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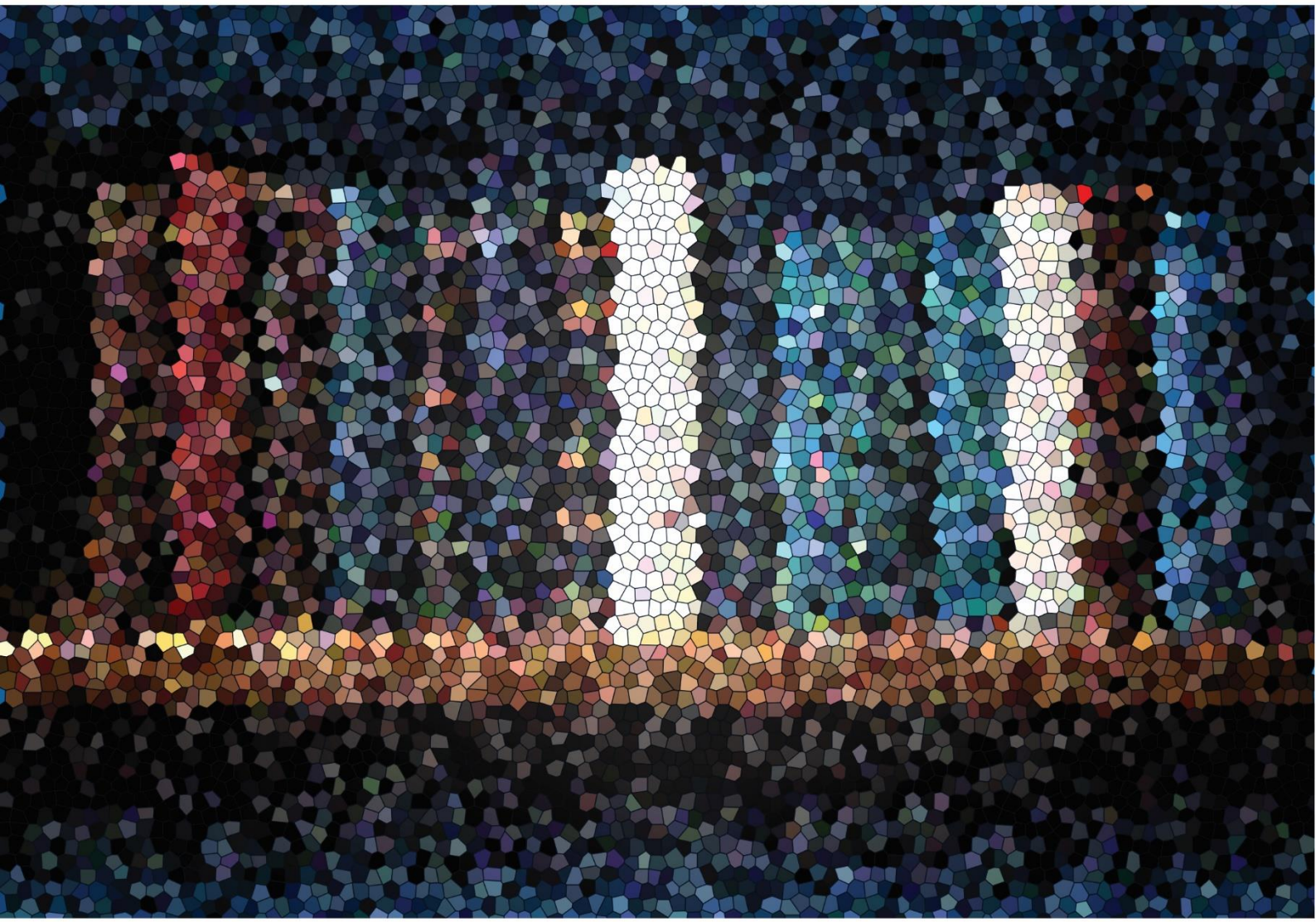

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Practices and Strategies for Teacher Professional Development in Education 4.0

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Abstract

In the era of Education 4.0, characterized by digital learning and rapid changes in labor market requirements, the professional development of teachers becomes a strategic priority for education systems. This theoretical article explores the practices and strategies of teacher professional development in relation to the new requirements of Education 4.0, with a focus on continuous training, adaptability, collaboration and pedagogical innovation. Fundamental concepts such as educational coaching, pedagogical mentoring and professional learning communities are analyzed, in correlation with validated international models and relevant local implementations. The paper includes examples of good practices from Romania, such as the SMART-Edu Strategy, iTeach, EDIS-PED, Aspire Teachers, emphasizing their contribution to the continuous and sustainable training of teachers, supporting the priorities of the European Union. The conclusions highlight the need for a coherent and systemic approach to lifelong learning, considered essential for supporting a genuine transformation of education in the context of the fourth industrial revolution.

Keywords:
coaching, digitalization, Education 4.0, mentoring, professional learning communities, teachers' professional development

1. Introduction

Changing times influence all areas of society, including education. The Industrial Revolution 4.0 is bringing major transformations in the economy, industry, government, politics and education through advanced technologies such as artificial intelligence, nanotechnology, genetic engineering, supercomputing and automation (Risdianto, 2019). This revolution emphasizes the development of virtual technologies that reduce the need for human labor, profoundly influencing all aspects of everyday life (Đuricin & Herceg, 2018). In this context, the educational system must train competitive human resources capable of meeting new challenges. Achieving these goals requires effective educational leadership and well-trained teachers. According to Sasongko & Sahono (2016), innovation is a creative activity that generates valuable ideas, concepts, objects, or solutions for society. In education, this type of innovation is essential for adapting continuously to technological and social change.

Education 4.0 marks a stage in which educational institutions adopt modern teaching methods, advanced digital tools, and smart, sustainable infrastructures. Miranda et al. (2021) identified four key dimensions of the model: educational infrastructure, learning methods, key competencies, and information and communication technologies. Together, these dimensions provide a strategic framework for reforming education to meet the demands of the 21st century. Teachers must possess the same key competencies required of students: critical thinking, digital skills, and problem-solving ability. These competencies are essential in the modern labor market (Peredrienko, 2020). The quality and professionalism of teachers directly correlate with the effectiveness of the educational process, especially in the context of the digital revolution.

Man et al. (2017) emphasize that the transformation of education is impossible without well-prepared teachers. Furthermore, poor student outcomes are often associated with a lack of teaching competence among teachers (Adzhar & Radzi, 2020). The OECD (2019a) also indicate the importance of continuous professional development. They state that to meet the increasingly complex demands of modern schools, teachers need to constantly update their knowledge and skills in response to the needs of their students. Therefore, for the education system to effectively respond to new global challenges, it is essential that teachers be innovative, flexible, and committed to continuous learning, thus becoming active agents of educational change.

2. Theoretical foundation

2.1. Teachers' professional development

Professional development is considered essential to ensuring the quality of education and a teacher's ability to adapt to the demands of contemporary society. According to researchers Ivanova and Antonov (2019), this process involves actively transforming one's professional identity by strengthening specialized skills and developing personal traits, motivation, communication, and self-reflection skills. These skills contribute to teachers' self-actualization in creative and effective ways.

Similarly, Desimone et al. (2006) emphasize that professional development is fundamental to improving specialist knowledge and enhancing teaching quality. Nowadays, in-service training has become a systemic necessity, essential for maintaining teachers' professional relevance, not just a recommendation.

The strategic importance of the teaching profession is also recognized in legislation. In Indonesia, for example, the teaching profession has been formally regulated since 2005. Regulation No. 55/2017 (Permenristekdikti) of the Ministry of Research, Technology and Higher Education establishes standards for teacher training and defines teachers as professional educators responsible for instructing, assessing, and supporting students in all educational cycles.

A major component of professional development is integrating digital technologies into education; however, this transition presents challenges. One such challenge is the lack of consensus on the concept of the digitization of education. Uvarov et al. (2019), for example, define digitization as achieving educational outcomes by personalizing learning with digital technologies. Vaindorf-Sysoeva & Subocheva (2020), on the other hand, describe digitization as the transfer of pedagogical functions into a digital space through the use of big data to organize learning, promote student autonomy in processing information, and use mobile technologies to expand access to knowledge and collaboration.

Dautova et al. (2020) define digitization as translating the educational process into a unified digital ecosystem based on hardware and software infrastructure. This transformation aims to qualitatively change the interaction between educational participants and optimize learning outcomes. This transformation entails reassessing the role of vocational training. According to Bagautdinova (2002), one essential aspect of computerizing education is using ICT as an integral part of teaching methodology and educational management, not just as technological support. This requires the continuous and systematic development of teachers to leverage the technological potential for pedagogical purposes and adapt to the demands of a computerized society.

2.2. Forms of teachers' professional development

Professional development is an ongoing process essential to the sustainability and effectiveness of a teaching career (Chin et al., 2022). The literature highlights multiple forms of professional development: formal, non-formal, and informal. They are defined by their own characteristics, advantages, and limitations; together, they contribute to the development of adapted, innovative pedagogical practices.

According to TALIS (OECD, 2019b), professional development falls into two categories: formal and informal. Formal professional development includes participation in courses, workshops, educational conferences, seminars, qualification programs, observation visits to other schools, involvement in teacher networks, and individual or collaborative research. It also includes mentoring, peer observation, and coaching activities. Informal professional development consists of less structured activities, such as literature reviews and informal peer dialogues on pedagogical strategies and practices. Formal professional development usually occurs in an organized setting, such as an online course or workshop (Lockee, 2021; Pires, 2021). These settings provide access to the latest methodological innovations. In contrast, informal learning often occurs spontaneously in various contexts, such as professional network interactions or exchanges of best practices with other educators.

Recent studies confirm that formal and informal learning complement each other and should be approached in an integrated way. For instance, during the pandemic, teachers benefited from both formal training offered by ministries of education and informal discussions through social networks to rapidly acquire the necessary skills for distance teaching (Trust et al., 2020).

In this context, Abaci et al. (2021) and Chin et al. (2022) emphasize that teachers relied on their own competencies and institutional support to overcome digital challenges. This confirms the idea that professional development is an ongoing learning process supported by educational infrastructure and

personal initiative. Similarly, Korthagen (2016) emphasizes an important point: the effectiveness of professional development hinges on its relevance to classroom practice. He emphasizes the significant gap between theory and practice and categorizes professional development into several levels:

1. Simple explanation of theories to teachers;

1.1. Explanation of theory accompanied by concrete example;

2. Integration of new methods into the active curriculum;

3. Emphasis on reflective learning, centered on teachers' real-life experiences, in order to strengthen professional identity.

This approach emphasizes teachers' personal development and is supported by Avidov-Ungar & Herscu (2019), who state that effective programs change teaching behavior and positively influence student learning.

Furthermore, research shows that professional development success depends not only on program content but also on teachers' personal and professional characteristics, such as teaching experience, openness to change, professional awareness level, and learning process expectations (Lockee, 2021; Sancar et al., 2021; Wuryaningsih et al., 2021).

2.3. Teacher 4.0 profile

The transformations brought about by Industry 4.0 have profoundly influenced the way we think, act, and communicate, including in education. In an ever-changing world, rapid adaptability, openness to new ideas, risk-taking, and creativity have become essential qualities for those in education (Noh & Karim, 2021). Although this technological revolution poses risks and uncertainties for schools and teachers, it also presents valuable opportunities, such as openness to innovative teaching methods and creative inquiry, which can enhance teacher effectiveness and student achievement (Uspayanti, 2021).

In this context, the concept of "Teacher 4.0" emerges as a new professional model that lies at the intersection of technology, pedagogy, and humanity. Teacher 4.0 is closely related to Education 4.0, an emerging educational paradigm based on the accelerated evolution of digital technologies and learner-centered practices (Peredrienko et al., 2020). A 4.0 teacher is characterized by flexibility, professional autonomy, an openness to lifelong learning, and interdisciplinary skills. They are teachers who can integrate modern technological tools into their teaching, create diverse educational contexts, and facilitate learning (Abdelrazeq, 2016; Smolyaninova & Bezyzvestnykh, 2019).

According to Abdelrazeq (2016), Teacher 4.0's responsibilities are marked by three major categories of challenges: human and didactic (e.g., adapting one's pedagogical style), organizational (e.g., integrating into flexible school structures), and technological (e.g., using smart equipment and digital platforms). In the face of these changes, teachers must manage the demands of a digitized environment and interact with a new generation of "digital native" learners (Afrianto, 2018).

Three innovative educational scenarios have been proposed to meet the new challenges (Abdelrazeq, 2016):

a) Monitoring student attention: using smart devices that detect movements and physiological reactions to increase engagement and provide teachers with automated feedback.

b) Real-time self-feedback: using wearable technologies (e.g., wireless headphones or AR glasses) to provide teachers with suggestions on their teaching behavior to facilitate immediate improvement;

c) Multilingual communication: integrating digital solutions that support learning in linguistically diverse classrooms and ensure equitable access to content and a shared educational experience.

For a sustainable transformation of education, it is important that these changes be translated into practice. Thus, three competence domains specific to Education 4.0 have been defined (Koenen et al., 2015):

1. Pedagogy in Education 4.0: This area involves designing a competency-based, learner-centered learning process that includes authentic tasks, critical reflection, autonomous learning, and alternative assessment methods. This approach promotes a socio-constructivist view of learning (Vygotsky, 1978; Lave & Wenger, 1991) in which teachers become facilitators who actively collaborate with other educational stakeholders.

2. Digital Technologies in Education 4.0: This dimension addresses teachers' ability to integrate technology into teaching to transform and enrich students' experience. Key competencies include supporting self-regulated learning, promoting peer collaboration, and designing hybrid and online courses

using tools such as learning management systems (LMS) platforms.

3. Learning Ecosystem in Education 4.0: The focus is on collaboration between teachers, students, and external partners, such as employers and the community.

Emotional intelligence, self-regulation, and social skills are essential here (Goleman, 2001; Mayer & Salovey, 1997). These skills enable the development of authentic learning communities based on empathy, dialogue, and shared solutions. The elements of knowledge, attitude and action that define the competences of the Teacher 4.0 must be approached in an integrated and complex way, to ensure balanced professional development (Barnett, 2009). Theoretical knowledge or practical experience are not enough; an open mindset, a commitment to lifelong learning and an adaptable professional vision are also necessary (Eraut, 1994).

A teacher's attitude toward change and willingness to evolve are fundamental to the success of Education 4.0.

3. Effective professional development practices and strategies

3.1. Mentoring and coaching

In recent years, instructional coaching and mentoring have become essential components of in-service teacher education. They are recognized for increasing pedagogical effectiveness and supporting early careers in education. According to Weston & Clay (2018), coaching is a process that facilitates learning and personal development through reflective dialogue, goal formulation, and active guidance. The coach does not offer solutions, but rather helps the individual discover them, regardless of their level of expertise.

In contrast, Jones (2018) defines mentoring as an asymmetrical relationship in which an expert provides professional knowledge and serves as a role model for a novice, offering specific support for their professional integration and development. This process involves modeling, observation, and direct exemplification. Recent research points to three theoretical frameworks commonly used in coaching program design:

a) The Zone of Proximal Development (ZPD; Breive, 2020), which emphasizes the importance of support tailored to the teacher's developmental level.

b) The Presage-Process-Product Model (Biggs, cited in Ganotice & Chan, 2019), which highlights the influence of context, process, and outcomes in training.

c) The GROW Model (Eriksen et al., 2020; Hastings & Pennington, 2019), which provides a four-step structure: goal, reality, options, and will.

These models all help maximize professional potential and are tailored to the mentee's profile (Lord et al., 2008).

In China, mentoring is an integral part of beginning teachers' professional career paths. Teachers are paired with mentors based on personal and professional compatibility. The mentoring process involves institutional induction, lesson observation, structured feedback, and shared goal setting (Wang et al., 2004). In the Philippines, Congcong & Caingcoy (2020) identified the systematic use of post-observation feedback by school leaders as a coaching method. School leaders use the results of classroom observations to support in-service teacher training and enhance the quality of education through professional reflection.

Research suggests these forms of support can significantly impact professional autonomy, motivation, and performance. For instance, Veenman et al. (1998) demonstrated in a study conducted in the Netherlands that a coaching and mentoring program for novice teachers significantly increased levels of pedagogical self-analysis and improved instructional effectiveness.

Additionally, Devine et al. (2013) and Gormley & van Nieuwerburgh (2014) emphasize that these practices facilitate active learning through dialogue and reflection. Additionally, Kets de Vries (2005) argues that group coaching is effective in creating effective teaching teams.

Educational leadership plays a critical role in implementing these practices. Congcong & Caingcoy (2020) note that school principals are mentor-coaches who provide feedback after observing lessons. Using these tools repeatedly optimizes learning and contributes to continuous improvement in teaching and academic performance. All studies agree on one essential idea: regardless of the model applied (ZPD, GROW, cognitive coaching, etc.), coaching and mentoring ultimately aim to sustainably develop teachers' professional skills and improve educational quality (Memorial, 2024; Jones, 2018).

3.2. Professional learning communities (PLC)

Initial training is not enough to meet today's challenges, and teachers can only become experts if they are involved in continuous professional development throughout their careers (Van der Klink et al., 2016). In this regard, professional learning must be reflective, sustainable, and relevant to practice rather than casual or purely theoretical (McGee & Lawrence, 2009). A central model for collaborative development is the Professional Learning Community (PLC), which DuFour & Eaker (1998) conceptualized as the educational equivalent of organizational learning (Senge, 1990). The precise definition of PLCs remains complex and adaptable depending on the context (Chen et al., 2016; Lomos et al., 2011), but researchers emphasize that they must integrate three dimensions: professional, learning, and community (Hairon et al., 2015). Thus, each school can develop its own operating formula (Bolam et al., 2005).

Lesson observation, a frequent practice in PLCs, contributes significantly to continuous improvement. Novice teachers learn effective teaching methods, while experienced teachers refine theirs (Wang & An, 2023). According to Hord & Tobia (2012), collaborative learning and the sharing of pedagogical practices are fundamental to the PLC model. Recently, educational research and policy have increasingly focused on developing Professional Learning Networks (PLNs) - groups of teachers from different schools who collaborate to improve teaching and learning (Poortman & Brown, 2017). These networks can take the form of research-action partnerships or lesson analysis groups. Stoll (2010) and Chapman (2014) argue that the complexity of today's world demands collaboration between schools because educational challenges can no longer be solved at the individual unit level. In the Netherlands, professional development is still dominated by traditional formats, such as courses and symposia, which are predominantly conducted outside of school (OECD, 2019a). However, interest in collaborative learning in the form of professional learning communities (PLCs) or internal pedagogical support networks is growing in educational policy and school practice (Admiraal et al., 2019).

Internationally studies such as those by Tynjälä (2013) demonstrate that learning naturally occurs in professional social communities through real-life problem-solving, material development, and practical reflection. Robbers and Vermeulen (2018) argue that scholarly literature increasingly reflects this interest, with a growing number of publications on professional collaboration in schools. An emerging dimension of professional development is online communities of practice. Unlike local ones, these groups are structured around a common purpose or interest and encourage freer, more flexible, and more personalized forms of interaction (Awosusi et al., 2022; Namaziandost et al., 2021).

Park & Choi (2009) suggest that professional knowledge can be cooperatively constructed in digital contexts with the development of interactive technologies.

In addition, these networks support targeted learning and facilitate access to personalized content, depending on individual interests (Mendel, 2011; Dede et al., 2016). According to Holmes (2013) and McConnell et al. (2013), professional collaboration supported by digital platforms contributes to extending the duration and increasing the accessibility of lifelong learning. Xu et al. (2023) highlight that, within online communities, teachers' professional identities gain increased visibility, considerably influencing interaction patterns and perceptions of their own role.

4. Professional development programs and platforms in Romania

To respond to the challenges generated by the digital transformation of education, the European Union launched the strategic initiative *"Resetting Education and Training for the Digital Age"*. The Digital Education Action Plan (2021-2027) is one of the initiatives included in this program. This initiative is complemented by additional measures to support member states in transitioning to a modernized education system. One such measure is the intention to collaborate with the European Investment Bank to allocate funds for the development of digital educational infrastructure (European Commission, 2021).

Additionally, it is proposed that Erasmus+ programs be reviewed and adapted to explicitly include the digital education component. In this framework, digitalization is recognized as an essential legislative priority for strengthening the European education.

The related action plan aims at two main strategic directions: the integration of educational technologies in all levels and forms of education, as well as the development of digital skills among teachers, pupils and students (European Commission, 2022). These

objectives reflect the European Union's commitment to building a resilient, inclusive, and responsive educational ecosystem that adapts to the demands of the digital age.

In recent years, Romania has initiated several programs and initiatives dedicated to the continuous professional development of teachers to support the transition to an education system adapted to the new requirements. These include EDIS-PED, iTeach, and Aspire Teachers, as well as the strategic approaches under SMART-Edu. These programs aim to upgrade pedagogical skills through digital training and the production of open educational resources. These programs address the challenges posed by digitization and the need for curricular and methodological transformation in line with the principles of Education 4.0.

4.1. SMART-Edu

Romania's *SMART-Edu* Strategy (2021-2027) has developed action plans based on the two main areas included in the EU Digital Action Plan. The program offers a consistent set of measures to digitize the education system, focusing on equity, quality, and adaptation to contemporary societal demands. Major action lines include:

1. Strengthening digital competencies at all levels of education through specialized subjects, cross-curricular approaches, and formal and non-formal teaching activities.

2. Supporting the initial and in-service training of teachers in the digital domain to prepare them to integrate technology into teaching.

3. Modernizing the digital infrastructure of schools to reduce access inequalities by extending connectivity, developing internal networks, and providing modern equipment and technical support.

4. Facilitating the exchange of best practices among schools through local, national, and international e-learning platforms, such as SELFIE and eTwinning.

5. Promote cyber safety and responsible digital behavior initiatives with a focus on personal data protection, digital hygiene, and the ethics of technology use (MEC, 2020).

4.2. iTeach

In the context of the accelerated digitization of education, the *iTeach* platform is one of the most relevant Romanian initiatives dedicated to the continuous professional development of teachers. Developed by the Institute for Education and Social IT, *iTeach* operates as an all-in-one educational system for pre-university and university educators (iTeach.ro, 2024).

The platform provides access to short, accredited online courses that are recognized with transferable professional credits in accordance with Ministry of Education regulations. Users can also publish scholarly articles and open educational resources, which reinforces a collaborative framework based on open learning and knowledge sharing.

With over 11,000 educational resources and 6,000 articles in its database, *iTeach* provides access to relevant, up-to-date, and diverse content. Its interactive component is supported by educational social networking functionalities, including blogs, wikis, thematic groups, collaborative spaces, and videoconferencing tools.

The platform also promotes personalized learning through a digital mentoring system that provides teachers with individual and collective support for their professional development. Its interactive component is supported by educational social networking functionalities: blogs, wikis, thematic groups, collaborative spaces, and videoconferencing tools.

Additionally, the platform promotes personalized learning through a digital mentoring system that provides teachers with individual and collective support in their professional development.

Through this approach, *iTeach* supports not only the continuous professional development of teachers, but also the formation of active professional communities connected by shared objectives and online collaboration (Educatia-Digitala.ro, 2024).

4.3. EDIS-PED

The *EDIS-PED* (Digital Ecosystem for Sustainable Learning with Open Educational Resources and Practices) Program, is a strategic initiative aimed at training pre-university teachers in Romania. The project, which is launched in the 2024-2025 school year, is coordinated by the University of Bucharest and carried out in partnership with several Houses of the Teaching Staff (in Bucharest, Dâmbovița and Prahova) and the Constantin Brătescu Pedagogical College in Constanța. Funding is provided through the National Recovery and Resilience Plan (PNRR), and participation is free for public school teachers (Educatia-Digitala.ro, 2024).

The program's primary goal is to educate 3,100 teachers in digital pedagogy via intensive courses and specialized mentoring. Participants can choose between two training paths: a postgraduate program provided by the University of Bucharest or an accredited program equivalent to 25 transferable professional credits offered by partner institutions. Both training programs combine synchronous and asynchronous activities amounting to 78–96 hours and are conducted entirely online.

In addition to the theoretical training, *EDIS-PED* offers a practical mentoring phase of at least three months to facilitate applying knowledge to real teaching contexts.

Another outcome of the program is the creation of Open Educational Resources (OER), developed by the participants and considered for accreditation as official teaching aids.

The project targets teachers at all levels of pre-university education - from early education to post-secondary - with a special focus on teachers in rural or disadvantaged schools. Training groups are organized according to specialization, level of digital competence and institution of origin. Through this comprehensive approach, *EDIS-PED* contributes significantly to bridging the digital divide in education, supporting the professional development of teachers, increasing the quality of education and the effective use of digital resources in schools (Educatia-Digitala.ro, 2024).

4.4. Aspire Teachers

Since its launch in 2016, the *Aspire Teachers* program has become one of the most innovative models of teacher training in Romania. The organization's main mission is to connect education to the realities of the 21st century by helping teachers acquire critical thinking, emotional intelligence, and active learning skills.

A central pillar of *Aspire*'s work is the professional development of teachers, which is carried out through communities of practice, applied training, and scientifically validated pedagogical resources. By 2025, over 6,000 teachers nationwide had participated in the program's activities, positively impacting the education of around 20,000 students (AspireTeachers.ro, 2025).

Relevant professional development initiatives include DataMathLab, an annual program supporting secondary mathematics teachers with hybrid training sessions in regional centers such as Bucharest, Iași, and Cluj, as well as thematic webinars and online workshops on instructional design, alternative assessment, flipped teaching, and student-centered learning. These initiatives complement in-service teacher training in a flexible and accessible way.

Aspire emphasizes collaborative support through active professional communities. Selected teachers participate in testing and validating resources, collaborating in learning groups and becoming part of a network to disseminate good practices. Aspire also provides one-on-one pedagogical mentoring to help strengthen teachers' professional identities.

In addition to direct training, *Aspire Teachers* has been involved in educational advocacy processes, proposing solutions to improve framework plans, curriculum provisions, and initial training policies. For instance, the organization the organization has supported the incorporation of digital literacy and data science into secondary education.

Aspire Teachers is thus an example of good practice in teacher professional development, offering a coherent, applied, teacher- and student-centered approach that contributes to transforming Romanian schools through competence, collaboration, and pedagogical innovation.

5. Conclusions

In the era of Education 4.0, which is characterized by the accelerated integration of technology into the learning process, the professional development of teachers has become a strategic necessity. The rapid changes brought about by the Fourth Industrial Revolution, including technologies such as artificial intelligence, augmented reality, and machine learning, require teachers to adapt and fundamentally redefine their role in education.

In this context, effective professional development practices involve in-service training, interdisciplinary collaboration, project-based learning, and integrating digital competencies.

For these initiatives to have a sustainable impact, professional development must be centered on teachers' real needs, be continuous and accessible, and be contextualized. Institutional support and coherent education policies must actively encourage teachers to participate in relevant training.

Romania's continuing professional development programs demonstrate a sustained effort to adapt education to the requirements of the digital era and the values promoted by Education 4.0. However, to ensure

the sustainable, coherent transformation of teacher training, strategic directions and concrete recommendations are needed.

First, access to free and flexible digital training programs must be expanded, especially for teachers in rural or disadvantaged areas where significant technology gaps still exist. These programs should systematically include Education 4.0 - specific competencies, such as personalized learning, integration of emerging technologies, and design of learner-centered learning environments.

Strengthening mentoring and post-training support is also essential for transferring knowledge into practice and encouraging pedagogical reflection. In this regard, creating active professional communities, whether physical or digital, can provide valuable spaces for teachers to collaborate, share best practices, and support one another.

Finally, teachers who actively engage in their professional development become agents of change and can contribute significantly to an education system adapted to 21st-century demands.

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Strategic Horizons: Comparative Lessons on Higher Education Internationalization from Romania and Poland

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Abstract

This article presents a comparative analysis of internationalization strategies at two leading higher education institutions (HEIs) in Central and Eastern Europe: Universitatea Babeș-Bolyai (UBB) in Romania and the University of Warsaw (UW) in Poland. Drawing on formal policy documents from the two institutions, the study employs content and discourse analysis to examine how institutional visions, goals, and actions articulate internationalization as a strategic imperative. Findings reveal both convergence and divergence in approach. UBB adopts a pragmatic, five-year operational strategy oriented toward measurable growth in international student recruitment, expansion of foreign-language programs, mobility diversification, and comprehensive student services. Its initiatives, such as the Françubb francophone project and alumni ambassador networks, underscore a market-driven, niche-focused model shaped by national legal constraints on joint degrees. By contrast, UW embeds internationalization structurally within its broader institutional strategy, envisioning joint and multiple-degree programs, multilingual curriculum expansion, and mobility as a permanent feature of study. Anchored in the 4EU+ European University Alliance, UW positions itself as a European trend-setter, aiming to integrate internationalization into its institutional culture through systemic reforms and cultural transformation. The comparison highlights shared emphases on alliances, mobility, curricular internationalization, and student integration, while also underscoring distinctive pathways shaped by national contexts and institutional ambitions. UBB exemplifies operational pragmatism within constraints, while UW embodies aspirational integration aligned with European higher education reforms. Together, the cases demonstrate the diversity of internationalization models in newer EU member states, illustrating how HEIs translate global imperatives into locally responsive strategies.

Keywords:
Internationalization, institutional strategies, higher education, Romania, Poland

1. Introduction

Internationalization has become an imperative for higher education institutions (HEIs) across the world. Under pressure from the ever-increasing and intensifying global race to attract academic talent, generate cutting-edge research, secure top placements in world university rankings, boost their prestige and credentials, and expand their worldwide collaboration networks, HEIs have made internationalization a strategic and instrumental priority in their efforts to boost their competitiveness on the world stage.

Driven by the global economic competition that oblige HEIs to define their relevance for their national economies as laboratories preparing their graduates for the local labor markets, universities are compelled to draft internationalization plans aiming to instrumentalize, through multiple interrelated actions and objectives, their aspirations for excellence, innovation, reputation and attraction among their peers in the global higher education landscape (Buckner, 2019).

This study focuses on the internationalization aspirations, actions and goals expressed in strategic plans implemented at Universitatea Babeș-Bolyai (UBB) in Cluj-Napoca, Romania and Uniwersytet Warszawski (UW) in Warsaw, Poland. It seeks to answer the following research questions:

1) How do internationalization strategies compare across two specific institutional settings in the newer EU member states?
2) In what ways do institutional strategies mirror each other in interpreting internationalization as a strategic objective?

This research brings attention to geographic and institutional contexts that remain under-researched, using content analysis of formal internationalization strategies at HEIs in two newer EU member states. As noted by de Wit et al. (2017) and Mammadova et al. (2025), research on internationalization has primarily centered on the English-speaking world and Western Europe, with limited focus on "peripheral" regions,

areas that, according to the authors, are expected to play an increasingly influential role in shaping the future of higher education internationalization. Examining how institutional strategies are formulated and articulated at these two institutions, offers valuable insight into the institutional cultures, professional practices, and mindsets that shape internationalization efforts in Romanian and Polish higher education. It also offers contrasting models of internationalization in higher education locales that have adopted and implemented this global imperative relatively recently, given their transition from their common (post)communist trajectories that had restricted their participation in the global higher education landscape until the 1990s.

2. Internationalization in Higher Education

Over the past three to four decades, scholarly engagement with the internationalization of higher education has produced an extensive body of literature (Fumasoli, 2021). This surge in interest coincides with the globalizing forces that gained momentum following the end of the Cold War, fostering an increasingly interconnected knowledge economy that has encouraged educational institutions worldwide to pursue international linkages and collaboration (de Wit & Deca, 2020). Nevertheless, some scholars argue that internationalization, in various forms, has existed since the earliest days of medieval universities. During that era, both students and scholars traveled throughout European Christendom to pursue their studies, a movement facilitated by Latin as the common language of instruction and by a shared curriculum and examination structure (Knight & de Wit, 1995). While assessing the extent of such early forms of internationalization through contemporary definitions remains challenging, modern forms of international academic engagement and exchanges, vastly more complex in scope, continues to serve as foundational elements of comprehensive internationalization strategies in higher education (de Wit & Deca, 2020).

Accordingly, this research is situated in the broader scholarly discourse on internationalization, recognizing that, although a range of definitions for the term exist, they are more productively viewed as complementary rather than conflicting (Lee & Stensaker, 2021). One of the earliest and most widely cited definitions described internationalization as "the process of integrating an international/intercultural dimension into the teaching, research and service functions of the institution" (Knight, 1993, p. 21; see also Knight, 2004). Building on this, van der Wende (1997) proposed a broader, systemic perspective, defining internationalization as "any systematic effort aimed at making higher education responsive to the requirements and challenges related to the globalization of societies, economy and labour markets" (p. 18). Later, Knight (2008) revised her earlier position, offering a more inclusive definition: "internationalization at the national/sector/institutional levels is the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of higher education at the institutional and national levels" (p. 21). A more comprehensive formulation was offered by de Wit et al. (2015), who defined internationalization as "the intentional process of integrating an international, intercultural or global dimension into the purpose, functions and delivery of post-secondary education, in order to enhance the quality of education and research for all students and staff, and to make a meaningful contribution to society" (p. 29). This article adopts the latter, more expansive conceptualization to guide its analysis of internationalization strategies.

While this article's primary focus is on how institutions articulate internationalization strategies, it is important to acknowledge that scholarly literature on higher education internationalization has significantly expanded since early research, which largely concentrated on mobility in the context of globalization. Over time, research has evolved to encompass comparative perspectives, such as the tension between competition and cooperation (van der Wende, 2001), and has explored themes including internationalization at home (Alexiadou et al., 2023), curriculum internationalization (Shahjahan et al., 2024; Stein, 2017), the role of internationalization in global university rankings (Buckner, 2022; Hauptman Komotar, 2019), and its influence on institutional transformation and governance structures (Kovačević & Dagen, 2022; Wright, 2022). Other studies have examined how internationalization can foster more inclusive and holistic approaches (Rajkhowa, 2024).

Still, academic mobility has remained a central and consistent theme within this evolving literature. Part of the reason for this ongoing focus is the visibility of physical mobility, that is, students studying abroad for a time at host institutions, and faculty and staff traveling for teaching, research, or conferences, which Teichler (2015) describes as "the most visible international activity and it is in the forefront of programmes aiming to promote internationalisation"

(p. S8). In the European context, academic mobility has also been reinforced at the policy level through the European Commission's active efforts to increase mobility rates, with the goal of having 23% of European students participate in mobility experiences by 2030 (Mitchell, 2024a). These efforts are further supported by the Erasmus+ Programme and the establishment of the European Universities alliance (Mitchell, 2024b).

Therefore, it is no coincidence that institutional internationalization strategies place particular emphasis on academic mobility as a core driver of global engagement, although this is certainly not the only factor or dimension of a modern internationalization strategy that takes into consideration the complexity of an array of interrelated connections, frameworks, partnerships and collaborations necessary to sustain long-term internationalization in higher education. Against this background, this study examines UBB and UW to reveal the multidimensionality of internationalization strategies in two distinct national settings that form part of a broader higher education nexus, as both institutions are members of the European Higher Education Area (EHEA).

3. Institutional Settings

The two universities included in this study, UBB and UW, were selected for their importance in the higher education landscape of their respective countries, Romania and Poland. Their comparability in size, research status and reputation make them ideal sites for the examination of internationalization strategies, as illustrative cases for the higher education context of both countries.

3.1. Universitatea Babeș-Bolyai

Tracing its origins to a Jesuit college founded in 1581 under the name *Academia Claudiopolitana Societatis Jesu*, UBB holds the distinction of being both the oldest and largest higher education institution in Romania (Universitatea Babeș-Bolyai, n.d.). However, in its modern form as part of the modern state of Romania, UBB was founded in 1919 (Petrescu et al., 2018). Today, the university comprises 22 academic divisions and offers around 528 degree programs in the three main languages of Transylvania–Romanian, Hungarian, and German–alongside programs in English and French, underscoring its tradition and ongoing commitment to multiculturalism. UBB currently enrolls more than 50,000 students (UBB, 2024a).

Given its size, UBB operates through a broad and complex administrative framework. Central to this structure is the priority placed on internationalization, coordinated by the *Centrul de Cooperări Internaționale* (CCI; the Center for International Cooperation). CCI consists of 24 staff members distributed across four sub-units, each addressing different aspects of international cooperation. Within this framework, the office staff play a pivotal role in formulating, implementing and managing the university's internationalization strategy. This office also works closely with mobility coordinators designated by each academic unit (colleges and departments), who oversee tasks such as candidate selection for mobility placements (CCI, n.d.).

Aligned with UBB's administrative capacity and CCI's internationalization mandate, the university maintains 217 active agreements with partner institutions in 53 countries. Erasmus+ mobilities account for a significant portion of internationalization efforts and activities at UBB. In 2023, for instance, the university facilitated 2,005 student mobilities, of which 830 were outgoing and 581 incoming under Erasmus+. That same year, UBB recorded 1,728 faculty mobilities, with 868 supported through Erasmus+ funding (UBB, 2024a).

Although UBB is the largest higher education institution in Romania, its internationalization activities also reflect a broader, gradual shift across Romanian higher education over the past two decades toward greater internationalization through Erasmus+ and other integrated educational programs (Becker & Salajan, 2024; Salajan & Chiper, 2012).

3.2. Uniwersytet Warszawski

Founded in 1816 through an imperial decree by Russian Tsar and Polish monarch Alexander I, the University of Warsaw (UW) is the Poland's largest research university, enrolling over 38,000 undergraduate and graduate students during the 2023-2024 academic year, approximately 3,700 of whom were international students (UW, 2024a). UW's academic infrastructure is comprised of 25 faculties, 30 academic and research units and 4 doctoral schools, with 8,000 employees, 4,500 of which as academic staff (UW, 2024d).

In 2024, the university reported 400 active international partnerships agreements with institutions located in 77 countries, resulting in 1,991 exchanges through the Erasmus+ Programme (UW, 2024b). Partly in response to these partnerships, UW offers 44 English-language programs and 22 double or multiple

joint degree programs with institutional partners from across the world (UW, 2024d).

Another signature initiative highlighting UW's internationalization efforts consists in its participation as a partner institution in the +4EU Alliance along six other universities from Czechia, Denmark, France, Germany, Italy and Switzerland. Through this alliance, which conferred the European University status by the European Commission, UW and its partner institutions seek to: a) enhance faculty, student, researcher and administrative staff mobilities; b) collaborate on a common educational framework, and; c) contribute to the further integration and sustainability of European higher education (UW, 2024c).

4. Methodology

The overarching methodological approach for this research study adopts elements of a comparative vertical case study design (Bartlett & Vavrus, 2014), adapted to examine formal policy documents on internationalization enacted at UBB and UW. To answer the study's research questions, this approach is instrumentalized through a content and discourse analysis of policy narratives, texts, and/or legislation. Consequently, the primary sources selected for analysis, serving as the empirical evidence for this study, had to meet a fundamental criterion: they had to consist of formal policy instruments with the power to direct and implement internationalization strategies at higher education institutions in the two national settings. As such, UBB's five-year internationalization strategic plan for 2025-2029 and UW's ten-year overall institutional strategic plan for 2023-2032, with an embedded internationalization dimension, were selected as the primary sources for this comparative analysis.

Each primary source was subjected to content and discourse analysis to tease out the policy-maker's 'utterances' (Gee, 2014) and to overcome the 'information barriers' (Krippendorff, 2018) that the enacted policy may pose to the researcher. In taking this approach to examining the primary sources, we focused on the rhetorical devices (Salajan, 2018) that, in context, elicited notions of an explicit and implicit intent to formulate and articulate internationalization goal, objectives and actions by the policy framers. While the UBB document was available in the English language, the UW document was translated from the original Polish language to English via the DeepL translation software, considered a reliable and accurate digital translator (Polakova & Klimova, 2023).

5. Findings

5.1. UBB: Internationalization Strategy 2025-2029

UBB's internationalization strategy is framed as a five-year operational plan that builds on the university's strong reputation as Romania's largest and most internationalized university. The strategy is explicitly tied to UBB's CCI, described as "a veritable foreign ministry of the university" (UBB, 2024b, p. 4), which coordinates all aspects of international cooperation and partnerships. The plan sets clear objectives to increase international student enrollment, both for full degrees and for mobility programs. Erasmus+ plays a central role, with UBB committing not only to expand numbers but also to embrace innovative forms such as blended, short-term, virtual, inclusive and green mobility. There is a strong emphasis on the digitalization of mobility processes to simplify administration and enhance inclusivity.

Another pillar is the expansion of teaching in foreign languages. UBB already offers programs in English, French, German, and Hungarian, but the strategy underscores the need for growth in English and French in particular, supported by international accreditation. The development of new language-based programs is explicitly linked to international recruitment and global visibility.

The university places significant emphasis on recruitment and marketing efforts, detailing practical tools, such as participation in international education fairs, online webinars, recruitment agency networks, and partnerships with high schools abroad. The strategy also calls for an international alumni ambassador network, enabling graduates to promote UBB globally. Within this context, the *Françubb* initiative is highlighted as a flagship project to strengthen UBB's francophone identity and ties with the Agence Universitaire de la Francophonie (AUF). German-speaking countries are also identified as priority recruitment markets.

UBB's strategy pays careful attention to student services and integration, presenting a long list of support measures, such as visa and residence assistance, tutoring and mentoring schemes, academic counseling, housing services, and access to career centers. This service orientation reflects the university's aim to improve not only recruitment but also retention and satisfaction of international students.

Finally, UBB identifies challenges such as national-level legal barriers that prevent joint or

double degree programs. While this limits some structural forms of internationalization, the strategy compensates by focusing on program expansion, marketing, mobility, and alliances. In terms of alliances, UBB emphasizes active participation in EUTOPIA, EUA, AUF, SGroup, and The Guild, not only as memberships but as platforms for raising visibility and co-developing projects. In short, UBB's plan is pragmatic and operational, balancing ambition with awareness of external constraints. It aims to achieve measurable growth in international enrollment, strengthen linguistic and cultural niches, and provide robust support services for students, while leveraging alliances for visibility and collaboration.

5.2. *UW: Strategy for 2023-2032 (Internationalization Dimensions)*

UW embeds internationalization as a core dimension of its 10-year institutional strategy, making it a fundamental condition for academic excellence. Its strategy integrates internationalization across education, research, and community-building, presenting it both as a goal and as a structural feature of the university's future.

A central priority is the development of joint, double, and multiple-degree programs with strategic partners. The strategy envisions curricula that transcend institutional boundaries, deepening academic integration across borders. In this regard, UW places special emphasis on its leadership role within the 4EU+ European University Alliance, which it describes as its "flagship" for internationalization. The alliance is not just a network but a framework for creating shared modules, joint research teams, and long-term institutional cooperation.

The strategy also calls for significant growth in English-medium and other foreign-language offerings, especially at the master's and doctoral levels. By diversifying its multilingual curriculum, UW aims to attract and integrate a more global student body, while simultaneously enhancing the intercultural competences of its Polish students.

Mobility is framed as a structural expectation, as the university commits to making international exchange "a permanent feature of university education" (UW, 2023, p. 30). This includes not only physical exchanges but also the institutionalization of digital mobility to broaden participation. Staff mobility is emphasized alongside student mobility, with the strategy viewing it as essential for professional development and for embedding international practices into the university's culture.

Integration into the community is another key pillar of UW's internationalization strategy, highlighting the importance of building a multicultural and multilingual environment, aiming to ensure that foreign students and staff are not seen as outsiders, but as full members of the university community. Internationalization is thus framed not only as a recruitment tool, but also as a transformational vector of institutional culture. The strategy also highlights institutional enablers, namely, simplifying procedures, diversifying funding sources, and ensuring that documentation and communications are available in English. This signals UW's recognition that bureaucratic and linguistic barriers can undermine internationalization efforts if not addressed systematically.

Finally, UW is explicit about its ambition, describing internationalization in aspirational terms as a prerequisite for achieving the highest academic standards and positioning UW as a leader and trend-setter in European higher education. In summary, UW's strategy is structural, long-term, and integration-focused, prioritizing joint degrees, alliance-driven collaboration, and embedding mobility and multilingualism as permanent features of education and research. As such, internationalization is conceived of as an intrinsic element of excellence, not just as a tool for growth.

6. Discussion and Implications

In light of the above findings, this section offers a comparison of the internationalization strategies at UBB and UW. While both institutions place internationalization at the core of their missions, their approaches differ in scope, emphasis, and response to contextual factors. Below is a structured comparative analysis highlighting similarities, differences, and emerging themes from the two institutions' strategic internationalization plans. In addition, Table 1 presents in a side-by-side comparison the core elements of the two institutions' internationalization strategies.

6.1. Similarities in Internationalization Strategies

Both UBB and the UW articulate internationalization as a central driver of institutional development rather than a peripheral activity. Each frames mobility, partnerships, and the expansion of foreign-language provision as essential to building visibility and reputation.

Partnerships and alliances occupy a particularly prominent role in both strategies. Thus, UBB highlights its involvement in European and global

associations such as EUTOPIA, EUA, AUF, the SGroup, and The Guild, presenting these memberships as multipliers for influence, visibility, and capacity building. UW, similarly, positions its role within the 4EU+ European University Alliance as a vehicle for systemic integration, stressing joint educational modules, research cooperation, and student/staff exchange as ways to establish itself as a trend-setter among European research universities. Both institutions, then, are leveraging transnational networks to enhance not only their international reputation but also to secure practical benefits for their communities.

Mobility is another converging theme, as both universities recognize mobility as more than just an add-on, describing it as a defining feature of contemporary higher education. UBB sets clear operational targets for Erasmus+ exchanges, calls for diversification of mobility opportunities, and emphasizes digitalization, inclusivity, and "green" mobility as ways to widen participation. UW goes further in framing mobility as a permanent component of its educational offerings, embedding it structurally into curricula, and explicitly promoting digital/virtual forms of exchange. Staff mobility is also underscored by both institutions, tied to building institutional capacity and exposure.

A further shared strand is the expansion of teaching in foreign languages. UBB stresses the need to expand English- and French-language offerings, explicitly tying this to recruitment goals and international accreditation. UW prioritizes growth in English-medium courses, especially at the master's level, and emphasizes the development of programs taught in other foreign languages, integrating them into a multicultural, multilingual educational environment.

Finally, both strategies are attentive to the student experience and community integration. UBB lays out comprehensive service infrastructures for incoming students, including visa assistance, tutoring, and access to career services. UW also focuses on integration but stresses the creation of a truly multicultural academic community in which international students and staff feel fully part of campus life. Both view student support as an avenue to ensure not only attraction but also retention and positive reputation-building.

6.2. Differences in Internationalization Strategies

Notwithstanding these similarities, the two strategies diverge in scope, emphasis, and structural orientation. Thus, UW takes a long-term, structural approach, embedding internationalization into its overarching institutional strategy for 2023-2032. It treats internationalization as a fundamental condition for achieving academic excellence and explicitly sets the goal of becoming a European trend-setter. A central component of this ambition is the creation of joint, double, and multiple degree programs with key partners. In contrast, UBB's five-year plan is more operationally oriented and acknowledges external constraints. The university openly notes the legal barriers in Romania that complicate the establishment of joint or double degrees. As a result, UBB places more immediate emphasis on recruitment, the expansion of international-language programs, and maximizing existing frameworks such as Erasmus+.

Another distinction lies in the marketing and recruitment dimension. UBB devotes significant attention to international student recruitment strategies, such as attending education fairs, building agency networks, running targeted webinars, and developing an international alumni-ambassador network. Moreover, it defines language-market priorities through its *Françubb* francophone initiative and its outreach to German-speaking countries. UW's strategy is less focused on external marketing tactics, focusing instead on structural integration into European initiatives, curricular redesign, and systemic alignment with partners. Its path to internationalization is less about recruitment pipelines and more about programmatic innovation and collaborative capacity.

The depth and breadth of student services also reflect this divergence. Thus, UBB sets out a highly detailed roadmap for international student support, including orientation programs, mentoring schemes, housing services, and psychological counseling. This service orientation aligns with its more immediate enrollment growth targets. In contrast, UW emphasizes integration into a multicultural community but focuses less on the granular service infrastructure, and more on institutional reforms that create a welcoming, sustainable environment.

Finally, the institutions' signature initiatives differ to a considerable degree. UBB explicitly promotes *Françubb,* a flagship initiative that aligns with its membership in the Agence Universitaire de la Francophonie, signaling a linguistic and cultural niche strategy. Instead, UW focuses on integration into the 4EU+ Alliance, presenting it as a structural vehicle for research and teaching collaboration at the European level. These initiatives reflect differing approaches, with UBB targeting specific linguistic/geographic

niches, while UW is signaling an intent for broader European structural integration.

Table 1

Visual Comparison of Internationalization Themes at UBB and UW

Theme	UBB	UW
Strategic Scope	Five-year internationalization-specific plan with operational targets and recruitment tactics.	Ten-year university-wide strategy; positions itself as a European trend-setter.
Partnerships & Alliances	Active in EUTOPIA, EUA, AUF, SGroup, The Guild.	Anchors internationalization in 4EU+ Alliance.
Mobility	Erasmus+ targets; inclusive, digital, and green mobility.	Mobility as a permanent feature of study; physical + virtual exchanges.
Foreign-Language Provision	Expansion of English- and French-language programs; accreditation goals.	Growth of English-medium (esp. master's) and other foreign-language offerings.
Joint/Dual Degrees	Legal constraints hinder development of joint degrees.	Actively pursues joint, double, and multiple degrees with partners.
Recruitment & Marketing	Strong focus: fairs, agency networks, alumni ambassadors, *Françubb* strategy.	Less emphasis on marketing; focus on alliances and program innovation.
Student Services	Comprehensive infrastructure: visa support, orientation, mentoring, housing, counseling.	Emphasis on integration into multicultural community; less detail on services.
Signature Initiatives	*Françubb* francophone initiative; German-speaking pipelines.	4EU+ Alliance as flagship initiative for integration and visibility.
Institutional Enablers	CCI as central hub for funding and coordination.	Calls for sustainable funding, streamlined processes, and internal capacity building.

Formulated succinctly, several common themes clearly emerge from the two documents:

- *Alliance-driven visibility and capacity:* Both universities see international networks and alliances as core engines of internationalization.
- *Mobility as a defining feature:* Student and staff mobility, in both physical and digital forms, is central to international engagement and intercultural competence.
- *Curricular internationalization:* Expanding programs in English and other foreign languages is viewed as a necessary precondition for attracting and retaining international talent.
- *Building inclusive, multicultural campuses:* Internationalization is not only about recruitment but also about integration and intercultural exchange, ensuring that internationalization is a community-wide process.
- *Internal capacity and enablers:* Streamlining administrative processes, ensuring sustainable funding, and building strong institutional structures are seen as prerequisites for successful internationalization.
- At the same time, divergent themes highlight the different institutional and national contexts:
- *Structural vs. operational focus:* UW pursues systemic, long-term internationalization embedded in its institutional DNA, while UBB focuses on practical, short-term levers and acknowledges contextual constraints.
- *Recruitment vs. partnership emphasis:* UBB invests heavily in marketing and recruitment pipelines, while UW emphasizes structural partnerships and joint degrees as its pathway to visibility.
- *Policy environment sensitivity:* UBB explicitly negotiates legal and national constraints, while UW positions itself aspirationally as a trend-setter.
- *Geolinguistic niches vs. pan-European integration:* UBB elevates French- and German-language initiatives; UW emphasizes its European alliance integration without singling out linguistic markets.

As these contrasting themes suggest, the two institutions' strategies, taken as illustrative case studies for their respective national higher education contexts, highlight the diversity of pathways through which European universities navigate global engagement. Thus, they show that internationalization is not a uniform template, but a dynamic process shaped by institutional vision, national policy environments, and the balance between immediate opportunities and long-term aspirations.

6.3. Implementation Challenges and Critical Reflections

While the strategies of UBB and UW provide compelling and, in many ways, complementary visions

of internationalization, a closer look reveals several challenges and contradictions that complicate their realization. Strategic plans often operate at the level of aspiration, but implementation is shaped by uneven capacities, contested priorities, and structural constraints.

A first set of challenges relates to resources and institutional capacity. Expanding foreign-language programs requires not only curriculum redesign but also sustained investment in staff development, recruitment, and accreditation processes. Mobility targets similarly depend on financial support, administrative efficiency, and student readiness, which may not be evenly available across all faculties. Bureaucratic inertia and fragmented internal structures can slow the translation of ambitious goals into operational realities. Moreover, the volatility of national higher education policy, whether through shifting regulations, fluctuating funding, or changing political priorities, further complicates long-term planning.

Second, there is the risk that internationalization becomes more rhetorical than practical. Scholars have warned that internationalization is at times deployed as a symbolic marker of prestige rather than as a fully integrated institutional process (Knight, 2011). Strategy documents may celebrate mobility, alliances, or multilingualism, yet implementation can be fragmented, uneven, or limited to specific niches. The gap between rhetoric and practice raises questions about how deeply internationalization penetrates the everyday academic life of students and staff, beyond high-profile initiatives and policy statements.

Third, the pursuit of global visibility and competitiveness can obscure issues of equity and inclusion. Heavy emphasis on rankings, partnerships with elite universities, and recruitment from targeted linguistic or regional markets risks reproducing existing hierarchies rather than broadening access. Similarly, prioritizing certain languages or programs may marginalize disciplines or groups less aligned with international benchmarks. Framing internationalization primarily as a market-driven strategy can conflict with universities' social and civic missions, especially in contexts where promoting access and supporting local communities remain pressing priorities.

Finally, the University of Warsaw's case illustrates a revealing paradox. While UW presents a highly sophisticated internationalization strategy that positions the university as a European trend-setter, the strategy itself is published only in Polish. This reflects a strong orientation toward domestic stakeholders and reinforces the institution's embeddedness in its national context. Yet it simultaneously limits the strategy's accessibility to international audiences, including potential partners and students. Far from being a trivial issue of translation, this choice highlights how the discursive framing of internationalization can contradict its stated aspirations. It underscores the tension between national accountability and global visibility, and illustrates how internationalization is always embedded in specific cultural and linguistic contexts.

Taken together, these challenges highlight that internationalization strategies must be read critically, not only as policy aspirations but also as situated practices subject to negotiation and compromise. They demonstrate that internationalization is not a uniform template, but a contested and uneven process shaped by institutional capacity, national policy environments, and the interplay between global ambitions and local realities. This underscores that internationalization cannot be understood as a single, uniform process, but must be seen as a set of differentiated institutional responses to evolving opportunities and constraints.

7. Conclusion

The internationalization strategies UBB and UW demonstrate two distinct yet complementary approaches to positioning European universities in a rapidly globalizing higher education landscape.

UBB's five-year plan is pragmatic, operational, and growth-oriented, reflecting both the university's ambition to expand its international profile and its recognition of external constraints, particularly Romania's restrictive legal framework for joint degrees. By focusing on expanding foreign-language programs, recruiting through targeted linguistic and geographic markets, and developing a robust infrastructure of student services, UBB positions itself as an institution committed to immediate and tangible results. Its use of tools like *Françubb* and alumni ambassador networks illustrates an entrepreneurial and market-driven approach to internationalization, while participation in networks like The Guild and EUTOPIA signals an awareness of the reputational and collaborative benefits of alliances. This resonates with Knight's (2004) characterization of internationalization as both a process and a set of activities tailored to institutional contexts.

In contrast, UW's ten-year strategy situates internationalization as a structural condition for

academic excellence. It aspires to move beyond recruitment and services to embed internationalization into the very architecture of the university. By foregrounding joint and multiple-degree programs, staff and student mobility as permanent features of study, and the central role of the 4EU+ Alliance, UW positions itself not simply as a participant in internationalization but as a European "trend-setter." Its strategy is characterized by long-term systemic integration, cultural transformation into a multilingual and multicultural community, and a strong emphasis on institutional reform to remove barriers to engagement. This aligns with the 'comprehensive internationalization' framework articulated by Hudzik (2011), which emphasizes integration across teaching, research, and service functions.

The comparison reveals a spectrum of internationalization strategies within Europe. On the one hand, UBB exemplifies operational pragmatism, focusing on marketing, recruitment, and service provision as levers of growth. On the other hand, UW represents aspirational integration, embedding internationalization into its institutional culture through alliances, joint curricula, and structural reforms. Both strategies are context-driven, UBB adapting to legal and policy limitations, UW leveraging its freedom to align with European integration agendas. This reflects de Wit et al.'s (2015) argument that internationalization is not monolithic but must be understood as differentiated responses to institutional and national conditions.

The picture that emerges from this analysis does not point to a dichotomy, but to a complementarity of internationalization strategy models. UBB's focus on targeted recruitment and student support responds to immediate market pressures and positions it competitively within specific linguistic and regional niches. UW's alliance-based structural reforms seek to redefine what it means to be an internationalized university in Europe, emphasizing leadership, sustainability, and integration. Together, they illustrate how universities in different national contexts can pursue internationalization not as a one-size-fits-all model, but as a tailored response to their opportunities, constraints, and ambitions, echoing Altbach and Knight's (2007) call to understand internationalization in diverse global and regional contexts.

Ultimately, both institutions affirm that internationalization is not optional but a strategic imperative, whether pursued through growth-driven pragmatism or integration-driven aspiration. Their approaches highlight the evolving diversity of European higher education, where universities balance external constraints, internal capacities, and global ambitions to craft strategies that serve their unique identities and trajectories. Their strategies enrich the diversity of the European Higher Education Area (EHEA), demonstrating that internationalization is not a uniform project but a dynamic process shaped by vision, context, and opportunity.

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Kindergarten as a Learning Organization: its Specificities Compared to other Institutions in Pre-University Education

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Kindergarten as a Learning Organization: its Specificities Compared to other Institutions in Pre-University Education

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Abstract

Every educational institution is expected to be a learning organization, since its mission is to produce learning and facilitate the learning of every learner. Structuring and measuring the extent to which each educational institution is a learning organization is less well developed for each level of schooling in pre-university education. This paper investigates the specificity of kindergartens as learning organizations by looking at differences in perceptions of internal evaluation among kindergarten employees compared to those in schools at all levels of pre-university education. Based on the "Schools as Learning Organizations" model, quantitative, non-experimental, comparative research was conducted using a questionnaire validated by OECD specialists, translated and validated for the Romanian context, on schools as learning organizations. The analysis of the responses of the 726 respondents in pre-university education, including 43 from kindergartens, revealed that there are statistically significant differences in favour of primary schools compared to kindergartens in terms of dimensions such as promoting team learning and collaboration among staff; adoption of systems for collecting and exchanging knowledge and learning. No significant differences were identified for the other dimensions. The conclusions highlight the need to adapt organizational development strategies for kindergartens to strengthen their learning culture.

Keywords:
school as learning organization, kindergarten as learning organization, educational leadership, quantitative analysis

1. Introduction

Rapid changes and increasingly complex demands challenge pre-university institutions, from kindergartens to high schools, to continuously learn, innovate and adapt to a wide range of developments, becoming organizations that learn. Such organizations can keep the rhythm of change by fostering opportunities for their employees to improve their capabilities, supporting their continuing professional development and creating innovative educational environments (OECD, 2019).

Lifelong learning is an important benchmark for staff members, who must constantly adapt and serve as role models for their students in this process. As Schleicher (2018) argues, students will internalize the value of continuous learning only if they see it reflected in the behavior of those who guide them. Therefore, effective educational organizations are those that facilitate collaboration, reflection, and continuous professional development, aspects that are also relevant for kindergartens, which are often overlooked in debates on educational innovation (OECD, 2019). However, in Romania, this vision has only been partially reflected in practice, where the focus has been on content, and staff professional development and the implementation of student-centered pedagogies have been limited (OECD, 2024). Deficiencies in the continuing education system and unfavorable salary conditions affect the attractiveness of the teaching career and hinder the formation of an organizational culture oriented towards learning and continuous improvement (David, 2025; OECD, 2025).

In this context, the paper adds rather limited knowledge related to kindergardens as learning organizations. Existing research has focused mainly on general dimensions of educational leadership and leadership for learning (Kools et al., 2020; Stoll & Kools, 2017), on identifying organizational and cultural conditions conducive to a learning school (Kools & Stoll, 2016), on conceptual models applied in Asian educational contexts (Retna & Ng Tee, 2016), and on the importance of collaboration and professional reflection within educational teams (Siennema & Stoll, 2020). The missing of a common agreement and definition of the essential characteristics of an "educational learning organization" (ELO) has long limited the advancement of this concept in educational research and its practical applicability (Stoll & Kools, 2017).

Dedicated research conducted in Romania to address this issue in depth, especially at the preschool

level is limited. Some relevant initiatives exist, like the research conducted by Prelipcean and Bejinaru (2016), which focused on conceptualizing the learning organization and its associated competencies, while Paraschiva and Drăghici (2019) analyzed the influence of leadership and human resource management on organizational learning processes in the educational environment. Moraru (2019) emphasized the integration of organizational learning principles into school development strategies, and Popescu and Surcel (2016) investigated the role of technology and digital platforms in supporting this type of learning. In addition, more recent research by Dînșorean and Sava (2023) provided an empirical perspective on school employees' perceptions of the extent to which their units function as learning organizations, but existing studies do not specifically include the preschool level, leaving an important research gap.

This study investigates the concept of ELO through a comparative approach, analyzing the culture of organizational learning at all levels of pre-university education, attempting to highlight the specificity of kindergarten in relation to other cycles of schooling: primary, secondary and high school. At the same time, the paper extends the work carried out by Dînșorean (2022) by including kindergarten, an educational level that has not previously been explored in this direction in the Romanian context. The analysis of the differences in perception between directors, teachers, and support staff aims to provide a detailed diagnosis of how the characteristics of ELOs in the pre-university system in Romania manifest themselves.

2. Theoretical foundation

2.1. The learning organization: concepts and theoretical perspectives

The notion of the learning organization got increasing popularity especially following the publication of Peter Senge's influential book (1990), which provided a key conceptual model for this type of organization. Central to this model is the notion that organizations need to continuously develop their learning capacity to respond effectively to rapid contextual changes. This ability is considered an essential and sustainable competitive advantage for the future. However, the concept has been interpreted and applied in various ways over time. Örtenblad (2004) proposed a typology of the main interpretations of the learning organization, identifying four dominant perspectives: workplace learning, organizational learning, employee learning facilitation, and knowledge transfer. In turn, Pedler and Burgoyne (2017) developed a pragmatic and applied approach to learning organizations, focusing on concrete criteria and practices through which they can be recognized and supported in various institutional contexts. These contributions reflect the complexity and dynamism of the concept, highlighting both its transformative potential and the need for ongoing conceptual clarification (Örtenblad, 2004; Pedler & Burgoyne, 2017).

A learning organization is typically conceptualized across several levels, emphasizing the relationships among individual behaviors, team dynamics, and organizational culture and practices (Kools & Stolls, 2016).

A practical framework for analyzing and assessing learning organizations has been proposed in the literature (Watkins & Marsick, 1996; Yang et al., 2004), offering both conceptual guidance and measurement tools. According to their theory of organizational learning, a learning organization aligns its members with a shared vision, continuously analyzes the changing environment, develops new knowledge, and applies it to more effectively address the beneficiary needs. The model identifies seven analytical clusters to assess these processes.

Systemic thinking theory is grounding organizational learning. Learning organizations are described as open systems, capable of adapting and learning from changes in the environment (Senge, 1990), facilitating a whole-school organizational learning referring to the processes by which organizations acquire and adapt knowledge, changing their behaviors to acommodate new learnings (Garvin et al., 2008). It is important that these processes are supported by social interactions and a continuously developed learning culture and climate (Örtenblad, 2002).

Studies also emphasizes the importance of employees' beliefs, values, and norms for sustainable learning, influenced by a learning atmosphere (Sillins et al., 2002), a learning culture (Gephart et al., 1996), or a learning climate (Örtenblad, 2002). "Learning to learn" is a key prerequisite to become a learning organization (Kools & Stoll, 2016).

In conclusion, the learning organization is a complex concept at the intersection of several theories and practices. Defining characteristics include openness to change, active employee participation in learning processes, the existence of a common vision, and the ability to generate and leverage knowledge.

Although there are differences between theoretical perspectives, they all converge on the idea that organizational learning is a sustainable competitive advantage, applicable in any field of activity (Garvin et al., 2008; Örtenblad, 2004; Senge, 1990; Watkins & Marsick, 1996). These conceptual frameworks can be used to understand how educational institutions, including kindergartens, can become environments conducive to organizational learning.

2.2. Specificity of learning organizations in education

The ELO is a powerful concept that inspires practices aimed at improving efficiency and catalyzing coherent and collaborative efforts at all levels of the organization to become a sustainable reality that manages to constantly improve the organizational performance and that of its learners (Harris & Jones, 2018). Although borrowed from the business environment, this concept has been adapted to education, including in Romania, where E. Păun (1999) notes that a learning organization involves the entire institutional structure, not just the individuals learning within it. Furthermore, Sava (2022) argues that all educational institutions of the future should strive to become and act as learning organizations, open to community and societal challenges.

Silins et al. (2002) highlight the integrated nature of ELO, describing processes such as environmental scanning, knowledge development, distributed leadership, and systematic collaboration. The OECD report (2024) updates this vision, emphasizing that an ELO is an adaptable, future-oriented institution that develops a culture of continuous learning and expands its boundaries to include learning from external and interconnected environments. These analytical frameworks are somewhat complementary to Senge et al.'s (1990, 2016) model of the school as a learning organization.

Building on these theoretical and empirical contributions, the main characteristics of an ELO can be identified as follows: building and sharing an educational direction focused on the development of all students; partners who support school development; facilitating ongoing professional development opportunities for staff; encouraging collaboration and team learning; promoting research, innovation, and critical reflection; implementing systems for collecting and distributing data and know-how; openness to community and integration into a broader educational system, shaping a leadership that learns and supports learning (Kools et al., 2020; Sava, 2022). In this formulation, the educational institution is seen not only as a place of teaching but as a professional community that is transformed through continuous processes of collective learning.

Detailing all eight characteristics of ELO (Kools et al., 2020), we first highlight building and sharing an educational vision focused on the development of all children. Such vision requires that directors, teachers, and support staff must work together to create an environment where learning is not just a process of transmitting information, but also an active process of engaging and supporting students to reach their full potential (Kools & Stoll, 2016). Such vision must be shared by the entire educational community: directors, teachers, students, parents, and staff, in order to support innovative and inclusive practices adapted to each student.

A climate of trust and collaboration is important for sharing good practices and responding to student diversity (Kools & Stoll, 2016). At the same time, the concept must be adapted to the external context and the specificities of the local community (Hargreaves & Fullan, 2012). Schools and kindergartens can use different methods, such as continuing training sessions for staff members, the creation of working groups, and the involvement of parents and the community in educational activities. Developing partnerships that contribute to the school's vision and development, reflects its ability to act as an open system in which collaborative relationships with parents, the local community, public organizations, NGOs, and the business community are important for building and sustaining a shared vision of learning. An ELO establishes partnerships based on equality, mutual learning, and respect, using networks and inter-school collaborations to facilitate knowledge sharing and professional development. It also actively monitors external factors to respond effectively to changes and opportunities that arise and integrates external expertise and resources to improve the ELO's performance. This approach contributes to a coherent educational vision that is adapted to the needs of society, strengthening the role of the educational institution as a learning organization (OECD, 2024).

An important component of an ELO is the creation and support of continuous learning opportunities for staff members. This approach is based on the idea that continuous staff learning has a direct impact on improving educational practices and, implicitly, on student outcomes (Hargreaves & Fullan, 2012). According to Kools and Stoll (2016), pre-university

educational institutions that encourage continuous learning promote both formal professional development and informal learning based on collaboration and experience sharing and reflections. Reflections are bases for collective practice-based learning, mainly in kindergarten (Wadel & Knaben, 2022).

Creating these opportunities requires clear institutional commitment. It is important that the leadership of the learning educational institution supports a culture of learning by organizing continuous training and development sessions, staff participation in conferences and workshops, and by facilitating the time and space necessary for collaborative learning among staff members (OECD, 2016). For example, peer mentoring programs or learning groups are effective methods for promoting the exchange of good practices and joint reflection on the educational process (Sillins et al., 2002).

There are innovative and dynamic ELO that not only keep pace with change but even anticipate and implement it quickly, benefiting from receptivity, efficient structures, well-defined practices, and a determination to embrace new developments. On the other hand, there are educational organizations that lag behind, unaffected by curricular changes (Sava, 2022). An effective solution to this situation is the creation of inter-school networks, where high-performing educational organizations support and mentor the less dynamic ones with a reduced capacity to adopt change (Sinnema & Stoll, 2020). The transfer of valuable teachers to educational organizations with greater challenges is another viable strategy that has shown positive results (Schleicher, 2021).

Another important aspect is access to modern educational resources, both digital and traditional, that support continuous learning. In addition, regular assessment of staff professional development needs can help tailor these opportunities to meet the specific challenges of each school or kindergarten (Schleicher, 2021). By implementing well-planned programs, schools and kindergartens can transform continuous learning into a natural process that is integrated into the organizational culture.

Promoting team learning and collaboration is a central feature of ELO, as it facilitates continuous professional development and supports the improvement of educational practice. Collaborative activities, carried out both face-to-face and through digital technologies, are strategically aimed at improving students' learning experiences and the performance of the educational team. Educational staff members reflect together on their own learning processes, learn to work in teams, and develop professional relationships based on mutual trust and respect. In this context, peer reflection becomes a natural behavior, and education institutions support these practices by allocating time and resources for collaboration, thus strengthening an organizational culture orientated towards collective learning (OECD, 2024).

Creating a culture of research, exploration, and innovation requires the involvement of educational team in various forms of investigation to expand and improve their professional practice, as well as the active engagement of students in research and exploration processes. This culture supports a continuous pace of learning, change, and innovation, based on staff openness to new approaches and a willingness to experiment and innovate in teaching. ELO encourages and recognizes initiative and risk-taking by educational team, thus promoting an environment in which challenges and mistakes are seen as opportunities for learning and development (Kools & Stoll, 2016).

Another important feature in the development of an ELO is the integration of systems for collecting and sharing knowledge for learning purposes. This requires mechanisms for constantly reviewing progress and differences between actual and expected impact. Mechanisms for constant communication and knowledge transfer are created within the educational organization, and examples of practices—both successful and unsuccessful—are made available to all staff for analysis. Sources of research evidence are accessible and there is the habit of using them in a pertinent manner, as teachers have the necessary skills to analyze and use multiple data sources, to guide teaching. The decision making, both at organization and classroom levels is evidence-based on internal evaluation and is constantly reviewed. In addition, ELOs regularly review their plans of action, modifying and adjusting them as necessary (Kools & Stoll, 2016).

The connection of ELOs with external environment and the broader educational system is also an important feature which requires them to function as open systems, welcoming initiatives from potential external collaborators. The educational organization constantly monitors the external context to quickly respond to emerging challenges and opportunities. Members of the ELO cooperate, learn, and transfer

information with professionals from other educational institutions through professional networks and inter-school partnerships. The educational institution also cooperates with parents/guardians and community members, who are considered active partners in the educational process and in the school environment. Partnerships with all relevant stakeholders and experts are meant to deepen and broaden the learning process. These collaborations are built on equality and provide opportunities for mutual learning, supported by the extensive use of information technologies to facilitate communication, peer learning and knowledge sharing, and constant collaboration with the external environment (Kools & Stoll, 2016).

A key factor in organizational learning and system development is educational leadership, supported by numerous international studies based on empirical evidence (Harris & Jones, 2015). Under the right conditions, research suggests that leaders can transform organizational performance by creating strong professional learning communities (Harris & Jones, 2015).

Based on these studies, shaping and developing learning-oriented leadership requires leaders of learning organizations to ensure that the organization's actions are consistent with its vision, goals, and values. Educational leaders become models of learning leadership, act as agents of change, being proactive and creative, and maintain a steady "rhythm" of learning, improvement, and innovation within the institution. Leaders also create an organizational culture, structures, and conditions conducive to professional dialogue, collaboration, and knowledge sharing (Sava, 2022). They initiate and participate in collaborations with other schools, parents, the community, and other partners, ensuring necessary resources and proactively addressing the students' needs (Kools & Stoll, 2016).

Although the concept of ELO is generic, in the context of this study it applies to all pre-university educational institutions, including kindergartens. Even though these are less addressed in the literature, we consider that the dimensions presented are fully applicable in their case as well.

2.3. *Kindergartens and pre-university educational institutions as learning organizations in Romania*

In the context of recent educational reforms, the concept of kindergarten and pre-university educational institutions as learning organizations has become increasingly relevant in Romania. This strategic approach aims to improve the performance of the educational institutions by promoting a culture of continuous learning, collaboration, and critical reflection among the entire educational community (Stoll & Kools, 2017).

The curriculum for early childhood education (0-6 years), approved by Order of the Minister of Education No. 4694/2019, highlights essential principles such as individualized learning, learning through play, and partnership with families, which underpin a holistic and child-centered approach in kindergartens (MEN, 2019). The implementation of this curriculum requires adequately trained professionals, who collaborate within the organization to share and co-create know-how, but also with the outside world, thus supporting the formation of an open and inclusive educational culture.

With regard to pre-university education, the regulatory framework on professional standards for teachers, established by Order No. 7386/2024, promotes specific competences for all career levels, emphasizing the role of continuous learning and collaboration within educational institutions (MEN, 2024a).

The framework methodology for ensuring the quality of continuing professional development programs (Order No. 4224/2022) regulates the continuing training process, including quality criteria and methods for accumulating transferable professional credits, so that teaching staff can respond to the challenges of modern education through continuous improvement (MEN, 2022). In parallel, the PROF program, dedicated to the professionalization of the teaching career, introduces a coherent career path architecture with differentiated standards for stages and roles, thus supporting teachers in developing the skills necessary to become active agents of learning in their organizations (MEN, 2024b).

Integrating these principles into the Romanian reality requires the development of open educational communities that facilitate collaboration between educational team, parents, and other stakeholders. In this way, pre-university education institutions can build sustainable partnerships with local authorities, NGOs, and the private sector to set up tailored educational programs for students and local communities (Albu, 2020; David, 2025). For example, in rural areas, partnerships with NGOs such as World Vision (2023) or Salvati copiii (Save the children) (2023) have enabled the implementation of remedial and extracurricular programs that contribute to

reducing school dropout rates and supporting students from disadvantaged backgrounds.

In urban areas, collaborations with the private or associative sector, or with universities, support the development of students' key skills through internships, career guidance workshops, and innovative educational projects.

A characteristic of ELOs is the adoption of an inclusive vision that recognizes student diversity and supports the integration of those with special educational needs. Collaboration with local associations and NGOs, such as Save the Children (2023), contributes to reducing discrimination and promoting inclusion in mainstream education. The active involvement of parents, through parent councils or support groups, stimulates dialogue and cooperation, which are reflected positively in students' academic performance and social development (Kools et al., 2020).

However, a systemic analysis of pre-university education reveals some limitations. Teaching practice has often focused on content rather than active teaching methods, differentiation, and inclusion, and teaching careers suffer from a lack of a clear, motivating framework linked to actual performance (David, 2025; MEN, 2024c; OECD, 2024). Beyond the existing institutional and systemic framework, at the level of each educational organization, be it kindergarten, middle school, or high school, the steps that school employees take and implement to make their institution a learning one are important. Kindergartens, which are often smaller educational institutions (if they are independent and not part of middle schools or high schools), do not have the pressure of hierarchies and school performance to demonstrate, and on the other hand, they have limited resources, which sometimes makes it questionable or difficult to quantify the extent to which they can be evaluated as organizations that learn, produce learning, and perform. In contrast, middle schools and high schools are under pressure from multiple external evaluations to prove the effectiveness of their organizational processes and the quality of their results. We are therefore not just talking about opportunities for collective learning and professional development for teachers, but about many other dimensions of organizational management that converge towards the status of a learning organization.

In conclusion, transforming kindergartens and other pre-university educational institutions into learning organizations is not only possible but also necessary for the Romanian system to adapt to current challenges. The success of this endeavor depends on the coherence of public policies, support for professional training, and the active involvement of the educational community.

3. Research methodology

3.1. Research objective and question

This study falls within the category of quantitative research, based on a non-experimental, comparative, cross-sectional design. The investigation analyzed the concept of the kindergarten as a learning organization, operationalized through the eight variables defined in the model developed by Kools et al. (2020). It aims to highlight the specificity of the kindergarten as a learning organization compared to other pre-university educational institutions in Romania. In this regard, the study seeks to answer the following *research question*:

Are there significant differences between the internal evaluation of learning organizations at the kindergarten level compared to other cycles of pre-university education?

3.2. Sample

The total size of the sample is 726 participants from pre-university educational institutions in Romania. The group consists of directors, teachers, and teaching assistants. The distribution by educational level is as follows: kindergarten – 43 participants, primary school – 51 participants, secondary school – 317 participants, high school – 315 participants. Even though it seems like there's an uneven number of respondents per education level, there are situations where preschools are part of schools or high schools, as affiliated structures, or high schools include all education levels. Out of the 59 participants from early childhood education, 12 were excluded as they were working in children's clubs, which are not part of the formal pre-university education system targeted by the present study.

Table 1

Sample demographic data (N = 726)

Characteristic	N	%
Gender		
Female	589	81.1
Male	125	17.2
Not specified	12	1.7
Employee status		
Permanent (indefinite term)	465	64.0
Substitute (fixed-term employee)	261	34.0
Environment		
Rural	253	34.8

Urban	473	65.2
Cycle of education		
Kindergarten	43	5.9
Primary	51	7.0
Secondary School	317	43.7
High school	315	43.4
Position		
Directors	74	10.2
Teachers	606	83.5
Teaching assistants	46	6.3

The sample was a convenience sample, with respondents being asked through various channels (school inspectorates, teacher groups, professional networks, etc.) to complete it online. However, it is diverse in terms of relevant categories (gender, background, employment status, position, educational cycle). Table 1 provides details of the sample from demographic and professional points of view.

3.3. The instrument

The dimensions of the learning organization were measured using items items from the SLO questionnaire (Kools et al., 2020), translated and validated for the Romanian context by Dînșorean A. in his bachelor's thesis completed in 2022, under the coordination of Prof. Simona Sava. The instrument consists of 65 items, organized according to the following eight dimensions:

One of the first aspects examined was the existence of a *shared vision focused on the learning of all students*. This dimension was measured with eight items that assessed, among other things, the extent to which the school's vision emphasizes students' cognitive and socio-emotional development as well as their overall well-being. Another dimension referred to the *involvement of partners* in shaping the school's vision, captured through three items, including the degree to which students are invited to take part in defining this vision. Attention was also given to *creating and supporting opportunities for continuous learning among staff members*. This was measured with ten items that highlighted, for instance, the importance attributed to professional development. *Team learning and collaboration among staff* were assessed through another set of ten items, focusing on the extent to which teachers work together to improve their practice. A further dimension addressed the *culture of research, innovation, and exploration*, with nine items evaluating whether staff are encouraged to experiment and innovate in their work. Similarly, *adopting systems for collecting and sharing knowledge* was assessed with eight items that considered how evidence is gathered and used to monitor progress and identify weaknesses. The school's *openness to the external environment* and engagement with the wider learning system was also evaluated, using five items that reflected the involvement in networks and collaborations with other schools. Finally, *modeling and developing leadership of learning* was measured with twelve items, focusing on the degree to which school leaders emphasize the improvement of teaching and learning processes. Answers were captured on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

According to Kools et al. (2020), the instrument used in their study demonstrated strong psychometric properties, indicating a high degree of reliability. For each of the eight dimensions, the Cronbach's Alpha coefficient was above 0.80. The Romanian adaptation of the instrument also revealed excellent reliability, with Cronbach's Alpha coefficients consistently above 0.90 across all dimensions, thus supporting its validity and consistency in assessing schools as learning organizations (Dînșorean, 2022; Dînșorean & Sava, 2023).

3.4. Data collection procedure

For data collection, an online questionnaire was distributed to the official email addresses of pre-university educational institutions and county school inspectorates in Romania. To strengthen both the response rate and the representativeness of the sample, we worked in close partnership with directors across different regions, receiving further assistance from inspectors in charge of educational management. The data was collected in 2022 as part of the bachelor's thesis of Adela Dînșorean (2022), coordinated by Simona Sava, and we have the authors' consent to use it, as the database has been made available to us. In her bachelor's thesis, A. Dînșorean focused on successfully validating the data collection tool for the Romanian context.

The data obtained in this process was collected through the QuestionPro platform, which provided both the distribution link and secure storage of the information. The database used in this research is an extension and update of the initial data set collected in the bachelor's thesis by Dînșorean (2022).

3.5. Data analysis procedure

SPSS software (Statistical Package for the Social Sciences) was employed for data processing. Descriptive statistical procedures, such as the calculation of mean, standard deviation, minimum,

and maximum values, were applied in line with the methodological guidelines of Sava (2004).

To analyze the differences between educational cycles (kindergarten, primary school, secondary school, high school) in terms of internal evaluation of educational organizations, we used analysis of variance (ANOVA), and when assumptions were violated, we resorted to the nonparametric alternative— the Kruskal-Wallis test. Following Cohen's (1988) guidelines, the magnitude of the effect was computed to examine how meaningful the differences were in practice. The partial eta squared index (η_p^2) was also calculated to identify the effect size. According to Cohen's (1988) interpretations, the values of this index are classified as follows: $\eta_p^2 \approx 0.01$ (low intensity), $\eta_p^2 \approx 0.06$ (medium intensity), and $\eta_p^2 \approx 0.14$ (high intensity).

4. Results

4.1. Presentation of descriptive data

The means, standard deviations, minimum and maximum scores, as well as the reliability indices (Cronbach's alpha) for each SLO dimension, are reunited in Table 2.

Table 2

Descriptive data, minimum and maximum values, and internal consistency for SLO variables (N = 726).

Variables	M	AS	Min	Max	α
1	4.24	.70	1	5	.94
2	4.13	.80	1	5	.94
3	4.05	.69	1	5	.94
4	4.07	.73	1	5	.94
5	4.01	.71	1	5	.94
6	4.05	.74	1	5	.94
7	4.10	.69	1	5	.94
8	4.30	.70	1	5	.94

Note: M = mean; SD = standard deviation; Min. = minimum score; Max. = maximum score; α = Cronbach's alpha; 1 = a shared vision focused on the learning of all students; 2 = promoting team learning and collaboration among all staff members; 3 = creating and supporting opportunities for continuous learning for all staff members; 4 = establishing a culture of research, innovation, and exploration ; 5 = promoting team learning and collaboration among all staff members; 6 = adopting systems for collecting and sharing knowledge and learning; 7 = learning with and from the external environment and the wider learning system; 8 = modeling and growing learning leadership.

In conclusion, all eight dimensions of the SLO tool scored Cronbach's alpha coefficients above .94, indicating exceptional internal consistency. The high scores also reflect a favourable perception of ELOs. These results support the validity and reliability of the Romanian version of the tool in the national educational context.

4.2. Presentation of results

For analysis of the differences between the internal evaluation of learning organizations at the kindergarten level compared to other levels of pre-university education, one-way analysis of variance (ANOVA) was applied for two of the dimensions investigated.

Regarding the dimension of establishing a culture of research, innovation, and exploration, ANOVA *indicated a statistically significant difference* between the four groups analyzed ($F(3, 722) = 3.783$, $p = 0.010$; $p < 0.05$; $\eta^2 = 0.016$). The Tukey HSD post-hoc test showed that high school *achieved significantly* higher *scores* compared to primary school, with the difference being statistically significant (MD = 0.284, p = .040). No other statistically significant differences were found between the other group combinations.

ANOVA showed that there were no significant differences between kindergarten and other levels of pre-university education in terms of creating and supporting opportunities for continuing education for staff. The complete data can be found in Table 3.

To examine the existence of differences in the internal evaluation of the learning organization kindergarten compared to pre-university education levels, the non-parametric Kruskal–Wallis test was applied.

For the variable representing the promotion of team learning and collaboration among staff, the Kruskal–Wallis analysis *revealed a statistically significant difference between the levels of schooling* ($\chi^2(3) = 9.945$, $p = 0.019$, $\eta^2 = 0.014$). Bonferroni post-hoc tests revealed a statistically significant difference between primary school and kindergarten, with primary school showing higher scores ($p < 0.05$). No statistically significant differences were found between the other groups. The significant difference suggests that there is a more developed culture of collaboration and teamwork in primary schools compared to kindergartens, possibly due to the organization of the groups or the structure of the teaching activities.

The Kruskal–Wallis test results *indicated a statistically significant difference between the levels of*

education analyzed for the variable adoption of knowledge collection and exchange systems and learning ($\chi^2(3) = 9.087$, $p = 0.028$, $\eta^2 = 0.013$). According to Bonferroni post-hoc tests, primary schools obtained statistically significantly higher scores than kindergartens ($p < 0.05$). No statistically significant differences were found between the other groups. The results indicate that primary schools use organized mechanisms for information exchange and learning among staff members more frequently than kindergartens, which may reflect a greater formalization of educational processes.

Regarding the other variables, the Kruskal–Wallis analysis showed that there were no significant differences between respondents' perceptions in relation to their level of education. The complete data can be found in Table 4.

Table 3

Analysis of variance of SLO scores by cycle of education where respondents work (N = 726).

Variables	Cycle of education: Kindergarten (N = 43)		Primary (N = 51)		Secondary school (N = 317)		High school (N=315)		F	p	η_p^2
	M	AS	M	AS	M	AS	M	AS			
Creating and supporting learning opportunities	3.99	.571	4.25	.639	4.08	.697	4.00	.718	2,254	.081	.009
Establishing a culture of research…	3.89	.709	4.06	.808	4.08	.695	3.95	.739	3,783	.010	.016

Note: N = number of participants; M = mean; SD = standard deviation; F = F-statistic; η_p^2 = partial eta squared

Table 4

Kruskal-Wallis test on SLO dimensions in relation to the cycle of education of the respondents (N = 726)

Variables	Cycle of education: Kindergarten (N = 43)		Primary (N = 51)		Secondary school (N = 317)		High school (N=315)		χ^2	p	η^2
	M	AS	M	AS	M	AS	M	AS			
1	4.11	.728	4.38	.602	4.28	.703	4.19	.715	6.857	.077	.009
2	4.01	.851	4.27	.707	4.13	.815	4.12	.796	1.994	.577	.013
5	3.92	.775	4.27	.745	4.12	.735	4.02	.725	9.945	.019	.014
6	3.97	.663	4.38	.602	4.28	.703	4.19	.715	9.087	.028	.013
7	4.05	.655	4.20	.660	4.10	.680	4.11	.723	2.172	.538	.003
8	4.16	.859	4.43	.615	4.34	.694	4.26	.712	5.127	.163	.007

Note: N = number of participants; M = mean; SD = standard deviation; χ^2 = chi-square; η^2 = eta squared; 1 = a shared vision focused on the learning of all students; 2 = promoting team learning and collaboration among all staff members; 5 = promoting team learning and collaboration among all staff members; 6 = adopting systems for collecting and sharing knowledge and learning; 7 = learning with and from the external environment and the wider learning system; 8 = modeling and increasing learning leadership

Therefore, participants, depending on their level of education, generally agreed that their institution has the characteristics of a educational learning organization. The data show significant differences for several dimensions: high school scored higher on research and innovation culture than primary school, and primary school scored higher than kindergarten on the dimensions of promoting team learning and staff collaboration; adopting systems for collecting and sharing knowledge and learning. For the other dimensions, perceptions were similar across schooling levels.

5. Discussions

The purpose of this research was to conduct a comparative analysis of how educational institutions in Romania behave as learning organizations, with a particular focus on the differences between the kindergarten and further pre-university educational cycles. The investigation examined how staff in pre-university education perceive the functioning of their institutions as learning-oriented organizations.

The homogeneous perception of the *creation and support of continuing learning opportunities* for educational team indicates a fair application of professional development policies in the Romanian education system, without necessarily reflecting their quality. The OECD (2025) emphasizes the need for real and ongoing professional learning opportunities integrated into culture of educational institutions through communities of practice and mentoring, while Giles and Hargreaves (2006) highlight the importance of balancing individual skills, collaboration, and autonomy for staff professionalization. Thus, uniformity of perceptions may reflect systemic efforts

to ensure equitable access to professional development, in line with the principles of a modern and institutionally supported career. Particularly in kindergarten the reflection of daily embedded practice is considered a needed prerequisite to act as a learning organization (Wadel & Knaben, 2022).

The dimension of *promoting team learning and collaboration among staff* showed significant differences between kindergartens and primary schools, where a more consolidated curriculum structure favors a collaborative professional culture, according to the OECD report (2024). It is of concern that the kindergarten teachers signal with less extent this fundamental factor of acting as a learning organization, with constant concern for collective learning, reflection and exchange (Wadel & Knaben, 2022). Differences in the adoption of knowledge collection and exchange systems between primary schools and kindergartens reflect a lower degree of formalization of these processes in preschool institutions, as highlighted in the OECD report (2025).

For the dimension of *learning with and from the external environment* and the wider learning system, no significant differences were identified in the perceptions of educational team between school levels. This homogeneity indicates a common perception of the value of external learning and trans-institutional collaborations. According to Senge et al. (2016), openness to external environments and the integration of systemic feedback are essential components of an organization capable of adaptive and strategic learning.

Similar perceptions regarding the variable *student-centered vision* and *involvement of educational partners* show a convergence on the importance of these aspects in transforming educational institutions into learning organizations. However, the OECD (2025) warns that declarative visions may not always be reflected in coherent practices, especially in disadvantaged contexts or small units.

Similarly, the shaping and *growth of leadership for learning* did not show significant differences, although primary schools scored slightly higher. This may reflect limitations in the development of authentic leadership oriented towards cultural transformation of the institution, as recommended by the OECD (2024). Kindergarten (and school) principals should have explicit conceptualization, focus and systematic concern of developing their institution as a learning organization (Wadel & Knaben, 2022).

In summary, kindergartens as learning organizations stood out with lower scores in the dimensions of collaboration and knowledge sharing, which can be explained by the lower level of institutional formalization, the absence of a consolidated organizational culture, to the detriment of collaborative professional development of staff. This finding signals an urgent need for policies and practices to ameliorate such situations, to ensure that kindergarten offers high-quality services, keeping the pace with the changes, innovations, applying new knowledge, with a dedicated concern for reflection and on-the-job learning, practice-oriented competence development among the teachers (Wadel & Knaben, 2022).

5.1. Theoretical contributions and practical implications

The research contributes to advancing the debate on educational learning organization through a differentiated analysis of the perceptions of kindergarten staff compared to other levels of pre-university education. The study highlights that the manifestation of the specific dimensions of a learning organization is influenced by the organizational context of each educational level. Thus, despite some trends towards the standardization of institutional practices, the particularities of kindergartens, schools, and high schools determine variations in how these dimensions are perceived and applied. This finding aligns with the OECD model conceptualized by Kools and Stoll (2016), which requires specific adaptations according to the level of schooling, providing a more flexible and contextualized framework for the analysis of ELOs.

Second, by including kindergartens and primary schools in the analysis, the research provides a broader and more balanced picture of how the dimensions of an ELO manifest themselves throughout the entire pre-university education. Although the literature often focuses on secondary and high schools, the results of this study indicate that organizational learning processes are also relevant for lower levels of education.

Thirdly, this research brings an important theoretical contribution being among the few studies investigating differences between cycles of schooling in terms of the internal evaluation of ELOs (Scheleicher, 2018; Silins et al., 2002). This approach responds to the call of Kools et al. (2020) to explore the applicability of the model in diverse cultural and institutional contexts. The results obtained in Romania

provide a valuable empirical benchmark that supports the universality of some dimensions of the model but also the need to adjust others according to the cycle of schooling. In this sense, the research not only validates part of the existing theoretical construct but also actively contributes to its expansion and refinement.

In practical terms, the organizational specificities highlighted can be exploited by decision-makers, school management, and teachers, supporting professional development, optimizing organizational processes, and cultivating a climate based on collaboration and continuous learning.

The practical implications also extend to members of the educational team, who can use the results of the study as a benchmark for self-reflection and professional development. In particular, teams in kindergartens can benefit from the application of concrete tools that support collaborative practices, such as professional learning communities or exchanges of good practices between colleagues. Encouraging inter-institutional and interdisciplinary collaboration can help reduce fragmentation in the education system and foster a common culture of continuous learning, in which every educational actor actively participates in the organizational development process (Stoll & Kools, 2017). This lays the foundations for a sustainable transformation of educational institutions in a spirit of innovation and continuous reflection (Wadel & Knaben, 2022).

At the same time, interpreting the data from the perspective of the theoretical model "Schools as Learning Organizations" (Kools et al., 2020) highlights the need to strengthen key dimensions in kindergartens, such as providing opportunities for continuous learning and developing a culture of research and innovation. These dimensions, which are less developed in some kindergartens compared to primary schools, are important pillars of the learning organization. In this sense, capitalizing on knowledge sharing, encouraging collective reflection, and leadership can support the transformation of kindergartens into adaptive and innovative organizations (Wadel & Knaben, 2022).

5.2. Limitations

The results should be interpreted with due consideration of the study's limitations. First, the research was based on quantitative methodology and internal evaluation, which may introduce a certain degree of subjectivity in the responses (Podsakoff et al., 2003). Furthermore, the sample was selected based on the availability of participants, which limits its national representativeness and reduces the possibility of generalizing the conclusions to the entire Romanian pre-university education system.

The sample sizes for the groups of respondents in kindergartens and primary schools are relatively small compared to the other groups, which may affect the statistical power of the tests applied and increase the risk of type II errors. Differences in size between groups can lead to difficulties in identifying significant differences or to overestimating the effect in comparisons (Field, 2024). Furthermore, the use of parametric statistical tests, such as ANOVA, requires strict conditions to be met. For some dimensions, these conditions were not met, which is why non-parametric tests were applied, which have lower statistical power and are more conservative, which may increase the risk of type II error (Field, 2024).

A major limitation in interpreting progress on the dimensions of learning organizations (SLOs) is the frequent tendency to give high scores in self-assessments, not because of genuine critical reflection, but to avoid possible administrative repercussions. The OECD (2025) highlights this phenomenon, referring to a "culture of surface compliance," in which innovative practices are reported but not internalized.

An important aspect is that the analysis focused on the cycle of education, without considering the level of employment institution, which can influence perceptions of organizational culture and learning processes. This distinction is relevant because staff may work in different institutional contexts with varying administrative and cultural characteristics. As already mentioned, even if respondents worked in kindergartens, they may have reported the school to which the kindergarten is attached as their place of work, and it is difficult therefore to accurately determine the level of education. In addition, the data comes from a larger study (Dînșorean, 2022), and the first author of this paper did not participate in data collection, which may limit control over the data focus.

Based on these limitations, several directions for future research emerge. First, it would be useful to extend the research to the international level to compare the perceptions of educational staff and students in different educational systems and to highlight possible cultural influences on organizational dynamics (Kools et al., 2020), differentiated by schooling cycles. Second, integrating perspectives of other educational actors, such as

students, parents, or local authorities, both with in-depth qualitative studies, or in a quantitative manner, would allow a more comprehensive and balanced analysis of how educational institutions function as learning organizations. In addition, combining quantitative methods with qualitative research, such as case studies or in-depth interviews, could contribute to a more nuanced understanding of the organizational processes involved and the real barriers encountered in the development of a learning culture. Third, using the level of the employing unit as the main criterion for analysis to better capture the influence of institutional and administrative context on perceptions of organizational culture and the learning process, highlighting possible differences in practices, resources, and priorities between kindergartens, primary schools, and other levels of schooling. Fourthly, to strengthen statistical analysis, future research should include a more balanced sample across school cycles, especially for under-represented levels.

6. Conclusions

This paper aimed to identify the specificities of kindergartens as learning organizations in relation to other levels of pre-university education in Romania. The results highlight that, although there is a common perception of the importance of dimensions such as student-centered vision, external partnerships, and learning leadership, kindergartens score significantly lower than primary and secondary schools in terms of research and innovation culture, teamwork, and knowledge exchange systems.

These differences can be mainly attributed to the organizational structure and limited resources available in kindergartens, which indicates the need for differentiated educational policies to support the development of these dimensions in preschool education. At the same time, similarities in terms of shared vision, leadership, and openness to the community suggest that there are elements of coherence between educational levels, probably influenced by the unified regulatory framework.

The results highlight that kindergartens, although part of the education system, are at a different stage of development in terms of the characteristics of ELO. This calls for specific strategic interventions to support kindergartens in the process of institutional consolidation, in line with international directions on organizational development in education promoted by the OECD and other relevant actors.

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Digitalization in Preschool Behavior Monitoring: Teachers' Perceptions and Practices

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Digitalization in Preschool Behavior Monitoring: Teachers' Perceptions and Practices

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Abstract

This study investigates preschool teachers' perceptions and practices regarding child behavior monitoring, along with their openness to digital solutions, within an educational context characterized by technology integration and the need for enhanced parent-teacher partnerships. Employing a descriptive design, the study involved administering an online questionnaire to preschool teachers from kindergartens in Cluj County, Romania, representing a range of ages and professional experience levels. The findings indicate a prevalence of traditional observation methods, such as written forms and handwritten notes, over digital tools. The main challenges identified in the use of digital instruments include time constraints for teachers and the lack of applications tailored to the specific needs of the kindergarten setting. However, most of the respondents express interest in using digital applications that facilitate automated report generation, personalized recommendations, and direct, efficient communication with parents. The conclusions emphasize the potential of a dedicated digital tool to meet the real needs of teachers and support a systematic process of behavioral monitoring in education.

Keywords:
behavior monitoring, digitization, early childhood education, educational applications, teaching staff your

1. Introduction

The preschool period is crucial for children's social and emotional development, and the behavior they display in kindergarten provides valuable insights into this process. Careful monitoring of children's behavior in educational settings serves a dual purpose: on the one hand, it enables educators to better understand each child's needs and interaction patterns; on the other hand, it provides concrete data for adjusting teaching strategies. In the classroom, appropriate behaviors (such as cooperation, rule-following, and engagement in activities) foster a conducive learning environment, while challenging behaviors (such as aggression, inattentiveness, and oppositional conduct) may disrupt the educational process. Research highlights a strong connection between social behavior and later academic success (Krasch & Carter, 2009), underscoring the importance of observing and guiding behavior from an early age.

The rapid digital transformations of recent decades have fundamentally reshaped various aspects of daily life, profoundly impacting the educational sector. Early childhood education, regarded as the foundation of human development, is no exception to this trend. The process of adapting and integrating digital technologies into the preschool context particularly influences core practices such as behavior monitoring and assessment, as well as modes of communication and collaboration with families.

When attention is directed toward a deeper understanding of each child's individuality and specific needs, digital tools offer opportunities to enhance the efficiency and quality of the educational process (Albulescu & Catalano, 2021). The implementation of innovative technological solutions aims not only to optimize workflows but also to create an environment conducive to children's harmonious development—one based on effective collaboration among educators, parents, and specialists. This transition toward digitized education requires careful analysis of opportunities, limitations, and ethical, social, and pedagogical implications, in order to maximize benefits and minimize potential risks. In this regard, research and innovation in educational technology contribute to the creation of adapted tools and strategies designed to support children, families, and teachers in navigating this new digital reality.

Within the complex landscape of early childhood education, there is an increasingly acute need for the development and implementation of effective tools for documenting, analyzing, and sharing behavioral observations. Traditional observation methods—often reliant on handwritten notes, subjective evaluations,

and limited communication—present significant limitations in terms of efficiency, objectivity, and the potential for early intervention. However, the rapid pace of technological advancement has opened up substantial opportunities to overcome these constraints. The implementation of digital solutions in preschool behavior monitoring promises a range of benefits, including: (1) optimized data collection and storage; (2) facilitation of objective behavior analysis through advanced tools and algorithms; and (3) improved communication and collaboration among educators, parents, and specialists.

Recent studies confirm this trend and emphasize the benefits of technology use in early childhood education (Al-Hendawi et al., 2025). Digital solutions not only streamline processes but also enhance the accuracy and relevance of collected information, providing a solid foundation for personalized and needs-based interventions. Thus, the integration of technology into early childhood education becomes imperative for better understanding of behavior, more precise progress monitoring, and ultimately, for supporting the harmonious development of children.

2. Theoretical foundation

Systematic observation-based assessment has become a central tool in early childhood education, being recommended by professional organizations such as the National Association for the Education of Young Children (NAEYC) to support evidence-based pedagogical decision-making (Peterson & Elam, 2020). Monitoring preschool behavior involves the organized collection of information about what children do and how they respond in various learning situations. These data can be used to adapt the curriculum, enable early intervention in case of emerging behavioral issues, and communicate progress to parents.

Monitoring the behavior of preschool children essentially refers to the systematic observation and recording of how they act and interact within the kindergarten environment (Alford et al., 2016). Observation is considered one of the simplest yet most effective methods of assessing young children, as it allows educators to capture how a child learns and behaves in a natural context. By tracking behavior over an extended period and documenting it in detail (Chafouleas et al., 2013), educators can identify patterns of response and developmental needs, gaining insights into the child's personality and thinking style. Practically, consistent observation enables educators to better understand the reasons behind certain behaviors (e.g., what triggers a frustration episode) and to identify potential special needs or developmental delays at an early age. Moreover, systematic documentation allows for tracking progress over time and appropriately adjusting teaching strategies.

In early childhood education, the assessment of preschool behavior relies on a multidimensional approach, combining direct and indirect methods to gain a comprehensive understanding of child development. This complex perspective is essential for the early identification of potential difficulties and for the effective adaptation of educational interventions.

2.1. The observer's level of involvement in the behavioral data collection process

2.1.1. The descriptive approach (through direct observation)

Systematic observation represents a fundamental component of behavior assessment, allowing for a direct and contextualized understanding of a child's behaviors within their natural environment. This descriptive approach involves careful observation and detailed documentation of behaviors, interactions, and relevant events (McComas et al., 2009). Direct observation provides valuable information regarding the frequency, duration, and intensity of behaviors, as well as the contextual factors (antecedents, consequences) that influence them (Shapiro & Clemens, 2005). By using structured observation tools (e.g., behavioral rating scales, observation checklists), the evaluator can record objective and reproducible data, offering a solid foundation for further analysis and informed educational decision-making (Kilgus et al., 2014).

2.1.2. The indirect approach (interviews and rating scales)

In addition to direct observation, a comprehensive approach to behavioral assessment also employs indirect methods such as interviews and rating scales (Kelley et al., 2011). Structured or semi-structured interviews with parents, educators, or other significant caregivers offer valuable insights into the child's behavior across various contexts (e.g., at home, in kindergarten, during social interactions). These interviews help identify risk factors, behavioral history, and previously implemented intervention strategies.

Rating scales, completed by adults who interact with the child, represent another useful tool in behavioral assessment (Chafouleas et al., 2010). These

scales are typically standardized and provide quantitative scores and behavioral profiles. Through such instruments, atypical behaviors, emotional or social difficulties, adjustment challenges, as well as the child's strengths can be identified (Tucker et al., 2017).

The combination of descriptive approaches (through observation) and indirect methods (interviews, rating scales) enables the development of a complex and nuanced picture of the child's behavior, supporting a holistic understanding of their development and informing effective educational and therapeutic interventions. This multimodal approach is essential for early, personalized, and effective intervention practices.

2.2. The degree of structure and standardization of the tools used in the observation process

The process of assessing preschool behavior involves the use of a variety of tools that differ in their degree of structure and standardization. This variation influences objectivity, comparability of results, and ability to generalize conclusions (Briesch et al., 2015).

2.2.1. Standardized assessment system

Standardized assessment systems, such as behavioral rating scales, are scientifically validated tools that provide quantitative scores and behavioral profiles (Kelley, 2011). These scales are typically administered by professionals (psychologists, counselors) and allow for the evaluation of a child's behavior in comparison with a normative sample, facilitating the identification of potential deviations or difficulties (Denham, 2012; Reynolds & Kamphaus, 2015). Standardized instruments are based on fixed protocols validated through multiple studies, ensuring consistency and enabling the comparison of results across different groups of children. Notable examples include: CLASS (Classroom Assessment Scoring System) – which evaluates the quality of teacher–child interactions and the classroom climate; inCLASS (Individualized Classroom Assessment Scoring System) – which focuses on individual child behavior, analyzing how the child interacts with adults and peers, engages with tasks, and manages conflicts; ASEBA (Achenbach System of Empirically Based Assessment) – a comprehensive system for assessing emotional and behavioral problems, as well as strengths in children and adolescents, with multiple forms tailored to different informants; BASC (Behavior Assessment System for Children) – which assesses emotional and behavioral problems (similar to ASEBA), but also includes personality traits (e.g., anxiety, depression, aggression, hyperactivity, atypicality) and adaptive skills (e.g., school adjustment, social competence) (Reynolds et al., 2011). The use of standardized systems enhances the objectivity of the assessment process, allows for cross-evaluator comparisons, and provides relevant data to inform educational and therapeutic intervention planning.

2.2.2. Non-standardized systems

Non-standardized systems involve the use of more flexible, non-uniform observation methods that allow for capturing the complexity of educational situations in more nuanced and context-sensitive terms. These include descriptive notes, reflective journals, narrative recordings, or open observations conducted without a rigid methodological framework (McComas et al., 2009). Direct observation by teachers involves careful monitoring and detailed documentation of behaviors, interactions, and relevant events. Interviews with parents and educators complement the information gathered through observation by offering a contextualized perspective on the child's behavior.

These methods allow for assessment in naturalistic settings, highlighting situational dynamics and the specific characteristics of the educational environment. Non-standardized tools, such as narrative journals and structured observation sheets, can provide a nuanced picture of behaviors, but they tend to be more subjective and less comparable than standardized systems. Although they offer a detailed and context-rich perspective on the child's behavior, these instruments raise concerns about external validity and result comparability. Nevertheless, in practice, they prove useful in the process of individualized educational intervention, where adaptability and qualitative interpretation are essential (Kelley et al., 2011).

2.3. Theoretical frameworks in behavior assessment

Behavior monitoring in early childhood education is grounded in multiple theoretical paradigms, reflecting a complex evolution of approaches to understanding and intervening in children's behavior.

One of the most influential perspectives is the behaviorist approach, which emphasizes the direct analysis of observable behaviors and the functional relationship between antecedents, behavior, and consequences—known as the ABC model (Bijou & Baer, 1961; Cooper et al., 2007). Within this framework, Functional Behavior Assessment (FBA)

serves as a key tool, frequently used in school psychology and applied behavior analysis to identify the function of problematic behavior and guide corrective interventions (O'Neill et al., 2015). Systematic monitoring plays a central role in this process, providing relevant data for understanding behavioral contexts and informing evidence-based interventions.

In contrast, child development theories, particularly those inspired by sociocultural constructivism (Vygotsky, 1978), propose a broader vision of observation. In this framework, observation is not solely for behavior correction but becomes a fundamental means of understanding the child in relation to their social and educational environment (Albulescu & Catalano, 2021). The educator is viewed as a "reflective practitioner", who observes how children explore, communicate, and interact in order to personalize the educational experience and create inclusive learning environments (Carr & Lee, 2012).

In contemporary approaches, behavior monitoring is increasingly linked to the social-emotional dimension of development. The goal is not only to identify and correct inappropriate behaviors but also to understand their emotional underpinnings—such as emotional regulation difficulties, anxiety, or frustration—which can manifest through subtle yet significant behavioral cues (Denham et al., 2012). Skilled observers can detect early signs of emotional imbalances and respond with preventive and empathetic interventions.

Behavior monitoring also has important applications in the early identification of developmental or behavioral disorders. Many studies on classroom observation focus on children considered "at risk" (e.g., predisposed to behavioral disorders or diagnosed with ADHD), precisely because observation yields critical data for detection and assessment. A recent meta-review (Al-Hendawi et al., 2025) found that over half of the studies using standardized observation systems in preschool settings focused on children with emotional-behavioral disorders or ADHD. The tools used frequently assessed aspects such as emotional regulation (42% of studies) and externalizing behaviors (21%), highlighting the importance of monitoring not only for ensuring quality education but also as part of early intervention strategies for children with special needs.

Furthermore, the theoretical foundations of behavior monitoring now include the integration of technological advancements. Traditionally, direct observation involved the physical presence of an observer in the classroom and manual recording of behaviors. In recent years, however, researchers have begun to employ digital tools—from video recordings of classroom interactions for later analysis, to tablet-based coding apps and even wearable sensors. Video-based studies allow researchers to detect subtle patterns in behavior and social interaction, which can then be analyzed in detail using specialized coding frameworks (Ribeiro et al., 2020). For instance, a video coder can record not only whether a behavior occurred, but also its duration, the exact sequence of events, and the responses of peers and adults (Green et al., 2022). These technology-enhanced approaches, partly derived from experimental psychology, significantly enrich the understanding of classroom dynamics and generate large volumes of data for research. At the same time, they raise new questions about how to integrate technology into routine kindergarten practices while maintaining a balance between naturalistic observation and technological intrusion.

Contemporary digital transformations are exerting a significant influence on early childhood education, particularly in the methods used to monitor children's behavior and to enhance communication with families. In this context, there is a growing need for the development and implementation of efficient digital tools that enable precise documentation, rigorous analysis, and rapid sharing of observations made in educational settings (Al-Hendawi et al., 2025). Such tools are becoming essential for optimizing the educational process, contributing both to a deeper understanding of children's behavior and to improved interaction with parents and other key stakeholders.

3. Research methodology

3.1. Type of Research

The present research is situated within the constructivist paradigm, which is based on the premise that educational reality is socially constructed and subjectively interpreted by the actors involved in the educational process. The main objective is to explore how educators understand, apply, and evaluate practices of observing children's behavior, in relation to available resources and the specific institutional dynamics. The study does not aim to identify fixed causal relationships. The constructivist paradigm is appropriate for studies that seek to understand individual and collective experiences that are culturally and professionally contextualized, as is the case in this applied research.

Although a quantitative tool—a questionnaire—was used, it served an exploratory rather than a confirmatory purpose, aiming to capture trends, attitudes, and perceptions relevant to designing a digital tool aligned with the real needs of preschool education. This approach aligns with the methodological views of authors such as Lincoln and Guba (1985), who argue that the validity of constructivist research derives from the depth of contextualization and the relevance of interpreting phenomena from the perspective of those involved.

The applied and exploratory nature of this research supports the goal of investigating current practices in preschool behavior monitoring, the needs of educators engaged in these processes, and the potential for integrating an appropriate digital solution.

The choice of a quantitative, descriptive-exploratory approach was driven by the need to obtain an overview of the current state of behavioral observation practices in preschool settings and the level of openness toward integrating digital technologies into this process. The use of a *structured questionnaire* provided the advantage of standardized responses, enabling rapid data collection and coherent, comparable analysis.

Given that the field of digital behavior monitoring in early childhood education is relatively new and underexplored in the Romanian context, an exploratory approach was deemed appropriate for identifying key areas of interest, the actual needs of educators, and possible barriers to implementing an innovative solution. Additionally, the inclusion of open-ended items in the questionnaire allowed for the collection of complementary qualitative data, which may contribute to the development of research hypotheses for future confirmatory studies.

3.2. Sample

The study involved 44 preschool educators employed at three public kindergartens in the city of Cluj-Napoca. The selection of the institutions was based on urban location, institutional size, and willingness to participate. A convenience sampling method was used, justified by the exploratory nature of the investigation and its contextual character. The choice of convenience sampling was influenced by institutional access, the feasibility of administering the instrument in the field, and the professional relevance of the participants.

Although this type of sampling does not allow for statistical generalization of the results, it is commonly used in applied educational research and provides a valuable basis for contextual analyses and the design of tailored interventions or tools.

The participants' profile was analyzed according to factors such as professional experience, level of training, frequency of behavior observation practices, and familiarity with digital tools.

3.3. Objectives, hypotheses, and research questions

Starting from the general aim of the research—to identify the methods used for monitoring preschoolers' behavior and to analyze the potential use of a digital application—the following objectives were formulated:

O1 – To investigate the frequency and methods of traditional behavioral observation used by educators in the kindergartens included in the study.

O2 – To assess the level of familiarity with and use of digital platforms in teachers' professional activities.

O3 – To identify educators' perceptions of the potential benefits that a digital application could bring to the behavior monitoring process.

O4 – To identify perceived challenges in using such an application (technical, ethical, organizational).

O5 – To examine the willingness of educators to integrate a digital solution into their professional practice.

The working hypotheses were derived from the research objectives:

H1: Most educators use behavioral observation methods in an informal and occasional manner, without a standardized systematic framework.

H2: The level of familiarity with digital technology varies according to teachers' professional experience and prior training.

H3: Educators perceive the integration of a digital application for behavior monitoring positively, highlighting benefits such as efficiency and accuracy.

H4: The challenges perceived in using a digital solution are primarily related to a lack of technical training and the time required for implementation.

H5: The willingness to integrate a digital application is higher among educators who already use technology in other aspects of their educational practice.

3.4. Research Instrument

The primary instrument used for data collection was a *structured questionnaire*, developed in accordance with the proposed objectives. It was composed of five thematic sections:

a) respondent profile – demographic and professional information (age, experience, initial and continuing training);

b) current observation practices – frequency, types of behaviors observed, and methods used in traditional observation;

c) digitization in behavioral observation – frequency of use, level of comfort, and types of platforms or applications currently used;

d) perceptions of the benefits of a digital solution – efficiency, accuracy, transparency, timesaving, and educator–family communication;

e) perceptions of challenges – technical difficulties, resistance to change, confidentiality, and logistical concerns.

The questionnaire included both closed-ended items (using Likert scales and multiple-choice questions) and open-ended questions to capture participants' personal perspectives.

3.5. Data Collection Procedure

The questionnaire was administered in digital format (via Google Forms) over a two-week period. Participation was voluntary, and all data were anonymized and handled in accordance with ethical and confidentiality principles specific to educational research.

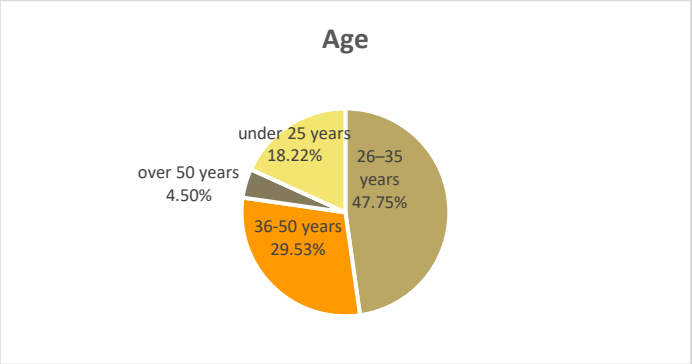
The responses were compiled into a database and analyzed using *descriptive statistics* (frequencies, percentages, means) with the aim of highlighting predominant trends and drawing conclusions about the educators' readiness and openness to integrating a digital application for behavior monitoring. The collected data were also correlated with respondents' professional characteristics to identify potential patterns in practices or attitudes.

4. Results

The results from Figure 1 indicate that the majority of participating educators are relatively young, in the first two decades of their professional careers, which may influence their openness to digital innovations and adaptability to methodological changes.

Figure 1

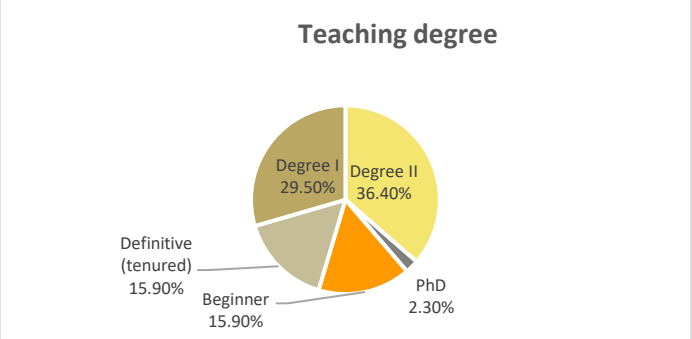
Age distribution of the sample



The high proportion of educators holding advanced professional ranks (Grade I and II) suggests a sample composed of individuals with significant experience and professional qualifications, which lends practical validity to their responses regarding behavioral observation (Figure 2).

Figure 2

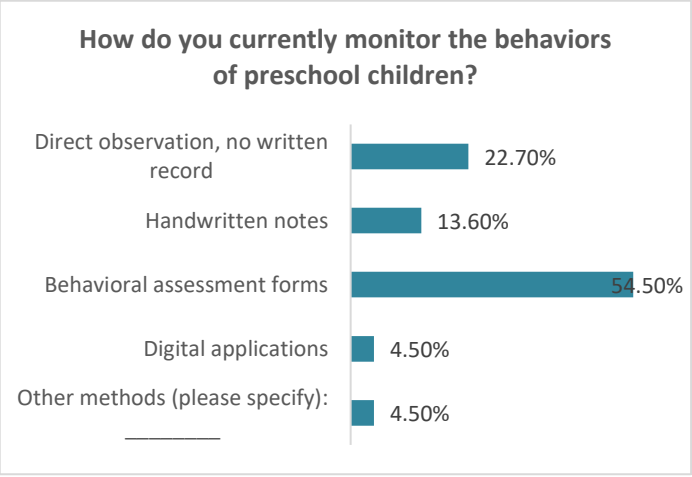
Distribution of the sample by level of expertise/professional rank



The analysis of the questionnaire data in Figure 3 revealed several significant trends regarding the methods used by educators to observe preschoolers' behavior, the frequency of their application, the challenges encountered in the process, and the ways in which information is communicated to families.

Figure 3

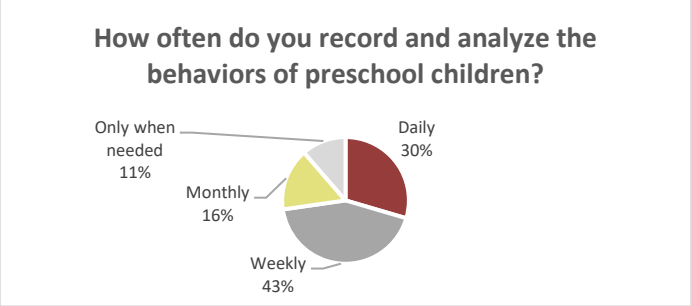
Current methods of behavior monitoring



The most frequently used practice is the completion of behavioral assessment sheets (54.5%), indicating a preference for semi-structured, relatively formalized methods. However, a significant proportion of respondents (22.7%) reported using direct observation without written documentation, suggesting an intuitive process that is difficult to systematically record or analyze. Other practices, such as handwritten notes (13.6%) or digital applications (4.5%), were reported to a lesser extent. The distribution from Figure 4 indicates that traditional methods continue to dominate, while the integration of technology into this process remains marginal.

Figure 4

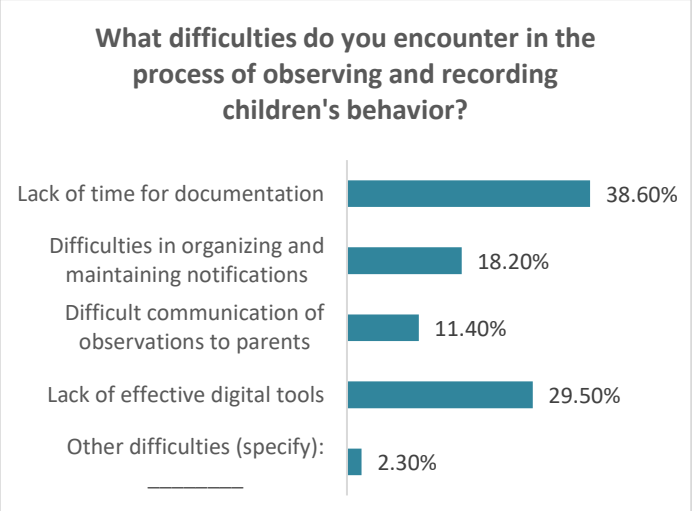
Frequency of behavior observation



When asked about the frequency with which they record and analyze children's behaviors, most educators reported sustained activity: 43% stated they do so weekly, and 30% daily. Only 16% mentioned conducting behavior analysis monthly, while 11% intervene only "when necessary." The data from Figure 5 confirm a genuine interest in behavior monitoring as part of daily teaching practice, although the lack of a unified framework and effective tool may affect the consistency and continuity of this process.

Figure 5

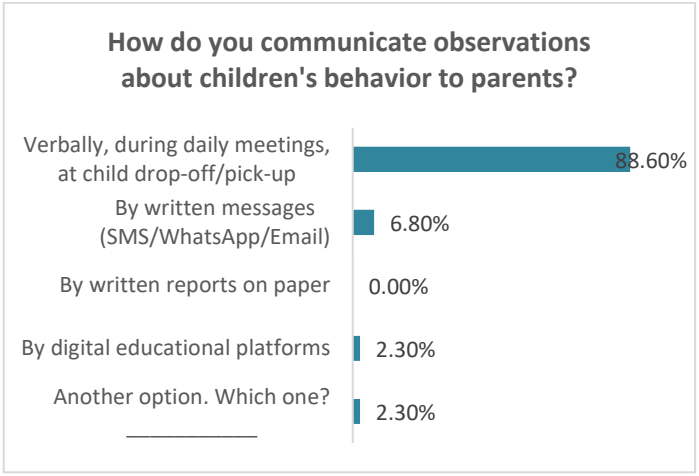
Identified challenges



Among the difficulties encountered by educators in the process of observing and documenting children's behavior, the most frequently reported, as shown in Figure 6, were lack of time allocated for documentation (36.4%) and the absence of efficient digital tools (29.5%). Other obstacles include challenges in organizing and storing records (18.2%) and difficulties in communicating observations to parents (11.4%). These challenges reflect both the structural constraints of the educational environment and the need for an integrated technological solution to effectively support the collection and transmission of information.

Figure 6

Modes of communication with parents



The communication of observation results to parents is predominantly informal and verbal, occurring during daily interactions at drop-off and pick-up times (88.6%). Written communication is almost nonexistent: only 6.8% report using messages (SMS/WhatsApp/email), and educational platforms are used at a very low rate (2.3%). The lack of written traceability may affect the transparency and consistency of collaboration between families and educators regarding behavioral interventions.

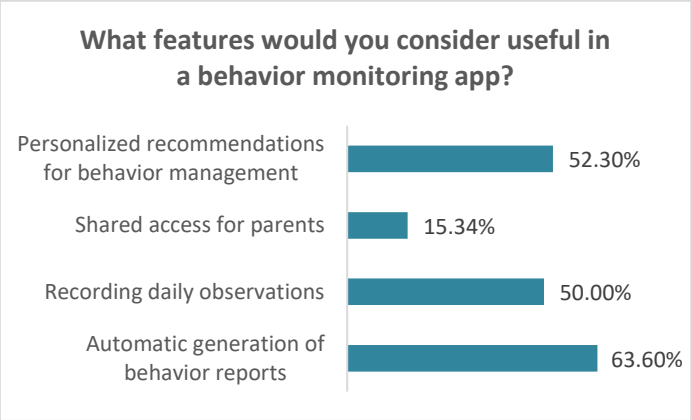
The results show that, although educators demonstrate a high level of involvement in observing children's behavior, the methods used are largely traditional, unstandardized, and difficult to manage over time. The reported challenges highlight *the urgent need for an intuitive, efficient, and contextually adapted digital tool* to support both documentation and clear communication with parents.

The analysis of responses, from Figure 7, reveals *a significant openness* toward the idea of using a digital application for monitoring preschool behavior, provided that it meets concrete, practice-based needs. The most valued features mentioned by participants

were: *automatic generation of behavioral reports* (63.6%), *personalized recommendations for behavior management* (52.3%), and *daily observation recording* (50%). Parental access to the application was considered useful by a smaller proportion (15.3%), indicating a stronger preference for internal-use tools intended for educators as professional observers and intervention agents.

Figure 7

Perceived useful features in a digital application



Regarding *the overall perception of the functionality* of such an application, 93% of respondents stated that they consider it useful *to a great or very great extent*, highlighting *the high potential for acceptance* of a digital solution—as long as it is intuitive, efficient, and tailored to the specific context of kindergarten activities.

Figure 8

Types of Behavioral Reports

The types of behavioral reporting preferred by educators clearly indicate, în Figure 8, *a shift toward synthetic, interpretive formats with direct pedagogical value*, as opposed to daily or strictly descriptive reports. The most appreciated forms of reporting were: *analysis of long-term behavioral trends, personalized recommendations for educational interventions, and comparison of the child's behavior with age-specific developmental norms.* These preferences suggest a real need for tools that not only record behavior but also provide *integrated, interpretive, and contextually relevant information* to support educational decision-making.

In contrast, *daily individual reports* were less appreciated, which may reflect a perception that they are *inefficient in terms of time investment versus pedagogical value*—especially in the absence of proper digitization to automate the process. This points to an educator profile focused on *strategic, longitudinal monitoring*, prioritizing quality and usefulness over excessive frequency or bureaucratic detail.

Regarding *parental involvement*, the vast majority of respondents (95%) were in favor of granting parents some level of access, yet they *preferred partial control over the information*—through notifications or selective reports. This suggests a need for features that allow *filtering and tailoring communication* based on the nature of observed behaviors. The results reflect *a controlled openness* to family involvement, supporting more transparent communication, while still requiring careful management to maintain professional boundaries and protect sensitive data.

A flexible, user-friendly, analytics-oriented, and partially shareable application emerges as the preferred model—one that supports the educator's daily work, reduces bureaucratic load, and facilitates constructive communication with families.

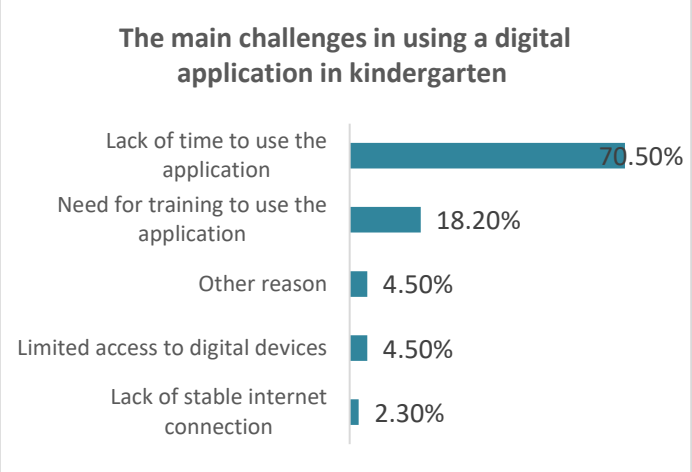
Despite limited prior experience, the data reveal *a generally favorable attitude* toward the use of a digital application for behavior monitoring. Only 14% of respondents reported previous use of such an app and found it useful, while 84% stated that they had never used one but were interested in adopting it. Only 2% considered such applications unnecessary. These figures suggest *a high potential for adoption*, provided the tool is accessible and practically relevant.

However, beyond this openness, the analysis of perceived difficulties, from Figure 9, reveals significant organizational barriers. The most frequently cited obstacle was the lack of time to use the application (70.5%), followed by the need for training in the use of new technologies (18.2%). Limited access to digital devices (4.5%) and poor connectivity (2.3%) were reported to a lesser extent, suggesting that the challenges are not primarily

technical, but rather related to integration into professional routines and the digital competencies of the staff.

Figure 9

Perceived challenges in using digital applications in kindergartens



The devices preferred by the majority of educators for using the application were identified as computers or laptops (64%)—considered the optimal option—followed by kindergarten-owned tablets (18%) and personal smartphones (16%). This distribution highlights the need for the *application to be compatible with multiple types of devices*, but especially optimized for desktop/laptop use, likely due to the comfort provided in data entry and report visualization.

Regarding the amount of daily time that could be allocated to using the application without disrupting educational activities, 52% of respondents estimated a reasonable interval of 5–10 minutes, while 25% could allocate between 10–20 minutes, and 14% less than 5 minutes. Only 9% stated they could dedicate more than 20 minutes per day to this process. These findings point to the necessity for the application to be *highly efficient, intuitive, and streamlined in its workflow*, so that it can be integrated into the fast-paced preschool environment without adding excessive bureaucratic workload.

5. Discussions

The analysis of the results highlights several key aspects regarding current practices in monitoring preschoolers' behavior and educators' perceptions of integrating technology into this process. The respondents' profile—relatively young educators with a high level of professional qualification—suggests a strong potential for adaptability to digital solutions (H2), creating a favorable context for the introduction of a dedicated digital tool (H3).

In terms of behavioral observation methods in use, traditional, semi-structured tools (such as behavioral evaluation sheets) clearly prevail over digitized or automated methods (H1). While there is a clear interest in the frequent monitoring of children's behavior, the lack of a unified framework and effective technological solutions affects the coherence, standardization, and efficiency of this process.

The identified challenges—such as the lack of time for documentation and the absence of specialized digital tools—reflect organizational constraints and inadequate digital infrastructure (H4). Communication with parents, carried out almost exclusively through verbal, informal means and lacking traceability, reveals an underutilized area for developing systematic family collaboration.

Against this background, there is significant openness to the use of a digital application for behavioral monitoring, provided it responds to concrete needs and does not add to bureaucratic workload (H5). The functionalities perceived as most useful—automated report generation, personalized recommendations, and daily observation logging—indicate a clear demand for a tool with real pedagogical value, capable of supporting educational analysis and decision-making.

At the same time, perceptions regarding parental involvement show a preference for partial and controlled access to behavioral information, signaling a legitimate concern for data protection and maintaining balance in the educator–family relationship. The barriers to using such an application are not primarily technical, but organizational: lack of time and the need for training are more frequently cited than device availability or connectivity issues, suggesting the need for an integrated approach to implementation.

6. Conclusions

The study highlights a genuine and sustained interest among preschool educators in monitoring children's behavior, the limitations posed by traditional methods, and the early stage of development for specialized digital tools. In this context, there emerges a clear opportunity for the development of digital applications designed to facilitate documentation, analysis, and communication of behavioral observations.

The main qualities of such digital solutions should include the validity, accuracy, and relevance of behavioral descriptors, while also meeting key

technical requirements such as ease of use, compatibility with existing equipment, automated report generation, and smooth integration into educators' professional routines. Additionally, the application should offer controlled communication options with parents, ensuring transparency and collaboration without compromising the educator's professional role.

The significant openness toward adopting such an application, despite limited prior experience, confirms a high potential for acceptance—if implementation is supported through training, technical assistance, and adaptation to real-world classroom conditions. A well-designed digital tool could thus substantially enhance the efficiency and professionalism of behavior observation practices in preschool education, contributing to a more coherent, evidence-based, and collaborative educational process.

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Psychological Factors Associated with School Dropout Intention of Secondary School Students

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Psychological Factors Associated with School Dropout Intention of Secondary School Students

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Abstract

School dropout in Romanian mainstream education has become an increasingly concerning phenomenon, especially among ethnic minority groups such as Roma students. This paper examines the psychological and individual factors involved in students' intention to drop out of secondary school in a rural area. The study investigates factors such as ethnic identity, school involvement, self-efficacy, resilience, and ethnic victimization. A cross-sectional correlational design was applied to a sample of 138 Romanian, Hungarian, and Roma adolescents enrolled in lower secondary schools in Mureș County, Romania. The results highlight that the intention to drop out of school is significantly associated with loneliness, lack of behavioral engagement, and experiences of victimization. Teacher support and resilience emerged as protective factors, mitigating dropout intention. Implications for educational policies and intervention programs are discussed, emphasizing the need for culturally responsive strategies in Romanian schools.

Keywords:
dropout intention, ethnic identity, ethnic victimization, school engagement, secondary school students, rural area, teacher support

1. Introduction

This study was motivated by the first author's professional experience working with ethnically diverse secondary school students. Among these, Roma students appeared to face challenges in integrating into Romanian education, such as psychosocial barriers and with ethnic values shaping their behavior and cognition. Guided by a scientist-practitioner perspective, the research aimed to investigate these issues empirically.

The primary objective was to examine the relations between school dropout intentions and constructs such as ethnic identity, victimization, school involvement, resilience, and teacher support among Romanian, Hungarian, and Roma adolescents students. A secondary objective was to explore the associations between ethnic identity and school dropout intentions, victimization, school involvement, resilience, and self-efficacy.

A cross-sectional correlational design was employed, with data collected through questionnaires administered to 138 adolescents attending gymnasium schools in the Mureș rural communities of Cristești, Ogra, Izvoarelor Valley, and Chirileu. For greater clarity, it should be noted that secondary school (as used in the title), middle school and gymnasium refer to the same educational stage. In Romania, this stage corresponds to grades 5 through 8.

Findings indicated that school dropout intentions were associated with multiple factors, including lowsocial and teacher support, feelings of loneliness, low behavioral engagement, and experiences of physical, social, verbal, media-based, and property-related victimization. Ethnic identity was positively associated with resilience and behavioral engagement and negatively correlated with victimization and loneliness.

These findings highlight the complex interplay between ethnic identity, psychosocial factors, and school engagement. They underscore the importance of targeted interventions to support adolescents at risk of school dropout, particularly within marginalized ethnic communities.

2. Theoretical foundation

For some students, staying in school represents a significant challenge, leading them to leave upper secondary education prematurely without completing their studies. This phenomenon is commonly referred to as school dropout.

The literature indicates that there is no standardized operational definition of dropout (Christle et al., 2007; Lundetræ et al., 2011; Strom & Boster, 2007). For instance, Fitzpatrick and Yoels (1992) define dropouts as students who leave upper secondary education

without graduating within four years, regardless of whether they later return to complete their studies. Similarly, Lundetræ (2011) defines school dropouts as students who fail to complete the gymnasium cycle within five years. In Norway, approximately 30% of all students who begin gymnasium fall into this category, a proportion that has remained relatively stable over the past two decades (Norway, 2013).

Students who drop out can be classified into three groups: those who leave school early (within the first five years), those who remain in gymnasium during the sixth year, and those who fail to complete their studies (Norway, 2013). Between 2007 and 2012, around 17% of students were anticipated to drop out and leave the educational system (Frostad et al., 2015).

Reviews conducted by Rumberger (1987, 1995; Rumberger & Sun, 2008) indicate that antecedents, correlates, and consequences of secondary school dropout have been extensively studied. These studies suggest that there is no single cause for leaving school. Moreover, students who drop out early are not a homogeneous group; they do not share the same risk factors. Instead, students may have highly diverse reasons for leaving school.

Traditional research on this phenomenon has examined the role of demographic predictors such as age, gender, and ethnicity (Rumberger, 1983). In addition to demographic factors, several social predictors have been identified, including poverty, single-parent families, parents with low educational attainment, and minority background (Frostad et al., 2015). A third group of predictors includes early academic underachievement and low scholastic performance (Fagan & Pabon, 1990). Personal factors, often combined with poor academic performance, constitute another reason for school dropout. However, this issue requires a comprehensive perspective, considering individual student characteristics alongside school-related factors that affect students' decisions to stay in or leave school (Frostad et al., 2015). These findings suggest that school organization, communication, leadership, and teachers can significantly impact a student's decision to remain in school (Knesting, 2008; Rumberger, 1987).

3. Research methodology

This study aimed to investigate two primary aspects:

- The relations between school dropout intentions and the following constructs: ethnic identity, victimization, school involvement, resilience, self-efficacy and teacher support among secondary school students.
- The relations between ethnic identity and the following constructs: school dropout intentions, victimization, school involvement, resilience, and self-efficacy among secondary school students.

The target population comprised 138 adolescent boys and girls enrolled in grades VI, VII, and VIII in secondary schools located in the Mureș county rural communities of Cristești, Ogra, Valea Izvoarelor and Chirileu.

A stratified random sampling method was employed, with ethnicity as the stratification variable. Participants identified as Romanian, Hungarian, or Roma. The distribution of participants by ethnicity was as follows: 45 Romanian (32,6%), 41 Hungarian (29,7%), and 52 Roma (37,7%) students. Regarding gender, the sample included 80 boys and 58 girls. Distribution by grade level was 53 students in grade VI, 45 students in grade VII, and 40 students in grade VIII.

Data were collected through a structured questionnaire with answers on Likert scales, which included scales measuring the following constructs: ethnic identity, resilience, school engagement, self-efficacy, perceived ethnic discrimination or victimization, and school dropout intention. The specific instruments utilized were translated for the present study, while those previously translated were referenced according to earlier studies:

- *Ethnic Identity Scale* (Umana-Taylor, Yazedijian,& Bamaca-Gomez, 2004);
- *Resilience Questionnaire* (Oshio et al., 2003; translated and adapted into Romanian by Cazan & Truța, 2015);
- *Self-Efficacy subscale of the Patternsof Adaptive Learning Scales* (PALS; Midgley et al., 2000; translated and adapted into Romanian by Damianet al., 2017);
- *School Engagement Measure* (Fredricks et al., 2004, 2005.

4. Results

The data were analyzed using IBM SPSS Statistics (version 25, 2019)to perform Pearson's bivariate correlation coefficients (r). Descriptive statistics can be consulted in Table 1 whereas results of correlational analyses can be found in Table 2. We will

describe the obtained results for each study objective below.

4.1. School dropout intentions and ethnic identity, victimization, school involvement, resilience, self-efficacy and teacher support among secondary school students. In the current study, the intention to drop out was significantly positively associated with all types of victimization: social victimization, media victimization, property attacks, and physical victimization.There is also a significant positive correlation between the intention to drop out and loneliness at school. Conversely,the intention to drop out was found to correlate negatively with behavioral school engagement.

Regarding teacher support, the data showed that it correlates negatively with the intention to drop out among adolescents. At the same time, teacher support was positively associated with better behavioral, emotional, and cognitive engagement in school, as well as with increased adolescent self-efficacy.

As for the relation between teacher support and resilience, the surveyed students reported being more willing to explore situations in the academic environment and to maintain a positive orientation toward their academic future (i.e., novelty seeking and positive orientation).They also reported being more aware of the meaning of their own ethnicity and having a clearer sense of the value of their ethnic identity. Loneliness at school was strongly associated with the intention to drop out. Teacher support correlated significantly positively with self-efficacy.

4.2.Ethnic identity and school dropout intentions, victimization, school involvement, resilience, and self-efficacy among secondary school students. Research results indicated that the ethnic identity of middle school students does not significantly affect their intention to drop out of school or permanently discontinue their studies, as the correlations with ethnic identity affirmation, ethnic identity exploration, and ethnic identity clarity were nonsignificant.

Table 1

Means, Standard Deviations, and Cronbach's Alphas

Scale	Mean	Standard Deviation	Cronbach's Alpha Coefficient
Intention to Drop Out			
1. Intention to Drop Out	15.6	6.14	.83
2. Teacher Support	21.7	5.86	.88
3. Loneliness	10.01	5.27	.87
Ethnic Identity			
4. Exploration	22.45	5.84	.62
5. Affirmation	24.58	5.13	.71
6. Clarity	15.39	3.76	.72
Resilience			
7. Novelty Seeking	25.97	4.55	.67
8. Emotional Regulation	20.29	4.50	.39
9. Positive Orientation	19.21	4.26	.78
10. Self-Efficacy	17.27	4.47	.83
School Engagement			
11. Behavioral Engagement	18.46	3.69	.64
12. Emotional Engagement	19.27	4.73	.71
13. Cognitive Engagement	23.26	6.48	.77
Victimization			
14. Physical Victimization	7	3.69	.84
15. Verbal Victimization	8.69	4.35	.78
16. Social Victimization	8.04	4.07	.83
17. Property Attack	7.80	4.57	.89
18. Average Victimization	8.4	4.65	.84

Table 2.

Correlations Among School Dropout Intention, Teacher Support, Loneliness, Resilience, School Engagement, Self-Efficacy, and Victimization

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. School Dropout Intention	—																		
2. Teacher Support	-.19*	—																	
3. Loneliness	.51**	.20	—																
4. Resilience – Affirmation	-.13	.12	-.33**	—															
5. Resilience – Exploration	-.06	-.01	-.03	.11	—														
6. Resilience – Clarity	.04	.20*	-.17*	.28**	.29**	—													
7. Behavioral Engagement	-.29**	.27**	-.11	.22*	.16	.37**	—												
8. Emotional Engagement	-.11	.30**	-.05	.08	-.08	.10	.15	—											
9. Cognitive Engagement	-.05	.29**	.02	.08	.10	.11	.45**	.43**	—										
10. Self-Efficacy	-.12	.35**	-.26**	.09	-.02	.28**	.33**	.35**	.47**	—									
11. Novelty Seeking	.03	.33**	-.20*	.13	.18*	.39**	.29**	.11	.21*	.53**	—								
12. Emotional Regulation	-.05	.03	-.06	.14	-.04	.07	.12	.23**	.36**	.10	—	—							

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
13. Positive Orientation	-.12	.34**	.23**	.22**	.05	.31**	.29**	.23**	.26**	.50**	.39**	.09	—						
14. Total Resilience	-.06	.36**	-.25**	.26**	.10	.39**	.36**	.30**	.42**	.58**				—					
15. Physical Victimization	.37**	-17	.32**	-.23**	-.01	-.10	-.10	.17	.06	-.14					—				
16. Social Victimization	.30**	-.07	.26**	-.22*	-.24**	-.13	-.14	.23**	.01	-.01						—			
17. Verbal Victimization	.13	-.02	.28**	-.19*	.01	-.06	-.01	.17	-.02	-.15							—		
18. Property Victimization	.21*	-.14	.33**	-.31**	-.07	-.09	-.15	.03	-.06	-.19*								—	
19. Media Victimization	.25**	-.09	.40**	-.19*	-.10	-.13	-.10	.19*	.06	-.05									—

5. Discussions

5.1. School dropout intentions and ethnic identity, victimization, school involvement, resilience, self-efficacy and teacher support among secondary school students. The present study identified that the primary factors correlated with school dropout intentions among secondary school students were loneliness at school, low behavioral engagement, and victimization.Adolescents who showed higher levels of behavioral engagement were less likely to consider leaving school. Active behavioral participation includes volunteering, presenting projects in front of the class, taking on active roles in group work, and feeling accepted and appreciated by peers (Farmer et al., 2003).

High correlation scores between school dropout intention and victimization indicate that students are more prone to consider leaving school when they experience physical, emotional, verbal, or media-related abuse, or when their personal property is harmed. These findings align with prior research showing that school victimization negatively impacts both school participation and socio-emotional adaptation (Phelan et al., 1994).

Consistent with Lee et al. (1999), one of the most important factors affecting adolescents' school satisfaction is the quality of the student–teacher relationship, characterized by acceptance and support. In this study, high correlations were observed between teacher support and self-efficacy, novelty seeking, resilience, positive orientation, and emotional regulation.

Adolescents expressing an intention to leave school reported lower levels of resilience. They were less inclined to explore the academic environment, held a less positive vision of their future, and exhibited lower self-efficacy. Additionally, they were less likely to assert themselves within their ethnic community or to develop a clear sense of ethnic identity. In addition, teacher support was significantly associated with loneliness, indicating that students who felt isolated at school also perceived lower levels of support and understanding from their teachers.

5.2. Ethnic identity and school dropout intentions, victimization, school involvement, resilience, and self-efficacy among secondary school students. Interestingly, no significant correlations were found between ethnic identity and school dropout intentions in this sample.The correlations between ethnic identity and students' intention to drop out of school were found to be minimal and statistically non-significant. Overall, these findings indicate that ethnic identity alone does not exert a substantial effecton the decision to discontinue formal education during the middle school years. It is likely that other interpersonal and intrapersonal factors play a more prominent role in shaping students' intentions to leave the educational environment.These findings highlight the importance of focusing on broader interpersonal and intrapersonal factors—such as victimization, loneliness, school engagement, and teacher support—when addressing school dropout risk, rather than attributing it to ethnic identity factors.

These important findings should be interpreted through the lens of a few limitations. First, the correlational design prevents causal inference, providing only information on concurrent relations between variables. Second, the cross-sectional nature of the study allows assessment at a single point in time, limiting the ability to predict long-term outcomes. Third, the reliance on self-reported data may introduce subjectivity, defensive response mechanisms, or superficial answers.Consequently, future research should address these limitations by using larger samples, longitudinal designs, and culturally adapted measurement tools to further investigate and prevent school dropout, with particular attention to ethnic-specific needs.To deepen the understanding of school dropout, the following future research directions are proposed: (1) *Sample expansion*: Including a larger number of participants to increase the generalizability of the results; (2) L*ongitudinal design:* Monitoring the evolution of dropout intentions over an extended period to identify trends and predictive factors; (3)

Development of a national questionnaire: Creating an instrument adapted to the cultural and educational specificities of Romania to assess adolescents' school dropout intentions; (4) *Designing intervention programs:* Developing counseling and career guidance programs that take into account the ethnic-specific needs of students.

Notwithstanding the aforementioned limitations, the present research has important implications which we will discuss below.

From a theoretical perspective, this research deepens the understanding of school dropout among gymnasium students, highlighting factors that contribute to the development of early school leaving, including teacher support, self-efficacy, victimization, school engagement, and resilience. The findings provide a foundation for further research in vocational guidance and career counseling.

From a practical standpoint, the results offer a basis for developing intervention and prevention programs targeting adolescents at risk of dropping out. Understanding the importance of teacher support can inform future teacher training programs, emphasizing empathy, unconditional acceptance, and respect, which may help reduce dropout rates.

Recognizing the unique characteristics of different ethnic groups and their influence within the Romanian education system can inform practical interventions. At the human resources level, schools may ensure the presence of specialized personnel tailored to the needs of each ethnic group, including teachers, school pedagogues, counselors, and community mediators. Attention should be given to providing qualified teachers for teaching the Romani language, according to the needs of students and their families.

At the curriculum level, educational plans, programs, textbooks, and supplementary materials should be adapted to the needs of target students, covering core knowledge (reading, writing, mathematics, history, geography, civics) as well as vocational elements. For Roma students, curricula should include the Romani language and aspects of Roma history and culture, similar to the content provided for Hungarian students.

Active-participatory teaching methodologies should be employed to address adaptation difficulties, prevent school failure, and value students' cognitive, attitudinal, and behavioral progress. These methods aim to enhance learning motivation and improve students' self-image.

Engagement with community mediators—educational, social, and medical—can strengthen the relationship between schools and the community. Social support may be enhanced through projects such as counseling programs for Roma children and their families, provision of free school meals, and initiatives to increase involvement and acceptance from peers and the wider community.

6. Conclusions

In conclusion, this study shows that school dropout intention among Romanian secondary school students is affected by multiple psychosocial factors, including loneliness, low behavioral engagement, and experiences of physical, social, verbal, and media-related victimization. Ethnic identity emerged as a protective factor, being positively associated with resilience and behavioral engagement, and negatively related to victimization and loneliness. Teacher support, self-efficacy, and positive school experiences play a central role in fostering student retention and promoting academic persistence.

These findings have important theoretical and practical implications.

Theoretically, they contribute to a deeper understanding of the psychological and social determinants of school dropout within ethnically diverse populations. Practically, they provide a basis for developing targeted intervention programs, teacher training initiatives, and culturally responsive curricula designed to support at-risk students.

Providing both theoretical and practical implications,the present findings contribute to a deeper understanding of the psychological and social determinants of school dropout within ethnically diverse populations and offer a foundation for developing targeted interventions, teacher training, and culturally responsive curricula to support at-risk students.

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What Myths Do Teachers in Romania Hold About Learning? Prevalence and Predictors Across Levels and Curricular Areas

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What Myths Do Teachers in Romania Hold About Learning? Prevalence and Predictors Across Levels and Curricular Areas

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Abstract

This study examines the prevalence and distribution of learning-related myths among teachers in Romania, exploring how misconceptions vary across teaching levels and curricular areas. A total of 1.625 teachers participated in an online survey assessing agreement with widely circulated educational myths and evidence-based learning principles. Results reveal that misconceptions remain pervasive, with 89.6% of respondents endorsing the "learning styles" myth and more than half agreeing that multitasking supports efficient learning. Nearly 45% believed that boys and girls possess different cognitive abilities. Conversely, most teachers accurately recognized validated principles such as the importance of socio-emotional well-being and adaptive teaching strategies. Statistical analyses indicated significant differences in misconception rates across teaching levels and subject areas, suggesting that disciplinary culture and initial teacher education shape cognitive-science literacy. Findings highlight the persistence of intuitive but scientifically unsupported beliefs in education and underscore the need to integrate cognitive-science content and myth-debunking approaches into both pre-service and in-service teacher training. The study contributes new empirical evidence to the European context and offers directions for designing professional development programs grounded in contemporary learning research.

Keywords:
teacher beliefs, learning myths, neuromyths, cognitive science in education, evidence-based teaching

1. Introduction

Over the past two decades, the intersection between neuroscience, psychology, and education has generated unprecedented public interest in how the brain learns. While this connection has fostered valuable dialogue between scientific and educational communities, it has also given rise to a proliferation of simplified or distorted interpretations of research findings—popularly known as neuromyths (Organisation for Economic Co-operation and Development [OECD], 2002). Neuromyths are misconceptions that arise when legitimate neuroscientific or psychological concepts are misunderstood, overgeneralized, or misapplied in educational contexts. Common examples include beliefs that individuals learn best when instruction matches their sensory "learning style," that people use only 10% of their brain capacity, or that the left and right hemispheres function independently in learning (Dekker et al., 2012; Pasquinelli, 2012).

Research consistently demonstrates that such myths are widespread among teachers worldwide (Ferrero et al., 2016; Gleichgerrcht et al., 2015; Howard-Jones, 2014). They persist because they appear intuitively plausible, align with cultural narratives about talent or intelligence, and are often promoted in teacher-training materials or commercial learning programs. While holding a neuromyth does not necessarily imply poor teaching, these beliefs can influence pedagogical decisions, diverting attention from evidence-based practices (Lethaby & Harries, 2016). For example, educators who believe in learning styles may spend valuable instructional time attempting to "match" activities to visual or auditory preferences rather than focusing on strategies that promote active engagement and retrieval practice.

Recent international studies indicate that even experienced teachers with formal education in pedagogy remain vulnerable to these misconceptions (Grospietsch & Mayer, 2019; Macdonald et al., 2017). Moreover, exposure to neuroscience courses alone has not been shown to eliminate myths; rather, critical reflection and explicit myth-debunking appear more effective (Ferrero et al., 2016). The prevalence of such beliefs across diverse educational systems suggests that cultural and institutional factors—such as curriculum design, teacher education traditions, and access to scientific communication—play a major role in shaping teachers' understanding of learning.

In Romania, as in many European contexts, teacher-training curricula have recently undergone

reforms aimed at aligning educational practices with the principles of inclusive and competency-based learning. However, research examining teachers' cognitive-science literacy and susceptibility to neuromyths remains limited. Most available evidence focuses on instructional methods or general attitudes toward innovation, without assessing the accuracy of teachers' beliefs about how learning occurs. This gap is particularly relevant given the rapid diffusion of popular psychology concepts through media and professional development workshops, often without rigorous scientific vetting.

Understanding which myths persist among Romanian teachers—and how these misconceptions differ by teaching level or curricular area—is essential for developing effective professional development programs. For instance, teachers in early childhood and primary education may encounter different pedagogical narratives (e.g., about developmental stages or multiple intelligences) than those in secondary education, who might be more exposed to cognitive or neuroscientific models. Similarly, differences across curricular domains such as languages, sciences, or arts may reflect distinct epistemic cultures and learning paradigms.

Against this backdrop, the present study aims to provide a systematic analysis of the learning myths endorsed by teachers in Romania. Drawing on a large national sample (N = 1.625), the study examines both the prevalence of misconceptions and their distribution across teaching levels and curricular areas. By combining descriptive and comparative analyses, this research seeks to identify patterns that can inform teacher education policy and the design of myth-debunking interventions.

Specifically, the study pursues three objectives:

- To determine the proportion of Romanian teachers who endorse common learning-related myths.
- To compare misconception rates across teaching levels (preschool, primary, lower and upper secondary).
- To examine differences in misconception prevalence across curricular areas and assess whether subject specialization influences susceptibility to neuromyths.

Through this investigation, the study contributes empirical evidence to the international conversation on evidence-based teacher education. It offers a diagnostic of current beliefs about learning within the Romanian educational system and supports ongoing efforts to align pedagogical training with robust findings from cognitive science and educational psychology.

2. Theoretical foundation

The persistence of educational myths among teachers can be understood through the intersection of theories from cognitive psychology, neuroscience communication, and teacher professional knowledge. These frameworks help explain both the psychological mechanisms that make myths intuitively appealing and the structural conditions that allow them to remain embedded in educational discourse.

2.1. Cognitive origins of educational myths

From the perspective of cognitive psychology, misconceptions about learning arise from intuitive theories—informal mental models people construct to make sense of complex phenomena (Vosniadou, 2013). Teachers, like all learners, rely on pre-existing schemas to interpret new information. When neuroscientific findings are communicated in oversimplified or metaphorical forms, they are easily assimilated into these intuitive schemas, creating "hybrid" beliefs that combine partial truths with inaccuracies (Lombrozo, 2012).

Dual-process theory (Kahneman, 2011) offers another explanation. Most individuals reason about learning using System 1 (fast, intuitive, and heuristic-driven) rather than System 2 (slow, analytical) processing. Myths such as "learning styles" or "10% brain use" appeal to heuristic reasoning—they are easy to visualize, feel plausible, and align with personal experience. Without explicit reflection or scientific literacy, such intuitive explanations remain unchallenged.

2.2. Communication of neuroscience and the emergence of neuromyths

The dissemination of neuroscience findings into the public domain often involves translation and popularization processes that favor simplicity and metaphor. Studies in science communication show that teachers tend to perceive information as more credible when it is accompanied by neuroscientific terminology or brain imagery, even if the explanation itself is irrelevant or flawed (Weisberg et al., 2008). This "seductive allure" effect contributes to the spread of neuromyths in educational contexts.

Additionally, commercial educational programs and professional development workshops sometimes use brain-based rhetoric to enhance credibility, regardless of scientific validity (Pasquinelli, 2012).

When teachers are not trained to critically evaluate such claims, they may adopt them as legitimate pedagogical knowledge. This problem is compounded by limited access to primary scientific literature and by the absence of explicit myth-debunking modules in many teacher-training curricula.

2.3. Teacher cognition and professional knowledge structures

According to Shulman's (1986) model of teacher knowledge, effective teaching depends on an integrated structure of content knowledge, pedagogical knowledge, and pedagogical content knowledge (PCK). Myths can infiltrate this structure when pedagogical concepts are learned in isolation from empirical research. For example, a teacher may correctly understand classroom differentiation but link it to the erroneous idea that each student has a fixed sensory learning style.

Research on teacher cognition emphasizes that beliefs act as cognitive filters shaping how teachers interpret professional information and classroom experiences (Fives & Buehl, 2012). Once established, beliefs are resistant to change, particularly when they are emotionally or culturally reinforced. Neuromyths often carry moral undertones (e.g., the idea of "respecting individual differences"), which makes them harder to abandon even when evidence contradicts them.

2.4. Conceptual change and professional learning

The conceptual-change framework (Posner et al., 1982) suggests that replacing misconceptions requires more than exposure to correct information. Learners—teachers included—must experience dissatisfaction with their existing conceptions and perceive the new explanation as more coherent and useful. Professional development that merely presents factual corrections is unlikely to succeed; instead, educators need structured opportunities to reflect, test, and reconstruct their beliefs within authentic contexts (Grospietsch & Mayer, 2019).

Consequently, effective myth-debunking interventions in teacher education should be dialogic and experiential, combining evidence presentation with metacognitive reflection. Embedding these processes into continuous professional learning can transform intuitive, fragmented knowledge into coherent scientific understanding.

2.5. Integrative perspective

Taken together, these theoretical perspectives highlight that learning myths are not merely informational deficits but cognitive, social, and cultural constructs. Addressing them requires interventions that target both individual cognition and institutional structures of teacher education. By framing the analysis of Romanian teachers' beliefs within these theoretical lenses, the present study contributes to a broader understanding of how educators negotiate scientific and experiential knowledge about learning.

3. Research methodology

3.1. Research design

The study adopted a quantitative, cross-sectional survey design aimed at identifying the prevalence and distribution of educational myths among teachers in Romania. This approach was chosen because it allows the systematic collection of data from a large and diverse sample, enabling both descriptive and comparative statistical analyses. The study was exploratory in nature, yet guided by theoretical frameworks from cognitive psychology and teacher cognition that conceptualize beliefs as stable yet modifiable constructs (Fives & Buehl, 2012; Vosniadou, 2013).

3.2. Participants

The target population consisted of teachers working in public and private educational institutions across Romania. Participation was voluntary and anonymous. A total of 1.625 teachers completed the online questionnaire. Respondents represented all main educational levels—preschool, primary, lower secondary, and upper secondary—as well as a broad range of curricular areas, including languages, mathematics, sciences, social studies, arts, and vocational subjects. The sample included participants from both urban (71%) and rural (29%) schools, and from all major regions of the Romania.

Most participants were female (a distribution typical of the national teaching workforce) and held a university degree or higher. The participants' mean teaching experience was approximately 15 years, with a range from novice to highly experienced educators. This diversity ensured that the data captured a wide spectrum of professional backgrounds and educational settings.

3.3. Instrument

Data were collected through a structured online questionnaire developed in both Romanian and English versions for clarity and cross-validation. The instrument was divided into two parts:

1. Demographic and professional information, including sex, age (year of birth), level(s) of teaching, curricular area(s), educational background, school location (urban/rural), and years of teaching experience.

2. Belief items addressing 14 statements about learning myths, derived from previous international studies on neuromyths (Dekker et al., 2012; Ferrero et al., 2016). Each statement was evaluated on a three-option scale: True, False, or I don't know.

The items covered both myth-based statements (e.g., "People use only 10% of their brain", "Learning styles determine learning success", "Girls and boys have different cognitive abilities") and scientifically accurate statements (e.g., "Learning to learn is the ability to organize one's own learning effectively", "Socio-emotional well-being supports productivity").

To ensure validity, the questionnaire was reviewed by three experts in educational psychology and psychometrics. A pilot test with 30 teachers confirmed item clarity and response consistency. Internal reliability across the "myth" items (coded as misconception indicators) showed acceptable internal consistency (Cronbach's $\alpha = 0.81$).

3.4. Data collection procedure

Invitations were distributed via a MOOC related to the topic learning to learn. Participation was voluntary, and informed consent was obtained electronically prior to completion. The survey required approximately 10–15 minutes to complete. Data were exported to Microsoft Excel and then processed and cleaned SPSS for analysis.

3.5. Data analysis

Data analysis proceeded in several steps:

Data cleaning and coding. Responses were standardized: "True," "False," and "I don't know" were converted to categorical values (1, 0, and NA). Each item was assigned a baseline truth value based on scientific consensus (e.g., "learning styles" = False; "learning to learn" = True). A misconception indicator was computed per item by comparing each respondent's answer with the baseline truth.

Descriptive analysis. Frequencies and percentages of correct, incorrect, and "I don't know" responses were calculated for each item, yielding an overall prevalence ranking of misconceptions.

Subgroup comparisons. Chi-square (χ^2) tests were conducted to evaluate differences in misconception prevalence across teaching levels and curricular areas. When expected cell counts were small, Fisher's exact tests were used as a robustness check.

Exploratory modeling. Logistic regression models were fitted for the three most prevalent myths, using misconception (1 = incorrect belief) as the dependent variable and sex, age, teaching level, and school location as predictors.

Visualization. Results were visualized through bar charts and heatmaps illustrating variation across subgroups.

The statistical significance threshold was set at $p < .05$, with Benjamini–Hochberg corrections applied to control for false discovery rate across multiple comparisons.

3.6. Ethical considerations

Participation was anonymous, and no identifiable personal data were collected. Respondents were informed about the study's purpose, the voluntary nature of participation, and their right to withdraw at any time. Data were stored securely and analyzed only in aggregate form.

4. Results

4.1. Overview of myth endorsement

Descriptive statistics revealed that misconceptions about learning remain widespread among the participant teachers. Table 1 presents all 14 statements included in the questionnaire, arranged according to their factual accuracy and the percentage of participants who endorsed each as true, false, or responded "I don't know..

The results show that several neuromyths are deeply rooted in teachers' conceptual understanding of learning. The most prevalent was the belief that "people differ by learning styles—auditory, visual, and kinesthetic," which was endorsed incorrectly by 89.6 % of respondents, while only 7.3 % correctly rejected it and 3.1 % selected "I don't know." This finding confirms that the learning-styles myth remains the dominant misconception in Romanian education, consistent with international literature (Dekker et al., 2012; Kirschner, 2017).

The second most frequent myth was "multitasking is efficient in learning," endorsed by 50.8 % of teachers. Nearly half (44.7 %) of participants also believed that "girls and boys have different cognitive abilities." In contrast, the myth that "intelligence is a fixed and innate ability" was rejected by most

teachers, with only 23.2 % endorsing it. Myths related to brain structure, such as "people use only 10 % of their brain" (41.7 %) and "the brain hemispheres function independently in learning" (37.1 %), were moderately prevalent.

Table 1

Prevalence of each learning myth

Item	Baseline truth	Correct %	Misconception %	IDK %
People differ by learning styles: auditory, visual, and kinesthetic	False	7.3	89.6	3.1
Multitasking is efficient in learning	False	23.4	50.8	25.8
Girls and boys have different cognitive abilities	False	45.5	44.7	9.7
People use only 10% of their brain	False	30.5	41.7	27.8
The brain hemispheres function independently in learning	False	37.0	37.3	25.7
Intelligence is a fixed and innate ability	False	69.0	23.2	7.8
A high IQ predicts success in school and life	False	74.3	20.5	5.2
Learning is independent of students' socio-emotional development	False	79.4	17.5	3.0
Nowadays, learning aims at integrating the individual into society	True	77.5	17.0	5.4
Learning is not influenced by the emotional state of the student	False	90.6	8.6	0.9
Learning aims at acquiring knowledge and developing practical skills	True	97.4	2.4	0.2
There is a strong connection between well-being and work productivity	True	97.7	0.9	1.4
The efficiency of learning methods depends on the teacher's ability to adapt strategies to students' characteristics	True	97.3	0.9	1.8
"Learning to learn" is the ability to organize one's own learning effectively	True	98.2	0.7	1.1

At the other end of the spectrum, several scientifically accurate statements were correctly recognized by almost all respondents. For example, 98.1 % of teachers correctly endorsed "learning to learn is the ability to organize one's own learning effectively." Similarly, 97.7 % recognized that "there is a strong connection between well-being and productivity," and 97.3 % agreed, "the efficiency of learning methods depends on the teacher's ability to adapt strategies to students' characteristics."

These results suggest that while teachers demonstrate strong awareness of socio-emotional and pedagogical principles, misconceptions persist in areas that involve neuroscientific terminology or intuitive reasoning about the brain.

4.2. Misconceptions across teaching levels

To explore whether professional context influences the prevalence of myths, chi-square analyses were performed comparing misconception rates across teaching levels (preschool, primary, lower secondary, upper secondary).

Significant differences emerged for several items (χ^2 $p < .05$). Primary-level teachers exhibited the highest endorsement of the "learning styles" and "10 % brain use" myths, while upper secondary teachers showed lower rates of these misconceptions but were more likely to believe that multitasking supports learning. Preschool educators were comparatively less likely to endorse gender-based myths but showed moderate acceptance of claims related to brain lateralization. These findings indicate that exposure to specific pedagogical discourses during initial training may shape which myths are most salient at each educational stage.

4.3. Misconceptions across curricular areas

Teachers of arts, languages, and social sciences demonstrated higher belief in the learning-styles myth, whereas teachers of mathematics and natural sciences were less likely to endorse it but showed greater susceptibility to the multitasking myth. Interestingly, misconceptions about gender and intelligence were relatively evenly distributed across all disciplines, suggesting that cultural stereotypes may transcend subject-specific epistemologies. These results emphasize that myth prevalence is not only a matter of individual misunderstanding but also reflects disciplinary cultures and the conceptual frameworks transmitted during teacher preparation.

4.4. Combined prevalence summary

Across all items, the mean misconception rate was 37.5 %, indicating that over one-third of all teacher responses contradicted established scientific evidence. However, when excluding true statements (to focus solely on myth items), the mean misconception rate rose to 51.8 %. Only 7 % of teachers correctly rejected all myth statements, demonstrating that nearly all participants held at least one misconception.

4.5. Logistic regression analyses

To further examine predictors of myth endorsement, exploratory logistic regression models were estimated for the three most prevalent myths: learning styles, multitasking, and gender differences. The dependent variable was the presence of the misconception (1 = incorrect belief). Predictor variables included sex, year of birth (as an age proxy), teaching level, and school location (urban/rural).

Results indicated that teaching level and school location were the strongest predictors. Teachers in primary education were approximately 1.8 times more likely to endorse the learning-styles myth than those in upper secondary education ($p < .01$). Rural teachers were slightly more likely to believe in multitasking efficiency than their urban counterparts ($p < .05$). Sex and age showed no consistent effects across models, suggesting that professional and contextual variables outweigh demographic factors in shaping myth acceptance.

4.6. Summary of main findings

In summary, the quantitative analyses highlight four key patterns:

- High overall prevalence of neuromyths, particularly those emphasizing sensory learning styles and multitasking.
- Simultaneous accuracy on evidence-based socio-emotional principles, indicating partial scientific literacy.
- Significant variation by teaching level and curricular area, reflecting the influence of pedagogical traditions.
- Predictive influence of professional context, with limited demographic effects.

Together, these results reveal that Romanian teachers navigate a hybrid knowledge landscape in which accurate educational concepts coexist with enduring cognitive and neuroscientific misconceptions. Addressing these beliefs through targeted professional development represents a critical step toward evidence-based teaching practice.

5. Discussions

The purpose of this study was to examine the prevalence of learning-related myths among teachers in Romania and to explore how these misconceptions vary across teaching levels and curricular areas. The results revealed a paradoxical knowledge pattern: while teachers showed high agreement with many evidence-based educational principles, they also endorsed several persistent neuromyths, particularly those related to learning styles, multitasking, and gender differences in cognition.

The finding that nearly nine out of ten teachers believed in the learning-styles myth confirms the robustness of this misconception, which remains deeply embedded in teacher discourse worldwide (Dekker et al., 2012; Kirschner, 2017). This myth's intuitive appeal lies in its compatibility with inclusive education rhetoric—emphasizing differentiation and respect for individual differences—despite the absence of empirical evidence supporting sensory-style matching as an effective learning strategy (Pashler et al., 2008). The widespread acceptance of this idea among Romanian teachers suggests that teacher-education materials and professional development courses may still reference learning styles as legitimate pedagogical tools.

Similarly, the high prevalence of belief in multitasking as an efficient learning strategy reflects the influence of contemporary digital culture, where simultaneous media use and multitasking are often framed as desirable skills. However, research in cognitive psychology consistently demonstrates that divided attention reduces learning efficiency and retention due to limited working-memory capacity (Sweller et al., 2019). The misconception may therefore stem from societal narratives equating busyness with productivity, rather than from formal pedagogical training.

The persistence of gender-based misconceptions—with nearly 45% of teachers believing that boys and girls possess inherently different cognitive abilities—indicates the continued influence of sociocultural stereotypes in education. Although neuroscience demonstrates minimal sex differences in overall cognitive functioning (Fine, 2013), such beliefs may unconsciously shape teachers' expectations and instructional practices, potentially reinforcing gender bias in classroom interactions.

Encouragingly, the teachers in this study demonstrated strong awareness of scientifically accurate statements concerning socio-emotional well-being, metacognition, and adaptive instruction. More than 97% correctly recognized that learning efficiency depends on the teacher's ability to adjust strategies to students' characteristics and that well-being and motivation are essential for productivity. This suggests that Romanian educators are receptive to modern educational paradigms emphasizing emotional, social, and cognitive integration. However, the coexistence of accurate and inaccurate beliefs implies that teachers' professional knowledge remains fragmented: informed by both scientific principles and enduring myths that feel pedagogically intuitive but lack empirical foundation.

Comparisons across teaching levels revealed significant differences. Primary-school teachers displayed the highest endorsement of the "learning styles" and "10% brain use" myths, whereas upper-secondary teachers were less likely to hold these views but more inclined to believe that multitasking enhances learning. These differences may reflect the pedagogical models emphasized in initial teacher education—where primary education focuses on child-centered differentiation and holistic development, while secondary education may prioritize efficiency, performance, and information management.

Differences across curricular areas also reached statistical significance. Teachers in language and social-science fields were more likely to endorse the learning-styles myth, whereas those in mathematics and sciences more frequently believed in multitasking efficiency. Such disciplinary variations suggest that each domain's epistemic culture influences how teachers interpret learning processes. For example, science teachers may view multitasking as a cognitive skill necessary for managing complex tasks, whereas language teachers might emphasize sensory preferences as pathways to engagement.

From a theoretical standpoint, these results can be interpreted through the lens of teacher cognition and conceptual-change theory. Teachers develop beliefs about learning through experience, intuition, and cultural transmission (Fives & Buehl, 2012; Vosniadou, 2013). Once established, these beliefs form cognitive schemas that guide interpretation of new information and resist modification. Consequently, professional development must not only provide factual corrections but also foster epistemic awareness—the ability to evaluate the credibility and coherence of educational claims.

At a practical level, the findings highlight several implications for teacher education and professional learning. First, teacher-training institutions in Romania should explicitly address educational myths within courses on learning psychology and neuroscience. Rather than presenting myths as isolated misconceptions, they should be embedded into reflective exercises that contrast intuitive beliefs with empirical evidence. Second, in-service professional development could include workshops focused on "myth-busting" through critical analysis of popular educational materials, social media content, and commercial brain-based programs. Such initiatives have proven effective in other contexts (Grospietsch & Mayer, 2019).

Furthermore, strengthening teachers' cognitive-science literacy can empower them to make informed decisions about instructional strategies. Integrating accessible summaries of research on memory, attention, and motivation into national teacher-development frameworks could bridge the gap between theory and practice. Finally, future interventions should promote a growth-mindset orientation, encouraging teachers to view learning ability as dynamic and malleable—thus counteracting myths that frame intelligence or capacity as fixed traits.

6. Limitations and future research

Although this study involved a large and diverse sample, it relied on self-reported responses, which may not perfectly reflect teachers' underlying conceptual understanding. The cross-sectional design also prevents causal inference about how specific experiences (e.g., professional training, exposure to neuroscience) influence beliefs. Future studies could combine surveys with qualitative interviews to examine how teachers negotiate scientific and experiential knowledge in practice. Longitudinal designs could further track conceptual change following targeted interventions.

7. Conclusions

This study set out to identify and analyze the prevalence of learning-related myths among teachers in Romania and to explore how these misconceptions vary across teaching levels and curricular areas. The findings demonstrate that while Romanian teachers possess substantial knowledge of socio-emotional and pedagogical principles, misconceptions rooted in

outdated or misinterpreted cognitive-science ideas remain widespread. The belief in learning styles, multitasking efficiency, and gender-based cognitive differences persists across the educational spectrum, echoing international patterns of neuromyth endorsement.

These results underscore that misconceptions in education are not merely informational gaps but reflections of deeper cognitive, cultural, and institutional dynamics. Teachers often assimilate scientific concepts through intuitive reasoning or popularized media representations rather than through systematic study, which can lead to the internalization of incomplete or distorted ideas. Recognizing this complexity is crucial for designing interventions that move beyond simply "correcting" false beliefs toward fostering critical and reflective engagement with research evidence.

From a pedagogical perspective, teacher education programs must explicitly integrate cognitive-science literacy and myth-debunking methodologies into both pre-service and in-service training. Course modules should help educators differentiate between intuitive beliefs and empirically validated knowledge about learning and the brain. Professional development activities that encourage reflective discussion, collaborative inquiry, and the application of research-based principles can strengthen teachers' scientific reasoning and pedagogical decision-making.

At a systemic level, educational policy should promote the dissemination of accessible, evidence-informed resources and partnerships between universities and schools. These collaborations can support the translation of cognitive-science research into practical, context-sensitive strategies that respect teachers' professional experience while fostering innovation.

Ultimately, combating educational myths requires cultivating a professional culture of curiosity, critical thinking, and continuous learning. When teachers understand not only what works but also why it works, they are better equipped to design inclusive, effective, and scientifically grounded learning environments. The insights from this study provide a foundation for reimagining teacher education in Romania through the lens of cognitive science and evidence-based pedagogy, contributing to a more informed and reflective teaching profession.

Authors note:

Maria Cristina Popa is a lecturer at Teacher Training Department, Lucian Blaga University of Sibiu, Romania. Her academic work lies at the intersection of early childhood education, cultural identity, and innovative teaching methodologies. Her research explores how children construct identity in multicultural and acculturative contexts and how teachers can foster inclusion and well-being through reflective and evidence-based practices. In recent years, her focus has expanded toward digital and blended learning in mathematics education, educational robotics, and teacher preparation for future-ready competencies.

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Teachers' Attitudes Towards Teaching and Learning Social Studies in Fifth Grade

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Abstract

This study explores the attitudes and practices of teachers regarding the teaching and learning of Social Education in fifth-grade classes in Romania. Introduced as a distinct subject in the national curriculum in 2017, Social Education promotes critical thinking, children's rights, democratic values, and civic engagement. Grounded in constructivist learning theory and a rights-based pedagogical framework, the subject aims to support students in becoming active and responsible citizens. Through a quantitative analysis based on a structured questionnaire applied to 162 teachers, the research investigates the frequency and perceived effectiveness of specific teaching methods such as debates, role-playing, group projects, and reflective activities. The findings reveal that while most educators favour participatory and experiential approaches, there is still a strong reliance on traditional resources such as textbooks. Teachers reported limited access to diverse educational resources and a moderate use of digital platforms. The study concludes with a call for ongoing professional development and curricular support to enhance pedagogical strategies and to strengthen the integration of children's rights and critical thinking in everyday teaching practice.

Keywords:
social education, children's rights, critical thinking, teacher attitudes, participatory pedagogy, fifth grade

1. Introduction

In a knowledge society dominated by information and pseudo-information, students need anchors to support their education and development. Social education supports them and offers a range of content that promotes and targets the acquisition of the skills needed to become active, informed, and responsible citizens of contemporary society. In this context, teachers have the role of "equipping students with the knowledge, skills, and values necessary to engage meaningfully in social life, to think critically, and to appreciate cultural diversity" (Andronache, 2024, p. 420).

Introduced in Romania in early 2017 as a subject at the middle school level, social education is included in the content of the approved by OMENCS No. 3590/06.04.2016 and is subordinate to the Man and Society curriculum area, with a budget of 1 hour/week over the four school years. Social education begins in the fifth grade with critical thinking and an introduction to the study of children's rights, aiming at a critical interpretation and reporting of facts and events in personal life, but also at formulating opinions and solving problems related to children's rights.

2. Theoretical foundation

Social education is defined as a complex educational process that aims to develop social, civic, and ethical skills, through which students learn to participate actively, responsibly, and reflectively in social life. It promotes values such as tolerance, solidarity, fairness, and respect for diversity (UNESCO, 2015). In the Romanian national curriculum, social education is integrated as a separate subject in lower secondary education and aims to develop general skills such as understanding social relationships, awareness of the role of norms and values, and taking responsibility in the community (Ministry of Education, 2017).

The integration of this form of education is based on a constructivist paradigm, which assumes that learning is an active, socially contextualised process in which knowledge is constructed through interaction and reflection (Bruner, 1996; Vygotsky, 1978). Thus, students not only accumulate information about society, but also learn to critically analyze social phenomena and actively participate in shaping reality.

2.1. Definition

Kelemen (2011, p. 52) argues for a distinction between two concepts that are often confused in common usage: social pedagogy and social education. Social pedagogy, the author states, refers to a field concerned with "the social integration of the human person and their access to various values and models

of action promoted by society." Social education, on the other hand, is defined as "a process of assimilation, attachment to the social group, and integrative discipline of the individual, in the sense of preparing them to comply with the rules of conduct set by the social group."

In the course material for the Social Pedagogy course for students specializing in the same field, Davidescu (2012) emphasizes the values and action strategies promoted by this field. The author supports the legal-legislative component of the discipline, noting that it aims to "transmit the rules of community life and social interactions, cultural models, techniques and beliefs, and, above all, value systems" (p. 16). The same author emphasizes the prosocial role of the discipline, under a democratic umbrella, "with an emphasis on decisions made through group debate, responsibility in fulfilling social tasks, and involvement in community actions."

Critical thinking, seen as a transversal competence and a tool for social learning, is recognised as one of the key competences for lifelong learning, being necessary for active and informed participation in society (European Commission, 2023). This involves the ability to analyze information, formulate and evaluate arguments, make rational decisions, and reflect on one's own assumptions and beliefs (Facione, 2011).

In social education, critical thinking allows students to question aspects of social justice, identify stereotypes and prejudices, recognize information manipulation, and develop a reflective and responsible attitude towards themselves and others (Jerome & Kisby, 2011). Teaching focused on the development of critical thinking involves the use of active teaching methods (debate, case studies, analysis of moral dilemmas, role-playing) that encourage active participation and the reasoned expression of opinions (Brookfield, 2012).

Another fundamental theoretical reference point is education on children's rights, based on the UN Convention on the Rights of the Child (1989), an international document ratified by Romania, which stipulates the right of the child to education, protection, participation, and development. Education about and for rights is not limited to the transmission of information, but involves creating an educational climate in which rights are respected, practiced, and internalized (UNICEF, 2014). This convention enshrines the right of the child to education, protection, participation, and development, and the implementation of these rights in schools involves more than just conveying content; it involves transforming educational practices and institutional culture so that rights are felt, practiced, and integrated into everyday school life (Lundy, 2007).

The rights-based education model emphasizes that students are active participants in the educational process, not just recipients of knowledge. This approach involves developing a democratic school culture in which autonomy, mutual respect, and participation are constantly promoted (Robinson et al., 2020). As a result, children's rights become not only the subject of learning, but also the normative framework for educational relationships. The implementation of rights-based education has significant effects on students' well-being, their actual participation in school life, and the reduction of exclusionary behaviors, and Levy et al. (2022) argue for a human rights-based framework to address the global children's rights crisis.

Covell and Howe (2008) showed that such an approach contributes to improving the school climate, the teacher-student relationship, and children's perception of self-efficacy. Subsequently, current research (Robinson et al., 2022; Bajaj & Suresh, 2021) has reinforced these conclusions, demonstrating that rights-based education supports inclusion, tolerance, social equity, and the cultivation of active democratic citizenship from primary school onwards. They also show that implementing rights-based education contributes to improving the school climate, student-teacher relationships, and children's self-esteem. Efforts to promote these values foster inclusion, tolerance, and a reduction in violent or discriminatory behavior (Jerome et al., 2015).

We conclude by offering a working definition of the term social education that captures the most relevant and specific aspects found in the literature: Social education is a branch of educational science that studies the formation of moral, civic-social, and democratic skills, as well as the promotion of the skills, values, attitudes, and beliefs necessary for active, informed, and responsible participation in society, with an active role in achieving social cohesion and supporting the holistic development of individuals.

2.2. The specifics of Social Education as a discipline in Romania

2.2.1. Civic Education and Civic Culture, the precursors of Social Education

Studied during grades III-IV (with a weekly frequency of one hour), the subject of civic education aims, as stated in the 2014 Civic Education Curriculum, "the internalization of rules of conduct and the manifestation of moral and civic behavior skills based on natural life contexts and the groups to which students belong at this age" (p. 3).

The subject is designed from a curricular point of view in a competency-based learning paradigm, which replaces the objective-based design model. Such an approach, say the authors of the curriculum (2014), facilitates "the transfer and mobilization of knowledge and skills in new situations" (p. 2). In fact, we understand that civic education is oriented towards "education through and for democracy," with the primary goals of moral and civic literacy for children, the development of positive attitudes towards oneself and others, the valorization of age-specific experiences, and the initiation of students into the practice of moral and civic behavior in a democratic society.

With its call-to-action content and structure, civic education takes the form of a complex and lengthy process of integrating students into the community. By combining formal contexts (within and outside school) with non-formal and informal contexts (highlighted by community partnerships), the assimilation of a value system consistent with a democratic and pluralistic society is encouraged.

In Romania's National Report on the International Study on Civic and Citizenship Education (pp. 230-236), authors Tacea et al. (2022) present, in Chapter 11 – Policies on Civic and Citizenship Education in Romania, an evolution of the discipline of civic education, referring to its specific characteristics in each period of Romanian education. Consulting the document National Curriculum for Compulsory Education. Reference Framework (1998), the authors summarise the main objectives of Civic Education and Culture at that time (also included in the Man and Society curriculum area): "the development of specific skills related to understanding the values of democracy and respecting the norms of behavior in society; the formation of a cultural universe regarding national and international social and political values and structures; the development of the student's ability to use specific modes of argumentation in communication, based on the acceptance of diversity of opinion." (p. 235). The stated goals are limited, as the authors insist, by the discontinuity of the study of this discipline, namely by the interruption of its study during the 5th and 6th grades.

Against the backdrop of a legislative change, namely the emergence of the new education law (relating to the period 2010-2015), Law 1/2011, existing curricular approaches are being reconsidered and a reconstruction of the National Curriculum is being proposed. In this sense, Civic Education retains its status as a subject studied in grades 3 and 4, and Civic Culture is changed to Social Education—a generic name, specific to each grade.

The new paradigm of the Social Education curriculum is mentioned in its presentation note (2017, p. 3) and emphasizes the idea that the proposed approaches go beyond learning about ... (specific to the cognitive, informative level of learning) and that the learning promoted is that through ... (which calls for action, participation, and active involvement), but also learning for ... (related to the transposition of learning into values, attitudes, and behaviors).

Comparing the school curricula of the two disciplines (Civic Culture and Social Education), we clearly see a change in the design paradigm, with a transition from a focus on content to one focused exclusively on students and the development of their skills. The reduction and consolidation of the number of general skills highlights the reconsideration and reformulation of an updated version of the outcomes that are truly relevant to the study of the subject over the four years. In other words, specific skills are associated in the new curriculum with a series of examples of learning activities, which facilitate a greater degree of applicability at the level of design by teachers. The last two categories listed in the curriculum present a restructuring from a curricular point of view: the learning content is presented systematically (grouped into content areas), and the methodological suggestions provide comprehensive and detailed recommendations for specific planning, in line with the curricular orientation of the current curriculum.

2.2.2. Curriculum for Social Education

The school curriculum for this subject is a common core curriculum for grades V–VIII. The subject retains its generic name of Social Education, but each year it also has a subtitle that reflects the specific content studied, namely: Fifth grade - Critical thinking and Children's Rights, Sixth grade - Intercultural education, Seventh grade - Education for democratic

citizenship, and, last but not least, Eigth grade - Economic and Financial education.

The structure of the document includes: Presentation Note, General Competencies, Specific Competencies and Examples of Learning Activities, Content, and Methodological Suggestions.

Analyzing the Methodological Suggestions section, we notice a new vision, much more applied, detailed, and exemplified, emphasizing a series of essential aspects in the development and planning of curricular documents by teachers. We refer to the following subsections: Teaching planning and design, Teaching strategies, and Educational project. We note that this section is at the end of the entire document, so it presents an integrated, comprehensive vision, with examples for all four years of study, for all four sub-headings of Social Education (with examples for formal, non-formal, and informal contexts).

In the section dedicated to teaching planning and design, the authors of the curriculum offer a series of recommendations for good practices in the development of school documents: calendar planning (tabular structure) and the design of a learning unit (structure & reflection questions). The teaching strategies promoted are those with a pronounced practical-applicative, participatory, and creative character. For the fifth grade, the curriculum exemplifies the application of the "starburst" method with instructions, working methods, a graphic organizer, and additional details for teachers. As mentioned above, the emphasis is also on activities carried out in non-formal environments, but also on a theoretical foundation based on documents that constitute fundamental references for the topics covered (UN Convention on the Rights of the Child, Law 272/2004 on the protection and promotion of children's rights, etc.).

As a new feature compared to the old school curricula of the subjects that preceded Social Education, the educational project is explicitly targeted by the new curriculum, being an integral part of the specific competences, learning activities, and proposed content. With a time budget of 25-30% of the total time allocated for the study of the subject each year, the educational project evaluates the activity of each student within the team, and is then graded according to pre-established criteria.

3. Research methodology

3.1. Research aims

The objective of this research is to investigate teachers' attitudes toward the specifics of teaching and learning social education in fifth grade, by leveraging existing teaching methodologies. Thus, we aim to assess the extent to which the methodology supports the teaching and learning process of social education, as well as teachers' perceptions of its usefulness and effectiveness, and to identify models of good practice.

3.2. Research objectives

In our research, we followed several directions that served as a guide for both the theoretical foundation and the actual assessment stage:

O_1: *Investigating teaching approaches and teachers' attitudes towards teaching and assessing social education in the fifth grade*

O_2: *Measuring the frequency of use of various teaching methods (e.g., role-playing, projects, debates, reflection) in social education classes*

3.3. Research questions

Below we list the questions that formed the basis of our investigation::

R.q.1: *What is the attitude of teachers towards teaching and assessing Social Education?*

R.q.2: *What are the most frequently used teaching methods in Social Education?*

3.4. Subjects

162 teachers in Romania who teach, have taught, or will teach social education, selected at random, with no preliminary conditions to be met.

The evaluation grid was disseminated through online groups on social networks, distributed to beneficiaries and partners of relevant associations, and through collaboration with representatives of educational management structures (specialized school inspectors from the County School Inspectorates in Romania).

3.5. Research methods and instruments

Our investigative approach was based on a questionnaire survey, a method frequently used in the field of educational sciences (and social sciences and humanities in general) due to its ability to collect data from a large number of respondents in a short period of time. We justify the choice of this method by the fact that it facilitates the investigation of teachers'

opinions, attitudes, and practices in a standardized, easily interpretable, and comparable framework.

The method gives us access to the subjective perspectives and opinions of respondents. Thus, we can identify a number of general trends among teachers, but also some specific difficulties or needs that are relevant to the purpose of the research.

As a research tool, we chose to apply a 3-section evaluation grid to respondents, comprising 17 items to be evaluated, of which 9 were closed-ended (Likert scale), 1 was open-ended (editorial) and 7 referred to socio-demographic data. The grid allowed us to measure current teaching attitudes and practices using Likert scales, thus facilitating the quantitative and comparative analysis of the recorded responses. The motivation for developing and applying such a tool was the desire to obtain standardized, relevant, and easily statistically processed data at the primary level.

The assessment grid applied to respondents was developed in Microsoft Forms and distributed via a link to be completed on social media and by email.

The content included in the assessment grid was adapted from the questions and aspects detailed in the national report Civic Education in Romania, published by researchers at the National Center for the Study of Democracy (Bădescu et al., 2024), which is a reference document and a topical source of information on the current status of civic and social education in Romania.

3.6. Demographic Data section

Contains 7 single/multiple choice questions from a drop-down list, as follows: gender, age category, highest level of education completed, field of study completed, teaching experience, teaching degree, qualification level.

3.6.1. Section I: Approaches and attitudes towards teaching and assessment in Social Education classes

The requirement was to "Indicate the frequency of use of each method or routine on a scale from 1 (very rarely) to 5 (very often)."

The Likert scale values were:

1 – very rarely; 2 – rarely; 3 – sometimes; 4 – often; 5 – very often

The nine statements evaluated were:

I use the textbook as my main working tool.

I prefer written assessments to oral assessments.

I encourage students to carry out projects in small groups on various topics.

I involve students in role-playing games or simulations of real-life contexts.

I encourage students to debate current issues in society.

I encourage students to suggest topics to be covered in future lessons.

I assign tasks that require research from multiple sources (physical/online).

I use essays as a means of assessing students.

I facilitate discussions and encourage students to reflect on what they have learned.

3.6.2. Section II: Use of educational resources

What tools/applications/platforms/websites do you use in designing and teaching Social Education classes? List a few examples

4. Results

Below, we will present and analyze the responses received in the evaluation grid for each item proposed. For this purpose, we will use comparison histograms, a category of graphic organizers that can illustrate the data obtained.

4.1. Demographic data section (summary)

Most respondents are female teachers (76%), predominantly aged between 46 and 60 (56%) and with between 10 and 25 years of teaching experience (46%). In terms of education, the most common level of study completed is a master's degree (55%), and the predominant field of study is "Other fields" (51%) (mainly history, geography, philosophy). Professionally, most respondents hold a first degree in education (59%) and are tenured in another subject, teaching social education only to complete their teaching load (36%).

4.2. Section I: Approaches and attitudes towards teaching and assessment in Social Education classes (synthesis and interpretation)

Analyzing the nine statements, we can highlight the fact that Social Education teachers generally adopt a predominantly applied and interactive approach to teaching, associated with a relatively moderate dependence on the formal (traditional) resources provided by the system. The use of the textbook (A1) appears to be a stable benchmark: more than half of the respondents use it "often" or "very often," confirming its role as a benchmark tool in a relatively

new discipline. In contrast, written assessments (A2) and essays (A8) are used rather occasionally, with the assessment profile being flexible and oriented towards other forms of student learning assessment.

Figure 1

Section I – A_1

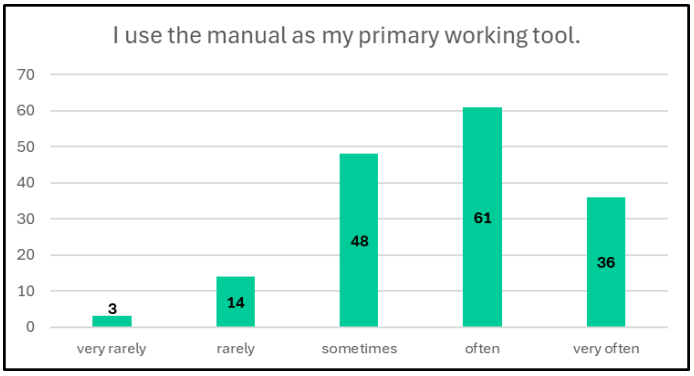


Figure 2

Section I – A_2

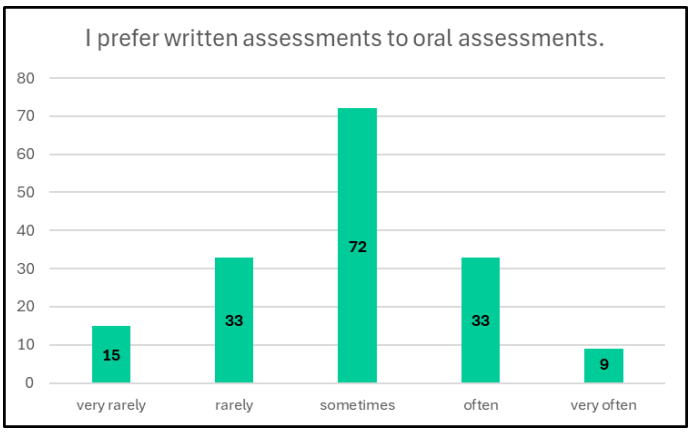
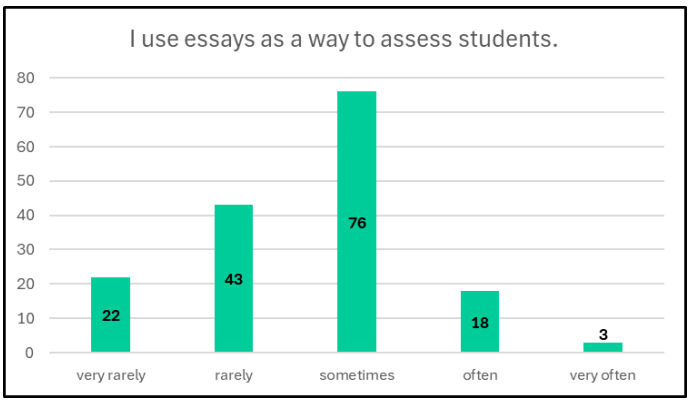


Figure 3

Section I – A_3



Active-participatory methods are the most frequently used. Small group projects (A3) and role-playing or simulations (A4) are common practices: most teachers say they use them "often" or "very often," which shows a clear focus on experiential learning and connecting content to students' lives and current events. The same trend is confirmed in the case of debates (A5), where approximately 80% of participants frequently encourage discussions on current issues, the highest level of agreement in the entire set of items, suggesting that teachers value this discipline as a space for civic education and critical thinking.

Figure 4

Section I – A_4

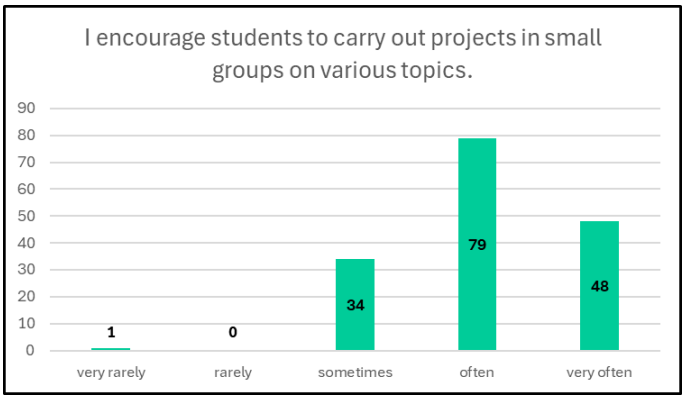


Figure 5

Section I – A_5

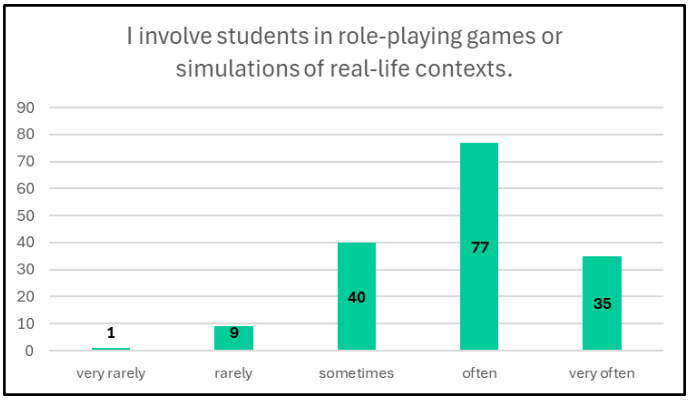
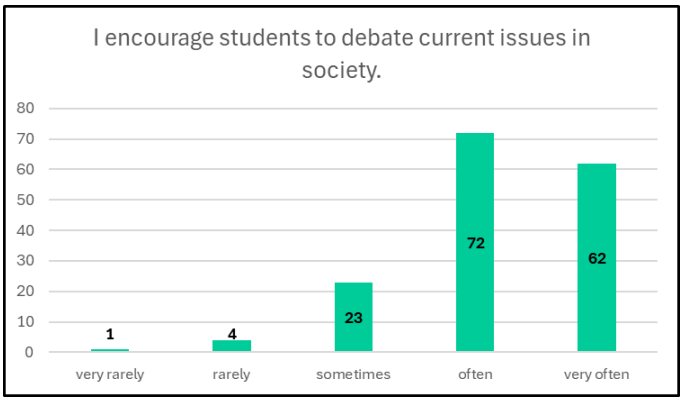


Figure 6

Section I – A_6



However, openness to curriculum customization is moderate: although teachers say they facilitate debates and various activities, only some of them allow students to propose future topics (A6), with most responses falling into the "sometimes" category. This reservation may reflect curricular constraints (imposed mainly by the school curriculum) or the limited

expertise of teachers who teach the subject as a supplement (to their teaching load).

Figure 7

Section I – A7

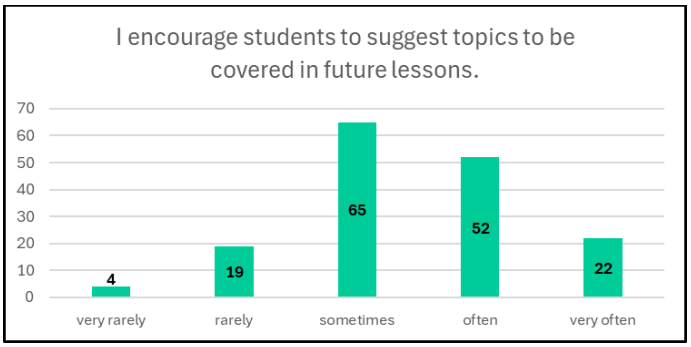


Figure 8

Section I – A8

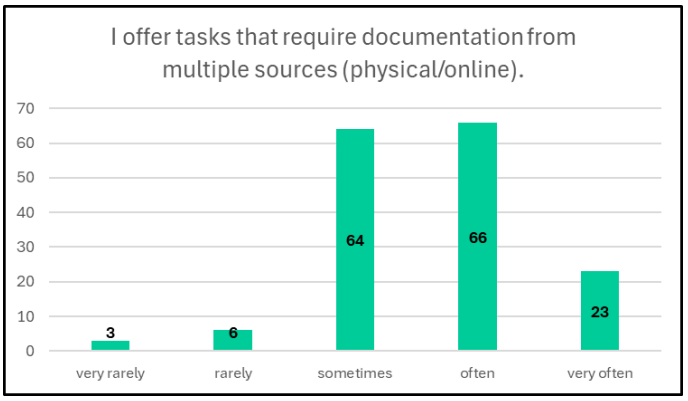
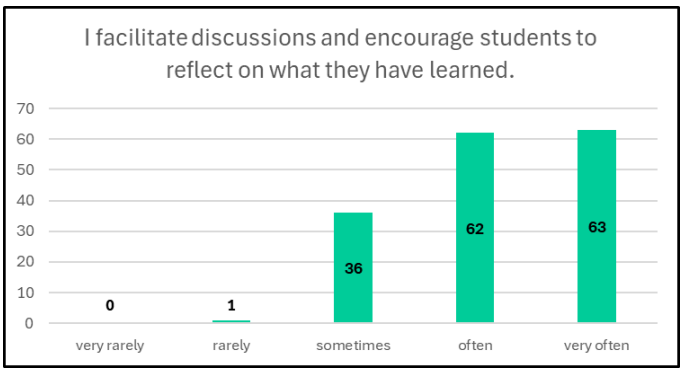


Figure 9

Section I – A9



With regard to students' ability to conduct independent research, the item on requirements based on the use of multiple sources (A7) shows a significant openness to the development of digital skills: approximately 70% of teachers assign such tasks at least "sometimes." However, the values for "very often" remain moderate, confirming the existence of barriers such as the risk of unethical use of information or interference from generative artificial intelligence tools, an aspect also highlighted in the teachers' descriptive testimonies (answers to the open question).

Finally, facilitating reflective discussions (A9) is one of the most established teaching behaviors of social studies teachers: over three-quarters of respondents say they consistently support reflection sessions on learning. This practice, combined with the high frequency of debates (as a method), outlines a profile of teachers who prioritize metacognition, dialogue, and the development of students' social skills.

4.3. Section II: Use of educational resources

What tools/applications/platforms/websites do you use in designing and teaching Social Education classes? List a few examples.

This last section aimed to collect examples of good practices in teaching and assessing Social Education. Below is a summary of the results obtained.

From the 162 responses received, we created a Top 10 Ranking of the most frequently mentioned:

1. YouTube: a free online platform where short and attractive videos can be browsed and viewed. Top response, in line with the responses to the previous items.

2. educred.ro: digital platform, the largest library of REDs in Romania. Accessible and useful for teaching design, the materials are aligned with current curriculum documents and approved by the Ministry.

3. Kahoot: online application for generating quiz-type contests. Intuitive to use, attractive interface, encourages learning through play. Requires an account, but is free.

4. manuale.edu.ro: platform developed by the Ministry where all approved school textbooks appear in digital, interactive format, with the possibility of downloading in .pdf format. Often used by teachers to project textbook pages onto interactive whiteboards.

5. didactic.ro: Romania's largest platform containing teaching projects and educational materials for all levels of education and subjects. Requires account registration, is free, but the materials are not approved or checked by an authorized entity.

6. Wordwall: online application with an impressive collection of interactive games and activities that utilize various learning and assessment items (quizzes, multiple choice, order of events, T/F, challenge wheel, etc.). Registration is required, and the free version is limited to 3 created materials. It offers flexibility, with some published materials being editable and customizable.

7. Google Suite (classroom/docs/forms/slides, etc.): free, account-based, intuitive, and practical applications for converting documents from Microsoft Office applications (Word, Excel, PowerPoint, etc.) into an online version that is editable and ready to be shared with other collaborators.

8. Padlet: a kind of digital "notice board" or "panel" where work, materials, questions, and impressions can be published and voted on or commented on, depending on the specific activity. The free version limits users to three padlets, but users still have free access as collaborators to other shared padlets. It excels in presenting timelines, hierarchies, rankings, or even managing and organizing ideas generated in a brainstorming session.

9. Canva: online graphic design tool, with a free version, but also a PRO version (for a fee, in exchange for more features). With an interface similar to classic text editing and presentation applications, it offers fully editable templates and various options for exporting material, depending on the user's needs.

10. Quizziz: interactive digital platform for creating and administering tests, quizzes, and various activities to deepen knowledge. Free access, user-friendly and intuitive interface, with live or asynchronous use mode (theme, for example). Students' answers are automatically recorded, and the application generates detailed and useful reports for personalized feedback.

This ranking of the most used platforms shows a clear preference for audio-visual resources and interactive digital tools, with YouTube, Kahoot, Wordwall, and Quizizz consistently mentioned in the top positions. This trend confirms that teachers feel an acute need for visual, dynamic, and immersive materials that can capture students' attention and support learning through play, exploration, and practical application. At the same time, the use of platforms such as educred.ro, manuale.edu.ro, and didactic.ro indicates a desire to combine official resources with flexible, adaptable tools that can compensate for the lack of specific materials for a subject that is still insufficiently covered in the curriculum.

It is noteworthy that, out of more than 150 open responses (to the above question), only 2-3 mention the use of artificial intelligence-based tools in the design or evaluation of Social Education classes. This absence can be explained either by a lack of knowledge about these resources and their potential, or by a reluctance to acknowledge them for reasons related to professional ethics, shame, or distrust of their educational validity. It is also possible that many teachers have used them occasionally, but without explicitly associating them with the idea of genAI (short for the concept of "generative artificial intelligence").

5. Discussions

Teachers were found to prefer encouraging project-based learning, debates, and assignments that require research. The general trend is to facilitate discussions, promote open dialogue, and support one's own opinions in the context of a reflective approach based on critical thinking.

Measuring the frequency of use of various teaching methods and approaches in Social Education classes, the results reveal a lack of diversity in the resources available for this discipline. Most respondents refer mainly to the provisions of the School Curriculum and the content proposed by the textbooks approved by the Ministry. However, an encouraging percentage of respondents mentioned the REDs proposed by relevant associations and various scientific publications as a benchmark in their teaching design approach.

6. Conclusions

The research results reflect the idea that Social Education remains a relatively new discipline in the Romanian curriculum, which is why "ideal" or unanimously validated educational practices have not yet taken root. Although there are valuable premises—such as teachers' openness to reflective methods, the use (at least partial) of open educational resources, and interest in the formation and development of critical thinking—there is a clear need for continuous adaptation and improvement of teaching practices. This adjustment must be constant and take into account both the complexity of the topics covered and the dynamics of contemporary society, in which children's rights, active participation, and values-based education are becoming increasingly relevant for the formation of young people as active and responsible citizens.

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Teachers' Content Mastery, Pedagogical Knowledge and Styles of Teaching: A triad for Enhanced Learning Achievement and Effective Teaching Delivery

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Teachers' Content Mastery, Pedagogical Knowledge and Styles of Teaching: A triad for Enhanced Learning Achievement and Effective Teaching Delivery

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Abstract

Teachers' proficiency in content, pedagogy, and their approach to lesson delivery is an essential requirement for quality learning outcomes. This paper aims to examine whether teachers' content knowledge, pedagogical skills, and teaching styles influence students' attitudes towards and performance in Literature-in-English. The study employed a descriptive research design with both quantitative and qualitative methods. The sample consisted of 127 Literature-in-English teachers and 632 students in the Arts stream from government-owned secondary schools in Ekiti State, Nigeria. Seven research instruments were used for data collection. Data analysis was conducted using inferential statistics. The findings indicate that all three independent variables are crucial for effective teaching, with teachers' content knowledge being the most significant factor affecting students' performance in Literature-in-English, followed by pedagogical knowledge and then teaching style. Conversely, teachers' pedagogical knowledge was statistically proven to have the greatest impact on students' attitudes towards Literature-in-English, followed by content knowledge and teaching style. The findings and conclusions of this study provide valuable insights for stakeholders in education on how to formulate action plans for improved teaching and learning outcomes.

Keywords:
teachers' content mastery; pedagogical knowledge; teaching styles; teaching delivery; learning achievement; Literature-in-English

1. Introduction

Literature-in-English serves as an encyclopedia of a nation's civilisation and culture. It reflects cultural customs, religion, history, economy, political systems, spiritual pursuits, ideologies, and the psycho-social structure of a nation. Literature-in-English is an artistic and creative form through which human beings can imaginatively depict peoples' lives, experiences, phenomena, and personalities within literary works. These imaginative works of art depict different historical epochs, events, and situations that reflect the ways of life and traditions of various races and cultures through language. Literature-in-English provides an outlet for people to express their thoughts, imaginations, emotions, experiences, and culture using elaborate language. Its aims include education, entertainment, and the development of intellect, morals, and language.

Literature-in-English is a school subject which has three genres, drama, prose and poetry. Literature-in-English is included in school curricula for the development of learners' potentials in an all-encompassing style; linguistic, motivational and methodological reasons (Duff & Maley, 1990). These reasons could be observed in learners' achievement such as students' attitude and performance. Learning achievement is an indication that shows the extent to which learners have achieved the set goals. It is a pointer to the outcomes of the learning process which is evident in students' cognitive, affective and psychomotor abilities. Learning achievement is not about learners obtaining good grades alone, but also learner's ability to successfully internalize information, skills, and concepts learnt. It also reflects in the learner's character, personality, thought process, social skills, self-confidence, practical abilities, motivation, and interest to learn and pursuing higher achievements (Mudzakkir & Darmawan, 2024). Attitude could be explained as learners' feelings about ideas or phenomena, which could be positive or negative. The attitude of the learner towards learning is important; it is pivotal to learners' academic achievement in school subjects.

Despite the various benefits of Literature-in-English, Literature teachers and students exhibit an unwholesome attitude towards the subject, while students' performance in both the internal and external examinations is unsatisfactory (Planning, Research and Statistics Department, Ministry of Education and Technology, Ado-Ekiti, 2017). For instance, of the three genres of Literature-in-English, teachers still feel unease with the task of teaching poetry. Students, especially, consider poetry to be the most difficult

genre due to language complexities, interpretation and grammar. These have made students abhor poetry (Carla, 2011; Daniel, 2013; Hashim & Nawawi, 1994). Another factor that contributes to students' abhorrence is the adoption of ineffective and teacher-centred approach in Literature classrooms (Labo-Popoola, 2010; Saffeen & Areen, 2013). Studies conducted by Amosun and Kolawole (2015), Auerbach and Andrews (2018) and Ayalew et al. (2022) focused on teachers' instructional practices. These studies attest that teacher-associated variables are significant factors which influence students' learning achievement.

Teaching is a complex social activity that involves interaction with students, teaching resources, and content. Teachers' ability to positively influence learners' outcomes largely depends on their experiential, professional, and academic qualifications, as their level of expertise and competence cannot be overstated (Olaleye, 2013). At any given moment, teachers, as agents of change, are tasked with guiding the progress of scientific and humanistic development. They are responsible for imparting knowledge and encouraging students to engage with emerging discoveries worldwide. Consequently, teachers' contributions are vital for the continuous growth of knowledge within the teaching community, lifelong learning, and self-improvement.

Knowledge of content, pedagogical content knowledge, knowledge of the curriculum, knowledge of pedagogy, knowledge of contexts in education, knowledge of learners and their characteristics, and knowledge of educational ends, purposes, and values are teacher knowledge needed for effective teaching delivery and improved learning achievement (Shulman, 1987). Of all these teacher knowledge, several studies have discussed the importance of content knowledge and pedagogical knowledge to students' learning outcomes (Adediwura & Bada, 2007; Badawi, 2009; Liu, 2013; Adegbola, 2018; Omonije & Obadiora, 2018). Teachers who are versatile in subject matter and pedagogical skills have the knowledge of the subject and understand why it is so. They create a participatory and supportive learning environment; have an insight into learners' learning deficiencies and help to address students' misconceptions and inadequacies. Teachers' competence in classroom activities depicts teachers' personal and professional development (Atrido, 2021). However, Atrido (2021) decries that some teachers exhibit dearth of subject competence, while some teachers still do not have appropriate knowledge of the various methods of teaching in Literature-in-English (Adelabu & Nder, 2013).

The researcher of the present paper observed that teachers can possess adequate mastery of content and be dexterous at pedagogy, yet be deficient in the manner in which they transmit information to students. The peculiarities of each teacher create distinctions in the way they present content, manage the classroom, employ teaching techniques, interact with students, and assess stated behavioural objectives. The specific pattern of a complex mix of needs, behaviours, beliefs, abilities, personality, attitudes, and approaches to teaching that are demonstrated by teachers—observable through how they conduct the teaching and learning process—is called teaching style (Farooq et al., 2022). Teaching style is an important factor in Literature-in-English classrooms as it can serve either as a motivating or a demotivating factor. Many students have a flair for a particular subject because of how the teacher handles it. Some students attend classes because of the teaching styles adopted by their teachers, while others stay away from classes because they are demotivated by the atmosphere created by the teachers' teaching style. A teacher's approach to classroom instructions plays a significant role in students' performance in and attitude towards a subject (Tanner & Dan, 2004). This study aims to examine the significance of teachers' content knowledge, pedagogical knowledge, and teaching styles as vital essentials for effective classroom teaching and improved students' attitude towards and performance in Literature-in-English.

2. Theoretical foundation

2.1. Content knowledge

Teachers' content knowledge is a body of knowledge about a discipline which encompasses understanding of principles, ideas, facts, theories, the vocabulary through which they teach, and how they are structured and organized (UNESCO-International Institute for Educational Planning, 2022). Content knowledge refers to teachers' possession of the comprehensive knowledge of a subject and the extent to which teachers marshal, amplify and explore topics, whether or not the topics will be taught in the classroom (Alimuddin et al., 2020). Laghari et al. (2023) expatiate that teachers' content knowledge is the expertise possessed by teachers on subjects' foundational concepts, theories, compositions, resources, forensic techniques, interrelationship with other subjects, and the practical applicability of concepts from several disciplines to real life.

Teachers' mastery of content is not limited to mastery of teachers' areas of specialization alone, but also adequate knowledge of students' presumptions, misconceptions, and re-teaching of misconceptions to form useful cognitive delineations.

Teachers' subject knowledge affects their ability to break down content to help learners understand the outlined objectives. It influences how teachers set questions and give assignments to students. Teachers' knowledge of subject matter need not be confined to the curriculum they teach. When teachers possess adequate knowledge beyond the stated curriculum, the probability of explaining the content comprehensibly for learners is high (Jadama, 2014). Tamir (1988) noted that substantive structure and syntactic structure are requisite for content mastery. Substantive structure refers to theories, models, concepts, and facts, while the syntactic structure focuses on the ways, means, and processes by which these accepted truths have been established. To ensure content competence, teachers are saddled with the responsibility of possessing in-depth knowledge of topics and establishing how these topics are interrelated with other varieties of topics that their students come across in other school subjects (Noddings, 1998). Teachers' knowledge of content in Literature-in-English helps teachers deliver error-free content, give sequential explanations, analogies and presentations, arouse creative thought-provoking questions, simplify complicated preconceptions, and correct misconceptions.

2.2. Pedagogical knowledge

Pedagogical knowledge refers to what teachers know about the rudiments of teaching-learning matters, such as theories of learning, approaches to teaching, techniques of evaluation, and classroom managerial issues. It is any theory relating to the process of teaching and learning possessed by teachers which influences what they teach in the classroom (Lenhart, 2010). It is the teacher's ability to fashion out techniques of effective teaching and appropriate materials needed for the promotion of improved learning outcomes. Pedagogical knowledge refers to the use of communication, lesson presentation and managerial skills needed for effective delivery in the classroom (Hakizumuremyi & Maniraho, 2022).

Pedagogical knowledge is the broad knowledge about the art of teaching which teachers acquire in the course of their teacher training or on the job after a period of time. Teachers' pedagogical knowledge is on the premise that teaching goes beyond the act of transmitting concepts, skills and information from teacher to students, but rather, an intricate phenomenon that demands several and diverse on-the-spot decisions and feedback to students' continuous learning needs (Rajabi et al. 2015). Teachers' pedagogical knowledge has two possible sources. The first source refers to the means by which teachers develop their occupational knowledge. At this level, sources of teachers' pedagogical knowledge are from formal teacher education (both pre- and in-service), the experience they had when they were students, or on-the-job experience. The second source is the foreknowledge that teachers employ to form their professional knowledge. Such knowledge is garnered from kinds of knowledge, misconceptions, and beliefs that teachers (or pre-service teachers) bring to the teaching arena.

2.3. Teachers' teaching styles

The term teaching styles refer to the teacher's prevalent classroom behaviour which is not associated to a teaching method, or a technique alone, but also a value system held by a teacher, even if the course content taught changes (Ashworty, 1998). It is the underlying plans of action that delineates the behaviours exhibited by teachers for the purpose of actualizing the stated learning objectives. Teaching style is the teacher's consistency at displaying certain behaviours, traits or quality overtime in the classroom in the course of relying knowledge, skills or information. The exhibition of these manners could be an offshoot of teachers' inclination, exposure, nature, custom, or even habit. Teaching style reveals teachers' philosophies, beliefs and the roles they prefer to take in the course of delivering information in the classroom (Saswandi, 2014).

Teaching styles adopted by teachers influence the type of assessment, management skills, methods of instruction, interactions, and emotional atmosphere in the classroom (Miller, 2006). Teaching styles are formed by accumulated notions about teaching, developed over the years through teachers' personal experiences, learning backgrounds, and educational and cultural influences. Teachers' teaching styles are evident in the organisation of classroom delivery, modes of discussion, lesson planning, presentation and evaluation of learning content, and the implementation of learning activities (Wong, 2015).

The researcher suggests that Literature-in-English teachers' preferred teaching styles may be influenced by how they were taught as students, their abilities, exposure, and beliefs about effective teaching. Some teachers believe it is their duty to dominate and steer

the lesson, leaving no space for student interference, while other teachers think that students are stakeholders in the teaching-learning process; therefore, their participation in class activities is essential. Early identification of teachers' teaching styles can significantly improve students' experiences. Understanding their own teaching styles may help teachers better realise how to implement their enthusiasm and vision for teaching, and how they can adapt, modify, or support their styles to improve interactions with students while maintaining all aspects of teaching. After identifying their teaching styles, teachers can explore ways to modify their approaches to meet students' needs and aspirations, address potential shortcomings, and develop plans to rectify any issues (Alhussain, 2012).

Researchers have come up with multiple teaching styles. Pratt et al. (2001) enumerate teaching styles as apprenticeship, transmission, nurturing, developmental, and social reform. Sun and Wang (2007) delineate teaching styles as: a) indifferent style, b) laissez-faire style, c) democratic style, d) authoritarian style. Mohanna et al. (2007) adumbrate teaching styles as no-nonsense teachers, the straight facts, big conference teachers, the official formal curriculum teachers, the one-off teachers, the sensitive student-centred teachers, and all-round flexible and adaptable teachers. Grasha and Riechmann (1996) classified teaching styles as formal authority, the expert, the delegator, the facilitator, and the personal role model.

The personal model style encourages students to imitate their approach, despite potential challenges in meeting the teacher's standards and expectations. Students are engaged in the learning process, fostering open engagement, communication, and competence. This style stimulates interest and critical thinking, encourage students to take an active role, and promote their efforts. The expert teaching style places teachers at the center of class activities, teaching, and explaining. This style professes teachers as "custodians of knowledge." Students taught by expert teachers have superficial knowledge and lack of deeper understanding. Teachers do not prioritize student participation, but focus on theoretical understanding rather than practical application. A teacher with formal authority style provides feedback based on formal standards, sets learning targets, and expectations, while focusing on clear expectations. However, this style can lead to restrictive regulation of students' standards and concerns. (Grasha & Riechmann, 1996; Nway & Nwe, 2018; Amasha & Assadi, 2024; Chiazor & Agwazie, 2024).

Teachers with facilitator style guide students, individually and as a group, towards set goals, encouraging them to communicate their thoughts and ask questions. The teacher plans, creates a positive climate, and fosters bonding among group members. The teacher provides input, guards against weak and vulnerable students, and helps passive learners to be heard. This method offers personal flexibility, focusing on students' ambitions and needs, but requires good teaching skills and time. Teachers with a delegator style help students become independent learners by working on projects independently or as part of an autonomous team. Teachers engage students through regular interactions, using both expert and delegator teaching styles. The goal is to enhance students' autonomy, with the teacher designing and implementing activities and acting as a consultant or resource person (Grasha & Riechmann, 1996; Nway & Nwe, 2018; Amasha & Assadi, 2024; Chiazor & Agwazie, 2024).

2.4. Studies on teachers' content mastery, pedagogical knowledge and teaching styles

Over the years, studies have been conducted on teacher content knowledge, pedagogical knowledge and teaching styles vis-à-vis students' learning outcomes. The outcomes of these studies have yielded mixed results. For instance, Boz (2002) investigated subject matter and pedagogical content knowledge of prospective teachers. The study differentiates between "knowing that" and "knowing why" in the classroom. "Knowing that" is declarative knowledge of procedures, rules, and concepts associated with specific topics in subjects in the school curriculum. It is the knowledge of a basic repertoire of subjects which focuses on symbolization, manipulation and their interpretations at different occasions. "Knowing why" is the underlying meaning and understanding of why things are the way they are; it includes understanding of why rules may or may not work in certain ways, and anticipation of the aftermath of using these rules (Even & Tirosh, 1995). Nonetheless, Findings from the study show that respondents understand that a literal symbol in Mathematics changes its sign when it is moved to the other side. However, it seems they forgot or did not know the reason why this rule works that way. The gap between their "knowing that" and "knowing why" seems to affect their explanations on mathematical symbols (Boz, 2002).

Chen, et al. (2020) examined whether the subject matter knowledge of high school life science teachers' and knowledge of students' misconceptions would have impact on students' learning. The study confirmed that teachers' ability to only comprehend science concepts they teach is not sufficient rather, they also need to have a broad knowledge of various conceptions students might have about the topics they have for the day when coming into their lessons. Peiman et al. (2015) show that when teachers have the knowledge of the subject matter, knowledge of assessment and knowledge of instructional techniques, such teachers are adjudged to be skilled and effective.

The study of Laghari et al. (2023) reveals that the majority of the respondents had satisfactory knowledge of foundational concepts and theories of subjects. Nonetheless, most of them are adjudged as developing teachers not only because of their subject area expertise, but because they could not connect the discipline they teach with other courses and demonstrate how they could apply their knowledge to happenings in real-life situations. Teachers' content knowledge plays a crucial role in achieving stated behavioural objectives. Its significance on students' learning achievement cannot be played down. In spite of the importance of teachers' content knowledge, Bold et al. (2017), cited in UNESCO-International Institute for Educational Planning (2022) observed that teachers in several countries in the world do not have appropriate mastery of content knowledge necessary for their teaching.

Oko (2022) examined which of the teaching methods, teachers' content knowledge and teachers' encouragement would influence Grade 10 students' mathematics results. Findings show teachers' knowledge of mathematics content is a significant element capable of producing better results. However, the results showed that the majority of the teachers do not have sufficient skills and knowledge in some topics in Mathematics. Peerzada and Jabeen (2014) investigated how teachers' subject matter knowledge and their behaviours impacted students' performance. Findings reveal that student performance is contingent on teacher subject matter knowledge. The researchers noted that teachers without content expertise could probably teach concepts erroneously and may have more difficulty presenting the subject matter. This may further deepen learners' malicious knowledge of concepts, just as their teachers.

Mosabala (2018) conducted a study on knowledge structures for teaching a science topic, the Doppler Effect. It was shown in the study that, in spite of the long teaching experience of the case study teachers, they cannot be classified as expert teachers because of the deficiencies in their transformed knowledge structures, the display of a lack of links among concepts and a lack of coherent knowledge about concepts. Wijayanti et al. (2021) analysed teachers' content knowledge and students' performance on fraction topics. The analysis revealed that both students and teachers tow a line of cognitive structure on fractions. Rather than teaching for understanding, teachers taught the concept of fractions for procedural performance. The pattern of teaching has successfully exposed learners to memorization of misconceptions about fractions.

Guerriero (2014) research affirms the need for teachers' dexterity in pedagogy and shows that relationship exists among teachers' pedagogical knowledge, professional competence and learning opportunities. Contrarily, the findings of Odumosu et al. (2018) play down the significance of pedagogical knowledge. The study reveals that students were not affected by teachers' pedagogical knowledge in Algebra in Mathematics. Suharyadi (2022) reveals that both senior and junior EFL teachers, equally, do not possess significant pedagogical knowledge because the senior teachers do not possess the appropriate knowledge of several aspects of pedagogical knowledge, while the junior ones are seriously weak in the teaching profession and lack the knowledge of English language teaching theory. König (2024) revealed that during teaching practicum in Austria and Germany, preservice teachers acquired pedagogical knowledge but discontinued with it at the point of transmission into the teaching profession

Farooq et al. (2022) investigated the impact of teaching styles on students' achievement scores at a university. The study indicated that teaching styles and learners' academic achievement are related. Many of the respondents are classified as facilitators, followed by the expert, delegator, formal authority, and lastly, demonstrator. Ullah et al. (2024) analysed the significant impact teaching styles have on students' academic performance at Peshawar University. The findings show that facilitator and delegator are active because of student-centred teaching styles displayed by the teachers, which have a significant improvement on students' academic performance, but authoritative styles have a comparatively lower impact.

Research findings indicate a positive and significant impact of teaching styles and learning

motivation on students' learning achievement at SDN Kutisari I/268 Surabaya (Mudzakkir & Darmawan, 2024). Teachers who have healthy interactions with students are perceived to develop interests in academic matters, get involved in classroom tasks, muster confidence, and achieve academic prowess. The student's ability to pull through rigorous learning tasks is contingent on the classroom structure set up by the teacher (Inayat & Ali, 2020).

Research gaps have been observed in the reviewed papers. Findings from the reviewed studies above have contradictory perspectives about the impact of teachers' content knowledge, pedagogical knowledge and teaching styles. Some findings revealed that these teacher-related factors contribute significantly to learners' learning outcomes, while some revealed otherwise. The reviewed papers focus on mathematics, life sciences, science, and motivation. In addition, none of the papers reviewed has investigated the influence of the combination of the trio: teachers' content knowledge, pedagogical knowledge and teaching style on students' performance and attitude in Literature-in-English. Furthermore, most of the papers reviewed neither investigated students' attitudes nor were they localized. To bridge these gaps, the present paper purposely seeks to confirm or negate earlier findings of the reviewed papers on the independent and dependent variables. It intends to domesticate the influence of the combination of the triad of content knowledge of teachers, pedagogical knowledge and styles of teaching on students' attitudes to and performance in Literature-in-English. Research findings from this paper will add to the available literature on teachers' content knowledge, pedagogical knowledge and teaching style. Two research hypotheses were formulated to achieve the purpose of the study:

1. None of these variables (teachers' pedagogical knowledge, content knowledge and teaching styles) will significantly contribute to students' academic performance in Literature-in-English?

2. None of these variables (teachers' pedagogical knowledge, content knowledge and teaching styles) will significantly contribute to students' attitude in Literature-in-English?

3. Research methodology

3.1. Methodology

The study employed a descriptive research design of a survey type. The research design was considered appropriate because the characteristics of the population were observed and described without manipulating variables. Research ethics were strictly adhered to throughout the study. Respondents were duly informed of the purpose of the study, their consent was sought, and participation was made voluntary. The identities of the respondents were guaranteed and kept confidential.

3.2. Sample and sampling technique

A multistage sampling procedure was adopted for the study. The procedure was adopted because the representative sample was selected in a sequence of stages from a population using smaller groups at each stage. At the first stage, four local governments were selected through a simple random sampling technique. Thereafter, using a simple random sampling technique, from each local government area, 4 schools were selected. At the third stage, through the purposive sampling technique, in total, 48 schools were selected. Purposive sampling technique was employed because certain criteria were set for school selection: the school must have registered students for Literature-in-English in external examinations for not less than 10 years, the school management must indicate interest in the research, and there must be teachers of Literature-in-English in the schools. At the last stage, in each school, intact classes of students who were taught Literature-in-English were considered. Participants in the study were 632 Literature-in-English students and 127 Literature-in-English teachers in Senior Secondary School II in Ekiti State, Nigeria.

3.3. Instruments

Seven instruments were employed for data gathering: students' questionnaire on teachers' pedagogical knowledge and teachers' teaching style; questionnaire on students' attitude to Literature-in-English; performance test conducted on students in Literature-in-English; questionnaire on teachers' pedagogical knowledge and teaching style in Literature-in-English; classroom observation scales for teachers' pedagogical knowledge, content knowledge and teaching styles in Literature-in-English. Students' questionnaire on teachers' pedagogical knowledge and teachers' teaching style sought students' opinions about their teachers' behaviour, time and classroom managerial skills, methods of teaching and assessment, knowledge of learning theories, and teacher-student relationship and interactions. A questionnaire on students' attitude to Literature-in-English focused on students' disposition to the genres of Literature, their passion for the subject

and their likes and dislikes about the subject, etc. Students' performance test in Literature-in-English tallied with the Literature-in-English Syllabus. Test items that consisted of objective and essay questions were drawn from the recommended literature textbooks and texts.

Teachers' questionnaire on teachers' pedagogical knowledge and teaching style in Literature-in-English centred on Literature-in-English teachers' opinions about their behaviour, time and classroom managerial skills, methods of teaching and assessment, knowledge of learning theories, and teacher-student interactions. The live classroom observations for content knowledge, teaching styles and pedagogical knowledge were carried out by research assistants who were also the foremost Literature-in-English teachers in the selected schools, but were not teaching the selected classes of students. Each observation scale was divided into two parts- A and B. Part A focused on respondents' personal information, such as the name of the school, class, subject, duration of period, and date of observation. For Part B of teachers' pedagogical knowledge, research assistants observed the presentation of respondents' lessons to check for their understanding of teaching approaches, learning theories, classroom assessment techniques, and classroom management for 40 minutes at each lesson. The degree of scoring was Very often (4), Often (3), Sometimes (2), Hardly Ever (1), and Never (0).

Part B of teachers' content knowledge consisted of observation protocol schedules for knowledge of literary appreciation skills (literary techniques); literary works (characterization, themes, plot); language learning and development (analytical, inferential skills and diction); and moral and values (application of literary works to life situations and experiences). The degree of scoring was Appropriately Mastered and Adequately Executed- excellent (4); Appropriately Mastered but Needs Adjustment - good (3); Fairly Mastered but More mastery and adjustment are recommended - fair (2); Poorly Mastered and appropriately executed- (poor (1); No Mastery- fail (0). Teachers' teaching styles propounded by Grasha and Riechmann (1996): the expert, formal authority, role model, facilitator and delegator types were used in the study. The scoring of Very Often (4), Often (3), Sometimes (2), Hardly Ever (1), and Never (0) was used for 40 minutes at each lesson.

3.4. Validity and reliability of the instruments

Before the pilot study, research experts in the fields of Literary Studies, Measurement and Evaluation, Language Education, and teachers teaching Literature-in-English scrutinized the instruments. Thereafter, they ascertained the content and face validity of the performance test and questionnaire. The instruments related to students were administered to 150 Literature-in-English students who were not part of the selected sample. A test-retest of the instruments was carried out during the pilot study. Pearson's Product-Moment Correlation was employed to ascertain the reliability coefficients. Students' questionnaire on teachers' pedagogical knowledge and teachers' teaching style (0.79); questionnaire on students' attitude to Literature-in-English (0.81); performance test of students in Literature-in-English (0.80); and questionnaire on teachers' pedagogical knowledge and teaching style in Literature-in-English (0.83) were obtained. To get the reliability of the observation scales, inter-rater reliability through Pearson's Product Moment Correlation was employed. The reliability of 0.82, 0.81 and 0.77 were obtained for classroom observation scale measuring teachers' pedagogical knowledge, teachers' content knowledge and teachers' teaching styles in Literature-in-English (0.77) respectively.

4. Results

Inferential statistics, multiple regression analysis, at the 0.05 level of significance, was used for data analysis.

H01: None of these variables (teachers' pedagogical knowledge, content knowledge, and teaching styles) will significantly contribute most to students' academic performance in Literature-in-English

Table 1

Multiple regression of joint contribution of content knowledge, pedagogical knowledge and teaching styles on students' performance in Literature-in-English

Model	Unstandardized Coefficients		Standardized Coefficients	T	p
	B	Std. Error	Beta		
(Constant)	37.291	3.774		9.880	.000
Teachers' Pedagogical Knowledge	.161	.092	.157	1.756	.016
Teachers' Teaching Style	-.051	.061	-.080	-.837	.043
Teachers' Content Knowledge	.251	.074	.327	3.375	.001
R=.372; R^2=.139; Adjusted R^2= .118; $F_{3, 123}$ = 6.598, p=.000					

p<0.05

Table 1 shows a positive relationship between the independent variables (teachers' content knowledge, pedagogical knowledge, and teaching styles) and the

dependent variable (students' performance in Literature-in-English) (R=0.372). The regression model shows that teachers' content knowledge significantly contributes to students' performance, followed by pedagogical knowledge. Although teaching style is statistically significant, it has a smaller and negative impact on students' performance. Nevertheless, the result reveals that the independent variables jointly accounted for 13.9% (R^2×100) of any variance observed in students' performance. The result shows further that $F_{3, 123}$ = 6.598, p=.000. Hence, the null hypothesis is not accepted, which means that content knowledge, pedagogical knowledge, and teaching styles jointly contributed to students' performance in Literature-in-English.

H02: None of these variables (teachers' pedagogical knowledge, content knowledge and teaching styles) will significantly contribute to students' attitude in Literature-in-English?

Table 2

Multiple regression of joint contribution of content knowledge, pedagogical knowledge and teaching styles on students' attitude to in Literature-in-English

Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
(Constant)	23.514	5.030		4.674	.000
Teachers' Pedagogical Knowledge	.413	.099	.402	4.164	.000
Teachers' Teaching Style	.086	.122	.062	.702	.484
Teachers' Content Knowledge	-.099	.082	-.116	-1.214	.227
R=.383; R^2=.147; Adjusted R^2= .126; $F_{3, 123}$ = 7.058, p=.000					

p<0.05

Table 2 reveals a positive relationship between the independent variables (content knowledge, pedagogical knowledge and teaching styles) and the dependent variable (students' attitude to Literature-in-English) (R=0.383). The result also depicts that independent variables jointly accounted for 14.7% (R^2×100) of the variance observed in students' attitudes to Literature-in-English. However, the result statistically shows that $F_{3, 123}$ = 7.058, p=.000. Hence, the null hypothesis is not accepted, which means that teachers' pedagogical knowledge, content knowledge, and teaching styles jointly contributed to students' attitude to Literature-in-English.

5. Discussions

It is revealed from the study that teachers' content knowledge, pedagogical knowledge and teaching styles jointly contributed to students' attitude to and performance in Literature-in-English. They jointly accounted for 13.9% of any variance observed in students' academic performance. Although in descending order, the highest contributing factor to changes in students' performance in Literature-in-English was teachers' content knowledge (β=0.327), followed by teachers' pedagogical knowledge (β=0.157) and teachers' teaching style (β=0.080). The remaining unexplained 86.1% of the variation could be caused by other variables not discussed in this study.

Teachers' content knowledge, pedagogical knowledge and teaching styles jointly accounted for 14.7% of any variance observed in the attitudes of students to Literature-in-English. At separately levels, only teachers' pedagogical knowledge with a beta value of 0.402 among the other contributing factors to changes in students' attitude towards learning of Literature-in-English was statistally shown to be better than content knowledge and teaching styles. The remaining unexplained 85.3% of the variation could be due to other variables not discussed in this study. Findings in Auseon (1995) confirmed that both pedagogical knowledge and subject matter knowledge affect the process of instruction because pedagogical knowledge is required in what and how teachers choose to teach. Atrido (2021) emphasized that, though, teachers' subject matter knowledge and pedagogical knowledge are two sides of a coin yet, a significant correlation exists between teacher's knowledge of the subject matter and what they teach. This implies that teachers' understanding of the content they teach is a sine qua non for effective classroom instruction. Teachers with shallow content and pedagogical knowledge will be at a loss when they are to teach concepts effectively and convincingly. Therefore, unarguably, teachers' knowledge of the subject matter and pedagogy of a discipline influences students' performance (Salami & Spangenberg, 2024).

Hill et al. (2005) reveal that teachers' knowledge of Mathematics is significantly related to students' achievement in Mathematics. A study conducted by Jadama (2014) on the influence of teachers' subject matter knowledge reveals that subject matter knowledge of a teacher significantly impacts on teaching and learning process in schools. This finding is at variance with the study of Odumosu et al. (2018), who reported that there was no significant interaction effect of content and pedagogical knowledge on students' achievement in algebra. Also, findings in the study of Mudzakkir and Darmawan (2024) support the findings of the present study that the teaching style

employed by teachers is an indispensable factor that determines the success or otherwise of the student's learning process.

6. Conclusions

The study confirmed the intricate interplay of teacher knowledge and attributes in influencing learning outcomes. It therefore behooves teachers to adopt essentialities that can enhance students' continuous improvement of knowledge and effective teaching delivery. The findings in the paper establish that teachers' competence of subject matter, pedagogical knowledge and teaching styles are cornerstones for effective classroom delivery and enhanced learners' performance in Literature-in-English. This, therefore, implies that Literature-in-English teachers ought to possess mastery of their discipline and be dexterous in pedagogical skills for optimal students' learning outcomes. A teacher's teaching style dictates the way a teacher creates a classroom atmosphere and presents materials, which is expressed through their character, behaviour and mannerisms.

6.1. Limitations and further research

Lack of prior investigation on the combination of the trio, teachers' subject matter, pedagogical knowledge and teaching styles on students' learning outcomes, affected the availability of prior studies to help elaborate the research problems being investigated and review past literature. The study adopted a descriptive research which is a mere description of the phenomenon revolving teacher-related variables in four local governments in Ekiti State. Thus, there is a limitation to the generalizability of the findings. To tackle the paucity of studies on the combination of teachers' subject matter, pedagogical knowledge and teaching styles and learner-related issues, further research could be carried out on this topic. In addition, future studies could adopt experimental or other research methods. A Larger sample and scope could be investigated for generalization. Further studies, especially qualitative research, can be conducted to explore why teaching styles may have a negative effect, and which of the teaching styles have a negative effect on the teaching and learning of Literature-in-English.

6.2. Recommendations

The following recommendations are advanced in line with the findings and conclusion of the study:

1. Teachers' content knowledge, pedagogical knowledge and teaching styles are good determinants of students' learning outcomes in Literature-in-English. Hence, teachers should strive daily to master them.
2. Teachers should know their teaching styles, and constantly employ teaching styles that can endear and sustain students' interest.
3. Government and stakeholders of education should organize workshops, seminars and training for teachers where actionable strategies can be identified to enhance teaching delivery and learning achievement.

Conflict of interest: It is declared in this study that conflict of interest does not exist.

Authors note:

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The Role of the Romanian School in Preventing and Combating Social Exclusion Among Children

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Abstract

This paper explores the complexity of social exclusion among children in Romania, adopting an interdisciplinary and systemic perspective grounded in recent statistical data, theoretical frameworks from sociology and educational sciences, as well as an analysis of institutional and community-based best practices. The study highlights that childhood in Romania remains deeply exposed to a range of interdependent vulnerabilities - from monetary poverty and parental absence to health problems, domestic violence, and unequal access to education. The research findings confirm the strategic role of the school within the child's social ecology, emphasizing its transition from a purely educational actor to a key pillar of social protection. Teachers, through their direct and continuous interaction with students, can identify forms of vulnerability that often remain invisible in official statistics, such as the effects of parental migration and the absence of family support. Thus, the school becomes both a reflection of social inequalities and a mediator between the child, the family, and public or community-based support systems. Positioned in this way, the school acquires significant transformative potential, emerging as a key space for preventing and addressing social exclusion, and for promoting inclusion and equity among children at risk.

Keywords:
social exclusion, social vulnerabilities, parental support

1. Introduction

Social exclusion among children is a central theme in current debates on social and educational policy, both at the European and national levels. This concern is reflected in key policy documents such as the *European Union Strategy on the Rights of the Child* (2021), the *United Nations Convention on the Rights of the Child* (1989), as well as the *UN Committee on the Rights of the Child's Concluding Observations on the Implementation of the Convention in Romania* (2023). The issue is also embedded within the *2030 Agenda for Sustainable Development* (2015) and the *National Strategy on Social Inclusion and Poverty Reduction for 2022–2027* (2022).

The analysis of the situation of children in Romania draws on both statistical data and empirical evidence, focusing on the identification and prioritization of issues that: (a) affect a significant number of children, with an incidence higher than the average recorded at EU level; and (b) generate long-term negative consequences on children's development. Within this framework, the *National Strategy for the Protection and Promotion of Children's Rights 2023 - 2027*, entitled *"Protected Children, Safe Romania"* (2023), incorporates key components of the *European Child Guarantee* (2021), particularly about access to early childhood education and care, educational and health services, and measures to support social inclusion.

In Romania, children aged 0 to 17 constitute the population group most exposed to the risk of poverty and social exclusion. An assessment of the most recent national and European statistical data reveals both the scale of the phenomenon and its determining factors, including household structure, parents' demographic characteristics, education level and employment status, place of residence, as well as the indirect effects of economic migration and domestic violence. Simultaneously, research conducted by non-governmental organizations highlights the presence of forms of vulnerability not captured in official statistics, particularly with respect to children affected by extreme poverty, parental migration, or family violence.

In this context, expanding the analysis to the level of school units has the following research objectives: (a) to identify the predominant forms of vulnerability observed among students, from the perspective of primary school teachers; (b) to compare teachers' perceptions with available official data; and (c) to assess the role of schools as sites for early detection and intervention in cases of child vulnerability.

The research results present a more nuanced reality: compared to official statistics, teachers report a significantly higher incidence of vulnerabilities among their students, especially in four critical areas: family context and parental economic migration, health status, risk behaviors, and poor socio-economic conditions of families. This perspective highlights the need to redefine the role of the school in preventing and combating social exclusion among children.

Thus, the school must be conceptualized not only as a privileged space for the direct observation of children's problems but also as a strategic actor in the early identification of vulnerabilities, an active support mechanism for parents, a key partner in collaboration with the non-governmental sector for implementing integrated interventions, and, not least, as a vector for raising awareness and mobilizing public institutions and society at large to reduce the social inequalities affecting children.

2. Multidimensional Analysis of Social Exclusion Among Children in Romania. European and National Statistics

2.1. General Context: Child Poverty and Social Exclusion in Romania

In Romania, poverty represents one of the most severe forms of social exclusion, directly affecting children's well-being and their opportunities for development. According to Eurostat data from 2024, Romania recorded the second highest percentage of population at risk of poverty or social exclusion (AROPE) among European Union member states - 27.9%, compared to the EU average of 21% (Eurostat, 2024a). The at-risk-of-poverty rate (AROP) stands at 19.0%, while the rate of severe material and social deprivation is 17.2% (INS, 2025).

In Romania, children (aged 0 - 17) constitute the population segment most exposed to the risk of poverty and social exclusion. By contrast, at the EU level, the most exposed group is represented by young adults (aged 18–24). In 2024, 33.8% of children in Romania were at risk of poverty or social exclusion, compared to the EU average of 24.2% (Eurostat, 2024b). Although this figure marks a reduction from 2023 (a decrease of 5.2 percentage points), medium-term analysis shows the continued structural nature of the risk: 39% in 2023, 36.3% in 2020, and 21.4% of children were experiencing severe material deprivation in 2023 (Eurostat, 2023a; INS, ZAF0123, 2020; INS, SAR112B, 2020).

These findings underline that children aged 0 - 17 remain the most vulnerable group in Romania regarding poverty and social exclusion. While the indicator has shown a slight downward trend in recent years (2023: 39%; 2020: 36.3%), the long-term evolution demonstrates the persistence of significant structural inequalities. This confirms the relevance of child poverty and social exclusion as central indicators in understanding and addressing social inequity in Romania.

2.2. Structural Determinants of Social Exclusion Among Children

a) Household Typology and Family Structure

Household structure is a key determinant of child poverty risk. According to Eurostat data (2024c), in households with dependent children, the risk of social exclusion reaches 30.4%. The most affected are large families: in 2023, 63.3% of households consisting of two adults with three or more children were affected by poverty, followed by households composed of three or more adults with children (28.0%), and single-parent families (21.6%) (INS, 2024).

Birth order statistics reveal a heightened concentration of vulnerability among children from large families: 10.1% of children in Romania are third-born, 3.7% are fourth-born, and 2.5% come from families with six or more children (INS, 2023).

b) Parental Age and Socio-Educational Profile

Young parental age, combined with low levels of education and limited integration into the labour market, significantly increases the risk of poverty among children. In Romania, 1 in 10 children is born to an adolescent mother. In 2022, 33.3% of all live births occurred outside of marriage, with 60.2% of these children having mothers under the age of 25 (INS, 2023). In 2023, one in four children was born to a mother under the age of 25 (INS, 2023, POP201B), while 12% had fathers in the same age group (INS, 2023, POP201F).

Regarding labour market participation, in 2022 only 55.2% of mothers of live-born children were formally employed, while 34.7% were not engaged in any form of employment. Young parents aged 18–24 recorded an employment rate of just 19% (INS, 2023).

c) Parental Educational Attainment and Its Impact on Children

Parental educational attainment is a critical predictor of the risk of social exclusion. At the European level, children whose parents have a low

level of education (ISCED 0–2) face a poverty risk of 61.2%, compared to only 11.0% among those whose parents hold higher education degrees (ISCED 5–8), resulting in a disparity of 50.2 percentage points. Romania exhibits the third highest educational gap within the European Union, with a difference of 69.9 percentage points between these two groups (Eurostat, 2024d). Nationally, relative poverty affects 42.8% of individuals with low educational attainment, compared to only 2.4% among those with tertiary education (INS, 2023, AR102F).

d) Place of Residence and Regional Disparities

The risk of social exclusion is unevenly distributed across territorial regions. In 2024, the South-East and South-West Oltenia regions recorded the highest AROPE (At Risk of Poverty or Social Exclusion) rates—39.7% and 35.1%, respectively—while the Bucharest-Ilfov region reported a significantly lower rate of just 12.0% (INS, 2025). Furthermore, in rural areas, 35.5% of the population lives in monetary poverty (Eurostat, 2023b), highlighting systemic disparities between urban and rural environments.

2.3. Parental Economic Migration and Its Effects on Children

Poverty remains one of the primary drivers of economic migration among parents in Romania—a phenomenon with profound implications for the well-being of the children left behind. According to data provided by the National Authority for the Protection of the Rights of the Child and Adoption (ANPDCA, 2021; 2024), the number of children affected by parental migration has decreased by approximately 15% over the past three years. In 2021, a total of 73,387 children had at least one parent working abroad, of whom 12,339 were in the situation where both parents had migrated. By 2024, these figures had declined to 61,007 and 9,039, respectively.

However, official statistics do not fully capture the scale of the phenomenon. According to a study conducted by Save the Children (2023), the actual number of children left behind without the direct care of their parents is significantly higher. Estimates suggest that over one-quarter of children under the age of 17 have had, or currently have, at least one parent working abroad. This discrepancy between official data and on-the-ground realities is partly due to the lack of formal notifications submitted by parents to the authorities, as well as the limited capacity of social assistance services to effectively monitor and address the consequences of parental migration (Ombudsman, 2021). As a result, the impact of economic migration on children often remains invisible in administrative statistics, further increasing their risk of social and emotional vulnerability.

2.4. Violence Against Children – A Persistent and Largely Invisible Phenomenon

In Romania, violence against children constitutes a major social issue, marked by both a significant prevalence and an underrepresentation in official reporting. According to data provided by the National Authority for the Protection of the Rights of the Child and Adoption (ANPDCA, 2021; 2023), the most frequently identified form of abuse is neglect, occurring predominantly within the family environment. In 2021, a total of 7,557 cases of neglect were recorded, rising to 11,053 cases in 2023, an alarming upward trend.

Nevertheless, official statistics capture only a partial image of the true extent of the phenomenon. A study conducted by Save the Children (2021) reveals a far more complex reality surrounding child abuse. The research indicates that at least one in five parents exhibits a tolerant attitude toward the use of corporal punishment. Notable discrepancies in perception exist between parents and children: while 28% of parents acknowledge using physical punishment, 46% of children report having experienced such practices. Moreover, over half of the parents state that they discipline their children when they make mistakes—23% frequently and 34% in exceptional cases.

From the parents' perspective, the primary factors contributing to the use of violence against children include poverty (68%), alcohol consumption (63%), lack of government support (41%), a high number of unwanted children (40%), limited access to parenting and child-rearing information (25%), and inadequate social services (20%). These factors point to a confluence of structural and individual vulnerabilities, underscoring the need for the development of multidimensional public policies focused on prevention, family support, and early intervention.

2.5. Children's Health Status and the Impact of Poverty

Children from families experiencing poverty are at increased risk of both undernutrition and, paradoxically, obesity, due to unbalanced or nutritionally inadequate diets (Mihalache et al., 2020). Health assessments conducted in school settings reveal significant disparities in children's physical development. According to the health evaluation conducted during the 2019–2020 school year, 26.6%

of children exhibited disharmonic development, with a higher prevalence of overweight conditions observed among students in urban areas (INSP, 2021).

International data confirm this trend. In 2022, one in three 15-year-old boys in Romania reported being overweight, compared to one in five girls (OECD, 2023). At the same time, the incidence and prevalence of chronic medical conditions among children have been steadily increasing, with notable variations based on the place of residence. In urban areas, the most frequently diagnosed health issues are refractive errors (5.3%), non-endocrine obesity (4.4%), and metabolic diseases such as diabetes (2%). In contrast, in rural areas, non-endocrine obesity ranks highest (3.4%), followed by refractive errors (2.4%) and underweight conditions (1.3%) (INSP, 2021).

3. Vulnerabilities of Children in Romania: Perceptions of Primary School Teachers

An analysis of the most recent national and European statistical data highlights the scope and complexity of social exclusion among children in Romania. In addition to these official sources, research conducted by non-governmental organizations points to the existence of often unreported vulnerabilities related to poverty, economic migration, and family violence. In this context, it is necessary to broaden the analytical approach to social exclusion by anchoring the investigation in the school environment, which is perceived as a privileged space for direct observation and, in many cases, the only setting where early identification of children's vulnerabilities can occur.

3.1. Research Question

Building on this premise, the present study poses the following research question: What are the main vulnerabilities identified by primary school teachers among their students?

3.2. Research Objectives

1. To identify the main forms of vulnerability observed among students, from the perspective of primary school teachers.

2. To compare teachers' perceptions with available official data.

To assess the role of the school in the early observation and intervention in cases of vulnerability.

4. Methodology

The research was conducted between October 2024 and January 2025, involving 164 primary school teachers who completed a structured questionnaire. The instrument was developed around four key dimensions, derived from the review of relevant literature and statistical data:

- Family and social conditions,
- Health,
- Risk behaviours,
- Family and parental economic migration.

Each dimension was explored using binary-coded closed-ended items (Yes/No), addressing the question: "Have you had at least one student in your class who...?" The questionnaire was distributed online via professional teaching networks and social media platforms. In parallel, informal discussions and interviews were conducted with a smaller sample of teachers to further explore and contextualize certain findings.

Two types of analysis were applied:

- Descriptive statistical analysis – to identify the frequency of reported vulnerability forms within each dimension.
- Comparative analysis – to correlate teachers' perceptions with the available official data.

It is important to note the exploratory nature of this study. Although it is not nationally representative, the research offers relevant insights into the predominant forms of vulnerability observed among students in the classes investigated.

5. Results and Interpretations

5.1. Dimension: Family and Parental Economic Migration

The most frequently reported form of vulnerability is parental absence due to economic migration. A total of 92.6% of respondents indicated that they had at least one student in their class with a parent working abroad, while 54.3% reported cases in which both parents were abroad, with the child left in the care of another adult.

Although official statistics (ANPDCA, 2021 - 2024) show a decrease of approximately 15% in the prevalence of this phenomenon, data collected from schools and studies conducted by non-governmental organizations (Save the Children, 2023) suggest a broader and largely underreported reality. This discrepancy indicates that schools are often on the front lines in dealing with the consequences of parental migration, while official statistical systems capture only a partial image of the phenomenon (see Table 1).

Table 1

Parental Economic Migration – School-Based Data vs. Official Statistics

Aspect	School-Based Data	ANPDCA Data (2021–2024)
Prevalence of the phenomenon	Very widespread (over 90% of sampled classes affected)	Decrease of ~15%, with fewer than 75,000 cases reported
Children without both parents but with a caregiver in the household	54.3% of teachers reported such cases	9,039 children in 2024
Risk of underreporting	High, noted by NGOs and institutions	Acknowledged by the Ombudsman

5.2. Dimension: Health

The second most significant category of vulnerability identified by teachers pertains to children's health. A total of 63.5% of respondents reported having at least one student in their class with disharmonic physical development, while 23.4% identified children at risk of chronic illnesses such as obesity, myopia, or diabetes. Additionally, 24% mentioned students living with adults suffering from chronic diseases.

Teachers' perceptions align with findings from public health studies but offer an important functional perspective: educators do not merely observe medical diagnoses but also recognize symptoms that directly impact classroom activity, including fatigue, lack of concentration, difficulties in adaptation, and social isolation (see Table 2). In this regard, the school functions as a privileged space for the early detection of health-related dysfunctions.

Table 2

Health Dimension – School-Based Data vs. Statistical Sources

Indicator	School-Based Data (Teachers' Reports)	Official Data (INS, OECD, etc.)
Children with disharmonic development	In 63.5% of classes, there are children with signs of impaired physical development.	26.6% of children assessed (2019–2020) were found to have disharmonic development.
Children at risk of chronic illness *(e.g., obesity, myopia, diabetes)*	In 23.4% of classes, there are children considered at risk for chronic illness, based on family history, environmental exposure, or preexisting conditions (e.g., asthma, obesity).	Urban areas: myopia – 5.3%, obesity – 4.4%, diabetes – 2%; Rural areas: obesity – 3.4%, myopia – 2.4% (INSP, 2021).
Children indirectly affected (living with chronically ill household members)	In 24% of classes, children live in households where at least one adult has a chronic illness.	No specific official data available for this indicator.

5.3. Dimension: Risk Behaviors

The third category of vulnerability concerns students' risk behaviors. A total of 58% of teachers reported having at least one student exhibiting violent behavior in their classroom; 48.8% indicated the presence of children coming from households with a potential for family violence; and 44.4% identified cases of parental neglect.

These behaviours are rarely captured in official statistics, underscoring the crucial role of schools in detecting and reporting such cases. Although the National Authority for the Protection of Children's Rights and Adoption (ANPDCA, 2023; see Table 3) reports over 11,000 cases of neglect, the reality observed by teachers suggests a significantly higher frequency (see Table 4).

Table 3

Cases of Child Abuse, Neglect, and Exploitation (ANPDCA, 2023)

Type of Case	Family	AMP (Maternal Assistants)	Residential Services	Educational Institutions	Other Institutions	Other Locations
Physical abuse	1321	29	78	186	11	369
Emotional abuse	1933	12	27	100	9	159
Sexual abuse	598	11	11	25	4	855
Neglect	11053	30	37	118	28	339
Exploitation through labor	143	0	0	0	1	66
E Sexual exploitation	8	0	0	0	0	35
Exploitation for criminal activities	60	0	0	8	0	45
Total	15116	82	153	437	53	1868

Table 4

Risk Behaviours – School Perceptions vs. Official Data

Aspect	School Perception	Official Data (ANPDCA, Save the Children)
Children with violent behaviors	58% of classes affected	No direct official data available
Risk of neglect	44.4% of classes affected	11,053 official cases reported in 2023
Origin of behavior	Dysfunctional households/families reported	Confirmed: abuse mainly occurs within the family
Parental attitudes	Indirectly observed (child aggressiveness)	1 in 5 parents approve corporal punishment
Under-reporting	Extremely high	Officially acknowledged

The significant discrepancies between what teachers observe in the field and what is reflected in official statistics can be explained by several key factors:

- Parents' reluctance to report violence, a phenomenon confirmed by the *Save the Children* study (2021).
- Insufficient or inadequately equipped social services, which lack the real capacity to identify and monitor such cases—an issue also highlighted in other contexts, such as parental migration.
- The tendency to normalize violent behaviours as part of child-rearing practices, a perception still widespread according to *Save the Children* (2021).

5.4. Dimension: Family and Social Conditions

The final dimension, though no less significant, concerns the socio-economic conditions of families. A total of 56% of primary school teachers reported having at least one student in their class living in overcrowded housing conditions; 54.3% identified students from households experiencing monetary poverty; and 25.9% mentioned cases of extreme poverty.

In comparison with official statistics (Eurostat, INS), teachers' perceptions reflect a higher incidence of the phenomenon. While national statistics quantify poverty in structural terms—such as income levels, educational attainment, or employment status—teachers observe its direct consequences: absenteeism, lack of school supplies, poor nutrition, and inadequate clothing.

5.5. Study Conclusions

Teachers report observing vulnerabilities in students across all four dimensions: Family and Parental Economic Migration, Health, Risk Behaviours, and Family and Social Conditions.

Children's vulnerabilities are multiple, recurring, and interconnected. Phenomena such as parental absence, family poverty, health problems, and domestic violence coexist and mutually reinforce one another.

Teachers indicate a significantly higher incidence of vulnerabilities compared to available statistical data, underscoring the crucial role of schools as spaces for early detection and intervention.

The family remains the primary source of risk for the child, whether through parental absence, precarious living conditions, or abusive behaviours.

The results support a reconsideration of the school institution's role in preventing and combating social exclusion, in line with Research Objective 3.

6. The Role of the School in Addressing Child Vulnerabilities

Continuing the investigative approach focused on the perceptions of primary school teachers, this section aims to analyse the role of the school in responding to identified vulnerabilities, emphasizing the intervention, prevention, and support strategies implemented by educational actors. While the previous section highlighted the complexity and prevalence of vulnerabilities among children, this chapter focuses on the concrete actions undertaken by teachers and the institutional and intersectoral resources mobilized to support children at risk.

In a social context marked by poverty, exclusion, and persistent structural inequality, the school becomes not only a place of instruction but also a key factor in the child's social protection network, playing a fundamental role in identifying, reporting, and intervening in situations of vulnerability. Thus, the main directions of school action can be summarized as follows:

6.1. Early Identification of Vulnerabilities and Family Dysfunctions

The school environment serves as a privileged space for direct observation, where teachers detect forms of vulnerability that are difficult to capture through statistics—such as the impact of parental migration, domestic violence, neglect, malnutrition, emotional difficulties, and lack of medical care. The discrepancy between official data and the reality perceived by schools highlights the risk of underreporting vulnerabilities and, implicitly, underestimating their effects on the child. Therefore, continuous professional development for teachers to correctly and promptly identify risk signs is essential, especially in communities affected by social exclusion.

6.2. Promoting remedial education, facilitating access to education and school inclusion of students from socio-cultural environments with educational risk (Jucan & Ungurășan, 2024)

Remedial education programs are large-scale national initiatives that currently benefit from substantial funding and are implemented on a wide scale. One such example is the *"School after School"* program, which aims to reduce the risk of early school leaving, particularly among students from vulnerable backgrounds, and to improve their performance in assessments and examinations.

6.3. Parental Support and Educational Interventions for Families

The research results confirm the close connection between child vulnerabilities and family characteristics: low parental education, economic migration, poverty, lack of emotional support, or parenting skills. In this regard, the school extends its traditional functions, becoming a support space for the entire family. Identified forms of parental support include:

- Informing parents about their rights and available social services (scholarships, aid, subsidies); assistance with the necessary documentation to access social benefits.
- Informing parents about programs and support services for families and children, including those run by the non-governmental sector; implementing educational programs (locally or nationally funded), tailored to children's needs, with parental education components.
- Parental education workshops focused on identified needs (e.g., children left home alone parents with medical issues). The 2023-2024 Methodological Letter for Early Education specifies that parental counselling activities are part of the 3 hours of methodological activity assigned to early education teachers or primary teachers. It is recommended that specialists from institutions focused on family and child welfare (school counsellors, social workers, legal advisors, etc.) participate in these activities.
- Extracurricular educational activities are designed to strengthen the partnership between school and parents and to create parental support networks.

6.4. Interinstitutional Collaboration and the Development of Community Support Networks

In the face of chronic vulnerabilities such as economic migration, poverty, or domestic violence, the school cannot act in isolation. Effective intervention requires collaboration with public social assistance services, the healthcare system, local authorities, and non-governmental organizations. Parental migration has structural and chronic effects, necessitating social policies, psychological counseling, educational support, and community integration.

Children's health must be understood holistically - encompassing medical, psychological, and social dimensions - and approached through integrated actions within both schools and communities (e.g., health screening programs, psychological and nutritional support, and access to medical services).

To combat violent behaviors, schools must be supported through partnerships with social services, school counseling, and anti-violence awareness campaigns. Institutional responses to poverty must combine structural interventions (e.g., income, housing, parental education) with active community support, especially in rural areas and among families with low levels of education.

Programs and services aimed at supporting vulnerable children must be built upon an integrated approach to family well-being. These should aim to reduce poverty and social exclusion, include labor market integration for parents, ensure access to public health services, develop parenting skills, and - most importantly - increase children's educational attainment and parents' professional qualifications (Prodan, 2022).

6.5. Support from the Non-Governmental Sector: Models of Good Practice

Over the past two decades, numerous NGOs have become strategic partners of schools in combating social exclusion. The programs implemented by organizations such as UNICEF, Save the Children, OvidiuRO, HoltIS, and World Vision have focused on several key areas:

6.5.1. Social programs and services for children and families at risk of poverty

Since 2011, UNICEF has implemented the project *"Supporting Invisible Children,"* later renamed *"First Priority: No Invisible Child!"*, providing education, healthcare, and social services to vulnerable families. Between 2014–2019, through projects such as *"Social Inclusion through the Provision of Integrated Social Services at the Community Level"* and the *"Minimum Package of Services" (MPS)* model, integrated community services were delivered. Since 2021, the project *"Romania for Every Child: Breaking the Vicious Cycle of Exclusion for Vulnerable Children"* has emphasized the need for Integrated Community Centers.

6.5.2. Programs and services for children left behind by parents working abroad

Since 2010, Save the Children Romania has implemented programs including: Direct intervention for children with parents abroad (e.g., recreational and social camps); information and counseling on parents' responsibilities when leaving the country, and

awareness-raising campaigns on the socio-emotional impact of migration on children; remedial education through After-School programs.

6.5.3. Programs addressing violence against children

Since 1999, Save the Children has operated five counseling centers offering evaluation, psychological counseling, and therapy for children and families. In 2003, it launched the first nationwide awareness campaign on child abuse: *"Beating is not from Heaven!"* followed by campaigns such as *"Violence Breeds Violence"* (2007), *"Listen to Their Soul!"* (2011), *"Label-Free Children"* (2013), *"Stop the Fight at Home!"* (2014), and *"Stop Violence Against Children!"* (2015).

6.5.4. Health programs for children and families

Save the Children, in collaboration with hospitals and private sector partners, has also implemented: *"Every Child Matters"* (2010) - supporting mothers and children in disadvantaged communities; equipping family medical practices and healthcare facilities with medical equipment; organizing informational sessions on nutrition, physical activity, emotional health, sexual education, and substance use under the *"Healthy Choices"* initiative (2017–2022), part of the national *Health Education Program*.

6.5.5. Educational access and awareness programs

The *"Every Child in Kindergarten"* project by OvidiuRO (since 2010) raises awareness about the importance of preschool education. Other projects such as *"I Also Want to Go to School," "A Future Through School,"* and *"We Support Vulnerable Children to Attend School"* (2018–2021), implemented by Save the Children, offer school preparation, after-school support, and summer schools. Projects like *"School for All," "Choose School,"* and *"I Want to Be in 9th Grade"* by World Vision Romania aim to prevent early school leaving.

6.5.6. Parental education programs

Parental education is promoted as a key means to provide children with positive behavioral models. For over a decade, Save the Children's counseling centers have implemented the *Positive Parenting Program (Triple P)*. UNICEF's *"Let's Go to School!"* and *"Inclusive Quality Education"* initiatives include components for developing parenting competencies. *"Start in Education"*, a World Vision project, includes both educational kits (*"Backpacks of the Future"*) for children and parental education sessions. HoltIS is a recognized provider of parental education in Romania, with a network of certified parenting educators active especially in schools (e.g., the *"Friendly Schools in Involved Communities"* project).

6.6. Active School Involvement in Public Policy Development and Implementation

The data generated by the educational system and the expertise of teachers form a valuable foundation for evidence-based public policies tailored to local realities. The principles *"Children First"* and *"No Child Left Behind"* are integrated into national strategies and programs, including:

- Law No. 272/2004 (republished), on the protection and promotion of children's rights.
- National Strategy on the Protection and Promotion of Children's Rights "Protected Children, Safe Romania" 2023 - 2027.
- The "Every Child in Kindergarten" project by OvidiuRO (2010), institutionalized by Law No. 248/2015, encouraging preschool attendance among disadvantaged children.
- The Integrated Community Centers, initiated by UNICEF, are being scaled nationally through the project "Creating and Implementing Integrated Community Services to Combat Poverty and Social Exclusion", led by the Ministry of Labor and Social Justice in partnership with the Ministry of Health and Ministry of Education (2018–2022).
- The "Healthy Meals" National Program, targeting preschool and school-aged children by providing a free daily hot meal or food package (Government Decision No. 24/2024).
- The National Program for Reducing School Dropout, which is directly or indirectly influenced by research reports, impact assessments, and best practices developed by schools and NGOs.

7. Conclusions and Discussions

7.1. Childhood – A Critical Stage Marked by Vulnerability and Social Exclusion in Romania

The present analysis underscores that, in Romania, childhood continues to be a stage deeply exposed to multiple risks of vulnerability and social exclusion. With a child poverty and social exclusion risk rate of 33.8% (Eurostat, 2024a) and a Human Capital Index of just 58% (World Bank, 2023), the country faces

systemic challenges that severely limit human development from the earliest stages of life.

Educational disparities associated with socioeconomic status are among the highest in Europe. Student performance - particularly in disadvantaged areas - can no longer be interpreted solely in terms of educational quality. Instead, it must be contextualized within a complex set of structural factors: poverty, migration, inadequate housing, insufficient parental education, and limited access to basic services. In this light, the outcomes of the education system reflect not only pedagogical efficiency but also the degree of social equity present in society.

7.2. Child Social Exclusion: A Complex, Multidimensional, and Intergenerational Phenomenon

The combined analysis of statistical data and teacher perceptions reveals the interconnected nature of vulnerabilities affecting children - ranging from household structure and parental education levels to the indirect effects of economic migration and domestic violence. The "compositional burden" model (Bradshaw & Mayhew, 2003) and the theory of the cycle of disadvantage (Rutter, 1985) confirm that poverty and social exclusion are transgenerational phenomena, often perpetuated by the absence of early and effective intervention.

Parental migration, early childbirth, domestic violence, and parental neglect represent invisible risk factors, rarely captured by official statistics but deeply felt within educational communities. This reality demands an ecological approach to vulnerable childhood (Bronfenbrenner, 2005), which considers the complex interactions between the environments in which the child develops: family, school, community, and institutional systems.

7.3. Child Poverty as a Manifestation of Structural Inequality

Child poverty cannot be reduced to a matter of low income - it represents a broader set of deprivations and exclusions: limited access to quality education, poor health services, precarious housing, malnutrition, and the absence of protection from violence. These dimensions define multidimensional poverty, which directly affects a child's ability to realize their potential and achieve social mobility.

Moreover, child poverty is increasingly understood as a social construct, shaped by political and societal choices regarding resource allocation and the functioning of protection systems. In this sense, the lack of systemic interventions and integrated support services is not merely a technical failure, but a form of social injustice.

7.4. The Role of the School: Between Educational Actor and Pillar of Social Protection

The research findings confirm the strategic position of the school in the child's social ecology. Far beyond its traditional educational role, the school is increasingly assuming responsibilities in early detection, parental support, and social intervention. Teachers - through their direct and daily interactions with students - are uniquely positioned to identify forms of vulnerability that are often absent from official records: parental migration, neglect, health issues, or domestic violence. Thus, school becomes a key factor in the early identification and prevention of social risks.

In this context, the school acts as a frontline defence against child vulnerabilities, providing not only educational support but also parental guidance through information dissemination, counselling, educational activities, and thematic workshops - helping to strengthen the relationship between families, communities, and public institutions.

Furthermore, the school plays a crucial role in facilitating integrated interventions, in partnership with the non-governmental sector, to support children and families in difficulty. The programs implemented cover a wide spectrum of needs: combating poverty, supporting children left behind by migrating parents, preventing and addressing violence, health education, early childhood education promotion, and parenting skills development.

At the same time, the school serves as a driver of public and societal accountability regarding child social exclusion. In this respect, child vulnerabilities cannot be addressed in isolation but require a systemic vision, where educational, social, health, housing, and community development policies are aligned and operational within a coherent intervention framework.

7.5. A Systemic Approach – A Prerequisite for Combating Social Exclusion

The effectiveness of such an approach does not lie solely in the implementation of isolated measures, but in the system's capacity to build sustainable mechanisms for prevention and support, capable of breaking the intergenerational cycle of poverty. In this sense, the school becomes both a mirror of social inequality and a bridge between the child, the family, and protection systems - a space with transformative

potential, capable of fostering inclusion and social equity.

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Gender Differences in Using Minecraft for Learning: Insights and Implications for Teaching Practice

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Gender Differences in Using Minecraft for Learning: Insights and Implications for Teaching Practice

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Abstract

The educational use of video games is increasingly promoted in the literature for all levels of education. Minecraft, one of the most popular video games of all time, has already found its place in classrooms around the world. Numerous studies and systematic literature reviews indicated that this video game can be effectively used to master curriculum content, develop skills, and increase students' motivation and interest in learning. Also, Minecraft is perceived as a gender-neutral game that appeals to both boys and girls of various ages. However, research has shown that girls play this game less than boys and that gender is one of the factors influencing the educational experience when this video game is used for learning. Furthermore, the issue of gender differences remains under-researched, and gender is often inadequately analyzed in studies. This paper aims to examine the extent to which gender differences are present in the use and educational effects of Minecraft, as well as to highlight the need for gender-sensitive integration of this game into teaching practice.

Keywords:
game-based learning, gender differences, gender-sensitive integration, Minecraft, technology-enhanced learning, video games in education

1. Introduction

In 2023, while evaluating the submitted applications for the contest "I Love Biology," organized by the Centre for Educational Technology, Didactics' Training, and Career Guidance of Biology Teachers (University of Belgrade, Faculty of Biology), I was pleased to see that one girl presented the topic of biodiversity (including both positive and negative human impacts) through the video game Minecraft. However, the application from this fifth-grade female student prompted me to reflect on the applicability and effectiveness of this video game from a gender perspective since it was actually her younger brother who created the Minecraft content that she showcased in the video.

This paper aims to address two research questions:

RQ1: How does the literature define and analyze the educational potential of Minecraft?

RQ2: To what extent are gender differences present in the use and educational effects of Minecraft?

2. Educational potential of Minecraft

Game-based learning enables experiential learning and active teaching while creating opportunities for collaboration and creativity development (Kersánszki et al., 2024). Accordingly, the use of digital games has become a growing trend in education (Shute et al., 2019; Tablatin et al., 2023), and Minecraft, as one of the most popular video games of all time, is already being used in classrooms around the world (Cigognini & Nardi, 2024; Costafreda Mustelier et al., 2021; Esclamado & Rodrigo, 2024; Nebel et al., 2016).

Minecraft, an open-world video game without an active narrative or predefined strict goals, was created by Markus Persson in 2009 and released by Mojang in 2011 (Al Washmi et al., 2014; Lane & Yi, 2017). In the game, players can build structures out of blocks (similar to LEGO bricks) within a three-dimensional virtual world that is generated at the beginning of gameplay. This virtual world includes various biomes, animals, non-player characters, and monsters, along with day and night cycles (Foerster, 2017; Short, 2012).

Minecraft is available on various devices and can be played individually or online as a multiplayer game (Alawajee & Delafield-Butt, 2021; Dezuanni et al., 2015). In addition to the Survival mode (with different difficulty levels), where players have to gather resources and escape or defend themselves from (nighttime) monsters, there is also the Creative mode that provides unlimited access to resources and does not involve threats from monsters (Anderson et al., 2017; Bos et al., 2014; Foerster, 2017). Beyond these

two main modes, there is also the Adventure mode, which offers specially designed experiences on specific themes, such as solving mysteries or simulations from different fields (Lane et al., 2022).

The Creative mode is considered more suitable for educational use (Bos et al., 2014), and some studies have also used various game modifications to create tailored educational experiences (Al Washmi et al., 2014; Dezuanni et al., 2015; Lane et al., 2022; Vicari et al., 2019). Since 2016, a special version of Minecraft, designed for educational institutions, has been available (Baek et al., 2020; Marrara et al., 2021; Slattery et al., 2025). Minecraft Education is an educational platform and a virtual collaborative learning environment that is based on the popular video game. This version includes certain restrictions compared to the standard version of the game (for example, modifying existing objects or building in specific areas can be disabled), but it also offers new teaching resources and additional features that teachers can use to control the environment (Furukado et al., 2024; Kersánszki et al., 2024; Slattery et al., 2025). For instance, it includes the Code Builder tool that can be used to teach programming within the game itself (Slattery et al., 2025; Voštinár & Dobrota, 2022). Also, the official Minecraft Education website (https://education.minecraft.net) offers pre-made lessons for specific school subjects (Furukado et al., 2024). Additionally, during the COVID-19 pandemic, the Minecraft Education version was widely used in online teaching (Cigognini & Nardi, 2024).

Numerous studies have examined the educational potential and effects of the standard version of Minecraft, modified versions, and the Minecraft Education edition in the classroom (Baek et al., 2020). The main educational benefits of Minecraft come from its game mechanics. In other words, blocks can be arranged to represent various objects and shapes, while the presence of diverse plants and animals allows visualization of different ecosystems and biomes. Moreover, the game can be relatively easily modified (even without programming knowledge) to suit various topics (Nebel et al., 2016).

Systematic literature reviews indicate that Minecraft can be successfully used for mastering curriculum content, developing skills, and increasing students' motivation and interest in learning at all levels of education (Alawajee & Delafield-Butt, 2021; Baek et al., 2020; Slattery et al., 2025). In addition to its use in social sciences and humanities, a significant number of studies focus on natural sciences, specifically the teaching and learning of biology and ecology (Short, 2012; Vicari et al., 2019; Wu et al., 2025), chemistry (Furukado et al., 2024; Short, 2012), physics (Marrara et al., 2021; Short, 2012), mathematics (Al Washmi et al., 2014; Bos et al., 2014; Foerster, 2017; Jensen & Hanghøj, 2020; Kørhsen & Misfeldt, 2015), computer science and programming (Kutay & Oner, 2022; Voštinár & Dobrota, 2022), as well as geography and geology (Costafreda Mustelier et al., 2021; de Sena & Stachoň, 2023; List & Bryant, 2014; Short, 2012). This video game also supports a STEM-based approach to learning (Kersánszki et al., 2024; Lane et al., 2022; Tablatin et al., 2023).

The study conducted with 12 teachers in Canada has shown that Minecraft has the potential to support the development of 21st-century competencies, such as collaboration, communication, creativity, innovation, and critical thinking. However, whether these competencies will actually develop depends primarily on the teachers' decisions regarding how the game would be used in the classroom, and especially on the quality of the designed activities since Minecraft is merely a tool for implementing them. It is also essential that teachers work with students to develop guidelines for appropriate collaboration and communication when using this video game in educational settings (Hébert & Jenson, 2020).

It is important to note that systematic literature reviews (Alawajee & Delafield-Butt, 2021; Baek et al., 2020; Slattery et al., 2025) highlighted that the quality of the analyzed studies is often limited and that generalized claims about the effectiveness of Minecraft in teaching and learning should be approached with caution. Slattery et al. (2025) also pointed out statistical issues in some of the research papers, as well as the fact that a certain number of studies failed to adequately examine gender differences and/or failed to report information regarding this variable.

We should be mindful that the sustainable and purposeful integration of Minecraft in teaching depends on various factors and the teachers' ability to overcome existing barriers. Manahan and Rodrigo (2023) identified first-order and second-order barriers based on their study involving five male and four female teachers (employed in both private and public educational institutions in the Philippines) who completed training on the educational use of Minecraft. First-order barriers include: 1. logistical impediments (such as lack of school computer equipment and/or policies related to the "bring your

own device" concept), 2. lesson scheduling (e.g., lessons in Minecraft often exceed the typical duration of a class period), 3. technical resources (in the case of online teaching, schools need to provide computers that students can borrow), 4. curriculum alignment (available pre-made lessons and Minecraft worlds are not always suitable for achieving the objectives of a specific lesson), and 5. changes in teaching and learning modalities (using Minecraft in a classroom setting differs from using it in online teaching). Second-order barriers include: 1. limited teacher experience (adapting and/or designing lessons in Minecraft requires a certain level of skill and can be time-consuming), and 2. classroom management concerns (due to the limited duration of a class period, it can be challenging to guide students' activities and manage their behavior within Minecraft's virtual worlds). The same authors emphasized the importance of school leadership support in overcoming these barriers, as well as fostering collaboration and networking among teachers who actively use this video game in their teaching (Manahan & Rodrigo, 2023).

3. Gender and the use of Minecraft in education

Minecraft is considered a gender-neutral game, although Alex (the default female avatar) was only added in late 2014/early 2015 (Anderson et al., 2017). Also, it is not possible to create hypermasculine male avatars or hypersexualized female avatars in the game due to the fixed blocky design of the characters, and gender identification is optional, as players can use skins without human characteristics (Potts, 2015).

The game is appealing to both boys and girls of various ages, likely because, in addition to the Survival mode, there is also the Creative mode (Al Washmi et al., 2014; Beavis et al., 2015; Esclamado & Rodrigo, 2024). Moreover, nearly all children who play video games are familiar with Minecraft (Voštinár & Dobrota, 2022). However, a study involving parents (N = 755) of children aged 3 to 12 in Australia has shown gender differences regarding this game. Statistically significantly more boys (54%) than girls (32%) had played Minecraft, according to parents' responses (Mavoa et al., 2017). Similarly, the research conducted by Cigognini and Nardi (2024) found statistically significant gender differences in prior experience with Minecraft, both in the 2019 sample (58% of boys and 25% of girls) and in the 2021 sample (67% of boys and 43% of girls). These differences in prior experience present a significant barrier when integrating Minecraft into teaching, as the lack of prior experience affects students' self-efficacy when using this game for learning (Cigognini & Nardi, 2024). Furthermore, experienced children (typically boys) may dominate competitive or collaborative tasks, or even disrupt and sabotage lessons (Nebel et al., 2016; Voštinár & Dobrota, 2022). For example, de Sena and Stachoň (2023) reported that when testing their prototype of the Minecraft-based game about climate zones with student pairs (aged 15 and 16), the average completion time was 11 minutes. However, the fastest pair finished in just six minutes. This pair consisted of a boy and a girl, but the boy immediately took control of the game, while the girl mostly observed and commented on his play. Similarly, Al Washmi et al. (2014) pointed out that children with extensive prior experience with Minecraft were engaged in behaviors that disrupted and prevented others from playing (such as destroying orientation signs or "killing" teammates), while children without experience needed time to understand the game concept before solving math tasks within it. The authors of this research did not specify the gender of the children with and without prior experience with Minecraft. Additionally, Voštinár and Dobrota (2022) highlighted that if the teacher lacks sufficient authority, then the experienced boys can quickly make the Minecraft environment unusable for instruction by destroying objects and/or building inappropriately.

The study conducted at a summer camp on the topic of renewable energy sources through the use of Minecraft, involving children aged 10 to 16, indicated that girls' interest and participation were minimal, as the camp included 14 boys and only one girl (Kersánszki et al., 2024). Research by Anderson et al. (2017), Ames and Burrell (2017), and Voštinár and Dobrota (2022) also showed that girls were significantly less likely than boys to apply for extracurricular activities that involved the use of Minecraft. However, in the study conducted by Lane et al. (2022), on the potential of using Minecraft to foster interest in STEM, girls' participation in the summer camp exceeded 50% in both 2018 and 2020. The authors emphasized that their goal was to attract girls and members of minority communities, as these groups have been historically underrepresented in STEM fields. The higher participation of girls (55%) was also reported in the research conducted by Kutay and Oner (2022), in which Minecraft was used to teach computational thinking to children from low-income families. It remains unclear why certain extracurricular programs and research projects

struggled to include girls, even when incentive measures and guaranteed spots were in place. To find the reasons, we should start by paying attention to how and where these Minecraft-based extracurricular programs were advertised and how applications were submitted.

Jensen and Hanghøj (2020) conducted six group semi-structured interviews involving a total of eight boys and four girls from a primary school in Copenhagen to examine the effects of using Minecraft in fifth-grade math instruction. In their analysis of the interviews, the authors focused primarily on the boys' positive experiences. Still, they did mention that one girl (Melanie) was unable to identify the mathematical aspects in this video game (Jensen & Hanghøj, 2020). Drawing general conclusions about the benefits and limitations of using Minecraft in teaching/learning based solely or predominantly on the responses and/or results of boys is highly problematic, as it overlooks the experiences of girls. Drastic examples of this can be found in studies conducted by Kørhsen and Misfeldt (2015) and Voštinár and Dobrota (2022), in which no girls were included since none had applied.

Dezuanni et al. (2015) intentionally included only girls in their research. The results of this study have shown that girls can be successful in Minecraft-based school projects, that they are interested in these activities, and that they can enjoy them. However, significant differences were reported in prior gaming experience and knowledge of the game, as well as in playing styles (Dezuanni et al., 2015).

In the study on the impact of Minecraft on vocabulary acquisition in English as a foreign language, no gender differences were found among children aged 9 to 14 (Weisi & Hajizadeh, 2025). Similarly, Esclamado and Rodrigo (2024) also reported no gender differences in learning outcomes regarding Minecraft-based activities made for eighth-grade students in the Philippines. However, this study found that boys explored Minecraft worlds more than girls, that girls benefited more from taking breaks, and that, after completing Minecraft-based activities, boys showed statistically significantly greater interest in STEM fields compared to girls. Importantly, the study revealed that negative emotions (such as boredom and frustration), experienced during the gameplay, had a greater impact on girls than on boys. Boredom, in particular, was found to negatively affect academic achievement (test scores) and interest in STEM. In other words, girls who reported higher levels of boredom explored the Minecraft worlds less, made fewer observations, and scored lower on the tests. Additionally, girls who reported high levels of frustration were less likely to complete tasks and showed less interest in STEM (Esclamado & Rodrigo, 2024). The research conducted by Cigognini and Nardi (2024) also found that statistically significantly more girls than boys perceived educational Minecraft-based activities as boring.

Anderson et al. (2017) pointed out that the use of video games (including Minecraft) for learning purposes is increasingly promoted. However, educational institutions tend to focus solely on how these video games can be utilized for teaching and overlook the fact that they may embed certain systems of thinking about gender and/or race (e.g., through narrative or avatar design). They also emphasized that video games have so-called "metagaming" environments (e.g., fan communities, YouTubers and streamers, publications and merchandise, festivals, conventions, or other local events) that influence identity construction. Minecraft may initially appear to be a neutral space or a "blank canvas" where players have complete freedom to create whatever they want. However, players inevitably bring their own social biases and cultural representations into the game, which is why both the game and its metagaming environment reproduce existing gendered, racial, and intersectional stereotypes. The same authors analyzed 25 YouTube videos and attendees and presenters at the Minefaire convention and concluded that Minecraft's metagaming environment is not gender-neutral and lacks gender balance (as most content creators and attendees were male). They also highlighted ways to prevent this video game and its community from becoming exclusionary spaces for girls and minorities (Anderson et al., 2017).

4. Discussion and Conclusions

Although Minecraft is appealing to both boys and girls (Al Washmi et al., 2014; Beavis et al., 2015; Esclamado & Rodrigo, 2024), research showed that girls tend to play it less frequently than boys and that gender is one of the factors influencing the educational experience when this video game is used in school-related settings (Cigognini & Nardi, 2024; Esclamado & Rodrigo, 2024). Achieving a certain level of competence in playing Minecraft is essential for its successful use in educational contexts (Lane et al., 2022) since a lack of prior experience negatively affects students' self-efficacy when using this game for learning (Cigognini & Nardi, 2024).

It is evident that many extracurricular activities and research projects involving Minecraft struggle to attract girls to participate (see Ames & Burrell, 2017; Anderson et al., 2017; Kersánszki et al., 2024; Kørhsen & Misfeldt, 2015; Voštinár & Dobrota, 2022). Also, gameplay styles and emotional responses can differ significantly between boys and girls (Cigognini & Nardi, 2024; Dezuanni et al., 2015; Esclamado & Rodrigo, 2024). For example, compared to boys, girls' learning can be easily disrupted by negative emotions such as boredom and frustration (Esclamado & Rodrigo, 2024).

Slattery et al. (2025) emphasized that understanding the evidence supporting the use of Minecraft in education is crucial if we want to meaningfully and effectively integrate this video game into teaching practice. Systematic literature reviews suggested that Minecraft can be successfully used at all levels of education to master curriculum content, develop skills, and increase students' motivation and interest in learning (Alawajee & Delafield-Butt, 2021; Baek et al., 2020; Slattery et al., 2025). However, the issue of gender differences remains under-researched, and gender is often inadequately analyzed in the literature (Alawajee & Delafield-Butt, 2021; Esclamado & Rodrigo, 2024; Slattery et al., 2025). Additionally, several studies (see Jensen & Hanghøj, 2020; Kersánszki et al., 2024; Kørhsen & Misfeldt, 2015; Voštinár & Dobrota, 2022) made conclusions about the educational potential of Minecraft based solely or predominantly on the outcomes of boys, which is highly problematic as it disregards the experiences of girls. Some studies also misinterpret certain shortcomings in the integration and/or preparation of activities as flaws of the Minecraft game itself (Alawajee & Delafield-Butt, 2021).

We should be mindful that meaningful integration is crucial for the successful use of Minecraft-based activities in educational settings. Still, only a small number of studies focus on this topic, and almost none address gender-sensitive integration. The gender-specific approach does not necessarily mean separating boys and girls, but rather acknowledging their different levels of gaming experience, knowledge of Minecraft, gameplay styles, and needs (e.g., girls benefit from taking breaks and having time for reflection). Furthermore, including preparatory and trial activities for practice (along with establishing guidelines for collaboration and communication), as well as providing support, guidance, and mentorship for group projects, and emphasizing Minecraft's creative aspects can all contribute to fostering a positive and collaborative learning environment, whether in the classroom or online.

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The Mediating Role of Special Education Preparedness in the Relationship Between Attitudes Toward Individuals with SEN and Attitudes Toward Inclusion

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The Mediating Role of Special Education Preparedness in the Relationship Between Attitudes Toward Individuals with SEN and Attitudes Toward Inclusion

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Abstract

This study examines the mediating role of special education preparedness in the relationship between attitudes toward individuals with special education needs (SEN) and attitudes toward inclusion. We worked with a total of N = 233 Hungarian teachers in Transylvania, from whom information was obtained through self-administered questionnaires. The research was based on a cross-sectional, correlational design. The results show that a higher level of special education preparedness was significantly and negatively correlated with negative attitudes toward individuals with SEN, while a positive correlation was found with more favorable attitudes toward inclusion. The mediation analysis indicates the partial mediating role of special education preparedness in the relationship between negative attitudes toward individuals with SEN and positive attitudes toward inclusion. The practical implications of the results highlight that, during teacher training, special attention should be paid to the integration of differentiated teaching methods, adapted educational practices and empathy development in relation to SEN students, which can foster more favorable attitudes toward inclusion.

Keywords:
attitudes, inclusion, mediation, special education needs, special education preparedness

1. Introduction

The preliminary literature review thus indicates a significant correlation between attitudes toward inclusion, attitudes toward people with special education needs (SEN), and the level of special education preparedness. In the presence of negative belief systems and emotional attitudes, the perceived level of preparedness is likely to be rated lower. Conversely, adequate preparedness is associated with a higher likelihood of a supportive attitude toward inclusive approaches and practices (Alassaf, 2025; Viera et al., 2024), as well as lower levels of prejudice toward individuals who are different (Gal et al., 2025). In this context, special education preparedness may function as a mediating factor in the development of teachers' attitude systems.

Based on this, the objectives of our study can be formulated on several levels. Firstly, we aim to increase the number of scientific studies available on the subject, as a review of the literature shows that few analyses deal with the relationship between special education preparedness, attitudes toward people with SEN, and inclusion in an integrated manner. Although the scientific field addresses each of the above-mentioned areas in a segmented form, studies are less focused on analyzing the overall relationship among them. The main objective of our research is to examine special education preparedness as an explanatory factor in the relationship between attitudes toward people with SEN and attitudes toward inclusion. In terms of methodology, we sought not only to draw conclusions about the correlations between the identified constructs, but also to create and test a theoretical model that would allow us to explore mediating effects. This approach enables us to reflect on the extent to which our results correspond to preliminary theoretical frameworks, while also allowing the current methodological structure to highlight certain pedagogical and psychological explanatory mechanisms more precisely.

From a practical perspective, our research results may indicate the explanatory role of special education preparedness in relation to SEN students and attitudes toward their inclusion and co-education. This allows us to identify risk factors that may hinder the success of inclusive educational practices, thereby providing potential guidance for the development and organization of teacher preparation and training programs.

2. Theoretical foundation

In terms of the conditions for the successful implementation of inclusive education, the literature identifies teachers' attitudes as one of the most relevant factors (Anthos, 2024). In this context, attitudes can be defined as the totality of teachers' convictions, belief systems, emotional patterns, and behavioral manifestations (Kahveci, 2023), which can directly influence how teachers perceive their professional role, their cooperation with students, and their general views on teaching and educational processes and methods (Clinton et al., 2023; Gidlund, 2018).

The formation of an inclusive attitude is greatly influenced by the teacher's basic emotional patterns and attitudes toward diversity and people with SEN (Lyra et al., 2023). Teachers with a more negative view of individuals with SEN are likely to perceive their inclusion in mainstream education as a greater challenge. In contrast, a more positive attitude may favor greater willingness and adaptability in learning about and applying differentiated teaching practices (Levins et al., 2005). This is supported by findings showing that teachers' attitudes toward inclusion can be shaped by their concerns, reservations, and beliefs regarding different types of SEN.

The results indicate more positive emotional patterns in cases of specific learning disorders or other milder developmental differences, while more pronounced negative emotional attitudes are observed in children with neurological developmental problems, which may influence the development of inclusion intentions and pedagogical practices (Linder et al., 2023).

From the perspective of fostering a positive attitude toward inclusion, the level of special education training is also considered crucial (Razalli et al., 2021). Various theories based on competence (Cate et al., 2018) and self-efficacy (Yeşilyurt, 2014) emphasize that professional knowledge, along with sufficient methodological and lexical expertise, can enhance teachers' perceived effectiveness in teaching and educating diverse, heterogeneous groups (Alassaf, 2025; Viera et al., 2024). A correlation can also be identified between attitudes toward people with SEN, attitudes toward inclusion, and special education preparedness. While negative attitudes can reinforce avoidant and non-supportive approaches to preparation and skill development, the acquisition of relevant knowledge and skills may promote greater openness and a more favorable attitude toward people with SEN and their inclusive education (Gal et al., 2025; Yada et al., 2022).

3. Research methodology

3.1. Participants

We used the G*Power program to determine the required sample size. Since our analysis was based on a three-variable multiple linear regression, the ideal sample size was calculated to be 119 individuals, assuming 95% statistical power and a medium effect size. When adjusting to the 80% statistical power commonly applied in the social sciences, with the same effect size, the recommended minimum sample size would be 77 individuals (Goodwin & Goodwin, 2014). The final sample size of our study was N = 233, which exceeds the specified requirements.

All 233 participants were over 18 years of age, worked in Transylvania, were native Hungarian speakers, and carried out their work in Hungarian. The majority of participants were women (89.3%), with the remainder being men. The sample's age range was 24-65 years, with an average of M = 39.5 years (SD = 9.48). Slightly more than half of the respondents (54.9%) worked in urban schools, while the rest were employed in rural settings. The educational distribution of the sample was heterogeneous: most teachers worked in secondary schools (39.5%), followed closely by those teaching in elementary schools (39.1%). A smaller proportion were kindergarten teachers (20.5%), while only a few (0.9%) worked in higher education. The majority of respondents (87.1%) reported having prior experience teaching students with SEN, yet only a small proportion (7.3%) felt fully prepared for such teaching and educational tasks. Furthermore, slightly more than half of the participants (50.6%) indicated that they had received little or no preparation during their university studies for working with SEN students. Beyond the school context, a substantial proportion of respondents (81.1%) also reported prior direct contact and interaction with individuals with SEN.

3.2. Instruments

3.2.1. Demographic Questionnaire

The demographic data sheet included questions regarding teachers' gender, age, place of teaching, educational level, and type of institution. In relation to inclusive education, participants were asked about their previous teaching experience with SEN students and whether they had had direct interactions with them outside of school. Their subjective sense of preparedness for inclusive education of SEN students

was also assessed, along with the extent to which they felt their university studies had prepared them for integration and inclusive teaching practices.

3.2.2. Sentiments, Attitudes and Concerns about Inclusive Education Scale

The self-administered scale examining teachers' attitudes toward inclusion consists of 14 statements and measures four distinct dimensions. It includes subscales on attitudes toward inclusion, concerns about inclusive education, feelings toward individuals with SEN, and fear of becoming disabled. The evaluation process is the same across all four subscales, using a Likert scale ranging from 1 to 4 (1 = strongly agree; 4 = strongly disagree). Both subscale and total scale scores can be calculated by summing the ratings given to the items. Higher scores indicate a more accepting attitude, fewer concerns about inclusion, and a more positive, balanced emotional orientation toward individuals with SEN and disability.

3.2.3. Attitudes and Perspectives Toward Persons with Disabilities Scale

The 9-item self-report measure assesses attitudes toward individuals with SEN and consists of two subscales. One subscale focuses on cognitive attitudes, primarily addressing ways of thinking and general beliefs about individuals with SEN, while the other targets emotional attitudes, capturing affective reactions and experiences directed toward them. The items are rated on a Likert scale ranging from 1 to 5 (1 = not at all characteristic; 5 = completely characteristic), and the scale also includes reverse-coded items. Total scores are obtained by summing responses, with higher scores indicating more negative opinions, beliefs, and convictions about individuals with SEN, as well as stronger negative emotional reactions toward them.

3.2.4. Special Education Preparedness Scale

The 12-item scale was developed to assess teachers' level of special education preparedness. Although it does not include separate dimensions or subscales, its items cover emotional and attitudinal aspects as well as didactic and methodological aspects, thereby providing a comprehensive profile. Items are rated on a Likert scale ranging from 1 to 4 (1 = strongly disagree; 4 = strongly agree). A total score can be calculated by summing the responses, with higher scores reflecting a greater level of special education preparedness.

3.3. Design

According to Adams & Lawrence (2018), cross-sectional, correlational research, which is a non-experimental research design, is characterized by a relatively short time frame, one-time data collection, and no intervention, with the aim of identifying relationships between the variables under study. While the correlational strategy is not suitable for demonstrating causal relationships, its main purpose is to capture the simultaneous presence of different variables or characteristics and to examine their relationships. This study is similarly based on a cross-sectional, correlational strategy, in which we conducted correlation analyses, regression analyses, and mediation analysis. In this process, we examined the relationship between specific predictor and outcome variables, with the presence of a mediating factor. In the model, the predictor variable was attitude toward people with SEN, the outcome variable was attitude toward inclusion, and the mediating variable was the level of special education preparedness.

3.4. Procedure

The research process began with the collection and synthesis of preliminary findings relevant to the topic. Subsequently, we selected the instruments used to measure the designated constructs. In doing so, we placed emphasis on employing tools grounded in the current theoretical frameworks applied in international research, which we adapted to the specific characteristics of the adult Hungarian population in Transylvania.

The questionnaire package included a demographic data sheet, a scale measuring feelings, attitudes, and concerns toward inclusive education, a scale measuring attitudes and perspectives toward individuals with special educational needs, and a scale assessing special education preparedness. Data collection was carried out online over a period of approximately two months. The toolkit was distributed to schools in Transylvania, where we were able to target and involve Hungarian-speaking teachers. The estimated completion time for respondents was 10-15 minutes.

The data processing phase began with cleaning procedures, which resulted in a final sample of N = 233 individuals. Statistical analyses were conducted using IBM SPSS 20, with mediation analysis performed through PROCESS Macro.

4. Results

The data analysis process began with an examination of descriptive statistics and reliability testing. The descriptive statistics include the minimum, maximum, mean, and standard deviation values of the measured variables (Pallant, 2010), along with the skewness and kurtosis values. According to George and Mallery (2019), the kurtosis and skewness indices are considered acceptable if they fall within the range of -2.00 to +2.00. In the present study, skewness values ranged from -.090 to .165, while kurtosis values ranged from -.287 to -.375. These results indicate that the assumption of normality was not violated, and thus the use of parametric tests was deemed appropriate. Further examination of the prerequisites included checking the reliability of the instruments. Since the scales used in the study each had a Cronbach's alpha coefficient above .700, following the recommendations of Tavakol and Dennick (2011), it can be concluded that all three are suitable for the reliable measurement of the psychological and pedagogical constructs they are intended to assess. A summary of the descriptive statistics and reliability indicators are presented in Table 1.

Table 1

Summary of descriptive statistical data and reliability indicators for variables

Variable	N	Min	Max	M	SD	Skewness	Kurtosis	Cronbach alpha
Attitudes toward inclusion	233	25	53	37.150	5.850	.080	-.429	.703
Special education preparedness	233	23	48	34.875	4.716	-.090	-.287	.722
Attitudes toward individuals with SEN	233	9	37	20.596	5.208	.165	-.375	.780

Table 2

Results of correlations between variables

Variable	1	2	3
1. Special education preparedness	-		
2. Attitudes toward individuals with SEN	-.421**	-	
3. Attitudes toward inclusion	.273*	-.344**	-

Notes: ** $p < .01$.

The basic condition for the creation and testability of the mediation model is the presence of statistically significant correlations between the variables that constitute the model (Hayes, 2018). To examine these relationships, we used Pearson's correlation test, conducting analyses between special education preparedness, attitudes toward individuals with SEN, and attitudes toward inclusion. The results are presented in Table 2.

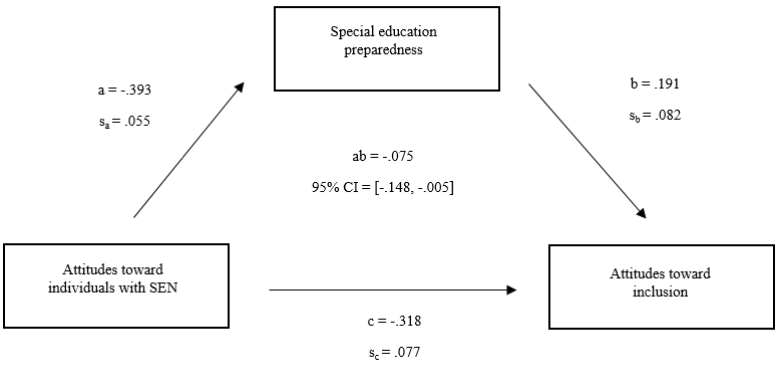
The findings suggest that special education preparedness is significantly and negatively correlated with attitudes toward individuals with SEN ($r = -.421$, $p < .01$). The negative direction of the relationship can be explained by the fact that the scale measuring attitudes toward individuals with SEN assesses negative attitudes, whereas the scale measuring preparedness reflects positive aspects, such as its presence and quality. In this sense, the relationship can be interpreted as follows: teachers with a higher degree of special education preparedness report fewer negative emotions toward individuals with SEN. The reverse of this pattern may also be true, teachers who hold more negative attitudes toward individuals with SEN tend to report lower levels of special education preparedness. Special education preparedness is also significantly and positively correlated with inclusion attitudes ($r = .344$, $p < .01$). This positive relationship suggests that a higher level of special education preparedness is associated with more favorable attitudes toward inclusion. Finally, a significant negative correlation was observed between attitudes toward individuals with SEN and attitudes toward inclusion ($r = -.344$, $p < .01$). Similar to the first case, this negative pattern may be attributed to the specific characteristics of the measurement scales. While higher scores on the attitudes-toward-SEN scale indicate more negative attitudes, higher scores on the inclusion attitudes scale indicate more positive attitudes. Thus, the results suggest that teachers who express more negative attitudes and emotions toward individuals with SEN are also more likely to hold unfavorable beliefs about inclusion.

As a further step in the analysis, a mediation analysis was performed to examine whether a potential mediator plays a partial or full mediating role in the relationship between a predictor variable and an outcome variable (VanderWeele, 2016). In the current model, the assumed mediator is special education preparedness in the relationship between attitudes toward people with SEN and attitudes toward inclusion. For the analysis, we applied a 10.000-bootstrap procedure and used a 95% confidence level

(Fossum & Montoya, 2023). The results were interpreted by examining the direct, indirect, and total effects (Schuler et al., 2022). The mediation model is illustrated in Figure 1.

Figure 1

Special education preparedness as a mediating factor between attitudes toward individuals with SEN and attitudes toward inclusion



Based on the results obtained, it can be stated that attitude toward people with SEN appears as a negative predictor of the perception of special education preparedness (a = -.393, SE = .055). It should be noted that the attitude scale measures negative attitudes, while the preparedness scale measures higher, more significant preparedness, which explains the negative effect. In this sense, more negative attitudes and emotional patterns toward people with SEN are associated with a less favorable perception of special education preparedness. Regarding special education preparedness, it is a statistically significant positive predictor of the formation of inclusion attitudes (b = .191, SE = .082). From a practical perspective, this means that greater special education preparedness predicts a more favorable attitude and more positive beliefs regarding inclusive education. The direct effect is statistically significant and negative, suggesting that attitudes toward people with SEN may influence the formation of positive attitudes toward inclusion not only indirectly but also directly (c = -.318, SE = .077). The indirect effect was also statistically significant (ab = -.075), as the 95% bootstrap confidence interval (95% CI = -.148, -.005) does not include 0. Based on these results, it can be concluded that the level of special education preparedness is a partial mediating factor in the relationship between attitudes toward people with SEN and attitudes toward inclusion.

5. Discussions

In terms of the theoretical framework, it became apparent that attitudes in this context can be interpreted as the sum of teachers' specific convictions, beliefs, emotional patterns, and behavioral involvement. This indicates that attitudes toward inclusion are determined not only by professional knowledge and knowledge-based components but also by various psychological and emotional factors (Kahveci, 2023). These factors can directly influence not only the nature of inclusive educational practices but also cooperation with students (Clinton et al., 2023; Gidlund, 2018).

The results of the research emphasize significant correlations between teachers' supportive attitudes toward inclusion, their special education preparedness, and their positive emotional attitudes toward people with SEN. Specifically, a statistically significant correlation was found between negative beliefs and emotions toward people with SEN and positive attitudes toward inclusive education, consistent with the findings of Lyra et al. (2023). Practically, this indicates that teachers who display more negative attitudes and emotions toward students with disabilities may also be more resistant to the principles and practices of inclusive education. This highlights the importance of addressing emotional components when supporting the formation of inclusive attitudes. Therefore, in addition to expanding teachers' knowledge and professional skills, it is advisable to supplement training programs with components that raise awareness of, and provide strategies for regulating, emotions and prejudices toward others, as well as fostering empathy. In line with Levins et al. (2005), the research shows that individuals with lower levels of negative attitudes toward people with SEN held significantly more favorable views of inclusive practices and pedagogical principles.

Mediation analysis highlights the partial mediating role of the level of special education preparedness in the relationship between attitudes toward persons with SEN and inclusion. Practically, this suggests that increased special education preparedness may be indirectly related to changes in attitudes, potentially reducing negative emotional attitudes toward otherness and promoting a stronger supportive attitude toward inclusion. These results support previous findings (Cate et al., 2018; Razalli et al., 2021), which emphasize the key role of special education, methodological, and didactic competencies in successful cooperation with highly diverse student groups.

6. Conclusions

The practical implications of these findings are relevant to the organization of teacher training programs. It appears that during teacher preparation, it

may be beneficial to place greater emphasis on the targeted integration of differentiated teaching practices, methodological elements, and adapted educational strategies for students with SEN. The impact of this can be assessed not only in terms of the expansion of professional competencies but also in terms of fostering a more positive attitude toward diversity and inclusive education.

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The Power of Rational Thinking: Implementing Group REBT Sessions to Enhance Student Mental Health and Reduce Adolescent Psychological Distress in Educational Settings

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The Power of Rational Thinking: Implementing Group REBT Sessions to Enhance Student Mental Health and Reduce Adolescent Psychological Distress in Educational Settings

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Abstract

This study centers on the implementation of a group intervention utilizing Rational Emotive Behavioral Therapy in two Romanian high schools. Rational Emotive Behavior Therapy (REBT) was formulated by psychologist Albert Ellis in the 1950s as a derivative of cognitive behavioral therapy. The fundamental aim of REBT treatment is to help clients understand and manage illogical ideas and unpleasant emotions that may be causing them psychological suffering. REBT treatment typically addresses anxiety, sadness, stress, aggressiveness, drug addiction, and other psychological disorders. This article's pragmatic and outcome-oriented approach attracts those aiming to improve their emotional and mental health. This project targets 10th grade students from the National College "Traian Lalescu" and the Theoretical High School "Traian Vuia," both located in Reșita, Romania. The intervention in this study comprises four group sessions, each with a duration of 50 minutes. The study incorporated a control group including 10th grade students participating in psychology courses within their academic curriculum. The experimental group consisted of students designated to participate in four group sessions centered on the concepts of Rational Emotive Behavioral Therapy. This study seeks to enhance psychological well-being and alleviate student stress within an academic setting through a psychological intervention using a personal development program grounded in Rational-Emotive and Behavioral Therapy. Rational Emotive Behavior Therapy (REBT) is a psychotherapy method that targets emotional and behavioral challenges to assist individuals in attaining pleasure and satisfaction.

Keywords:
control group, intervention, Rational Emotional Behavioral Therapy, REBT, students

1. Introduction

Rational Emotive Education (REE) is an approach that tries to meet the goals of cultivating critical thinking, problem-solving, and social and emotional competences in students. It is implemented in educational settings with the intention of achieving these objectives. An educational strategy that is based on the ideas of Rational Emotive Behavior Therapy, rational-emotive education (REE) is a preventative educational method that was developed for children and adolescents during important periods of cognitive development (Kabasakal et al., 2020). The REE distinguishes between rational and irrational beliefs in addition to positive and negative emotions. REE classrooms facilitate an examination of the ways in which irrational beliefs impact children's conduct, instill a sense of personal accountability for one's actions, instruct methods to rectify maladaptive behavior, and promote healthy substitutes for detrimental routines (LaConte et al., 1993).

Although the primary objectives of REBT or REE in educational settings for children and adolescents are comparable to those for adults, the particular approaches employed may vary according to student intelligence and cognitive development (Bernard, 2004).

2. Theoretical foundation

Rethinking individuals as substantial, cogent, and goal-oriented beings is the premise upon which rational-emotive behavior therapy (REBT) operates, according to Ellis (1986). Activating Beliefs, Consequences, or ABC, is the foundation of RBT, which aims to enhance emotional state and encourage rational responses to real-world situations. Ellis (1986) argues that the development of irrational beliefs that result in psychological disorders in humans is significantly influenced by biology, according to the relational emotional behavior therapy (REBT) theory. In regard to the formation of the psyche, REBT theory emphasizes the interplay between biological and social factors. An association between tension and irrational beliefs concerning personal experiences is a common occurrence, according to Rational Emotive Behavior Therapy (REBT) (Ellis, 2002). To put it

differently, personal tension is not caused by external circumstances; instead, it stems from the irrational beliefs of the individual, which may include inflexible and illogical concepts or thought processes (Ellis & Bernard, 2006). By utilizing particular techniques, with an emphasis on argumentation techniques, the ABC model elucidates in detail and in an exhaustive manner how one can assist a person who holds irrational beliefs in the process of developing rational ones (Ellis, 2002; Dryden, 1995). According to Ellis (2002), the most efficacious approach to managing and controlling irrational beliefs is to modify the thought process or set of beliefs of the individual. The primary goal of Rational Emotive Behavior Therapy (REBT) is to diminish emotional disturbances, as irrational beliefs are recognized as the main source of stress (Ellis & Bernard, 2006; Vernon, 2004). To achieve this, irrational beliefs must be modified. David et al. (2017) found in their meta-analysis that REBT therapies, encompassing psychotherapy, education, and counseling, are effective for many disorders, irrespective of clinical state, age, or delivery format. Nonetheless, Effect sizes are influenced by the type of control condition. Further research is required to systematically evaluate the mechanisms of change in REBT and to test the associated change theory. The efficacy of REBT in reducing irrational beliefs was not influenced by the kind of intervention, including psychotherapy, educational activities, or counseling. This may result from the uniformity of REBT's scope and methodologies, which seek to alter the same categories of irrational beliefs irrespective of clinical condition or disease. David et al. (2017) found that certain REBT sessions aimed at distinct groups were equally effective, as the clinical state of the participants did not moderate the outcomes. In comparison to a control group, REBT had high effect sizes for distress and academic performance at posttest, and medium effect sizes for anger, behavioral outcomes, depression, emotional outcomes, health outcomes, and quality of life at posttest. Nonetheless, little yet notable effect sizes were produced for anxiety, cognitive results, and many other outcomes at posttest, as well as for quality of life at follow-up. The quality of the studies adversely predicted effect sizes at post intervention and follow-up, a result corroborated by earlier meta-analyses of cognitive-behavioral therapy.

Gonzales et al. (2004) and Engles et al. (1993) discovered that study quality did not have a statistically significant correlation with treatment efficacy, indicating no distinction between well-executed and poorly executed research. The reduced effect sizes observed in REBT may be attributable to the implementation of more rigorous studies that effectively controlled for investigator allegiance bias. The attenuated effect sizes observed in REBT may be ascribed to the implementation of more rigorous studies that meticulously controlled for investigator allegiance bias. This is particularly pertinent given that such bias has been empirically demonstrated to inflate effect sizes. Trip et al. (2007) conducted a quantitative meta-analysis demonstrating that Reactive Emotional Emotion (REE) strongly influences several factors, including unpleasant emotions, actions, and illogical beliefs. To fully realize the promise of REE, enhancements in research, high-caliber studies, and standardized methodological criteria—such as clinical evaluation, protocol adherence, clinical significance, follow-up data collecting, and participant attrition—are essential.

Clark (2000) argues that the majority of individuals' thoughts and internal monologues can be identified as having originated during their young adulthood. Their social circles, parents, and other relatives, as well as the media, undoubtedly exerted an influence on them during this period. The formation of both rational and irrational attitudes is substantially impacted by a variety of factors. Several elements contribute to this, such as early life activities, interpersonal relationships, and media exposure. Significant environmental factors exert a substantial influence on the formation of belief systems. Among these are the effects on society, the media, and the family unit. Furthermore, individuals' perspectives are influenced by their life circumstances and the surroundings in which they reside, in addition to their inherent tendencies (Clark, 2000).

Rational Emotive Behavioural Therapy and Rational Behavioural Education are deployed with the aim of fostering enduring satisfaction. In accordance with the three fundamental categories of mental processes associated with individuals, REBT intervention centers on thoughts, feelings, and behaviors. By means of interactive activities such as games and narratives, rational-emotive behavioral education programs educate individuals on the ways in which illogical and inferential reasoning affects their emotions and behavior. The impact of cognitions on behavior and emotions is heavily emphasized across all aspects of the curriculum in rational emotional behavioral education. In light of various challenges, parental rejection, taunting, academic setbacks, criticism, unjust treatment, or academic failure, children and adolescents of the same age may exhibit

varying degrees of adaptive and maladaptive emotions and behaviors. Further investigation of the affective attributes of pupils in educational contexts is crucial, as emphasized by Rogers and Saklofske (1985). Academic performance and learning are significantly influenced by intrapersonal noncognitive variables, according to Boyle (1987). Significant differences in how pupils react to the same incident in school and other contexts are acknowledged by Rational Emotive Behavior Therapy (DiGiuseppe, 1990).

The meta-analysis done in a prior report by the research team on logical Emotive Behavior Therapy (REBT) demonstrates considerable effects on numerous variables, including emotions, anxiety, logical beliefs, and academic performance. Nonetheless, the constraints of REBT studies require attention, and rigorous research should be undertaken. The meta-analysis reveals that REBT therapy, encompassing educational or counseling interventions, can effectively diminish anxiety in children and adolescents. Nonetheless, further study is required under the contemporary skill or accomplishment framework, emphasizing the rationality of children and adolescents. David et al. (2017) also found that Reactive Emotional Emotion (REE) treatments work for a wide range of illnesses, regardless of the person's clinical state, age, or delivery method. The control state does have an effect on Effect Size, though. More study is needed to look into how change happens in REBT and to test the idea that goes with it. Gonzales et al. (2004) and Engles et al. (1993) both found that internal validity was not significantly linked to treatment effectiveness. The reduced effect sizes observed in REBT may be attributable to the implementation of more rigorous studies that effectively controlled for investigator allegiance bias. The attenuated effect sizes observed in REBT may be ascribed to the implementation of more rigorous studies that meticulously controlled for investigator allegiance bias. This is particularly pertinent given that such bias has been demonstrated to inflate effect sizes Gonzales et al., (2004). Trip et al. (2007) discovered that REE has a big effect on things like bad feelings, actions, and views that don't make sense. To fully achieve REE's promise, research needs to get better, studies need to be of higher quality, and methodological standards need to be defined. Also, things like how people felt about school or how motivated they were to learn weren't looked at as much in the studies that were part of the metaanalysis.

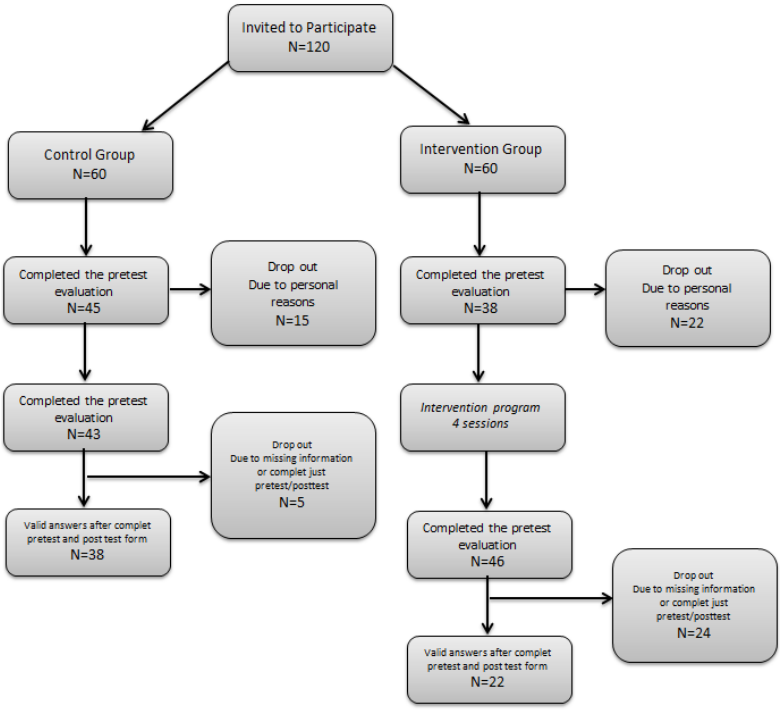
3. Research methodology

The research employed a quasi experimental design, utilizing a pre-test and post-test control group design. The objective of this research is to assess the effectiveness of REBT intervention in high school students by improving psychological well-being and reducing stress within an academic environment. This will be achieved via a psychological intervention in the form of a personal development program that is rooted in Rational-Emotive and Behavioral Therapy. Rational Emotive Behavior Therapy (REBT) is a psychotherapy method designed to address emotional and behavioral challenges, facilitating individuals in attaining happiness and fulfillment in their life.

3.1. Participants

Figure 1

Flow of participants included



The research included 120 tenth-grade students from 4 different classrooms from 2 different high schools located in the western region of Romania (Graph 1). Two classrooms from each school. One classroom from each high school served as the control group, and the other as the treatment group. Making up a total of 2 control groups and 2 treatment groups. All classrooms participating in the research were focused on science, and included one psychology class each week in the curriculum. In the treatment groups the psychology class was replaced by REBT interventions, administered by a psychologist with a degree in education. In contrast, the control groups attended normal psychology lectures as per usual.

3.2. Instrument

- *The General Attitudes and Beliefs Scale* (GABS), comprising 26 items based on REBT approach, designed to assess rationality and irrationality, additionally incorporates the following dimensions of evaluation: self worth, need for achievement, need for approval, need for comfort, need for righteousness, and global assessment of others. A Cronbach alpha reliability analysis revealed a reliability coefficient of .490 on rationality, .669 on irrationality, .577 on self worth, .700 on need for achievement, .594 on need for approval, .537 on need for comfort, .720 on need for righteousness and .533 on global assessment of others.

- *Depression and Anxiety Scale 21* (DASS 21) containing 21 items to measure students' depression, anxiety and stress levels. The reliability analysis utilizing Cronbach's alpha indicated a reliability value of .822 on depression, .680 on anxiety and .766 on stress.

- *Attitudes towards school(ATS),* including 9 items, was utilized to assess students' affect items, behavioral intention items, and cognition items using a five-point Likert scale. The reliability analysis utilizing Cronbach's alpha indicated a reliability value of .171 for affect items, .670 behavioral intention items and .565 for cognition items.

- *The Learning Motivation (LM)* scale has 21 questions designed to evaluate students' levels of learning motivation in order to assess extrinsic motivation, introjected regulation, motivation identified regulation, motivation intrinsic regulation. This scale utilized a five-point Likert format. Reliability analysis using Cronbach alpha showed .710 on extrinsic motivation, .630 on motivation introjected regulation, .572 motivation identified regulation and .541 on motivation intrinsic regulation.

3.3. Privacy and Withdrawal

In order to maintain the confidentiality of the responses, a unique code was used. This code includes the initials of the first and last name, along with the day and month of birth. The identification code was used to securely associate the pretest with the post-test assessment, in order to ensure the confidentiality of the participants, and consistency in evaluating the results. Participants may revoke consent and terminate participation at any moment without incurring any adverse repercussions.

3.4. Intervention program

This research implemented a Rational Emotional Behavioral Therapy group intervention in two Reșita high schools in Caraș-Severin county. The programs outlined by Ellis et al. (1997; 2006) were adapted to consist of four sessions, each lasting 50 minutes, for Romanian participants. This research investigates the REBT intervention, which seeks to assist participants in comprehending and regulating irrational beliefs and negative emotions that may contribute to psychiatric distress. This study included four group sessions, each lasting 50 minutes, for the intervention.

3.4.1. Session 1

Session topic: Group Initiation and Fundamentals of REBT

Session Description: Introduction to the program, using the lecture in order to clarify the principles of Rational Emotive Behavior Therapy as well as its operational mechanisms, a cognitive-behavioral methodology aimed at enhancing self-concept and self-esteem.

Objectives of the session:

- Creating a safe space for participants to form a group;
- Introducing participants to the fundamental concepts of REBT;
- Introducing the participants to the notions of self-esteem from a cognitive-behavioral point of view;
- Improving self-esteem.

3.4.2. Session 2

Session topic: Deconstructing the ABCs of Emotion. A brief analysis

Session Description: The second session focused on the distinction between rational and irrational beliefs. Students were employed in circumstantial recognition for an activating event (A), irrational (B), and emotional and behavioral consequences (C). Students must completed at least one given ABC worksheet.

Objectives of the session:

- Familiarizing students with primary and complex emotions at a theoretical level;
- Exploring their own irrational beliefs starting from an activating event relevant to them;
- Diminishing at least one irrational belief.

3.4.3. Session 3

Session topic: Anxiety, Academic Expectations, and Coping with Irrational Thoughts: Navigating the World of Students

Session description: In the third session, irrational thoughts were emphasized, but also academic expectations and their connection with anxiety. A cognitive/behavioral approach to anxiety reduction and functional coping strategies in anxious situations.

Objectives of the session:

- Familiarizing students with anxiety at a theoretical level;
- Exploring the irrational thoughts-school attitudes-anxiety link;
- Exploring coping strategies that can be used by students.

3.4.4. Session 4

Session topic: Empowering Change: Mastering Problem Solving and Challenging Irrational Beliefs

Session Description: During the fourth session, we discussed exposure to in vivo home tasks and continued to practice using REBT concepts. At the end of each session, new in vivo exposure activities were created for students, and these exercises were based on individuals' unique hierarchies.

Objectives of the session:

Familiarizing students with problem-solving strategies;

- Diminishing at least one irrational belief;
- Summary of the 4 sessions;

Asking for a framework that gives students finality about the program.

4. Results

Table 1 presents the mean, minimum, maximum, standard deviation, and the difference between the control and intervention groups in the pre-test and post-test of The General Attitudes and Beliefs Scale.

Table 1 demonstrates a significant decrease on the Global Assessment of Others scale, from pre-test to post-test *(moment: F(2,48)=6.01, p=.02, p<.05, group: F(2,48)=.02, p=.89*). However, the decrease is present only in the intervention group with pre-test scores of 9.23 and post-test scores of 7.94, whereas the control group showed no substantial change, with pre-test scores of 8.95 and post-test scores of 8.37.

We also found a marginal effect of the intervention on the Need for Righteousness (*moment:(2,48)=2.83, p=.10, group: F(2,48)=3.64, p=.06*), with the intervention group scoring lower levels as compared with the control group. The two groups were more similar in the pre-test (intervention group mean = 12.87, control group mean = 13.95), as compared with the post-test (intervention group mean = 11.65, control group mean = 13.68).

Table 2 shows a significant difference on Anxiety between the intervention group and control group (*F(2,48) = 6.42, p = .02, p< .05*), with the intervention group scoring higher levels intervention group mean = 10.37) compared with the control group (control group mean = 6.71) in the pre-test.

Table 3 displays the mean, minimum, maximum, standard deviation, and the difference between the control and intervention groups in the pre-test and post-test of Attitudes towards school. Table 3 indicated that no significant differences were observed between the control and intervention groups across any variable.

Table 4 displays the mean, minimum, maximum, standard deviation, and the difference between the control and intervention groups in the pre-test and post-test of The Learning Motivation. Table 4 demonstrated that no significant differences were detected between the control and intervention groups for any variable.

Table 1

Descriptive statistics and mixed ANOVA results for Gabs

			Descriptive statistics					Mixed ANOVA results		
Variable	Moment	Group	N	Min	Max	m	SD	Effect	F	p
Rationality	Pre-Test	Int	31	6	20	15.29	3.17	Moment (within)	.86	.36
		Ctrl	19	9	19	14.74	2.66	Moment*Group	.54	.47
	Post-test	Int	31	8	20	15.19	2.90	Group (between)	3.64	.06
		Ctrl	19	8	19	13.89	3.01			
	Pre-Test	Int	31	40	101	65.71	14.65	Moment (within)	2.10	.15

Irationality		Ctrl	19	39	91	70.32	13.63	Moment*Group	.66	.42
	Post-test	Int	31	32	95	60.84	14.68	Group (between)	3.03	.09
		Ctrl	19	45	104	68.95	15.02			
Self worth	Pre-Test	Int	31	4	16	9.90	3.11	Moment (within)	2.71	.11
		Ctrl	19	4	17	11.26	4.05	Moment*Group	.19	.67
	Post-test	Int	31	4	18	9.26	2.72	Group (between)	1.99	.17
		Ctrl	19	4	20	10.16	3.64			
Global assessment of others	Pre-Test	Int	31	6	15	9.23	2.06	Moment (within)	6.01	.02
		Ctrl	19	3	13	8.95	2.85	Moment*Group	.87	.36
	Post-test	Int	31	3	14	7.94	2.22	Group (between)	.02	.89
		Ctrl	19	4	12	8.37	2.36			
Need for righteousness	Pre-Test	Int	31	7	20	12.87	3.20	Moment (within)	2.83	.10
		Ctrl	19	9	19	13.95	2.71	Moment*Group	1.18	.28
	Post-test	Int	31	6	20	11.65	3.18	Group (between)	3.64	.06
		Ctrl	19	6	20	13.68	3.57			
Need for comfort	Pre-Test	Int	31	5	20	11.84	3.42	Moment (within)	.02	.90
		Ctrl	19	5	15	12.32	2.56	Moment*Group	1,53	.22
	Post-test	Int	31	5	19	11.13	3.19	Group (between)	2.17	.15
		Ctrl	19	4	19	12.89	3.23			
Need for approval	Pre-Test	Int	31	3	15	8.29	2.59	Moment (within)	.14	.72
		Ctrl	19	3	14	9.63	2.58	Moment*Group	.35	.56
	Post-test	Int	31	3	14	8.39	2.71	Group (between)	2.58	.12
		Ctrl	19	3	15	9.21	3.24			
Need for achievement	Pre-Test	Int	31	7	20	13.58	3.53	Moment (within)	.513	.48
		Ctrl	19	9	20	14.21	3.32	Moment*Group	2.59	.11
	Post-test	Int	31	6	19	12.48	3.35	Group (between)	5.60	.11
		Ctrl	19	8	20	14.63	3.14			

Table 2

Descriptive statistics and mixed ANOVA results for Das21

			Descriptive statistics					Mixed ANOVA results		
Variable	Moment	Group	N	Min	Max	m	SD	Effect	F	p
Anxiety	Pre-Test	Int	19	5	19	10.37	4.806	Moment (within)	0.52	0.48
		Ctrl	31	0	14	6.71	5.013	Moment*Group	1.32	0.26
	Post-test	Int	19	1	19	9.11	4.806	Group (between)	6.42	0.02
		Ctrl	31	1	21	7.00	5.013			
Depression	Pre-Test	Int	19	1	17	9.95	3.961	Moment (within)	0.14	0.71
		Ctrl	31	1	19	7.19	4.197	Moment*Group	0.35	0.56
	Post-test	Int	19	1	19	9.37	5.356	Group (between)	0.14	0.71
		Ctrl	31	0	20	7.32	5.363			
Stress	Pre-Test	Int	19	3	20	12.26	4.994	Moment (within)	0.45	0.50
		Ctrl	31	1	19	8.55	5.089	Moment*Group	3.21	0.08

	Post-test	Int	19	2	21	10.84	4.705	Group (between)	3.21	0.08
		Ctrl	31	1	19	9.19	4.549			

Table 3

Descriptive statistics and mixed ANOVA results for attitudes towards school

Variable	Descriptive statistics							Mixed ANOVA results		
	Moment	Group	N	Min	Max	m	SD	Effect	F	p
Cognition	Pre-Test	Int	19	4	10	6.47	1.54	Moment (within)	2.47	.12
		Ctrl	31	4	9	6.16	1.46	Moment*Group	.90	.39
	Post-test	Int	19	5	9	6.32	1.20	Group (between)	.76	.39
		Ctrl	31	3	8	5.61	1.30			
Behavior	Pre-Test	Int	19	6	12	9.79	1.68	Moment (within)	.82	.37
		Ctrl	31	6	13	9.48	1.56	Moment*Group	.23	.63
	Post-test	Int	19	7	13	10.11	1.48	Group (between)	1.12	.30
		Ctrl	31	7	14	9.58	1.50			
Affect	Pre-Test	Int	19	11	15	13.16	1.25	Moment (within)	3.09	.09
		Ctrl	31	8	19	12.55	2.37	Moment*Group	.14	.72
	Post-test	Int	19	5	18	12.32	2.70	Group (between)	.14	.71
		Ctrl	31	9	15	12.00	1.36			

Table 4

Descriptive statistics and mixed ANOVA results for Motivational learning

Variable	Descriptive statistics							Mixed ANOVA results		
	Moment	Group	N	Min	Max	m	SD	Effect	F	p
Introjected motivation	Pre-Test	Int	31	9	30	21.90	5.83	Moment (within)	.10	.76
		Ctrl	19	9	30	22.79	5.24	Moment*Group	.13	.73
	Post-test	Int	31	13	30	21.97	4.65	Group (between)	1.86	.19
		Ctrl	19	9	30	22.00	5.78			
Intrinsic motivation	Pre-Test	Int	31	7	25	16.03	4.60	Moment (within)	.20	.66
		Ctrl	19	11	20	16.47	3.16	Moment*Group	.28	.60
	Post-test	Int	31	10	24	16.06	3.44	Group (between)	.12	.73
		Ctrl	19	6	20	15.11	4.33			
Identified motivation	Pre-Test	Int	31	10	25	18.81	4.18	Moment (within)	.04	.84
		Ctrl	19	8	24	19.00	3.81	Moment*Group	.01	.91
	Post-test	Int	31	11	25	18.74	4.12	Group (between)	.07	.79
		Ctrl	19	7	25	18.79	4.61			
Extrinsic motivation	Pre-Test	Int	31	5	25	14.84	5.65	Moment (within)	1.08	.30
		Ctrl	19	5	24	16.47	6.30	Moment*Group	1.19	.29
	Post-test	Int	31	5	25	14.81	4.75	Group (between)	.07	.79
		Ctrl	19	5	25	17.00	6.25			

5. Discussions

The aim of this research was to examine the impact of Rational Emotive Behaviour Therapy (REBT) on irrationality, general attitudes and beliefs, learning motivation and attitudes towards school among Romanian high school students using a four-session intervention program based on REBT principles, targeting 10th-grade students in two Romanian high schools. The findings indicated that the REBT intervention had marginal effects on certain irrational attitudes and beliefs, such as the need for righteousness and global assessments of others, with no effect on learning motivation or attitudes towards school.

We found that only 2 out of 6 irrational scales (i.e., Global Assessment of Others, and Need for Righteousness) changed following the REBT intervention. We will discuss each result separately. The global evaluation of others describes the way individuals generally evaluate and judge others (David et al., 2010). The global assessment of others among teens is shaped by peer comparisons, cultural expectations, and the broadening of social networks, resulting in detrimental self-evaluations and harmful interactions. High school pupils are often influenced by their peers and society norms. During early adolescence, young individuals encounter diverse peer associations—both good and negative—as they generally expand their social circles (Brighton, 2007). Unconditional acceptance/ assessment of Others serves as the rational counterpart to self-acceptance, acknowledging that individuals' fallibility and imperfections must be embraced (David et al., 2010). The results regarding the decrease of global assessment of others are consistent with results reported by Cristea et. al (2008). REBT assists adolescents in diminishing their Global Assessment of Others by confronting irrational beliefs, promoting emotional control, boosting self-esteem, and cultivating empathy, resulting in a reduction of Global Assessment of Others post-interventions. This may affect their evaluation of peers and their ethical judgments (Nawa et. al. 2024).

The need for righteousness details one's need to perceive the self and others as moral and virtuous (Davies, 2008). When they reach the highschool age, teenagers begin to grow morally, internalizing societal norms and developing a sense of appreciation for justice and fairness. (Kohlberg, 1973). This phase aids students in comprehending the significance of these values in preserving societal order (Kohlberg, 1958). Teenagers cultivate abstract reasoning, allowing them to comprehend fairness in interpersonal interactions and societal contexts (Murray, et. al., 1979). REBT promotes self-reflection, augmenting students' self-awareness and comprehension of their values, particularly the significance of fairness in their relationships. Cognitive and emotional transformations heighten awareness of equality and intensify the need for justice when students use these ideas in their everyday endeavors. The decrease of the need for rightness among students after a REBT program can be attributed to the cognitive and emotional restructuring enabled by the REBT approach. The program used in this study, particularly in sessions 3 and 4, assisted students in identifying and challenging irrational beliefs, resulting in generating improved rational thought and emotional regulation. Through the reorganization of their ideas and emotions, students cultivate a more equitable viewpoint, diminishing the stringent insistence on justice and righteousness.

The minor improvement of the intervention on rationality or irrationality did not have a significant effect on attitudes towards school nor on learning motivation. Attitudes towards school and learning motivation in students are influenced by factors like family environment, relationships, personal interests, and intrinsic motivations. Although these attitudes are generally independent of rationality or irrationality, and can be shaped by past experiences and perceptions (Al-Hassan et. al, 2024), the current study findings suggest that behavioral attitude, identified regulation, and intrinsic regulation are not correlated with rationality or irrationality, since they evaluate different characteristics of human behavior and cognition. Introjected motivation, influenced by internal factors like guilt or worry, showed a significant correlation with both rationality and irrationality. This indicates that internal influences may affect both rational and irrational ideas. Affective items, behavioral purpose items, cognitive items, and extrinsic motivation have significant correlation with irrationality, indicating the influence of emotional disturbances and external influences. Despite these correlations and expected effects, the research indicates no significant changes in control group in the control group across any subscales of learning motivations (affective items, behavioral intention items, and cognitive items) or attitudes towards school (extrinsic motivation, introjected regulation, identified regulation, intrinsic regulation) following to the REBT session.

The absence of significant changes following the intervention may be attributed to the sensitivity of the measures or the length of the intervention. These

results are consistent with results found by Kachman (1990). Kachman (1990) suggested that, in order to improve the external validity of this study, it is recommended that the experiment be conducted with a sample from a public school system. Also the efficacy of the intervention with subjects from lower socioeconomic backgrounds and with a broader spectrum of intellectual and attainment levels would be supported by a study that utilized more representative samples (Kachmann, 1990). In our study, despite the intervention being implemented inside a public school system, the participants came from an upper-middle class background. Thus while the study does indeed take the public school system side of Kachman's suggestion, it fails to reach his suggested socio-economic class of desired participants.

Furthermore, attitudes towards school or learning motivation for minor improvements did not have a significant effect. This may occur because 10th-grade students are not subjected to final examinations, or due to the fact that the two high schools involved in the present research are the most prestigious in the region.

6. Conclusions

In conclusion, while the groups initially exhibited similarities, the interventions implemented have led to varying outcomes. This suggests a potential necessity for more tailored and individualized strategies within treatment programs. Subsequent research has the potential to elucidate these disparities and enhance the effectiveness of interventions tailored to each demographic.

6.1. Future Directions

Implementing longitudinal research may yield a more profound comprehension of the evolution of these factors and their interactions across time. This would aid in evaluating the sustained efficacy of the program.

Subsequent study may examine additional variables that could affect the outcomes such as generalized anxiety, school motivation or self concept. Incorporating a wider array of components may yield a more thorough comprehension of the underlying dynamics.

6.2. Limits

The present study contains several limitations that might be changed to enhance further research:

- Sample Size: Despite the random assignment of students to control and experimental groups, the overall numbers in both groups were not substantial. When sample sizes are minimal, there is insufficient power to identify a difference.
- Emotions of the student in the sample: The sampling process may have encountered an issue, as the experimental group had a substantially higher level of anxiousness compared to the control group.
- The submission of responses: Due to the code employed to protect participant confidentiality, certain assessments could not be included since the student did not submit the identical code.
- Profile of the high school: Both institutions are situated in urban locales and serve academically proficient students with strong educational backgrounds.
- Program length: The four sessions, each lasting 50 minutes, may not have been adequate to provide a significant effect.
- Short-Term Analysis: The study's emphasis on short-term effects may neglect long-term consequences. Longitudinal studies are essential to evaluate the enduring impact of the intervention across time.
- External Factors: Unregulated external variables may have impacted the outcomes. Subsequent study should endeavor to regulate these variables to more precisely isolate the intervention's effects.

By overcoming these constraints and adhering to the proposed future directions, researchers might enhance the existing findings to create more effective and focused therapies, ultimately resulting in improved outcomes for the populations under study. The current results of this indicate that REBT interventions are efficient on general beliefs and attitudes.

Authors note:

Ana-Maria Eugenia Jura (Ph. D. Student) has developed a sustained academic and practical interest in the intersection of education, psychology, and personal development. Her work explores how educational practices can be optimized through integrative counseling approaches, with a particular focus on the role of self-esteem in adolescent development and the shaping of personality during childhood. She has investigated the cognitive and psychological dimensions of transdisciplinary frameworks, especially as they apply to both educational and therapeutic contexts. More recently, she has contributed to innovative approaches in vocational education and staff development, with attention to enhancing employability among vulnerable populations. Throughout, her work reflects

a sustained concern with the evolving nature of decision-making in educational and social systems, balancing traditional insights with emerging methodologies.

Laurențiu Maricuțoiu (Ph.D.) is Professor at the West University of Timișoara. In his studies, Professor Maricuțoiu investigated self-regulation mechanisms in the general population and in the education system. He focused on how these self-regulation mechanisms are relevant for one's self-worth and psychological well-being. Following some early meta-analyses on interventions on employee burnout or on employee engagement, he focused his studies on how both students' and teachers' well-being develops and evolves in the classroom. He published longitudinal studies on the mechanisms of students' well-being, in which he analyzed how performance feedback impacts students' well-being, how students adapt to negative performance feedback, or how students' well-being is predicted by within-student fluctuations of self-efficacy.

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Educational Integration Strategies for Children in Foster Care – Insights for Professionals

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Abstract

Foster children in residential care centers encounter significant barriers to socio-educational integration. This study investigates these challenges, identifies the services and resources necessary to improve academic outcomes, and integrate insights from professionals with evidence from international best practices. Employing a qualitative design - including interviews with seven specialists, analysis using the Atlas.ti software, and a systematic literature review - the research examines the professionals' perspective about educational experiences of students in foster care. Based on these findings, the study proposes targeted strategies to enhance their integration into the educational system and promote their long-term social inclusion.

Keywords:
students in foster care, foster care centers, integration strategies, school integration

1. Challenges and barriers to school integration for children in residential centers: a literature review

Research consistently shows that students living in foster care exhibit the highest levels of vulnerability regarding both social and educational integration (Zetlin, 2006; Zetlin, MacLeod, & Kimm, 2012; Frerer et al. 2013; Morton, 2019; McDowall, 2018; Rădăcină, 2022). Based on the analysis of reviewed research, two main tendencies emerge in the research on educational difficulties that characterize the most significant challenges of school integration for children in residential care. The first approach explains these vulnerabilities in terms of individual and familial factors. These manifest in adverse situations like abuse, trauma, poverty, unmet needs, and attachment difficulties resulting from the absence of a consistent caregiver (Sebba et al., 2017; Berardi & Morton, 2017). A second line of interpretation links educational difficulties to contextual factors related to the broader educational and social environment. Studies emphasize that the circumstances leading to placement, as well as the frequent transfers between care facilities, profoundly affect these children's ability to concentrate, learn, and actively participate in classroom activities (Evans & McCann, 2020).

The literature repeatedly highlights the importance of understanding the educational trajectories of students in residential care, particularly in the context of their social histories, which are often marked by many instances of abuse, deprivation, and trauma. These factors have direct effects on the cognitive, social, and emotional development of children (Berardi & Morton, 2017; Maté, 2011; Morton, 2019). Such effects frequently manifest as difficulties with school integration and, in various cases, academic failure (McDowall, 2018).

Difficulties in school integration are sustained not only by developmental issues rooted in the adversities these children have faced, but also by the lack of specialized socio-educational services and by stigmatization from peers and teachers. Stigmatization is strongly associated with low expectations. Caregivers and teachers often display a lack of confidence in the abilities of students in the child protection system, which in turn fosters low self-expectations and poor academic outcomes among this group of students (CREATE Foundation, 2017; Harvey et al., 2015).

Thus, many times the educational experiences of these students are characterized by low academic achievement, high levels of absenteeism, frequent school changes, deviant behaviors within the school environment, and low graduation rates (Cashmore et al., 2007; National Working Group on Foster Care and Education, 2014; SOS Satele Copiilor, 2020; Frerer et al., 2013; Rădăcină, 2024). Their promotion and graduation rates are lower starting from middle school, and their scores on standardized assessments are generally lower than those of other students (Frerer et al., 2013).

These challenges manifest throughout the school years and give rise to difficulties related to academic skills, self-regulation, behavioral problems, and health conditions closely associated with the stress resulting from neglect and abuse. As a consequence, school failure is observed among a significant proportion of children in institutional care (Rutman & Hubberstey, 2016).

However, research has also identified a group of students raised in residential care who have achieved outstanding academic results. Usually, these individuals are successful university graduates.

Supportive relationships with adults, resilience, consistency, and high aspirations are key factors that have contributed to their educational success. A stable place of residence and consistent school attendance during the final years of study are also important sources of support for their school integration (Lund & Stokes, 2020).

In the context where successful school integration serves as a foundation for future professional and social inclusion, it is evident that all necessary resources should be invested in understanding the barriers that hinder academic success and in ensuring the right to equitable education for students from residential care settings.

2. Research

2.1. Research scope and questions

2.1.1. Research scope

This study brings attention to the challenges that arise in the process of school integration and to identify methods that can enhance the chances of academic success for children living in residential foster care centers, from the perspective of professionals working within these institutions.

2.1.2. Research questions

1. What challenges are encountered in the school integration process of children from foster care centers?

2. What methods increase academic achievement for children in foster care?

2.2. Description of the sample and research methods

To address the research questions, an initial literature review was undertaken to examine the fundamental characteristics and internationally recognized approaches relevant to the topic. Subsequently, 36 interviews were conducted with children and young people aged 7 to 21 from four residential foster care centers in Transylvania, along with seven professionals employed in these institutions. The present study focuses only on the 7 interviews with professionals. All ethical procedures approved by the General Directorate of Social Work and Child Protection were observed throughout the data collection process. Data were analyzed through qualitative content analysis. A coding system was applied whereby each interview was labeled with the prefix "I" followed by the interview number and an identification code assigned to each participant. The analysis was conducted using *Atlas.ti* software.

2.3. Sampling

The respondents were selected using both convenience and purposive sampling, based on availability and willingness to be interviewed. The professionals - social workers, educators, and directors - were between 25 and 55 years of age and had at least five years of experience in the field.

3. Research results

3.1. Insight from professionals: school integration for children in foster care centers and socio-educational approaches

In the course of the research, seven professionals (social workers, educators, and center directors) working in residential foster care centers were interviewed. They emphasized the importance of investing in the school education of children in care and provided an overview of the children's current educational situation.

Depending on the type of residential center, professionals highlighted the children's academic performance as well as the difficulties they face in the school environment.

> "The school performance of children from the center is generally in the medium to low range. They experience difficulties in acquiring new knowledge, sometimes struggle with adapting to school tasks, integrating into the group, and expressing their own opinions, ideas, or information in front of their peers." (I1)

> "When they attend school, they often disrupt the class and may be sent back to the center. They frequently offend teachers, disturb lessons, and are unable to tolerate having attention drawn to them, which often leads to situations escalating in other directions." (I3)

According to professionals working in residential care centers, the academic performance of

institutionalized students varies depending on the type of center and from student to student. In public centers in particular, low academic performance is predominant. As noted by the students themselves, there are instances of absenteeism, failing grades, and, more rarely, grade repetition.

From the professionals' perspective, the factors contributing to school failure are diverse. They range from peer influence and other personal interests, to aspects related to the low quality of educational provision, the need to work to obtain financial resources, and dysfunctional behavioral patterns such as aggression or involvement in criminal activities.

> "The frequency of school absenteeism is high among adolescents exhibiting behavioral disorders and risk behaviors, such as criminal activity, aggression, and oppositional conduct" (I1).

> "Although they are sent to school, many prefer to wander around the school, citing various reasons, such as having mathematics first period, the class teacher not arriving, or simply disliking the teacher" (I2).

> "They miss classes because they spend extended time during breaks, refuse to attend certain lessons, go to other students' classes, or remain in the schoolyard" (I3).

Professionals noted that there are cases in which students from residential care centers are victims of bullying at school and that they have, at times, intervened to stop such forms of abuse. They also observed that some aggressive behaviors displayed by institutionalized children toward their peers may serve as a form of self-defense, arising in response to insults or mistreatment experienced in the educational environment. Younger students are the primary victims.

> "…the most frequent situations involve discrimination, labeling, and subsequently the passing of judgments, insults, and exclusion from the school community. There have been cases when children returned from school upset, telling me that one of their classmates had made fun of them. I discussed the matter with the class teacher/form tutor." (I1)

> "Given that these children are educated alongside peers from family environments, there have been instances of bullying, including criticism directed at them." (I5)

> "Children from the center have been victims of bullying, with the younger ones particularly subjected to verbal harassment, where peers have said things like, 'You don't have parents' or 'You are from the center' " (I7).

Unfortunately, instances of discrimination and aggression towards institutionalized students are still evident in the educational environment. There is an urgent need for school-based programs aimed at preventing bullying, as well as for counseling and support services for children from socially disadvantaged backgrounds, who remain the primary targets of such aggression.

The accompanying diagrams, generated using the qualitative data analysis software atlas.ti**,** succinctly illustrate the findings discussed. The first diagram highlights the factors that characterize foster care students' school integration and the interrelationships among the core concepts.

The professionals interviewed also put forward a series of suggestions aimed at improving the school integration of institutionalized children and young people. These measures include psychological and educational counseling sessions, visits to higher education institutions, educational activities, discussions with individuals who have succeeded in their academic and professional paths, as well as visits to - and ongoing collaboration with - potential employers. Other useful activities proposed by the specialists were "skills development activities" (I1, I2) and extracurricular activities such as competitions and excursions. For students with disabilities, the importance of reducing study hours was emphasized in order to prevent fatigue and to help them meet educational requirements more effectively.

Other measures were mentioned that could support the school integration of institutionalized children, such as "providing financial incentives for those who attend school, consulting children about the school's extracurricular activities, organizing interactive classes on the importance of school lessons" (I1, I4, I6), and maintaining constant communication and cooperation between educational institutions and child protection services.

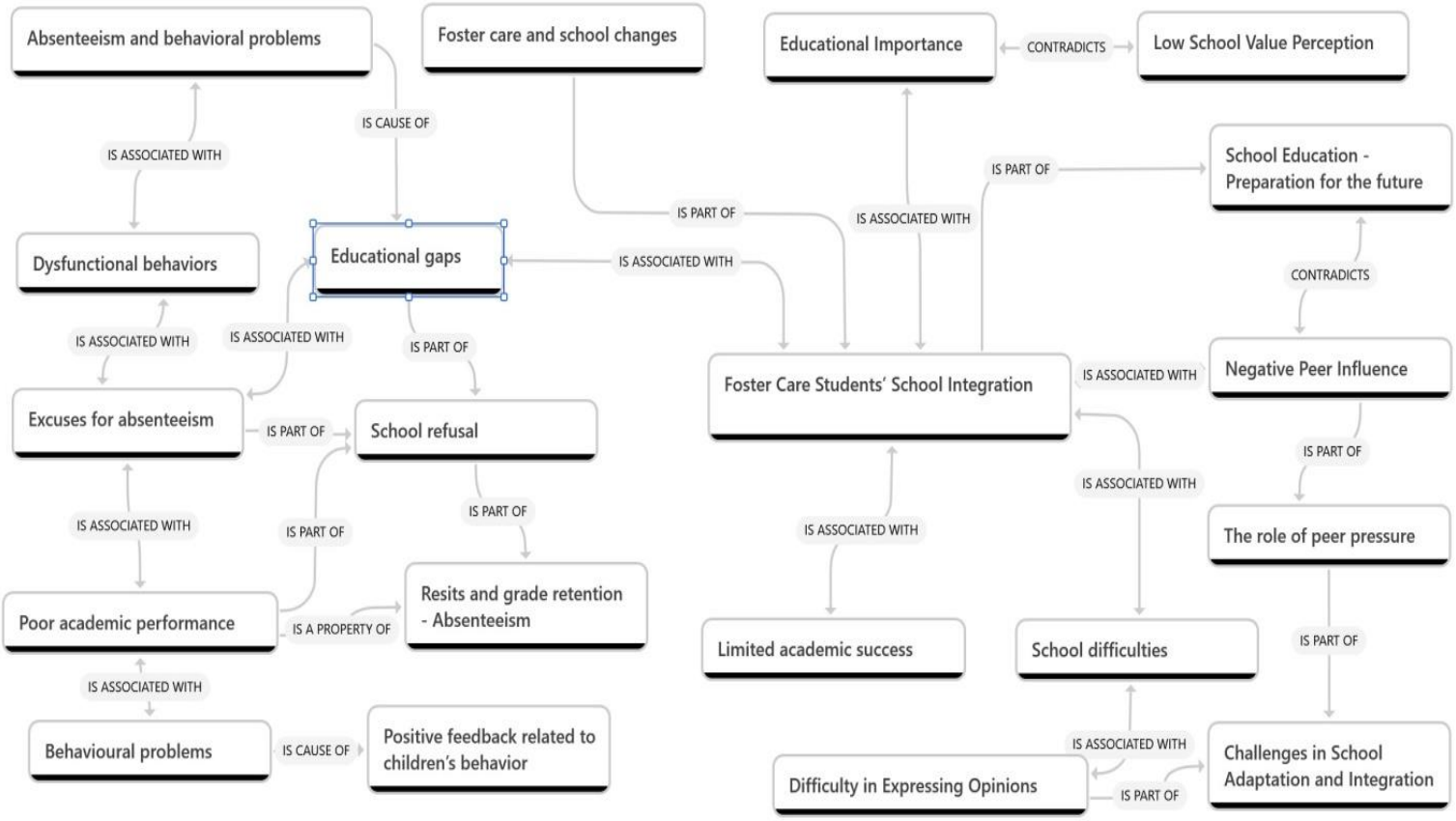
In the context of private family-type residential centers, where children consistently achieve good or very good academic results, it is noteworthy that they benefit from both educational and vocational counseling, as well as supplementary remedial instruction. Such measures demonstrate that targeted resources can play a decisive role in supporting the successful school integration of institutionalized children and adolescents.

The Network Diagram No. 2 presents the aspects describing the measures proposed by experts to

facilitate the school integration of students in the child protection system.

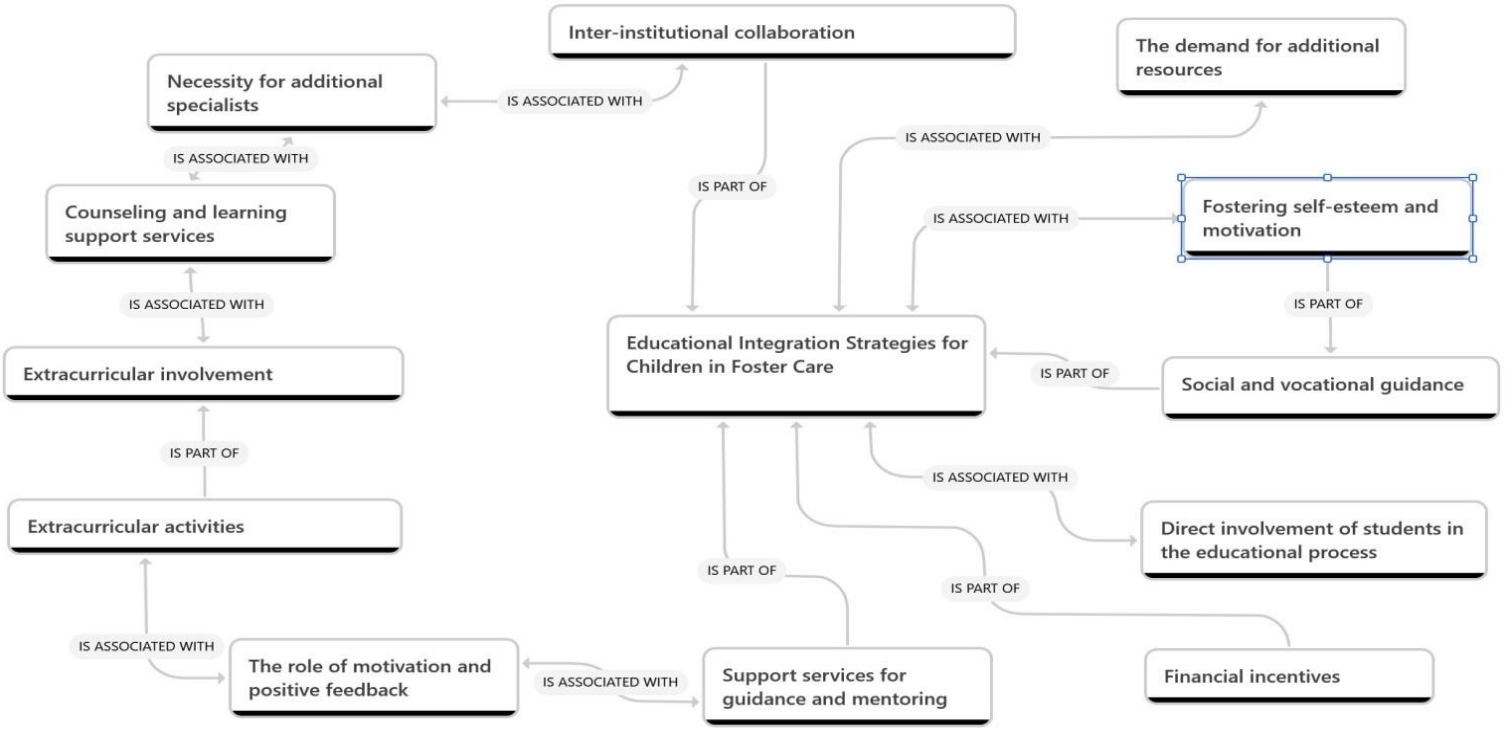
Network Diagram No. 1

Foster Care Students' School Integration



Network Diagram No. 2

Educational Integration Strategies for Children in Foster Care



3.2. Factors that support school integration: international research findings

Why do we address the importance of school education, particularly for children in the child protection system? Studies indicate that strong academic achievement is closely linked to health, well-being, and social inclusion (Smith et al., 2015). For children in residential care, access to education is essential, as it promotes social connections, a sense of belonging, and the development of social capital. Schools also provide stability and safety, serving as a key source of support (Rutman & Hubberstey, 2016).

Several factors can enhance the school integration of children in the special protection system. First, it is important to ensure that children are integrated from kindergarten into educational settings that include peers from diverse social backgrounds. Integrative learning environments can provide social and academic benefits, contributing to the development of an equitable and inclusive society (Plasencia & Melnick, 2024). Secondly, it is essential to invest in socio-educational programs and in the educational development of children, as these can have a positive impact on the life trajectories of institutionalized youth. Continued participation in school can also support the development of coping mechanisms, enabling these children to manage situations of vulnerability they have experienced. Institutionalized students require tailored and individualized programs to address their specific needs (Pirttimaa & Välivaara, 2017).

In designing effective interventions, it is essential to support teachers and school staff in developing a thorough understanding of the relationship between trauma and its impact on cognitive, social, and emotional development, through targeted professional learning on trauma and its effects. Examples of trauma-informed strategies for school personnel include fostering curiosity and compassion toward each student's life circumstances; accepting every child regardless of academic success or failure; implementing disciplinary practices that promote safety and acknowledge each student's strengths; and building partnerships among teachers, parents, and the community that address the needs of every student (Berardi & Morton, 2017).

In addition, it is necessary to provide training for caregivers and teachers on the impact of stigmatization on children in the child protection system (Lund & Stokes, 2020). Furthermore, improved placement management in residential care centers is required to minimize changes in educational institutions, alongside providing additional support to facilitate the adjustment of children who transfer to a new school (Lund & Stokes, 2020).

On the whole, children need strong and close relationships with adults (Rutman & Hubberstey, 2016). An important objective in supporting socio-educational integration is the facilitation of supportive relationships with key adult figures - such as social workers, educators, and teachers - alongside fostering resilience and promoting higher expectations (Lund & Stokes, 2020). Students in the child protection system perceive social workers as important allies. Social workers' involvement in their education provides these young people with a sense of being valued and appreciated, and with the assurance that someone believes in their abilities and advocates for their right to education (Rutman & Hubberstey, 2016).

A reconfiguration of legislation and the development of socio-educational policies are necessary in order to provide support and individualized or specialized programs for children from the moment they enter the child protection system (Evans & McCann, 2020). At the international level, several initiatives of this kind have been developed, such as the Fair Futures program and the Graham SLAM program implemented in New York. These programs are designed to provide long-term support for youth in residential care, offering a range of services including counseling, academic support, and the development of independent living skills. Evidence shows that participation in these programs leads to significant improvements in the educational outcomes of the beneficiaries.

Another important resource is represented by community schools. These institutions adopt a holistic approach to addressing the needs of all students, offering integrated support and stability, particularly for those experiencing various forms of vulnerability. Community schools provide educational, health, and social services, while fostering community, development and active participation. They are often regarded as hubs within the community, serving both students and their families by facilitating access to education, support, and broader social connections. Such schools are especially relevant for children in residential care centers, given their potential to deliver socio-educational support and promote long-term inclusion (Evans & McCann, 2020).

Internationally, various programs support children and adolescents in the child protection system, with

evidence showing positive outcomes (Forsman & Vinnerljung, 2012). In Sweden, the Skolfam program provides individualized support for at least two years (Pirttimaa & Välivaara, 2017). It assesses each child's strengths and needs to design tailored interventions, aiming to promote well-being, manage behavior, and enhance academic skills. Innovative methods, such as socio-drama and ongoing academic monitoring, are used to support psycho-social development. Research shows that participants' school performance improves, and the program has been adapted in other Nordic countries (Oraluoma & Välivaara, 2016, as cited in Pirttimaa & Välivaara, 2017).

Table 1

Steps for Achieving Better School Integration (Adapted from Rădăcină, 2023)

Steps in achieving better school integration for student in foster care center
✓ Assessment of cognitive development upon enrollment in residential centers (skills, knowledge acquisition, and their alignment with the appropriate school level);
✓ Development of an individualized plan addressing developmental gaps identified in each subject area;
✓ Providing weekly psychological, social and education counseling services;
✓ Facilitating children's and adolescents' participation in after-school activities;
✓ Organizing support groups for children at risk of school dropout;
✓ Developing interinstitutional relationships (to secure resources for institutionalized children) and collaborating with associations, companies, and universities;
✓ Organizing extracurricular activities, with a focus on knowledge acquisition and the development of skills and talents
✓ Establishing clear norms in each residential center, implemented through educational support activities, with rewards for participating children and adolescents
✓ Involving children in evidence-based programs that provide support through creative methods, such as music, theater, or other forms of art
✓ Promoting a non-judgmental attitude toward children in residential care, based on appreciation and encouragement

Drawn from the research presented and the intervention programs discussed previously, the Table 1 outlines several steps that could support children and adolescents in achieving better school integration (Evans & McCann, 2020; Lund & Stokes, 2020; Pirttimaa & Välivaara, 2017; Rutman & Hubberstey, 2016).

In Romania, evidence-based programs aimed at promoting school integration for children in the child protection system are scarce and are typically implemented by NGOs or at a local level. More commonly, children from disadvantaged backgrounds have access to various types of socio-educational services (Save The Children Romania, 2024; UNICEF, 2017). Given the increasing number of children in the child protection system who face difficulties with school integration, there is an urgent need to develop evidence-based programs that offer these students genuine opportunities for successful educational inclusion (Rădăcină, 2022). Building on international programs, recommendations from interviewed specialists, and the previously outlined steps, the following elements are crucial in designing such programs in Romania:

- Conducting rigorous assessments of each child's needs and developmental level within the residential center;
- Providing support and education to ensure adherence to clear rules established in each center;
- Reinforcing learning and compliance with established norms;
- Teaching empathy and compassion;
- Implementing art-based interventions (e.g., music, theatre, dance, painting);
- Providing academic support;
- Monitoring students' educational progress;
- Establishing partnerships and promoting inter-institutional collaboration;
- Offering counseling and personal development services.

5. Discussion and conclusions

The main limitation of this study lies in the small and geographically restricted sample, which limits generalization. However, the findings align with international research and highlight patterns relevant for designing intervention programs.

The novelty of this study is its focus on the Romanian child protection system, foster care children who faced a variety of challenges in schools and on the measures that could be implemented nationally to address their educational needs Proposed directions include developing individualized socio-educational services, fostering empathetic and non-judgmental attitudes toward institutionalized students, introducing

practical subjects aligned with their interests, and diversifying teaching methods. Collaboration among state institutions, child protection agencies, and schools, supported by training and resources for staff, is essential.

Preventive and intervention measures, particularly in school preparation and socio-educational inclusion, are crucial to securing the right to equitable education and strengthening the social integration of children in foster care.

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