimization of order processes. The AI system in MUMC+ eliminates problems by automatically adjusting order levels to actual demand. This allows the hospital to avoid both shortages and excesses, which significantly reduces storage costs and improves resource availability. AI in MUMC+ also supports the planning of transport routes inside the hospital. Transport of patients, medical samples, drugs and other materials. This makes it possible to minimize the transport time of patients and materials, which increases operational efficiency and patient comfort. This translates into faster diagnoses and treatment, and thus improves the quality of patient care. Thanks to innovations in operational logistics management, MUMC+ is becoming a role model for other medical facilities around the world.[19]

Mount Sinai Hospital in New York uses AI to manage medical waste (general, hazardous, infectious, radioactive). Waste segregation at source into color-coded containers has been perfected. AI analyzes waste production data, identifying areas where more effective separation and disposal procedures can be implemented. As a result, the hospital reduced waste management costs and improved regulatory compliance. The implementation of artificial intelligence in waste management in hospitals has several advantages, such as: segregation, cost minimization, and sustainable development. Those responsible for AI work in the hospital note that there are challenges and risks associated with AI-centric waste management, such as implementation difficulties, data dependence, technical complexity, ethical privacy issues, resistance to change and legislative compliance requirements. Changi General Hospital, Sutter Health, King Abdulaziz Medical City and AIIMS Delhi adhere to stringent requirements for proper disposal and are actively pursuing AI-centric solutions. The hospital already uses AI, computer vision, optimizes waste collection routes, uses image recognition and waste classification algorithms, ensuring proper treatment and disposal. Another good practice for implementing AI is provided by Changi General Hospital in Singapore, which uses artificial intelligence to automatically segregate waste and optimize collection routes. [20],[21]

CONCLUSION

It should be noted that although artificial intelligence can offer valuable support in managing hospital logistics, humans and their expertise in making strategic, tactical and operational decisions are still crucial. The good practices presented in this article show that AI works perfectly at the operational level. Sutter Health in the United States uses artificial intelligence to remove waste and optimize waste and recycling tracking. King Abdulaziz Medical City in Saudi Arabia is implementing AI to help improve efficiency and properly dispose of waste. AIIMS Delhi in India is researching artificial intelligence for waste segregation and recycling management. But these examples show, that AI collaboration with healthcare professionals is still necessary to ensure safe and effective resource management practices. Moreover, approximate examples show that Despite numerous benefits, the implementation of AI in hospital logistics is associated with challenges such as: - Costs (investments in AI technologies can be significant, which is a barrier for many medical facilities); - Staff training (the implementation of new systems requires appropriate staff training, which involves additional costs and time); Data security (protecting medical data from cyberattacks is a key challenge that requires advanced security measures). The literature review and the cited implementation examples confirm that the future of using AI in hospital logistics is promising. [22], [23]

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ARTIFICIAL INTELLIGENCE AND ART

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ABSTRACT

Artificial Intelligence (AI) has changed paradigms of creativity and art, raising questions about the capacity of machines to create works that evoke emotional response and possess originality. This article explores whether AI systems can create 'real' art and what this means in terms of philosophy, aesthetics and cultural norms. Examples of AI art such as "Théâtre D'opéra Spatial" and "Portrait of Edmond de Belamy" are analyzed to assess their emotional and artistic value. The question of originality of AI art is discussed through the lens of copyright, imitation theory and cultural perceptions, providing a deeper understanding of how AI affects traditional notions of creativity.

Keywords: artificial intelligence, art, creativity, culture, authorship, ethics, law, philosophy.

INTRODUCTION

Art, as a form of self-expression and a means of communication, has historically belonged exclusively to humans, as it was believed to be based on deep personal experience, intuition and emotional interpretation. With the advent of artificial intelligence in the twenty-first century, this notion has begun to be questioned: is it possible for machines not just to imitate but also to create authentic works of art? In recent decades, advances in neural networks and algorithms such as Generative Adversarial Networks (GANs) have led to the creation of artworks that evoke aesthetic and emotional responses, requiring academic analysis and interpretation.

Considering AI in the context of art poses a question for researchers: can algorithms truly create original, emotionally meaningful works or are they limited to the roles of tools and imitators of human creativity? Foundational works in the philosophy of creativity, such as Margaret Boden's theories on creativity and the types of creative act (combinatorial, transformative, and exploratory), provide a theoretical framework for exploring the possibilities of AI in the arts [1]. Boden argues that the creative process can be replicated in computing systems, but this requires a specific type of information processing that may be limited by technical capabilities.

In addition to the philosophical aspect, the use of AI in the arts also raises important ethical and legal issues, including copyright and intellectual property rights. AI-created works such as "Théâtre D'opéra Spatial" and "Portrait of Edmond de Belamy" have sparked debates about authorship and originality, especially in light of traditional notions of art based on unique human experience and intuition. Philosophers of art, such as Arthur Danto, have described art as a collection of cultural symbols unique to human experience

[2]. However, with the use of AI, this concept has begun to change, requiring a deeper academic analysis.

The purpose of this paper is to explore the ability of AI to create art with original aesthetic and emotional characteristics, using examples and theoretical approaches to analyze the creative process. The study reviews the main theoretical positions concerning the nature of creativity, cultural perceptions of AI art, and copyright issues. This research aims to expand the understanding of the limits of creativity possible for artificial intelligence and the role of human perception in determining the value of such works.

Creativity and artificial intelligence: theory and examples

Understanding creativity within artificial intelligence requires reference to fundamental theories and models that have been proposed by cognitive scientists and philosophers. One of the key theories comes from Margaret Boden, who in her book *The Creative Mind: Myths and Mechanisms* proposed three types of creativity: combinatorial, exploratory, and transformative [1].

Combinatorial creativity, according to Boden, is based on creating new combinations from known elements. It is the most common form of creativity in AI art projects such as Generative Adversarial Networks (GANs), which work by combining and “recombining” visual data from a training set. A classic example of this approach is *Portrait of Edmond de Belamy*, created by the Obvious team using GANs. This work was built on a database of over 15,000 portraits from the 14th through the 20th century. The algorithm “learned” the basic elements of style, and by combining them, created a new, “original” image, although the creation process itself boils down to combining patterns that already exist.

More complex forms of creativity, such as **exploratory** and **transformative** creativity, according to Boden, require the ability of the system to go beyond established structures or to transform basic principles in a fundamentally new direction. In this sense, AI tends to remain within the bounds of combinatorial creativity and therefore cannot claim deep originality, since, according to Boden, transformative creativity requires not only the analysis of data but also an intuitive understanding of its cultural significance. This statement emphasizes the limitations of AI in creating truly new, unique art free from the influence of raw data.

Jacques Deleuze, in writings such as *Difference and Repetition*, also discusses the nature of originality and novelty, pointing out that creativity requires not just new combinations, but going beyond established standards and norms [3]. Deleuze emphasizes that art is “the recreation of the new through repetition” that does not remain within the confines of old forms. This philosophical approach can be applied to the analysis of how AI, following algorithmic instructions, is limited in its ability to create something fundamentally new, since its system is built on predetermined parameters.

Emotional response in AI art

An important aspect of art is its ability to elicit an emotional response from its viewers. The perception of emotion in art is described in detail by Arthur Danto in his work *The Transfiguration of the Commonplace*, where he argues that the emotional aspect of art lies in the ability of a work to evoke feelings in the viewer that are often not conveyed at the level of mere visual perception [2]. For Danto, authentic art is not only visually but also metaphysically endowed with meaning that causes the viewer to experience a unique emotional experience.

In the context of AI, works such as *Théâtre D'opéra Spatial*, created using algorithms developed by Anna Riedler and Fabio Giampietro, pose the question: is AI capable of creating works that evoke genuine emotional responses, or do viewers merely project their feelings onto the work? In this case, the algorithm acts as a tool that forms images, but is unable to realize or feel their emotional content itself. Nevertheless, many viewers reported that *Théâtre D'opéra Spatial* evoked a sense of surprise and even an “unexplainable” emotional response, suggesting that emotional response does not always depend on the subjective experience of the author, but may be shaped by the viewer's perception.

On the other hand, work on neuroaesthetics, such as that of Semir Zeki, argues that art perception is associated with the activation of certain neural connections and patterns in the brain, which may explain why AI-created works are able to elicit reactions in viewers similar to those elicited by traditional art [4]. It also suggests that aesthetic perception and emotional response to AI works may be partly driven by cognitive and sensory mechanisms, not just cultural relevance.

Originality, imitation and the problem of authorship

Originality as a concept, especially in the field of art, is closely related to the issue of authorship. In Plato's work *The State*, imitation is seen as the creation of copies of reality, and only that which goes beyond imitation and creates something unique can be considered true art [5]. This definition can be applied to AI art, in which works are generated based on imitation limited to a data set.

Portrait of Edmond de Belamy also exemplifies this problem. The GAN algorithm operates on the basis of imitation and is not capable of true intuitive interpretation, which distinguishes it from the human artist, for whom art is inextricably linked to personal experience and perception. However, it is important to note that despite this, *Edmond de Belamy* was sold at auction for \$432,500, emphasizing its commercial value and status as a work of art, albeit one created by an AI. This case raised copyright issues, as the owners of the algorithm (Obvious) were recognized as authors, but the system itself could not be the subject of authorship.

Legal aspects also play an important role in determining originality and authorship in AI art. In the United States, the Copyright Office has ruled that works created solely by algorithms cannot be considered intellectual property without human involvement [6]. This aspect demonstrates that the concept of originality and authorship in AI art remains debatable, and future intellectual property law will likely be designed to accommodate the contributions of both humans and machines.

Ethics and cultural perception

Ethical and cultural aspects play an important role in the perception of AI art. In his work *The Work of Art in the Age of its Technical Reproducibility*, Walter Benjamin argued that with the advent of technology, the uniqueness and “aura” of a work of art is destroyed, as everyone can become a creator and consumer of art [7]. This view is particularly relevant to AI art, where algorithms can repeatedly recreate new works, blurring the boundary between original and copy.

Some critics of AI art, such as the authors of *Robot Art: On Creativity and Authenticity*, argue that the lack of human experience makes such works less meaningful because they do not convey the cultural and historical contexts inherent in traditional art [8, Ch.4].

Proponents of AI art, on the other hand, believe that machines can stimulate innovation and inspire new forms of expression, thereby expanding the boundaries of art and opening up new cultural directions.

ANALYZING THE EMOTIONAL AND ARTISTIC VALUE OF AI ART

Portrait of Edmond de Belamy: art of imitation or innovation?

The *Portrait of Edmond de Belamy* has become a landmark example of AI art and has resonated with both specialists and the general public. This portrait, created using the GAN algorithm, was based on the analysis of many classical portraits painted by artists from the fourteenth to the twentieth century. GAN (Generative Adversarial Network) in this case acts as an “imitator” - the algorithm tries to recreate the general style characteristic of a traditional portrait, while preserving unique features not inherent in the original works.

In terms of aesthetics, *Portrait of Edmond de Belamy* is an interesting example, as its visual appeal lies in the blurriness of the image, making it both recognizable and somewhat abstract. This unique combination creates a sense of “ghostliness” or “understatement” in the viewer, which is perceived as an innovative element. However, as critics have noted, the composition and style of the work itself was derived through combinatorial analysis and imitation, which calls into question the true originality of the work [1].

Viewers' perception of *Portrait of Edmond de Belamy* also reveals interesting aspects of the emotional response to AI art. Many viewers and critics have noted that this portrait evokes feelings of nostalgia and even anxiety, despite the lack of a specific emotional intent. This can be explained by theories of neuroaesthetics, which indicate that the brain responds to visual distortions and incomplete forms by activating areas associated with emotion processing [4]. Thus, *Portrait of Edmond de Belamy* is able to elicit emotional responses despite the algorithm's lack of empathy and emotional perception abilities.

Théâtre D'opéra Spatial: the creation of surreal images and their perception

Théâtre D'opéra Spatial, the result of a collaboration between Anne Riedler and Fabio Giampietro, is an interactive audiovisual work combining images and sound sequences developed with deep learning algorithms. This work utilizes surreal AI-generated images and poses questions about space and time to the viewer. Unlike *Portrait of Edmond de Belamy*, this work is not tied to one particular style and is seen as a more comprehensive example of AI art.

In terms of aesthetic analysis, *Théâtre D'opéra Spatial* uses images that viewers perceive as “dreamlike” or “otherworldly”, which allows it to be categorized as a work that evokes a sense of “unusual beauty”. This work was created using neural networks trained on a variety of artistic styles, allowing the algorithm to go beyond mimicking a particular style to create something truly surreal. This case becomes an example of exploratory creativity, where the AI generates images that did not exist in the training dataset, but emerge as new, unusual combinations.

In terms of emotional response, *Théâtre D'opéra Spatial* evokes strong feelings in viewers, which they often describe as “sublime” or even “scary”. Research on the perception of such works shows that the emotions evoked by AI art may be related to viewers' subjective interpretations based on their cultural experiences and expectations.

Some theories of emotion, such as the affective gap theory, suggest that when viewers encounter something foreign or unfamiliar, it can activate feelings of surprise and even fear [9, Ch.5]. In this case, AI acts as a “conduit” into the realm of the surreal and otherworldly, although it is not itself aware of the effect it creates.

The impact of AI on the perception of art: new forms of authenticity

The works *Portrait of Edmond de Belamy* and *Théâtre D'opéra Spatial* show that artificial intelligence is able to create works that are perceived by viewers as authentic, even though they are devoid of personal authorial experience. This raises philosophical questions such as the problem of authenticity and genuineness of art. Arthur Danto emphasizes that art includes not only physical qualities but also an “aura” and “context” that endow it with meaning [2]. In this respect, AI works can be perceived as 'real' works of art, as viewers project their feelings and expectations onto the images created.

At the same time, it is important to take into account that the works themselves do not contain personal experiences, which are traditionally considered the basis of authenticity. However, this does not diminish their artistic significance in the eyes of the audience, which emphasizes a new attitude towards art that does not depend on the personal involvement of the artist. This shift in the perception of authenticity reflects changes in contemporary art, where technology is increasingly recognized as part of the creative process and can itself shape cultural values and aesthetic standards.

ORIGINALITY AND IMITATION IN AI ART

The philosophy of imitation: the limits of the creative act of AI

The concept of imitation (mimesis) has extensive roots in the history of philosophical thought and aesthetics. Plato, in his dialogue *The State*, defined imitation as a representation of reality, questioning the value of works of art that do not go beyond imitation [5]. He argued that true art should strive to create the new, going beyond the mere reproduction of existing forms. In the context of contemporary technology, especially in the field of Artificial Intelligence (AI), this assertion takes on particular significance, as many machine learning algorithms, such as Generative Adversarial Networks (GANs), function on the basis of analyzing and copying styles, which calls into question their potential to create original art.

A prime example of this problem is *The Next Rembrandt* project, where deep learning algorithms were used to generate an image that mimics Rembrandt's style. Although the image generated is not a copy of any specific work, it is based on multiple analysis and synthesis of known works by the master. This situation generates a debate as to whether such a product can be considered original, given that the algorithm lacks the intuitive understanding of cultural context necessary for true creativity. Since AI, unlike humans, lacks the capacity for emotional perception and personal experience, its activity is often reduced to mechanical reproduction, which raises doubts about its ability to create something truly new.

Jacques Deleuze, in his work “Difference and Repetition,” emphasizes that true creativity requires not just reproduction, but transformation - the creation of new forms beyond the original ideas [3]. This perspective points to the limitations of AI, which, due to its algorithmic nature, is tied to repetition and variation based on given data. Thus, it cannot

engage in the process of transformative creativity necessary to achieve the level of originality inherent in human creativity.

Legal aspects of originality and authorship

Issues of originality of works created using AI also raise significant legal and ethical dilemmas. Traditional copyright concepts assume that the author of a work must be a living entity, which automatically excludes AI from the category of authorship. According to the U.S. Copyright Office decision, works created solely by algorithms cannot be registered as copyrightable works due to the lack of human contribution [6]. This ground argues that authorship is related to the presence of creative intent and unique ideas that cannot be attributed to machine intelligence.

Nevertheless, works created with AI often have commercial value, making issues of authorship and legal protection particularly relevant. For example, the *Portrait of Edmond de Belamy*, created with the help of GAN, was sold at auction for \$432,500, which emphasizes its high market value. Although this work was generated by AI, its creators, the Obvious collective, registered a copyright on the technological process used to create it, rather than on the work itself. This emphasizes the role of humans as algorithm developers, but not as artists in the traditional sense.

These cases point to the need to reconsider the legal framework for AI art, which is still in its formative stages. Leading researchers, such as Ryan Abbott, propose the development of new categories of rights that take into account the contributions of both programmers and the systems themselves involved in the creative process [10]. This solution could contribute to a more adequate reflection of the dynamics of human-machine interaction in the arts.

Originality and audience perception

Despite the mentioned limitations of algorithmic creativity, viewers often perceive AI-created works as original. This perception is due to the fact that such works represent something beyond human experience, which gives them uniqueness. For example, the AIVA (Artificial Intelligence Virtual Artist) project in the field of music demonstrates the ability of AI to generate melodies that are perceived by listeners as emotionally rich and unique, despite the lack of human involvement in the process of their creation.

The phenomenon of AI art being perceived as original can be explained in terms of the aesthetic theory of Arthur Danto, who argued that the meaning of art is shaped through its cultural context and the interpretation of the audience [2]. For Danto, it is not only the fact that a work is created that is important, but also its perception in the context of cultural and historical realities. In this sense, AI art becomes original not through an internal creative process, but through a new, “machine” view of traditional forms and concepts. This perception is reinforced by the viewer's realization that the creator is not human, which gives the work an additional symbolic and metaphorical level.

CULTURAL PERCEPTIONS AND ETHICAL DIMENSIONS

The impact of AI on culture and the perception of art

With the development of artificial intelligence technologies, we are seeing significant changes in the cultural landscape, including the ways in which art is created and perceived. Artificial intelligence is not only transforming the processes of artistic

creation, but also challenging traditional notions of what art is and who its author is. Importantly, AI art is both admired and feared due to the changing dynamics between artist and viewer.

As AI becomes an increasingly active participant in the art-making process, its impact on cultural practices becomes apparent. For example, algorithms can analyze large amounts of data, extracting elements from diverse artistic traditions, resulting in unique and unexpected combinations. This expands the boundaries of artistic expression and challenges previous notions of creativity as something exclusively human.

In part, this approach to art can be illustrated by works created by AI, which are seen as cultural artifacts that reflect not only algorithmic decisions, but also broader social and cultural contexts. For example, digital paintings created by AI can combine elements of different styles and movements, creating a dialog between tradition and innovation. Research shows that viewers often perceive such works as a reflection of a global cultural environment that mixes different cultural codes and meanings [11].

Ethical debates surrounding the use of technology in the arts

With the growing influence of AI on the arts, a number of ethical issues arise regarding authorship, originality and possible implications for the cultural sphere. One of the key aspects is the issue of substitution of human creativity. When AI creates works of art, the question arises: does it not threaten traditional forms of creativity and diminish the value of artistic expression?

Some critics argue that the use of AI in art could devalue human labor as the technology becomes available for mass use. This concern affects not only artists but also a wide range of art professionals, including curators and critics. As Laurence Lessig, co-founder of Creative Commons, points out, digital technology is changing the rules of the game, making creativity more accessible but also less exclusive [12]. This creates new challenges for those who want to protect their authorship and creative expression.

On the other hand, the use of AI in art can open new horizons for collaboration between artists and technology. Some artists see AI not as a threat, but as an opportunity to expand their creative horizons by using algorithms to generate new ideas and concepts. For example, artificial intelligence can be a tool that helps artists go beyond traditional thinking and create works that reflect modernity and current societal issues.

In addition, ethical issues also relate to the impact of AI on society as a whole. How does artificial intelligence affect our perception of art, our culture and ourselves as creative beings? There is a concern that technology can lead to a lopsided perception of art if viewers perceive works as the result of algorithmic calculations rather than as an expression of human experience.

It is therefore important to foster dialog between the various actors in the cultural field, including artists, technologists, viewers and researchers. Ethical debates about how AI is changing art should include different perspectives and take into account the views of different cultural and social groups. New models and practices need to be developed to integrate technology into the artistic creation process without losing the human aspect of art.

CONCLUSION

In this paper, we analyzed the impact of artificial intelligence on art, focusing on key aspects such as the emotional and artistic value of AI art, originality and imitation, as well as cultural perceptions and ethical issues related to the use of technology in art. Our study confirms that AI is not only changing the way artworks are created, but also triggering deep philosophical, legal and cultural debates.

First, the emotional and artistic value of AI-created works shows that such works can evoke a wide range of emotional responses in viewers. Examples such as "Portrait of Edmond de Belamy" and "Théâtre D'opéra Spatial" illustrate how AI can create visually appealing and conceptually meaningful works that are perceived as aesthetically and emotionally rich, even though there is no personal authorial experience. This raises the question of what exactly makes art meaningful: the personal experiences of the artist or the emotional response of the viewer. On this basis, it can be argued that AI art can be perceived as genuine art, capable of evoking complex emotions despite the mechanistic nature of its creation.

Second, the philosophical and legal aspects of originality and imitation become particularly relevant in the context of AI. We have seen that many algorithms, such as GANs and deep learning systems, operate on the principle of analyzing and copying styles, which calls into question their capacity for true creativity. Plato and Jacques Deleuze emphasize the importance of transformation and innovation in the process of creating art, while current copyright law has not kept pace with technological developments, leaving many questions about who should be considered the author of AI-created works.

In addition, viewers' perception of AI art also raises interesting cultural and ethical questions. On the one hand, AI can create works that are perceived as authentic and original, but on the other hand, these works lack personal context and experience, thus challenging traditional notions of authorship and originality. As the AIVA project has shown, AI music creation also illustrates this contradiction, as viewers can perceive algorithmically created melodies as emotionally rich and unique despite their lack of personal contribution.

Thus, the impact of AI on art and culture forms a new context for discussing topics related to authenticity, authorship and emotional perception. At the moment, artificial intelligence continues to evolve and find applications in various fields of art, offering new forms of creativity that can be both innovative and controversial. It is important that further research in this field delves into ethical aspects as well as legal regulatory issues in order to adapt to the rapidly changing landscape of technology-enabled art.

In conclusion, the study of AI art opens the door to redefine our notions of creativity, authenticity and artistic value, emphasizing the need for a further interdisciplinary approach to the study of this complex and multifaceted topic.

NOTES

1. Aesthetic value - assessing the artistic level of works created by AI using theories of aesthetic perception. This includes analyzing composition, form, and consistency with cultural traditions that are traditionally associated with art.

2. Emotional Response - exploring the ability of AI art to elicit emotional responses from viewers. This involves work on neurasthenics, affective computing and theories of emotion. It also takes into account the viewers' experience with AI art and their subjective descriptions of the emotional states evoked by these works.

3. Originality and authorship - assessing the degree of originality of AI works, taking into account legal aspects and philosophical notions of authorship and imitation. The works of Margaret Bodin and Jacques Deleuze are used as key concepts to analyze the possibilities of AI to go beyond mere combinatorial creativity.

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ARTIFICIAL INTELLIGENCE IN AGRICULTURE: APPLICATIONS IN PORTUGAL

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ABSTRACT

As technology advances continue to redefine artificial intelligence (AI), it has become a focal point for researchers and industry specialists. The creation of robots that mimic human cognitive functions including learning, reasoning, and self-correction is referred to as artificial intelligence (AI). AI's rising precision and efficiency have been demonstrated by its wide range of applications across industries, and agriculture has embraced the technology to boost productivity and income. To gain a thorough understanding of the topic, a review of previous research on artificial intelligence in agriculture was conducted. Additionally, this paper takes a practical approach to the potential of artificial intelligence in agriculture. It addresses the emergence of new techniques and methods, applies a quantitative approach, and examines how experts, academics, and agriculture professionals view the application of AI in agriculture. By providing insights that are relevant in both academic and practical contexts, it aids in the creation of actual applications.

Keywords: Artificial Intelligence, Agriculture, Efficiency, Quantitative analysis

1. INTRODUCTION

AI stands as a technological development that has captivated both academic discourse and practical applications across diverse industries. Its evolution has been punctuated by redefined definitions, adapting to technological advancements (Kok et al., 2002). AI represents a branch of computer science dedicated to crafting machines capable of emulating human-like cognitive functions, encompassing learning, reasoning, and self-correction.

The far-reaching implications of AI are manifest across various sectors, with its penetration into industries such as manufacturing, healthcare, marketing, finance, and tourism (Dwivedi et al., 2021). However, one sector that can witness a transformative impact is agriculture, where AI's applications can potentiate a new era of innovation, efficiency, and sustainability.

In explaining AI's role in agriculture, it becomes imperative to understand its overarching definition and how it pertains to this domain. Defined broadly, AI in agriculture represents a confluence of technology and methodology aiming to revolutionize conventional agricultural practices. Its core objective is to expand, automate, and optimize farming operations, thereby enhancing productivity, mitigating risks, and ensuring sustainable food production.

The significance of agriculture as a global economic basis is very high staggering global value of \$3.6 trillion and a consistent contribution of 4% to the global GDP over the past two decades, the agricultural sector highlights the socio-economic dimensions of

numerous nations (FAO, 2022). However, this sector has several challenges, ranging from unpredictable weather patterns, and crop-damaging pests and diseases to the deleterious impacts of climate change and desertification (Komarek et al., 2020). These challenges create some threats to agricultural productivity, exacerbating the already mounting pressures due to an expanding of global population.

At the forefront of these challenges stands the United Nations' 2030 Sustainable Goals, notably the Zero-Hunger program, which underscores the imperative of achieving food security sustainably (United Nations, 2015). Against this backdrop, the integration of AI into agricultural practices emerges as an instrumental strategy, offering novel methodologies and technological solutions to address these challenges.

The combination of innovation technology, digitalization, and AI stands tries to mitigate the challenges that agriculture faces (Yela Aranega et al., 2022). This paradigm change indicates the need to reevaluate established agricultural practices and technologies, with a renewed emphasis on maximizing the production of crops, minimizing resource use, and decreasing labor costs.

Moreover, the strategic significance of AI in agriculture extends beyond efficiency gains. It fundamentally reshapes the agricultural business models, opening new possibilities for growth, innovation, and sustainability (Toniolo et al., 2019). These models serve as framework stating how value is created and delivered within the agricultural ecosystem.

However, despite the interest and the potential of AI in reshaping agricultural paradigms, the existing literature on AI's role in agriculture remains a work-in-progress (Cavazza et al., 2023). While there is a proliferation of studies examining the potential synergies between AI and agriculture, the depth of scholarly exploration concerning its implications on agricultural business models remains relatively limited.

The literature on AI in agriculture largely encompasses case studies that evaluate and discuss technological solutions and algorithms, spanning diverse agricultural domains (Panpatte and Ganeshkumar, 2021). Yet, the scarcity of success stories within the literature, elucidating tangible benefits reaped by farms leveraging AI technologies, is evident (Sood et al., 2022).

While the literature underscores the necessity of coupling AI with complementary technologies like IoT (Internet of things) and robotics to create a cohesive digital ecosystem in agriculture (Chiles et al., 2021; Dal Mas et al., 2023), it also delineates emerging farming techniques such as vertical farming, aquaculture, insect breeding, and precision agriculture (Davies and Wilson, 2020; Saad et al., 2021).

AI also have the potential to address multifaceted sustainability issues, including reducing agricultural pollution, optimizing resource utilization, and fostering environmentally friendly practices (Rao et al., 2018). However, several gaps persist in the academic literature, as the shortage of comprehensive AI-driven business models in agriculture (Cavazza et al., 2023). Despite the emergence of technological solutions and algorithms, the absence of real-world case studies showing AI's potential implications on the future of agriculture remains a reality.

In response to this call for in-depth analysis rooted in real-world scenarios to contribute for the formulation, implementation and evaluation of public policies, this research adopts a multi-case study methodology. It will provide an in-depth exploration of AI's application in agriculture and its impacts.

The subsequent sections of this article delineate the current literature, develop the research question, elucidate the chosen methodology, present key findings, and engage in comprehensive discussions regarding recommendations for policy, implications, and limitations of the research.

2. Literature review

2.1. Conceptualization of AI in Agriculture

Artificial Intelligence has garnered significant attention from both scholars and practitioners in recent years. Defined broadly, AI stands as a branch of computer science aiming to develop machines capable of human-like cognitive processes (Kok et al., 2002). Its applications span various industries and notably, agriculture (Dwivedi et al., 2021).

The agricultural sector, with a global value of \$3.6 trillion and a consistent contribution of 4% to the global GDP, holds immense significance (FAO, 2022). However, it faces formidable challenges—unpredictable risks like weather conditions, crop-destroying pests, and diseases, coupled with the adverse impacts of climate change and desertification (Komarek et al., 2020; FAO, 2022). The need for sustainable food security has been highlighted as a crucial goal by the United Nations (United Nations, 2015).

In response to these challenges, technology, digitalization, and AI emerge as potential solutions (Yela Aranega et al., 2022). The integration of AI in agriculture aims not only to address these challenges but also to enhance productivity and reduce human effort (Saad et al., 2021). The strategic role of AI in agriculture becomes apparent considering its potential to reshape existing methodologies and technologies for maximizing crop yield and ensuring sustainable food production (FAO, 2022).

AI's impact on agricultural business models stands as a focal point in this evolving landscape (Toniolo et al., 2019). Defined as the framework through which organizations create value, business models in agriculture are poised for transformation through AI integration (Bagnoli et al., 2019). This transformation not only addresses sector-specific challenges but also aligns with sustainability objectives (Biancone et al., 2022).

Sustainability remains a pivotal theme in this context, with AI-driven solutions showing promise in supporting environmentally friendly practices (Rao et al., 2018).

2.2. AI Technology applied to agriculture

Precision Agriculture, enabled by AI, empowers farmers to make data-driven decisions by harnessing information from diverse sources such as satellite imagery, drones, sensors, and weather forecasts (Castellini et al., 2016). Through the utilization of machine learning algorithms, farmers can optimize irrigation, fertilization, and pesticide application, resulting in heightened crop yields, diminished resource usage, and enhanced sustainability.

Crop Monitoring and Disease Detection leverage computer vision and machine learning techniques to analyze images of crops captured by drones or satellites (Castellini et al., 2016). By identifying patterns and anomalies in plant health and growth, AI systems can swiftly detect diseases, pests, nutrient deficiencies, and other issues, enabling farmers to take timely actions to mitigate losses.

Predictive Analytics plays a crucial role as AI models analyze historical data on weather patterns, soil conditions, crop yields, and market prices to forecast future trends (Tao et

al., 2018). These forecasts aid farmers in planning planting schedules, managing inventories, optimizing resource allocation, and minimizing risks associated with climate variability and market fluctuations.

Robotic Farming is on the rise with AI-powered robots and autonomous vehicles being developed to execute various tasks on the farm (Li & Wang, 2017). These tasks include planting seeds, applying fertilizers and pesticides, weeding, and harvesting crops, thereby operating with precision and consistency, reducing labour costs, and increasing operational efficiency.

Supply Chain Optimization, facilitated by AI technology, streamlines the entire agricultural supply chain from production to distribution (Tao et al., 2018). Machine learning algorithms analyse data on demand forecasts, transportation routes, storage conditions, and market dynamics to reduce waste and ensure the timely delivery of agricultural products to consumers.

In Crop Breeding and Genomics, AI techniques, including genetic algorithms and deep learning, accelerate the breeding of crops with desirable traits (Zhang et al., 2016). By identifying genetic markers associated with these traits, breeders can efficiently develop improved crop varieties.

Finally, AI-powered Farm Management Systems integrate data from various sources, automate routine tasks, and provide insights tailored to specific farm conditions (Li & Wang, 2017). These systems aid farmers in planning, monitoring, and decision-making, optimizing resource utilization, and maximizing profitability.

3. METHODOLOGY

Given the aim of exploring AI applications in agriculture in Portugal, the methodology for conducting this research will follow the next steps:

- Research Objective Clarification: Clear research objectives that outline the specific aspects of AI in agriculture, to guide the entire research process.
- Data Collection: Quantitative methods will consider a sample of observations by questionnaire to analyse perceptions of the impacts of AI application to Agriculture.
- Data Analysis: Quantitative data will be statistically analyzed.

4. QUANTITATIVE ANALYSIS – THE IMPACT OF AI IN THE AGRIBUSINESS IN PORTUGAL

In order to address the research topic, a quantitative methodologic approach was used, bolstered by a questionnaire, to determine the disparities in opinions regarding artificial intelligence's impact on the agricultural industry among specialists, academics, and agriculture professionals. A systematic questionnaire that was created following the literature review was used to gather the data. A non-probabilistic sampling approach was employed to obtain a convenience sample. Convenience sampling is appropriate when obtaining a complete sample is problematic (Mercadé et al., 2017, 2018). Eighty people participated in the fieldwork, which took place in January and February of 2024, with a confidence level of 95% ($p=q=0.5$) and an increase in data error of 5.8% for the proportion estimate. The next table shows a summary of the information regarding the data collection and the technical matters of the sample.

4.1. Data Analyses and Discussion

To analyze the differences in perceptions between Experts, academics, and Agriculture professionals, a covariance analysis (ANCOVA) has been carried out. The variance due to the individual differences is estimated from the regression between the dependent variable and the covariable. The scores in the dependent variable are statistically adjusted to the covariable. Finally, an ANOVA is performed on these adjusted scores (Tabachnick and Fidell, 2007). Thus, the analysis controls the effect of the covariable, so that it eliminates the variation due to the mismatch of the ANOVA error.

In the following table (4) analyzes the adjusted means F statistics and p-value for each group.

Table 4. AI Technologies applied in the Agricultural sector.

Variables	Experts and Academics	Agriculture professionals	F	<i>p</i>
Precision Agriculture	4,112	3,153	102,323	0,000***
Monitoring and Disease Detection	3,780	3,526	24,762	0,000***
Predictive Analytics	4,211	3,631	15,626	0,000***
Robotic Farming	4,354	3,614	67,235	0,000***
Supply Chain Optimization	4,366	3,500	88,432	0,000***
Crop Breeding and Genomics	4,321	3,571	82,533	0,000***
Farm Management Systems	4,234	3,568	55,425	0,000***

*= $p < 0,1$; **= $p < 0,05$; ***= $p < 0,01$

In Table 4 are displayed the adjusted means, F statistics, and p-values. The analysis shows that there are statistically significant differences in all AI technologies applied to Agriculture (p-value < 0.01 in all cases), always showing a higher score in Experts and Academics responses.

As for AI impacts in the agriculture sector, a four-point Likert scale, that rate 1 as “None”, 2 as “Low”, 3 as “Moderate”, and 4 as “High” impact, was used. The t-student test has been carried out to verify whether there are significant differences between Experts, Academics and Agriculture professionals (Table 5).

Table 5: Perceptions about AI impacts in the Agriculture Sector

Variables	Experts and Academics Mean	Agriculture Professionals Mean	t-student	<i>p</i>
Increased Production Efficiency	2,14	1,43	1,930	0,052*
Precision in Agricultural Management	2,48	1,95	3,743	0,000***
Harvest Optimization	2,68	1,71	1,512	0,080*
Intelligent Water Resource Management	2,58	1,40	7,644	0,000***
Improvement in Quality	2,05	1,77	1,732	0,03**
Decision Support	2,25	1,81	4,945	0,001***

*= $p < 0,1$; **= $p < 0,05$; ***= $p < 0,01$

In table 6 it can be seen that Experts and academics sample have higher scores in all the items analyzed, namely, the higher impacts are in Harvest optimization, Intelligent Water Resource Management, in Precision in Agricultural Management, in Decision Support, and Improvement in Quality.

Finally, to analyze whether there is a correlation between AI and its influence on efficiency and Decision Support a Cramer's test was applied (table 6).

Table 6: AI Impacts on Efficiency and Decision Support

	Cramer test	<i>p</i>
AI Influences Efficiency in Agriculture	0,373	0.000***
AI contributes to effective decision support	0,368	0.00***

*= $p < 0,1$; **= $p < 0,05$; ***= $p < 0,01$

The results indicate that AI has an influence on both the variable's efficiency and decision support according to the perceptions of the participants in the study.

5. CONCLUSION, LIMITATIONS, AND FUTURE RESEARCH

AI's integration into agriculture represents a significant opportunity to address the sector's challenges while enhancing productivity and sustainability. By leveraging AI technologies such as precision agriculture, crop monitoring, predictive analytics, robotic farming, and supply chain optimization, farmers can make data-driven decisions, optimize resource use, and streamline operations. Furthermore, AI-driven solutions have the potential to reshape agricultural business models, fostering innovation and sustainability across the entire value chain.

Despite the promising potential of AI in agriculture as shown by this research, several challenges persist. The existing literature often lacks comprehensive real-world case

studies demonstrating the tangible benefits of AI technologies on farms. Additionally, there is a shortage of AI-driven business models tailored to the agricultural sector. Moreover, the integration of AI into agriculture requires addressing technical, infrastructural, and regulatory challenges. Furthermore, the adoption of AI technologies may face resistance due to concerns about data privacy, cybersecurity, and the displacement of traditional farming practices. Finally, the scalability and accessibility of AI solutions in agriculture remain a concern, particularly for smallholder farmers.

Regarding the main limitations of this research, there is a sampling bias, because the demographic groups are underrepresented, and this limits the generalizability of the findings. As this topic is not very well studied there are no adequate scales already validated. The case studies can offer a higher in-depth exploration of the application of AI to agriculture, but there is little information available and a low number of studies.

Future research in the field of AI in agriculture should aim to advance the understanding of AI's implications for the sector. This includes conducting more comprehensive case studies that evaluate the real-world impact of AI technologies on farm productivity, sustainability, and profitability. Moreover, there is a need for research focused on developing AI-driven business models tailored to the unique needs and challenges of the agricultural sector. Additionally, interdisciplinary research collaboration is essential to address technical, infrastructural, and regulatory challenges hindering the adoption of AI in agriculture. Furthermore, future studies should explore the scalability and accessibility of AI solutions, particularly in the context of smallholder farmers. Overall, continued research in this area is crucial to unlocking the full potential of AI in transforming the agriculture sector.

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INTELLIGENT CINEMATIC ADVANCEMENT: AI WORKFLOW AS A CATALYST FOR CULTURALLY ADAPTIVE AND SUSTAINABLE AESTHETICS IN FILMMAKING PRACTICES, CREATIVE POTENTIALS AND ENVIRONMENTAL IMPACT IN ALIGNMENT WITH SDGS

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ABSTRACT

While technical breakthroughs, including the utilization of AI tools, have continuously advanced filmmaking over the years, the leveraging of such tools in the context of creativity and sustainable development has remained elusive and role of AI in fostering sustainable practices aligned with the SDGs remains under-researched. This paper will explore how the AI driven innovations in the film industry have led to the enhancement in creativity and efficacy of the films produced lately while promoting sustainable practices that align with the United Nations' Sustainable Development Goals (SDGs). AI holds a promising creative potential in a combination of technological advancements in filmmaking such as automated scriptwriting, virtual production, and visual effects, which are being increasingly explored. However, these advancements are not free from challenges and there are significant concerns over ethics in algorithmic biases as well as risk of diminishing human creativity. In particular, as AI tools become widely adaptable to filmmakers, characterization of how AI can be used to simultaneously enhance creative practices and align optimize resource allocation with sustainable development outcomes is required. As the industry grapples with the economic and environmental challenges, the relevance of incorporating smart utilization of AI to serve the SDGs in filmmaking warrants such an investigation. We propose how AI can be used not just as a technical tool but also as an accessible resource for filmmakers that guides them towards creative practices to create culturally refined stories, augmented representation and inclusivity in global cinema during film production. The study undertakes a systematic literature review across interdisciplinary findings to map the theoretical foundation and provide robust recommendations and practices relevant to the industry, highlighting AI usage as a tool conducive to sustainable development in filmmaking. This paper aims to tackle the three pillars of AI's ability to be used to support filmmaking practices with powerful sustainability strategies aligned with SDGs. In addition, will investigate a few real case studies of films which have used AI for their production, and we will examine that how AI is transformative for the filmmaking processes and thereby promoting sustainability.

Keywords: AI - Sustainable Developments Goals - Filmmaking Production - Creative Practices - Cinematic Advancement

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USE OF ARTIFICIAL INTELLIGENCE (AI) IN FILMMAKING

INTRODUCTION

The film industry has historically been at the forefront of technological innovation from the beginning of sound to computer generated imagery. As the world stands at the cusp of 2024, the film industry is utilizing the transformative potential of Artificial Intelligence in transfiguring the filmmaking process in a more creative and efficient one. From Automated scene generation to predictive analytics in script writing AI has shaped the craft of filmmaking enabling unprecedented creative possibilities. This technological revolution is happening in tandem with an exacerbating emphasis on the means of sustainability driven by the Sustainable Development Goals (SDG) of the United Nations. Since it is one of the most resource intensive creative industries the filmmaking conference with an exacerbating pressure for cultivating environmentally and socially responsible practices thereby making the integration of AI and sustainability all at once. The aim of this paper is to explore that how AI has turned the filmmaking industry into a budding technological narrative with intriguing possibilities coming with innovative tools and methodologies for scriptwriters, directors and production teams. Its influence is not only limited to storytelling or production techniques, but AI has also promoted sustainable practices such as virtual production resource optimization and carbon footprint reduction Nassar, Samah. 2022. AI has revolutionized the alignment of the SDG goals like Responsible Consumption and Production (SDG 12) and Climate Action (SDG 13) with the methods of film production that has led to a way of creating environmentally conscious media content. The aim of this paper is to analyze the transformative role of AI in field making by underscoring its potential in enhancing creativity improving efficiency and promoting sustainability. This paper claims that AI has transformed the traditional filmmaking processes by restructuring the pre-production phase, production and editing techniques while also simultaneously promoting sustainable practice for fostering the goals of SDG.

METHODOLOGIES

This research adopts for a qualitative approach which will explore how Artificial Intelligence (AI) is influencing the traditional filmmaking techniques and promoting sustainable practices which are aligned with the Sustainable Development Goals (SDGs). The methodology which will be employed will include a literature review which will take into account a thorough analysis of the existing literature on the applications of artificial intelligence in filmmaking as well as sustainable film production. This will include several scholarly articles as well as industrial reports and case studies for providing a theoretical foundation for understanding the intersection of technology and sustainability. Furthermore, this research will also undertake a thorough examination of case studies thereby examining the real-world examples of AI implementation in film production. This will include the use of a few selected cases such as the use of virtual production techniques in the films the Mandalorian thereby examining that how the AI is transforming the analysis of scripts. The cases will also emphasize on sustainability like carbon neutral productions which will further conceptualize the role of AI in promoting environmentally responsible filmmaking Nassar. S. (2021). Furthermore, the study will also develop an interdisciplinary framework for analyzing how AI has introduced certain practices which aligns with SDGs. This framework will incorporate technological innovation as well as resource efficiency and social responsibility that will serve as lens

for the evaluation of the impact of AI in filmmaking. Lastly for the purpose of capturing the perspectives of the filmmaking industry as a whole various interviews with film makers or producers as well as sustainability experts will also be conducted.

LITERATURE REVIEW

The integration of Artificial Intelligence in filmmaking has been an exacerbating focus in academic and industry discussions with research highlighting its transformative impact on traditional techniques. As discussed by Nassar (2022), since the year 2016, the impact of Artificial Intelligence can be seen in the production of films where the first trailer of the film *Morgan* was produced by the supercomputer named IBM Watson and the full script of the short film *Sunspring* was made by AI named Benjamin. Again, Yang et al (2023) have discussed that how the filmmaking education is sharing knowledge regarding the interaction between AI and filmmaking since with the rapid advancement of technology in the 21st century, AI has started to be extensively used in various aspects of post-production of a film. These not only covers the area is audio and video or color correction editing or visual effects and scene generation but rather the use of AI can also be seen in the production of music that too with a touch of plotlines and emotions. Moreover, AI has also started to show its capacity in generating movie scripts and design of characters. In this aspect, the study of Hales (2021) becomes important who have substantiated that how AI based programs such as ScriptBook assist in generating data-driven storylines and predict the reception of the audience. Moreover, AI enhanced production tools such as Sensei of Adobe can optimize the editing workflows by automating the respective tasks and enabling the filmmakers to focus on their creativity (Mugubi & Manono, 2024). Przegalinska and Triantoro (2024) have shed light on the importance of AI in enhancing the creativity of scriptwriters where machine learning (ML), more specifically the use of neural network models such as GANs is used in artistic practices. GAN plays an important role in pattern recognition and prediction along with technical demands (dataset, GPU power) and the challenges which are faced by the artists in complex installation or coding knowledge. Moreover, the emergence of virtual production techniques powered by artificial intelligence allow for previsualization and onset production in real time which reduce reliance on physical sets and align with sustainable practices by minimizing resource use and waste. Moreover, research by Ahmad et al (2022) have emphasized on how AI driven tools have led to the optimization of resource allocation and reduction in energy consumption during production which contributes to the production of carbon neutral films. Nevertheless, there are concerns that still persist about ethical implications and accessibility of all these artificial technologies. Doshi and Hauser (2024) have argued that too much reliance on AI often diminishes the human creativity of individuals that can lead to buyers in content creation. Humans are born with certain the skills of creativity which cannot be paralleled with technological devices and can ultimately result in biasness. Moreover, integrating AI with sustainable practices often results in financial and technical challenges for small scale film makers.

FRAMEWORK

This study has employed an interdisciplinary framework for analyzing the impact of artificial intelligence on traditional filmmaking techniques and how it aligns with the sustainable development goals. This framework has used three key dimensions which include technological innovation sustainability practices as well as ethical and social

considerations. First and foremost, the technological innovation has explored the integration of artificial intelligence tools into filmmaking processes such as in storytelling directing shooting editing and postproduction. In this respect the technological devices such as machine learning algorithms as well as virtual production platforms and AI driven editing systems are analyzed which are specially used by the film makers for streamlining their workflows and enhancing creativity. Next, the sustainability practices which examine how AI has enabled environmentally sustainable practices in the filmmaking process. This includes the AI driven solutions that result in resource optimization energy efficient production and carbon footprint reduction. These include specifically the SDG 12 (Responsible Consumption and Production) and SDG 13 (Climate Action) which is primarily driven by the use of virtual sets and digital workflows that minimize physical waste and reduce the chances of environmental harm. Nassar, S. (2021). Lastly, the ethical and social considerations aim to address the ethical implications of AI adoption in filmmaking. This dimension aims to reduce the chances of any impact on human creativity as well as risk of algorithmic bias as well as the accessibility of AI technologies for independent film makers. Moreover, this dimension also evaluates the chances of AI in contributing to more inclusive storytelling so that the films which are directed can address the underrepresented voices in the industry.

PRACTICAL CASES

AI has transformed the process of filmmaking whereby several high-profile productions have substantiated their capabilities for adapting to the innovative ways of storytelling production and editing techniques. These practical cases showcase that how AI is revolutionary for this industry. In this list of films, the first name that comes is *The Mandalorian* (2019) produced by Disney that used virtual production by Unreal Engine, which is an AI driven tool that renders real time 3D environments. The team has also used AI powered rotoscoping techniques which was used for the purpose of handling the complex characters and scenes with multiple objects (Pan, 2024). This was beneficial for the film because the team reduced much of its time by 90% needed for rotoscoping and got more time to invest on creative tasks. Furthermore, the Stagecraft processes involved shooting the live actions actors and sets which were surrounded by large and high-definition LED video walls. The second film that comes in this list includes the film *Morgan* (2016) which was among the first films that used AI for its purpose Nassar, S. (2021). This 90-minute sci-fi thriller movie was created using the Watson AI of IBM. The AI was used as an editor to handle on the massive amounts of footage shots as well as its purpose was also to identify the most impactful scenes and then compiling it as a trailer (Morgan, 2021). Although this film needed human input for the purpose of final touches, the *Morgan* was one of those films that showed the pathway of AI as a transformative tool for creative decision making in the realm of films. In the list, the third name that comes is the *Blade Runner 2049* (2017) which used AI tools for creating digital doubles and enhancing the visual effects (Elyamany, 2021). The neural networks analyzed and replicated the complex facial movements for imitating the realistic CGI characters. Lastly, two other films which have used AI for leveraging the editing techniques include *The Irishman* and *Avengers: Endgame* both of which got nominated in Oscar in the category of Best Visual Effects. The films used AI in GPU-accelerated effects for pre-visualization and de-aging technology to make the characters appear younger than their age (Hilal, 2024). The use of AI based software not only analyzed the

facial movements but rather it speeds up the decision making with their enhanced visual consistency and minimized any resource intensive reshoots.

DISCUSSION

The use of artificial intelligence in filmmaking has represented a set of groundbreaking opportunities as well as certain complex challenges. On the one hand, AI has leveraged the use of transformative tools which has led to the revolutionizing of traditional techniques improved script writing visual production and postproduction editing. Films like *The Mandalorian* substantiate how AI driven virtual production that reduced the reliance on physical sets which not only helped in producing environmentally sustainable film but also led to climate actions. However, these advancements come with a number of challenges. The concerns over ethics regarding the over reliance of artificial intelligence include potential diminishing of human creativity and the homogeneous outcome of storytelling due to the algorithmic biases. There are a number of criticisms that are pondering over the use of AI in the domain

of filmmaking whereby critics have argued how AI generated films are at a risk of losing their emotional depth and creativity that traditionally comes from human experience. Furthermore, the issue of accessibility is also a rising concern as independent film makers often lack the financial support that is needed for adopting AI driven tools that exacerbate inequality in the industry of filmmaking. Thus, although AI has offered immense potential for transforming filmmaking and promoting sustainability there also lies a need for adopting a balanced approach that not only prioritizes environmental sustainability but also helps in maintaining the creativity that the audiences are looking out in the theaters as well as inclusivity and ethical considerations to realize its full benefits Nassar. S. (2021).

FINDINGS

From this above study and the analysis of the real time films which has used AI it can be seen that how artificial intelligence has profoundly transformed the traditional filmmaking techniques by introducing innovative tools and methods that has enhanced creativity efficiency and sustainability. First of all, it can be seen that how AI powered technologies such as virtual production, automated editing systems as well as predictive analytics have helped in revolutionizing the process of directing and postproduction processes as well as editing. the practical examples have substantiated that how directors and producers are integrating their creativity with that of technology by joining hands with organizations such as IBM for reducing the reliance on physical sets and on location shootings to produce films in minimized waste and energy consumption that can be aligned with sustainability goals. Moreover, the techniques of de-aging have highlighted that how AI tools such as Avid Media Composer are used for editing films as well as tools like Autodesk Maya is used for 3D modeling animation as well as contributing towards the creativity of many films (Li et al., 2021). However, alongside all these advantages there are also certain significant challenges that can be observed from the above discussion. The ethical concerns around AI included the potential erosion of human creativity as well as over reliance on algorithms and risks of bias in storytelling (Komal et al., 2024). Moreover, the financial and technical barriers of accessing AI driven tools can also limit the independence of the low budget film makers which questions the concept of inclusivity persistent within the film industry. The findings suggest that while AI shows immense promise and opportunities in the film industry it is also important to

achieve a balanced implementation that prioritizes creativity inclusivity and ethical consideration all in one for the success of the industry.

RECOMMENDATIONS

For maximizing the benefits of artificial intelligence in filmmaking it is important to address the challenges which have been discussed above. First of all, the film industry should prioritize the investment of education regarding the use of various AI tools and technologies and training for equipping the film makers with the necessary skills so that they can effectively utilize the AI driven tools. Through the engagement with various workshops online courses and certification programs the film makers especially those who are from underrepresented and independent backgrounds can gain knowledge regarding the effective use of resources in leveraging the AI technologies for the sake of producing films. Secondly the government and industry stakeholders should take up a proactive stance for providing subsidiaries or grants to small scale film makers so that the access of AI technology can be used in a more democratic way. Thirdly various ethical guidelines and policies must be adopted so that it can be ensured that AI tools are used in a responsible manner by the film makers which are not coming at the cost of their own creativity or are not getting susceptible to algorithmic biases. Finally sustainable filmmaking processes should be widely promoted for integrating AI tools that can help in the optimization of resources and reduce any forms of carbon footprints for achieving sustainable balance.

CONCLUSION

Thus, in conclusion it can be said that artificial intelligence is influencing the filmmaking industry by introducing certain innovative tools that is transforming the traditional techniques of directing editing as well as production. It is enabling the film makers to push the creative boundaries while also simultaneously adopting for the sustainable practices which are aligned with sustainable development goals. However, it can be said that the integration of artificial intelligence is not without any challenges, but it also comes with certain ethical concerns accessibility barriers and the risks of losing human creativity. These aspects make it necessary to realize the full potential of AI and take necessary and balanced approach for prioritizing ethical frameworks in the film industry that can use AI for innovative ideas without sacrificing the creativity or inclusivity.

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THE IMPACT OF AI ON HUMAN TRANSLATION: WILL TRANSLATORS AND LOCALIZATION EXPERTS DISAPPEAR IN THE JOB MARKET AND BE REPLACED BY AI-POWERED TRANSLATION TOOLS?

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ABSTRACT

The purpose of this paper is to investigate the use of AI in translation, particularly in the context of machine-translated texts and the differences between HT and MT. The focus of this investigation is to discover whether this software can compete with the skills of professional translators and eventually replace them. The trigger comes mainly from articles on machine translation vs human translation that I read to have a broader view of this topic. Artificial intelligence seems to have revolutionized machine translation technology in recent times. On the one hand, one of the benefits is that AI-powered translation tools can quickly translate large volumes of content, whereas on the other hand, AI translation still has plenty of pitfalls: some source texts can be misinterpreted and this could lead to inaccuracies and errors, as well as to cultural insensitivity or bias. My research aims to discover whether in the future translators and localization experts will disappear in the job market or whether new job roles will emerge instead as a result of AI. The literature review describes in detail theoretical issues with regard to ethical considerations for AI-powered translation. It also makes reference to a few key findings from former research. The data gathering process consists mainly of qualitative semi-structured interviews with Italian four professional translators, interview transcripts and content analysis which I used to examine and interpret data and findings.

Keywords: AI, AI-powered tools, audio-visual translation, HT, localization, MT, untranslatability.

INTRODUCTION

First and foremost, the present research aims to explore what are the perceptions of Italian translators regarding the use of AI in translation with particular attention to the context of machine-translated texts and the main differences between MT and HT. The focus of this analysis is to investigate whether AI can compete with the abilities of professional translators and replace them in the future.

Unfortunately, so far, there is still a limited body of research with regard to this area, however, some studies have been demonstrating that AI-powered translation tools can have either advantages or disadvantages as they seem to have made the translation process faster and more efficient, but, at the same time, they could misinterpret some source texts and consequently lead to errors (Chaoying 2022; Moneus, Sahari 2023; Wang 2023)[3][9][15].

This could especially happen in the cases of lexical gaps, that is to say that there is not one-to-one equivalence between the source and the target text, such as for example the translation and adaptation of culture-laden terms and expressions that do not have a straight equivalent in the target language (Munday, Pinto, Blakesley, 2022)[10].

Considering the above, the chief dilemma identified for this analysis is to inspect if in the future translators and localization experts will be completely replaced by AI, or whether new job roles will emerge in the field of translation since expert translators may be needed in order to manage AI-powered tools.

Secondly, another research question that is taken into account for this study is whether translators would have to specialize in specific fields so as to remain competitive in the job market, focusing mainly on technical-scientific texts which could be more difficult for AI-powered tools to translate correctly.

Thirdly, this research also attempts to examine whether AI could succeed in overcoming translation and adaptation difficulties typical of audio-visual translation such as cases of untranslatability caused mainly by regional and social varieties of British and American English into Italian and also by highly cultural references, idioms, slangs and neologisms.

In light of the above, the objective of this inquiry is not to re-analyze former research about the positive aspects or the possible drawbacks of AI-powered translation tools, I undertook this study to discover the perceptions of Italian technical-scientific translators regarding HT vs MT in order to better understand and analyze what are their main difficulties in the translation and adaptation process and whether AI can improve or worsen the situation. I have chosen this topic because it appeared timely and interesting to me and I aimed to examine the participants' viewpoints with the perspective to contribute knowledge and understanding in my own professional context.

LITERATURE REVIEW

The history of content translation and localization dates back to the ancient world where translators were needed in order to translate literary works, diplomatic letters and religious contents as well. It was during the Middle Ages that translation had an important role in passing on knowledge among different languages and cultures. Nevertheless, with the invention and widespread use of the printing press during the Renaissance and later with the development of mass media in the 19th century, translation became a conventional activity (Munday, Pinto, Blakesley, 2022)[10]. However, the process of translation and localization was at first very slow, arduous and demanding as it required that the translators had to have a combination of skills and knowledge of both the source and the target languages and the culture that were mixed with the languages. In order to make good translations, translators worked firstly with dictionaries and grammars and relied, above all, on their expertise and intuition so as to produce translations without errors and inaccuracies. Complicating matters further was the fact these early linguists had to deal with several texts which presented different linguistic and cultural nuances (Dunne, Dunne 2011)[5].

Afterwards, with the development of technology the field of content translation and localization progressed as well: the invention of computers and consequently the advance of the internet in the 20th century introduced innovative techniques and tools such as computer-assisted translation and machine translation which contributed to

make the translation and localization process faster and easily approachable for a larger audience (Hartley 2009)[7]. Thanks to the assistance of AI, individuals and businesses can have the possibility to translate content into many languages and resultantly create challenging opportunities for new markets and future developments (Moneus, Sahari 2023)[9].

Nowadays, with the advent of AI and machine learning, it seems that the translation and localization industry is being transformed. The prevalence of research can demonstrate that AI-powered tools manage to translate complete texts in a few seconds. Moreover, tools have recently enhanced the accuracy and the efficiency of translation and localization, simplifying the process of communication across language barriers. Besides, the use of machine learning algorithms characterize another modality through which AI can introduce further changes as it seems to enhance the quality of translations. In other words, AI powered devices can acquire skills in recognizing and understanding the subtle differences of several languages and lead to more precise and natural-sounding translations (Wang 2023) [15]. Regarding further benefits of AI-powered translation and localization, it has to be pointed out that AI could help businesses to save money as it seems to minimize the demand for human translators and localization experts. Contrariwise, apart from the benefits and advantages of the use of AI in content translation and localization, there are also some challenges that AI has to deal with as well. Firstly, there is a high risk of over-reliance on AI-powered translation tools which could lead to imprecisions and errors. Secondly, another important quality that translations need to ensure is that they are respectful, unbiased and culturally appropriate; according to studies done in this area it seems that not always AI can serve this scope. Additionally, one of the biggest challenges in using AI for translation and localization is to ensure that the device can identify the context of the text that is being translated. One of the most difficult tasks for AI-powered tools is to convey in the target language colloquialisms, metaphors, idiomatic expressions, proverbs, figure of speech and terms linked to the source culture and this generally leads to inaccuracies and misinterpretations. Moreover, apart from identifying the semantics and syntactic structure of texts, further challenges in using AI for translation include dealing with polysemic words, handling sentences, word alignment, domain mismatch and rare words (Chaoying 2022)[3].

METHODOLOGY

The data gathering process consists mainly of qualitative semi-structured interviews with Italian professional translators, interview transcripts and content analysis which I used to examine and interpret data and findings. Semi-structured interview gives researchers major possibilities to interact with the participants and to probe questions and the interviewees' answers are generally flexible and detailed (Flick *et al.*, 2004)[6]. Hence, as I was planning on doing flexible interviews with the translators through which I could also ask follow up questions, I considered that this type could be the most appropriate method to use (Kumar 2014)[8]. The participants that I interviewed were four Italian experienced translators. Hence, the talk with them aimed to provide a background of the contemporary translation and localization practices and in particular it supplied valuable perceptions on what is, and what will then be in the future, the impact of AI on this field.

FINDINGS AND DISCUSSION

The chief dilemma identified for this analysis is to inspect the potential impact of AI on the job market for human translators along with the need to ensure that translations are respectful and culturally appropriate. As a result, the main research questions that have been addressed are whether translators and localization experts will be completely replaced by AI in the future and if new job roles can emerge in the field of translation since expert translators may be needed in order to manage AI-powered tools. Findings demonstrate that AI is having a crucial effect on the job markets for translators and localization experts. Even though AI-powered and localization software still do not produce accurate translations, they are gradually becoming efficient and error-free which means that they are bringing positive changes in the process of translation and localization. Some of the changes include the following:

Firstly, AI-driven translation and localization tools have the advantage of being more efficient, cost-effective and above all faster than conventional translation practices. Consequently, the result is that less human translators are then needed to accomplish the same tasks within the working time expected, therefore this can cause job losses in the translation industry (Wang 2023)[15]. However, if on the one hand the advent of AI in this industry could make many professional translators redundant, on the other hand, it seems that new job roles can emerge thanks to the development of AI technology. In other words, as innovative technologies advance, there could be a high demand for localization experts and translators which may be able to manage state-of-the-art AI-generated tools and provide at the same time good quality for automatic and computerized translations (Moneus, Sahari 2023)[9].

As reliance on AI progressively increases, it could happen that translators and localization experts will have to specialize in specific fields in order to keep pace with the developing job market. In particular, they would have to concentrate on creative or highly technical-scientific areas which still seem to be rather laborious for AI-driven software to translate with precision and without errors. As mentioned above, if on the one hand the possible drawback of the impact of AI on the translation industry is to cause job losses, on the other hand, the development of technology could contribute to increased demand for professional experts in new areas which might emerge. In essence, considering that new businesses tend to extend their outreach throughout the world and consequently promote content in several languages, it is likely that more translators with effective skills will be needed so as to successfully handle the increased amount of work (Moneus, Sahari 2023)[9]. In addition, notwithstanding the fact that AI computerized devices manage to do high-quality translations, they cannot be considered as perfect as they do not review and edit the translation done as human translators would do, therefore they cannot ensure accuracy. This assumption suggests that AI cannot completely replace human translation, as a result, a good compromise would be that AI-powered tools are to be used in conjunction with human expertise so as to guarantee that content translated is culturally appropriate, accurate, free from bias and above all error-free.

However, the main point that emerged from the interviews with professional translators is that an interesting challenge for AI is whether it can overcome translation difficulties typical of audio-visual translation (subtitling, dubbing, voice-over, and audio description).

Screen translation is generally regarded as a complex type of translation as audio-visual work consists in dealing with the oral languages combined with sounds, music colors and voice registers, etc. (Dunne & Dunne 2011)[5]. The difficulty of dubbing is that translators and adapters need to make sure that the new dialogues synchronize as well as possible with the actors' lip movements on the screen which means, in most cases, that translations are not always faithful. Regarding subtitling, a further difficulty is characterized by the frequent shortcuts which are made. Normally, half of the source dialogue is lost due to spatial restrictions (Pena-Díaz, Díaz Cintas 2023)[12]. Hence, this is one of the areas of translation that requires the expertise of skilled human translators.

Additionally, what makes audio-visual translation even more difficult than any other type of translation is the fact that translators and screen adapters deal with spoken languages which constantly include untranslatable words and expressions that do not have a direct equivalent in the target language, namely idioms, informal figure of speech and sayings, terms that have strong cultural references linked to the source culture, proverbs, neologisms and slang expressions (Pena-Díaz, Díaz Cintas 2023)[12]. Furthermore, apart from highly cultural references and idiomatic expressions, what tends to amplify screen translation difficulties is the presence of regional dialects and local accents in the dialogues to translate and dub. Regarding the translation of British English into Italian, one of the UK's most common dialects that screen translators struggle to adapt into the target script is Cockney (Taylor 2006)[14]. Cockney English came about in the poorer East End of the city and is characterized by its distinctive rhyming slang. Other common types of British accents and dialects include Estuary English which is spoken by people who live along the Thames Estuary and it is now becoming one of the most widely spoken accents down South. Brummie is the dialect spoken in Birmingham which is quite soft, elastic, and lumpy sounding. Scouse is the Liverpudlian nasal accent, whereas Geordie is the type of dialect spoken in Newcastle. One of the biggest differences between Geordie and RP is that the 'r's at the end of words are not pronounced and tend to be pronounced as 'ah' instead. Translators then seem to struggle to find effective substitutes in the target language in order to convey the same impact that these features of the language have in the original films (Taylor 2006)[14].

Consequently, an interesting research question that emerged in the course of all the interviews is whether AI would help to discover better solutions and strategies in dialect translation so as to obtain pleasant exotic effects without falling into banal neutralization or incoherent localization.

The prevalence of research in the area of sociolinguistics and dialectology maintains that the approach of Italian translators in dealing with dialects in most cases tends to be amateurish and superficial and that translators may not always be sufficiently trained to resolve problems caused by language variations (Ranzato 2006)[13]. According to Galassi (1994, cit. in Di Fortunato 1996)[4] the use of dialects in Italian screen translation seems to have a rather comic connotation; moreover, their use is generally perceived as unsuitable for dramatic films as dialects tend to be often neutralized or replaced by wrong expressions. The result is the creation of a socially unmarked and geographically unlocalised language.

Research shows examples of strategies and solutions in dialect adaptations that can achieve uncommon but good results which might pave the way for further developments: one of them is the use of rhyming which, in translating Cockney rhyming slang or other non-rhyming dialects, could reach pleasant effects of exoticism (Ranzato 2006)[13]. Other better solutions could be obtained experimenting with the potential of the target language, particularly its lexis and syntax. The result could be an unusual prosody that may reach the effect of an unlocalised variant of the standard language (Taylor 2006) [14]. In light of the issues hitherto raised a further research question that has arisen in the discussion is whether AI will succeed in providing better solutions in dialect adaptations.

According to data gathered for this enquiry it seems that the response is negative since apart from the disadvantages of AI-powered translation tools discussed above such as the lack of ethics, the high risk of unemployment in the translation industry and the possibility of making individuals lazy, the biggest drawback of AI in the field of translation and adaptation is lack of creativity as it cannot learn to think divergently and come up with new ideas (Wang 2023)[15].

That being the case, creativity seems to be an important element especially in audio-visual translation; according to Monica Scheer, a subtitler for Swedish television:

The translator has to be a little bit of a writer because this one is a creative profession but within frames set by someone else. He/she must work with a living dialogue and must enter into other people's way of thinking and their way of expressing themselves. For example how would an elderly person formulate himself/herself, and, on the contrary, how would a young boy express himself. Especially that bit to try to put oneself into another person's shoes is what makes the job very difficult. Besides, an important quality for translation is suspiciousness. No one claims that the translator has to know every word in the film, but he has to understand where he/she does not understand. Guessing is usually not recommended. However, translation always means shrinking the dialogue because the translator has got two lines of thirty- four spaces each to summarize what is being said in six seconds (Scheer cit. in Almegård Nörby 1998)[1].

Nevertheless, further research should be done in order to investigate whether future and more advanced AI computerized tools will be able to improve the quality of screen translation and maybe lead to more accurate and natural-sounding translations.

LIMITATIONS

This research project has some limitations which depended mainly on the fact that I am a novice researcher and that it was the first time that I was doing a detailed research in this field, therefore my inexperience might, somehow, have influenced the way I carried out this investigation. The interview itself could be considered as a sort of limitation for this research as generally participants could perceive one-to-one debates with personalized questions as an invasion of their privacy and consequently might feel intimidated or uncomfortable to share personal information about their lives or their

previous experiences. A further limitation was determined by the small sample size of the survey: because of time constraints, only four translators were interviewed. The involvement of a larger number of participants could have provided more common elements to analyze and identified further interesting patterns and themes and in addition it would have also given the opportunity to draw better analogies and comparisons of the findings (Neuman 2013)[11].

CONCLUSIONS

All things considered, regarding the main research question addressed for this investigation “Will AI-powered tools replace human translators?” It seems that the answer is no, at least according to findings. AI has improved the accuracy of machine translation tools, but it cannot replace humans.

A good translation in fact is not just a question of translating the source text word by word into the target language. Nor does it consist, however, in the translator skimming through the source text, putting it aside and then transcribing the general idea by using his/her own words in the target language. It requires a thorough knowledge of both languages, but above all, it is fundamental to have a deep understanding of the source culture that is mixed with the language and an ability to deal with new situations appropriately (Cavaliere 2021)[2]. No dictionaries and AI-powered translation tools can contain all the solutions to such problems, especially in translating a film script, since these problems are always new and different as people use words in unusual ways. These unusual uses of the language take place at all times and some expressions become popular informal sayings among speakers and eventually come to be part of the language itself. To explain further, not only does the process of translation take place between two or more texts, but rather between two or more cultures. As a result, translating and overdubbing film scripts is not only a linguistic matter, but an activity which bridges the gap between different languages and cultures to respond to the audience’s demand for a wider communication, consequently it seems that AI cannot serve this scope.

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ARTIFICIAL INTELLIGENCE (AI) AND ART REVOLUTION

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ABSTRACT

Today we are assisting the increasing diffusion of text-to-image programs that are causing many debates relative to aesthetics and culture and therefore the images produced via a "prompt" defined by the user.

In fact, there are disturbing questions behind all of which it hides and hides a banalization of the idea itself of art and consequently that of AI, however, it raises fundamental questions, such as: AI can effectively produce art or, at least, artistic content that is also relevant? Can AI be considered as a brush on a digital canvas? The aim of this research is to answer these questions and investigate its evolution (fig. 1).

Keywords: Artificial Intelligence, Art, Generative images, Artistic revolution, Art history.



Fig.1. Prof. Minaudo, M., “*AI and oil painting on canvas*”, March 2024 (Image created using AI - Microsoft Copilot).

INTRODUCTION

The idea starts from a personal passion for teaching teaching through new technologies and therefore following the introduction of AI in the field of education and in all school levels, including university. Thanks also to a competition announced by the Ministry of Education and Merit in Italy, having participated with a Primary School class as a sample, therefore, having started an experiment based on the ability of some children to use it, it was possible to proceed with a report accurate results.

MATERIALS AND METHODS

Through the research/experimentation presented, we want to highlight the artistic and educational aspects that are directly related to the history of art, through the methodology of interpretation, research methods and descriptive methods, explanatory but also comparative research methods. The research refers to the effects produced by the creation of a painting or image generated by Artificial Intelligence and artistic vision according to new methods based also on Augmented Reality (AR) and Virtual (VR). The aim of this research is to underline the importance and the need to find and combine new/innovative solutions relating to works of art and therefore verify the real impact, observed in class with students, with forms of artistic expression that have beauty as the ultimate goal and technique or rather new techniques as a means. The experimentation was based on the organization of small groups of primary school students who worked in various artistic laboratories with the use of Artificial Intelligence to create both videos and images with techniques previously used only in manual activities and without computers or electronic devices. We started from the creation of images for inclusion, in order to give everyone the opportunity to participate actively and without feeling excluded through an educational method centered on the vision of some famous works in the world and then moving on to "reawaken interest and 'love of art and science' and therefore a combination between them. This document reports the results obtained, including even statistical data to better understand this phenomenon and its continuous incessant expansion, finally, to more appropriately evaluate the real impact that activities with AI in Art can have, indeed, have had in the field of teaching-learning.

Applications and online platforms used:

Assemblr EDU

An immersive education platform to help teachers/parents and students to have fun and learning experience with 3D/AR visualizations.

<https://edu.assemblrworld.com/>

Meshy

For create 3D models.

<https://www.meshy.ai/>

SDXL-Lightning

A lightning-fast text-to-image generation model.

<https://fastsdxl.ai/?fbclid=IwAR0TEu2VZbGM4EmOeAgRZfLEb8g5W06ocBbL-thFXw-EpmoOu8kCBzX9UEA>

DALL·E 2

An AI system that creates images and even works of art in a realistic way.

<https://openai.com/dall-e-2>

Midjourney

Research laboratory (AI) that creates images from textual descriptions ("text-to-image") similar to DALL-E and those presented by Stable Diffusion.

<https://www.midjourney.com/home?callbackUrl=%2Fapp%2F>

Designer Image Creator

To transform ideas into images simply by describing them.

<https://designer.microsoft.com/image-creator?p=pixel+art+of+%5Bred+headed+woman%5D+with+%5Blong+straight+hair%5D%2C+%5Bbrown+eyes%5D%2C+wearing+a+%5Bcrown%5D+and+%5Ba+green+dress%5D%2C++holding+a+%5Blaptop%5D%2C+square+pixels%2C+low+resolution%2C+64bit%2C+pixelated+character+portrait%2C+simple+background%2C+full+body+pose%2C+2d+game+graphics%2C+pixelart%2C+low+poly+models+%5Bmortal+combat+style%5D&referrer=CreateLG>

Krikey

AI app for animate 3D talking avatar.

<https://www.krikey.ai/>

Virtual Tour of the museum and about Vincent van Gogh works.

<https://www.vangoghmuseum.nl/en>

Smithsonian museum

The world's largest and research complex, with 21 museums and 9 research centers + affiliates around the world.

<https://www.si.edu/>

Virtual Tour – “Smithsonian Natural History Museum”

https://naturalhistory2.si.edu/vt3/NMNH/z_NMNH-108.html

Virtual Tour "*Sistine Chapel*"

<https://www.museivaticani.va/content/museivaticani/en/collezioni/musei/cappella-sistina/tour-virtuale.html>

Virtual Tour “*Louvre – Petite Galerie*”

<https://www.louvre.fr/visites-en-ligne/petitegalerie/saison3/>

RESULTS AND DISCUSSION

Our attention focuses on Artificial Intelligence and the revolution in the artistic field starting from some fundamental questions such as those concerning the interaction between AI and human intelligence. Bruno Cucinelli, who highlighted the importance of ethics in AI design and compared this approach to a “nomos” similar to that of the ancient Greeks, a rule that guides social and political life (<https://www.brunellocucinelli.com/>

[it/thoughts/letter-on-artificial-and-human-intelligence.html](https://www.brunellocucinelli.com/it/thoughts/letter-on-artificial-and-human-intelligence.html)). Cucinelli also explored the idea that AI could be a “breath” that revives the vital fire of the human mind, allowing creative visions to be translated into reality. AI could be an ally for artists in the creative process.

The Work of Art in the Age of Artificial Intelligence: the exhibition “The work of art in the age of Artificial Intelligence” in Parma pays homage to Walter Benjamin's famous essay from 1936. Benjamin reflected on art that was transformed under the impulse of emerging technologies such as cinema and photography. Today, AI is further influencing art, opening up new expressive possibilities.

Scientific Experiments on Art and Artificial Intelligence: several experiments seek to better understand the world of art through AI.

These studies explore how AI can contribute to artistic creation, understanding works of art and discovering new perspectives [1].

In summary, AI is redefining the concept of artistic creativity, opening new paths and challenging our perceptions. It is fertile ground for innovation and collaboration between humanity and technology.

Artificial intelligence is today becoming an integral part of the educational process and to verify its effective impact, especially in the teaching of the History of Art and in painting or sculpture workshops, a group of students were involved as a sample class.

It has been found that AI facilitates learning, especially in combination with visualization through Augmented/Virtual Reality with an interactive and targeted approach together with playful elements. There will certainly be further long-term benefits and also the extracurricular community, in fact, the data collected and shown in the graphs shown here also show us the situation relating to trends in the world in addition to the use of generative images.

With the introduction of AI in education (which can be considered an assistant in the educational process, an effective facilitator) and therefore in classes, the teacher does not lose his role (which in any case needs to be rethought) but remains a fundamental figure, the safe reference with strategic importance. An updated standard would be appropriate: from primary school to secondary school and even university, a revision of the curriculum also to combat dropout.



Fig.2. Art and Technology lesson using AI to generate new images changing the prompt together with the students, April 2024

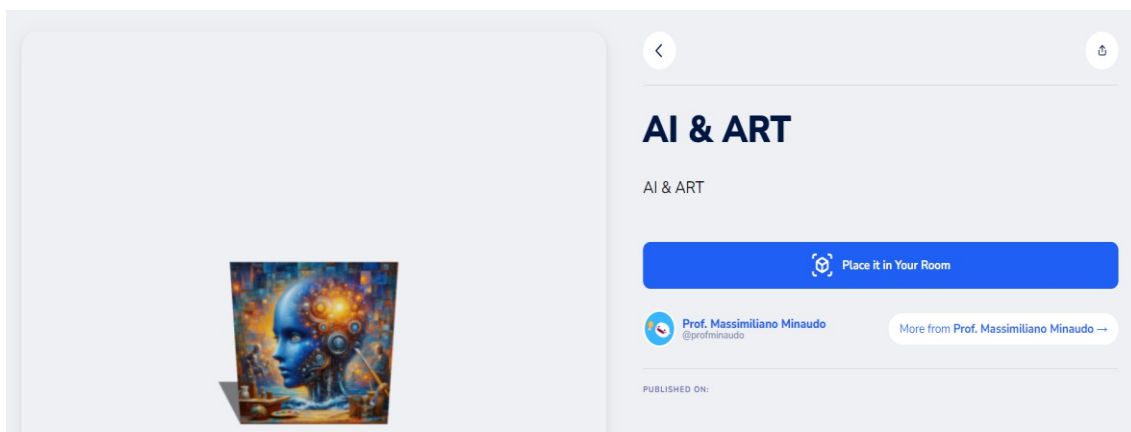


Fig.3. Display the AI-created painting in the classroom using Assemblr EDU, April 2024.

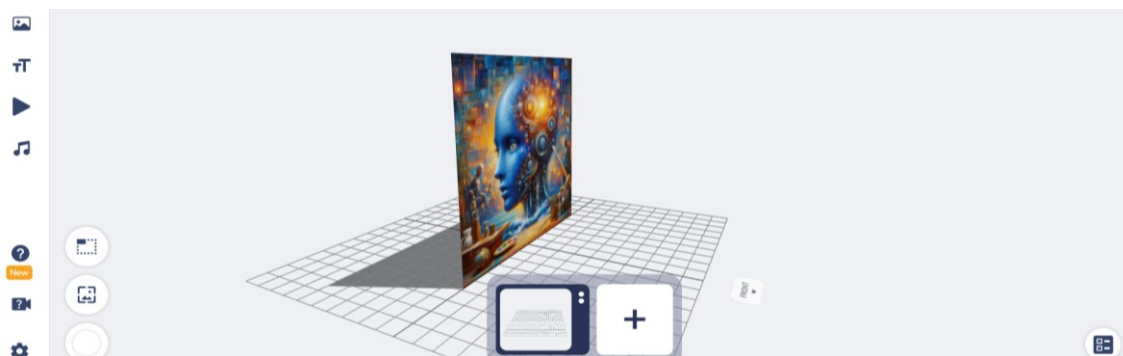


Fig.4. Observation in Augmented Reality (AR) of the picture obtained with Artificial Intelligence by exploring it in the surrounding space, April 2024.

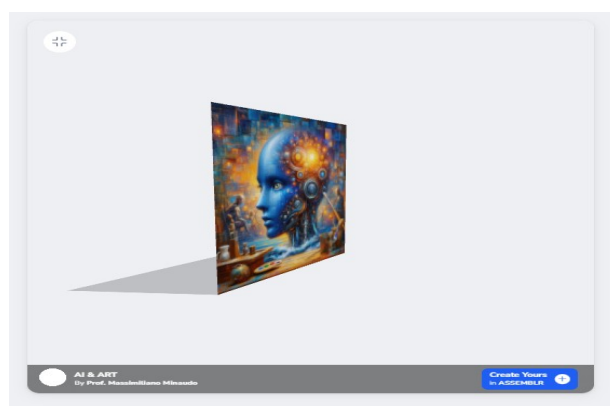


Fig.5. Use of mobile devices for virtualization and observation of the painting, April 2024.



Fig.6. “AI and oil painting on canvas of a woman in the middle of a field of flowers”, March 2024 (image created during the workshop with the students using AI).

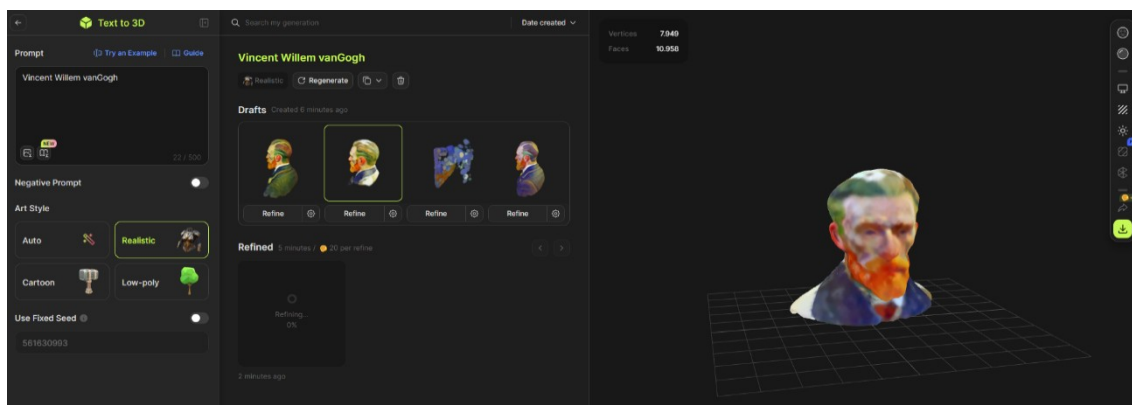


Fig.7. Sculpture of the post-impressionist painter Vincent Van Gogh - statue created with Meshy.

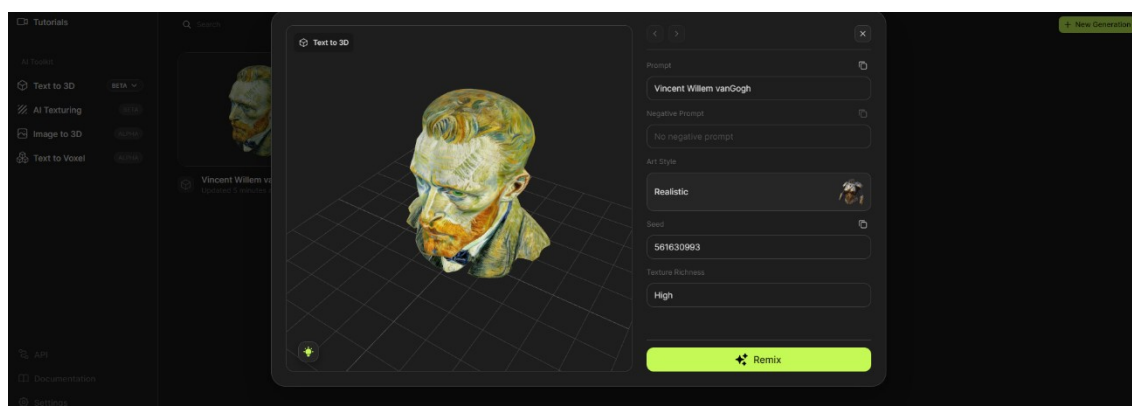


Fig.8. Vincent Van Gogh statue refined with Meshy.

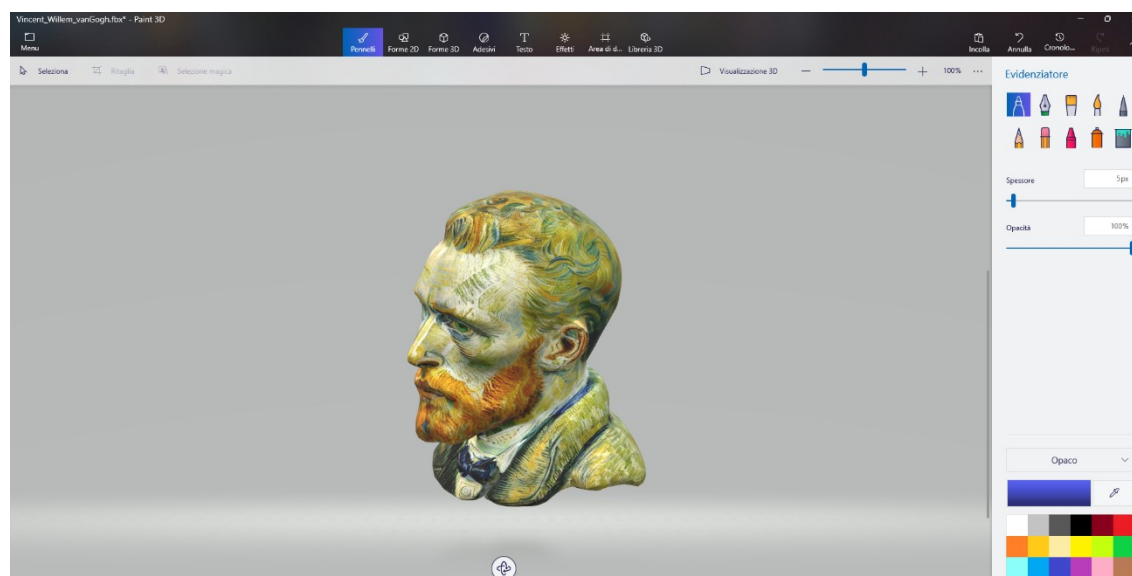


Fig.9. Paint 3D – Microsoft Apps.



Fig.10. Virtual Tour "*Sistine Chapel*".

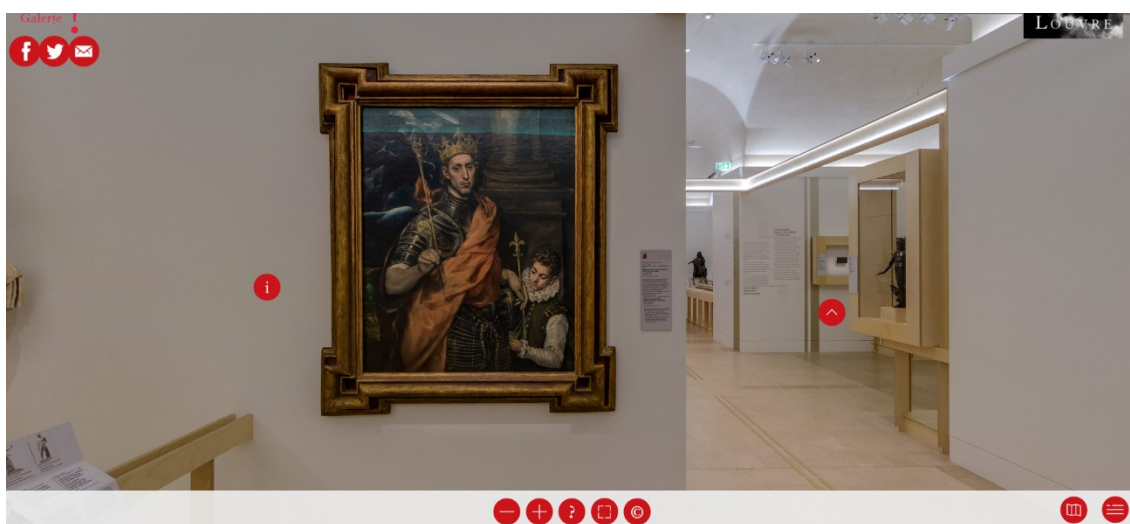


Fig.11. Virtual Tour "*Louvre – Petite Galerie*".

Artificial intelligence (AI) is having a strong impact in various sectors beyond education and in particular on productivity, we are seeing continued growth and the market is expected to reach a volume of \$407 billion by 2027. According to Goldman Sachs Research, even, by 2033 the contribution of AI should be such as to lead to an increase in global GDP equal to 7%. The adoption of ChatGPT, both in education and in other additional environments, has recorded (since the first five days) as many as one million users of the chatbot. 64% of companies expect artificial intelligence to contribute to a generic increase in productivity and according to estimates by the European Parliament, thanks to AI, labor productivity will grow between 11% and 37% by 2035. impact on the various sectors is therefore certain: real estate, public administration, commerce and education. Trends indicate that AI has great potential to improve productivity and transform these and other sectors, however, it should be noted that its adoption poses challenges, such as the need for training of students, workers and policies for equitable income redistribution [2].

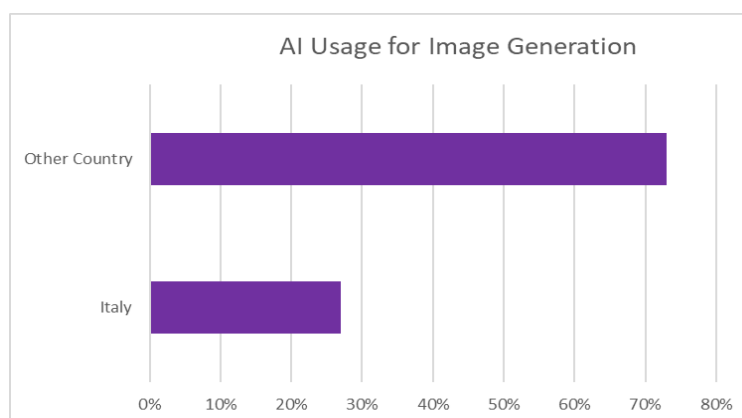


Fig.12. AI Usage for Image Generation.

Source: Developed by the author based on research findings.

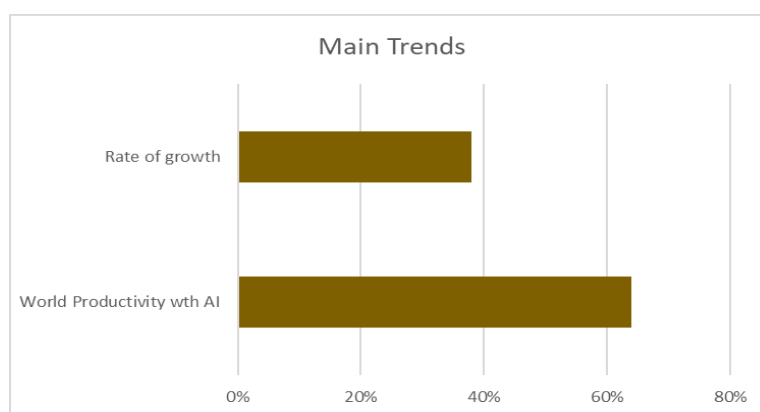


Fig.13. Main Trends.

Source: Developed by the author based on research findings.

CONCLUSION

Art, augmented reality (AR) and artificial intelligence (AI) constitute a tripod that evolves in a surprising and innovative way so much so that we can affirm, based on the results obtained during experiments, that this is now the new form of artistic expression, the trend destined to spread especially among young students and apprentices [3].

This intersection is therefore changing the way we already interact or will interact with modern art but also revisiting the works that are the object of study. Art is certainly a means through which artists express their creativity and ideas but also a way to communicate emotions, thoughts and concepts that often go beyond words. Augmented reality is a technology that overlays digital information, such as images and sounds, onto the real world and this can enrich the user's experience, allowing them to interact with art in new and engaging ways without detracting from the historicity of a painting or of a sculpture, indeed, a work of art could be enriched with animations and sounds that are activated when the user looks through an AR device to stir something in the soul. Artificial Intelligence is becoming increasingly sophisticated and advanced to the point

of creating works of art autonomously (all it takes is a prompt). Various questions arise or can arise about the role of the artist and even about the very nature of art also because AI can be used to analyze and interpret works offering new perspectives and insights. In conclusion, in an overall vision: Art, AR and AI, it can be said that we are currently witnessing the creation of a new artistic landscape full of possibilities and at the same time the inauguration of revolutionary forms of expression aimed at changing the very way in which art is created, experienced and shared.

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