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Introduction

In modern societies, work constituted an important component of a person's sense of self-worth, not solely a source of income, but a source of activity and development of competencies. Transformation, dynamic technological development, globalization, and the so-called consumer revolution, however, significantly influenced the changing views on work and careers, the value of work and the individual performing work, as well as the importance of education. Therefore, it can be observed that the ubiquitous progress of society and civilization has repercussions for work, as evidenced by changes in the structure of employment, as well as in the nature of human labour and the work environment. Some positions are completely eliminated, necessitating a change in qualifications, while newly created positions require employees to possess new qualifications. Therefore, the transformations of the modern world are giving rise to new professions, jobs, forms of employment, expectations for employees, and new types of careers. Without a doubt, the situation is highly influenced by the development of artificial intelligence (AI). It increasingly redefines the labour market, thereby influencing education by shifting away from the traditional model of knowledge transfer toward the development of narrow, specialized competencies, as well as the use of AI in education and work.

In the context of education, therefore, the practical use of artificial intelligence tools as a daily support becomes increasingly important, as does the promotion and development of lifelong learning competencies, as well as the acquisition of so-called micro-credentials, so that employees can continuously adapt to the changing requirements of employers. In this case, individuals' focus on technological and soft skills (e.g. critical thinking) are gaining particular significance. This is crucial as AI increasingly takes over repetitive and routine tasks in various professions, with the professions being eliminated or their scope of duties undergoing fundamental change. Therefore, in order to fully prepare today's students and those in the labour market, the educational and further training processes must emphasize the proper and ethical use of AI and ensure the effective utilization of students' and employees' potential in developing both subject-specific and, above all, soft skills.

The themes outlined above are the focus of the empirical and overview articles included in this issue. Thus, the articles address the topic of soft skills among today's youth from the perspective of preparing them for the labour market (notable among these are the articles: Revealing the Creative Potential of Students Through Active Learning Methods in Azerbaijan by *Mammadova Gunel, Nigar Jafarova, Samedli Selcan*; Professional Competences in the Labour Market: Selected Development Perspectives by *Daria Rogowska*; and He That Would Eat the Kernel Must Crack the Nut: Older Preschoolers' Ability to Understand the Moral Idea of the Proverb by *Nijolė Bražienė, Daiva Malinauskienė, Asta Vaitkevičienė*), as well as innovative education that prepares students to develop these competencies, including the use of AI (articles: Implementing Work-Integrated Learning in a Large-Enrollment Undergraduate Course: A Case Study Using the Incentivized Improvement Method (IIM) by *Olivia Podolak Lewandowska, Moaz Shoura, Marco Agazio Sama*; A Discourse on the Merits and Demerits of Establishing a Friendship with a Chatbot. A Discourse on the Interactions between Children and Teens with Generative Artificial Intelligence from an Educational Perspective by *Agnieszka Dopierała;* and Cultivating Digital Literacy: Mentorship Models for Farmers Engaging in Live Streaming and E-Commerce – Systematic Literature Review by *Feleisha Sushane Taylor Harris, Akiva Onika Sarita La Geer-Jeremiah*). Additionally, issues related to work and work-life conflicts of contemporary individuals are addressed (articles: Work–Life Conflict, Rumination, Procrastination, and Occupational Burnout: Psychosocial Hazards in Teachers' Work by *Przemysław Ławrynowicz* and Work-Home Conflict as a Challenge for Contemporary Working Societies by *Katarzyna Nowosad*). Furthermore, there was no shortage of topics related to management, particularly human resources and public and private schools (articles: Ethical

Dilemmas in Strategic Human Resource Management by *Aleksy Kowalski* and Public vs Private Schools: Differences in Management Strategies and Educational Policies by *Rafał Mydłowski)*.

Pursuant to the traditions of the journal, the issue also includes reviews of noteworthy publications in the field of pedagogy. These comprise a review by Bogusław Stańkowski of Giuseppe Bertagna's *La scuola al tempo del Covid. Tra spazio di esperienza ed orizzonte d'attesa* and a review by Wiktoria Darmoń of *Children Should Be Seen and Heard: A Review of Metodologia badań otwarta na dzieci (Children-Inclusive Research Methodology)*.

I hope that issue 13 of the journal, now available to readers, will serve a source of inspiration for academic discussions, research and new research and scientific projects.

Norbert G. Pikuła

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Work–Life Conflict, Rumination, Procrastination, and Occupational Burnout: Psychosocial Hazards in Teachers' Work

Konflikt na osi praca–życie, ruminacje, prokrastynacja i wypalenie zawodowe: psychospołeczne zagrożenia w zawodzie nauczyciela

Introduction

The teaching profession is widely regarded as one of the most demanding and emotionally taxing occupations. High levels of responsibility, time pressure, and the need to reconcile professional duties with private life may contribute to lowered mood and psychophysical difficulties. Research indicates that teachers frequently experience work-life conflict, which adversely affects their mental health and overall well-being.

This conflict is associated with an excessive workload, the necessity of working beyond standard hours, and difficulties in effectively separating professional and personal domains. Such conditions generate substantial

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stress, which may in turn lead to chronic rumination, procrastination, and occupational burnout. Elevated levels of rumination may make it difficult for teachers to disengage and rest, which can result in poorer recovery and, consequently, further intensification of negative psychological outcomes.

It is also worth noting that teaching requires not only classroom work but also the preparation of instructional materials, marking students' work, organising meetings with parents, and participating in professional development. As a result, teachers often work beyond standard working hours and outside the school setting, which may contribute to difficulties in distinguishing between professional and private life (Cinamon & Rich, 2005).

Adverse phenomena that reduce teachers' motivation and engagement in striving to achieve pedagogical goals may result in an erosion of their sense of agency. This, in turn, can lead to a less positive attitude towards pupils, difficulties in communication, and a diminished interest in fostering a stable and supportive working climate. Reversing this tendency should create opportunities to cultivate socially desirable teacher attitudes, to select appropriate classroom management styles, and to individualise educational influence. Above all, preventing procrastination, rumination, and occupational burnout can strengthen teachers' self-esteem, thereby enabling them to cope more effectively with adversity and various setbacks in both professional and personal life (Bera, 2021).

This article examines selected literature concerning the associations between work–home conflict, rumination, procrastination, and occupational burnout among teachers. The aim of this review is to identify the mechanisms linking these phenomena and to indicate potential intervention strategies that may enhance teachers' well-being and increase their professional effectiveness. Table 1 below provides an overview of selected studies addressing the issues discussed.

Table 1

Table 1 above presents key studies on work–home conflict, rumination, procrastination, and occupational burnout. It highlights the significant associations between these phenomena and underscores the need for further research to develop effective preventive and remedial strategies.

Table 1. Overview of selected studies on work-life conflict, rumination, procrastination, and occupational burnout

Author	Year	Subject of research	Key conclusions
Greenhaus & Beutell	1985	Work-life conflict	Work-life conflict results from the overlap of occupational and family roles, leading to increased stress and psychological strain
Tice & Baumeister	1997	Procrastination	The short-term effect of procrastination is reduced stress; in the long term, however, it is associated with poorer performance and greater health-related costs
Maslach et al.	2001	Burnout	Burnout comprises emotional exhaustion, depersonalisation, and a reduced sense of self-efficacy
Hakanen, Bakker & Schaufeli	2006	Burnout among teachers	High job demands lead to exhaustion and diminished work engagement
Steel	2007	Procrastination	Procrastination is associated with impulsivity and low conscientiousness, and it also exacerbates negative affect
Sonnentag & Fritz	2015	Rumination and recovery	A lack of psychological detachment from work increases stress levels and contributes to occupational burnout
Sirois & Pychyl	2016	Procrastination and mental health	Procrastination is linked to higher levels of stress and depression, as well as reduced sleep quality
Chmielewska	2021	Burnout among teachers in Poland	Teacher burnout is associated with health-related, psychosocial, and organisational determinants
Bakker, Demerouti & Sanz-Vergel	2023	Work-life conflict among teachers	Work-life conflict leads to psychological exhaustion and reduced professional effectiveness
Poonacha & Bapu	2024	Rumination and procrastination	Self-compassion is associated with lower rumination and procrastination

Source: Authors' elaboration

Work–life conflict

Work–life conflict refers to difficulties arising from the simultaneous enactment of occupational and family roles that may interfere with one another, thereby generating psychological and emotional strain. Teachers, as an occupational group, frequently experience this conflict due to teaching and administrative responsibilities, as well as the need to work beyond standard hours, which may substantially increase their psychological burden.

Research by Greenhaus and Beutell (1985) demonstrated that work–home conflict may be bidirectional: work-to-family conflict (WFC), in which occupational demands disrupt family life, and family-to-work conflict (FWC), in which family obligations hinder the fulfilment of work-related duties. Among teachers, WFC appears to be the predominant form, indicating that work overload adversely affects their family life as well as their capacity for rest and recovery.

Conversely, research by Sonnentag and Fritz (2015) indicates that chronic work overload, coupled with insufficient post-work recovery experiences, constitutes a key predictor of occupational burnout. Work–home conflict may further intensify rumination – defined as persistent, negatively valenced work-related thoughts during non-work time – which undermines psychological detachment, impairs recovery, and contributes to cumulative fatigue.

Moreover, empirical findings suggest that work–home conflict may facilitate procrastination as an avoidance strategy aimed at reducing additional stress arising from competing obligations. Sirois and Pychyl (2016) extended this line of evidence by showing that individuals experiencing pronounced conflict between work and private life are more likely to delay task completion, which in turn increases stress levels and reduces occupational effectiveness. This state may subsequently intensify affective rumination about work and thereby further reinforce tendencies to postpone tasks.

In light of existing research, work–family conflict constitutes one of the key challenges faced by teachers, who must balance intensive professional demands with private life. The literature emphasises that relations between these two domains may be both synergistic and conflictual in nature (Tomaszewska-Lipiec, 2018). Given the specific characteristics of teachers' work – including the need to prepare lessons, organise additional educational activities, and engage in pupils' development – this occupational group is particularly vulnerable to difficulties in maintaining work–family balance (Tomaszewska-Lipiec, 2014).

Among the determinants of work–family conflict in teachers, the following are frequently highlighted: high time-related demands, high emotional demands, limited flexibility in work organisation, social expectations regarding the teacher's role, and low financial satisfaction. These factors are briefly discussed below.

As noted above, one of the most commonly identified contributors to work–life conflict is substantial time burden associated with professional duties. Teachers not only spend time at school, but also prepare for lessons, participate in trainings, mark pupils' work, and organise additional educational activities (Tomaszewska-Lipiec, 2018). Consequently, their working day often extends beyond standard hours, which restricts the time available for family life and rest.

Teaching requires intensive emotional involvement, stemming both from interactions with pupils and from contact with parents and school administration (Sadowska-Snarska, 2014). High levels of stress, alongside the necessity of responding to pupils' difficulties, may contribute to occupational burnout and to challenges in sustaining healthy family relationships. Compared with other occupational groups, teachers have limited scope to adjust working hours to family needs. Their schedules are closely tied to the school year and fixed lesson timetables, which constrains the organisation of family life, for example childcare arrangements (Michoń, 2014).

It is also important to note that teachers are often perceived as individuals who should be fully committed to the education of children and adolescents, which may generate pressure to devote time and energy to work at the expense of family life (Robak & Słocińska, 2014). There are considerable social pressure and an expectation that teachers adopt an uncritical stance and demonstrate full commitment – an expectation that stands in tension with what educators experience in their professional lives. Teachers' remuneration is among the lowest in the country and is disproportionate to the responsibilities they fulfil, which may necessitate taking on additional work. Many teachers, in order to make ends meet, are compelled to hold multiple posts. This, in turn, increases time-related demands and reduces the time available for family life (Głogosz, 2014).

Work-life conflicts may lead to a range of consequences, including occupational burnout, health problems, deterioration of family relationships, reduced job satisfaction, and, consequently, decreased professional effectiveness.

The following section briefly outlines the potential effects of an imbalance between work and private life.

As noted above, one of the primary outcomes of work-family conflict is occupational burnout, manifested in emotional exhaustion, depersonalisation, and a diminished sense of personal accomplishment at work (Maslach & Leiter, 2011). Teachers who lack opportunities for rest and recovery after work are more vulnerable to stress and the long-term effects of occupational overload (Tomaszewska-Lipiec, 2018). In turn, chronic stress and an absence of work–family balance may contribute to various health problems, such as hypertension, sleep disturbances, and headaches (Słocińska & Robak, 2014). Teachers who have insufficient time for rest and physical activity more frequently experience psychosomatic complaints.

Work–family conflict may lead to a deterioration in relationships with one's partner and children. Teachers who are excessively absorbed in their work may find it difficult to devote sufficient time to their family, which can result in domestic tensions and a sense of neglect experienced by family members (Kubiak-Szymborska, 2014).

A prolonged work–family conflict may lead to reduced job satisfaction, which in turn diminishes engagement in professional duties and, consequently, lowers the quality of teaching (Michoń, 2014). Teachers who perceive that their work adversely affects family life are more likely to consider changing profession or leaving the education sector altogether. In addition, reduced professional effectiveness among teachers may result in difficulties with concentration and, as a consequence, poorer lesson preparation and decreased creativity in instructional work (Gotowska, 2014).

Difficulties in reconciling the roles of teacher and parent or spouse/partner may also stem from the fact that educators are subject to strong pressure in the form of imposed tasks, which are often inconsistent with teachers' own expectations and may be internally incoherent or even contradictory. This lack of logic and inconsistency generates substantial stress (Wierzejska, 2018).

The foregoing suggests that work-family conflicts among teachers arise primarily from high occupational demands, limited job flexibility, and social pressure related to the teacher's role. The adverse consequences of these conflicts include occupational burnout, health problems, weakened family relationships, and reduced professional effectiveness. To mitigate these negative outcomes, it is important to implement work–life balance strategies and to support teachers through more flexible forms of employment.

In summary, work–home conflict constitutes one of the key factors contributing to occupational stress, rumination, and procrastination and, consequently, to teacher burnout. The subsequent sections of this article examine how these mechanisms interact with one another and which strategies may help to reduce them.

Rumination and its impact on teachers' well-being

Both forms of conflict (work-to-life and life-to-work) are strongly associated with phenomena such as rumination, procrastination, and occupational burnout, which may intensify stress and threaten teachers' well-being (Tomaszewska-Lipiec, 2018). Research highlights the important role of affective rumination in lowering mood. The literature distinguishes two main types of rumination (Querstret & Cropley, 2012):

- Affective rumination – negative, work-related thoughts that increase stress and exhaustion.
- Problem-solving pondering – an analytical consideration of occupational problems, which may be helpful but makes it more difficult to detach from work.

Rumination, understood as persistent and recurrent thoughts about unresolved occupational problems, constitutes an important factor affecting teachers' mental health by impeding rest and recovery (Cropley & Zijlstra, 2011). Research has shown that teachers are particularly susceptible to this pattern of thinking due to intensive emotional labour, responsibility for pupils' outcomes, and high administrative demands (Cropley & Millward Purvis, 2003). In teachers, work–family conflict often contributes to heightened affective rumination, as excessive workload makes it more difficult to separate professional and private life (Tomaszewska-Lipiec, 2014).

Rumination may function as a mechanism that perpetuates stress and tension even after the working day has ended. Sonnentag and Fritz (2015) indicate that individuals who engage in ruminative thinking after work experience difficulties in psychological recovery, which can lead to chronic fatigue and a reduced capacity to cope with everyday occupational and personal challenges.

Moreover, there is a strong association between rumination and procrastination. Sirois and Pychyl (2016) demonstrated that individuals who frequently engage in ruminative thinking tend to postpone their tasks, which further increases stress levels and leads to a vicious cycle of avoidance and intensified negative affect. Teachers who experience this mechanism often encounter difficulties in effective time management and action planning, which may reduce their occupational performance and job satisfaction.

It is also worth noting that rumination may have a long-term impact on the development of occupational burnout. Teachers who are unable to separate work-related thoughts from private life are more vulnerable to emotional exhaustion and depersonalisation, which may result in a deterioration of relationships with pupils and colleagues (Geisler, Buratti & Allwood, 2023).

Factors that may contribute to affective rumination among teachers include, among others:

- Limited ability to detach from work – teachers often continue to think about pupils' problems, lesson plans, or administrative backlogs after working hours (Robak & Słocińska, 2014).
- Work overload and time pressure – the need to combine work with family life means that occupational tasks "spill over" into private time, hindering effective rest and recovery (Sadowska-Snarska, 2014).
- Negative emotions – frustration arising from insufficient time for private life may lead to chronic stress and heightened rumination (Michoń, 2014).

Rumination – particularly affective rumination – may lead to a range of occupational as well as psychophysical difficulties. Some researchers point to several key risks in teachers' work associated with ruminating about work:

- Increased risk of occupational burnout – rumination may sustain emotional tension, contributing to chronic fatigue (Maslach & Leiter, 2011).
- Sleep disturbances – thinking about work-related problems outside working hours reduces sleep quality, which adversely affects both mental and physical health (Słocińska & Robak, 2014).
- Reduced quality of family life – teachers preoccupied with work-related thoughts may find it difficult to engage fully in family relationships (Tomaszewska-Lipiec, 2018).

In summary, rumination constitutes a significant issue in the teaching profession, contributing to increased stress levels, heightened procrastination, and an elevated risk of occupational burnout. Effective intervention strategies such as mindfulness-based techniques, training in psychological detachment, and stress-management programmes may help teachers to reduce the detrimental impact of rumination on their day-to-day functioning.

Procrastination as a stress-coping mechanism

Procrastination defined as the tendency to delay the completion of tasks despite awareness of negative consequences is a common phenomenon among teachers. Research indicates that teachers frequently postpone tasks related to marking pupils' work, lesson preparation, and school administration, which may contribute to increased stress, reduced teaching quality, and occupational burnout (Tice & Baumeister, 1997). Procrastination may function as a coping mechanism in response to stress arising from work overload and work–home conflict. Moreover, evidence suggests that individuals experiencing chronic occupational stress are more likely to delay tasks, which paradoxically leads to further increases in strain and reduced work effectiveness (Steel, 2007; Schlachter et al., 2018).

Among teachers, work-family conflict may likewise contribute to procrastination, as the tension associated with performing multiple roles simultaneously undermines effective time management (Tomaszewska-Lipiec, 2014). Studies indicate that as many as 50% of teachers regularly postpone occupational duties, which may affect both their effectiveness and stress levels (Markiewicz, 2018).

In teachers' work, procrastination may take three forms (Rozental & Carlbring, 2014):

- Academic procrastination – delaying the preparation of instructional materials and the marking of pupils' work.
- Occupational procrastination – avoiding administrative and organisational duties.
- Decisional procrastination – postponing key instructional decisions.

Procrastination often occurs in response to rumination, that is, persistent thoughts about unresolved occupational problems. Teachers who are unable to mentally disengage from work may use delaying as an avoidance strategy to reduce negative emotions associated with demanding tasks (Sirois & Pychyl, 2016). However, this is a short-term solution that leads to the accumulation of backlogs and an increase in stress levels.

Research showed that individuals who procrastinate initially experience relief resulting from avoiding difficult tasks; nevertheless, the long-term consequences include increased time pressure, reduced job satisfaction, and a greater risk of occupational burnout. In teachers, procrastination may result in poorer work organisation, unmet commitments towards pupils, and a greater emotional burden (Sirois & Pychyl, 2013; van Eerde, 2003; Laybourn et al., 2019).

To mitigate the adverse effects of procrastination, the use of self-regulation strategies is recommended, including task planning, time-management techniques, and behavioural interventions. Psychological support programmes may also be effective, as they help teachers cope more effectively with stress and reduce tendencies to delay professional responsibilities (Sonnentag & Fritz, 2015).

The literature indicates that procrastination among teachers is often facilitated by circumstances such as:

- Cognitive overload, understood as an excess of duties leading to feelings of being overwhelmed and to the avoidance of difficult tasks (Głogosz, 2014).
- Fatigue and low energy – teachers burdened with professional and family responsibilities are more likely to postpone tasks that require substantial cognitive effort (Gotowska, 2014).
- Lack of social support – teachers who do not receive assistance with work organisation and family duties may be more prone to delaying challenging tasks (Sadowska-Snarska, 2014).

Key consequences of procrastination among teachers include, among others:

- Reduced work effectiveness – delaying duties results in an accumulation of backlogs and increased stress (Michoń, 2014).
- Lower job satisfaction – teachers who experience procrastination often feel less competent and more overwhelmed by professional demands (Słocińska & Robak, 2014).
- Increased strain in family life – unfinished work tasks may lead to the spillover of frustration into the private sphere (Tomaszewska-Lipiec, 2018).

In summary, procrastination is not only a consequence of occupational burden but also a stress-coping mechanism and a means of escaping worry, which may further undermine teachers' well-being, reduce their work effectiveness, and, consequently, contribute to occupational burnout.

Occupational burnout

Occupational burnout is a state of chronic fatigue, cynicism, and reduced effectiveness, resulting from prolonged occupational stress (Maslach & Leiter, 2011). In other words, it is a syndrome characterised by emotional exhaustion, depersonalisation, and a diminished sense of occupational efficacy. Among teachers, it constitutes a particularly salient risk, arising from high job demands, stress, and difficulties in maintaining a balance between work and private life (Maslach, Schaufeli & Leiter, 2001). In this occupational group, work–family conflict is one of the key factors predisposing individuals to burnout (Tomaszewska-Lipiec, 2018).

Occupational burnout comprises three main components (Maslach, Schaufeli & Leiter, 2001):

- Emotional exhaustion – chronic fatigue and a lack of energy.
- Depersonalisation – distancing oneself from pupils and colleagues.
- Reduced personal accomplishment – diminished job satisfaction and a sense of inefficacy.

Teacher burnout is a complex psychological process, the development of which depends on the interaction between job demands, personal and organisational resources, and cognitive–emotional mechanisms. A key framework underpinning analyses of burnout is the Job Demands-Resources Model (JD-R), developed by Demerouti, Bakker, Nachreiner, and Schaufeli (2001). This model posits that burnout results from chronic exposure to high job demands in combination with insufficient resources that support the employee. The main components of the JD-R model are:

- Job demands, that is, aspects of work that require sustained psychological and physical effort (e.g., workload, time pressure, interpersonal conflict).
- Job resources, which may offset the adverse effects of demands (e.g., social support, job autonomy, opportunities for development) (Demerouti et al., 2001).

In accordance with the JD-R model, high job demands coupled with insufficient resources lead to emotional exhaustion, which constitutes the core symptom of burnout. Among teachers, the most salient risks include:

- Time pressure and excessive workload, contributing to chronic fatigue (Skaalvik & Skaalvik, 2018).

- Low autonomy and limited influence over school-related decisions, resulting in helplessness and frustration (Bakker et al., 2023).
- Lack of support from school leadership and colleagues, which exacerbates feelings of isolation (Demerouti et al., 2001).

Research by Bakker, Demerouti, and Sanz-Vergel (2023) showed that work–home conflict is one of the key predictors of occupational burnout. Excessive occupational duties restrict opportunities for recovery, which contributes to chronic fatigue and a deterioration in teachers' mental health and mood. In addition, Sonnentag and Fritz (2015) indicate that teachers who engage in ruminative thinking about work after it has ended experience higher levels of stress and greater difficulty resting, which fosters burnout.

The association between procrastination and occupational burnout is also well documented. Laybourn, Frenzel, and Fenzl (2019) demonstrated that individuals who delay the completion of occupational duties experience greater psychological strain and difficulties in goal attainment, which contributes to feelings of helplessness and reduced job satisfaction. Among teachers, procrastination may lead to an accumulation of backlogs, further increasing stress and reducing work effectiveness.

The long-term consequences of occupational burnout include not only a decline in teaching quality but also an increased risk of health problems, sickness absence, and leaving the profession (Hakanen, Bakker & Schaufeli, 2006). Teachers who are overburdened with professional and family responsibilities often lose motivation and engagement in their work (Gotowska, 2014). Notably, prolonged strain contributes to reduced concentration and creativity at work (Tomaszewska-Lipiec, 2018). Therefore, it is crucial to implement preventive strategies, such as stress-management techniques, psychological support programmes, and organisational measures aimed at reducing work overload and increasing teacher autonomy. This is particularly important because insufficient post-work recovery contributes to chronic fatigue (Głogosz, 2014).

Taken together, teacher burnout results from the cumulative impact of work–family conflict, work-related worry, and the postponement of task completion. The implementation of effective stress-management strategies and improvements in working conditions may help to mitigate its adverse consequences.

Conclusions

In summary, work-life conflict, rumination, procrastination, and occupational burnout are strongly interrelated and constitute significant challenges for teachers. High job demands, time pressure, and difficulties in separating work from private life contribute to increased stress and emotional strain, which may manifest as rumination and procrastination.

Work-life conflict is a key factor affecting deterioration in teachers' quality of life. Research has shown that its consequences include difficulties in resting, impaired psychological recovery, and an increased propensity for ruminative thinking. Rumination, understood as recurrent thoughts about occupational problems, makes it difficult to detach from work, which in turn elevates stress levels and contributes to chronic fatigue. This relationship also promotes procrastination, which may function as a form of avoidance of burdensome tasks, while simultaneously contributing to the further escalation of stress and frustration.

Occupational burnout is a consequence of prolonged stress and the absence of effective coping mechanisms. In the teaching profession, stress is driven in particular by physical and psychological overload resulting from work duties, as well as by a lack of sufficient tools to support the fulfilment of assigned tasks (Nowosad, 2021). Among teachers, burnout manifests as emotional exhaustion, depersonalisation, and a reduced sense of occupational efficacy. Procrastination and rumination reinforce this process by limiting opportunities for effective recovery and intensifying feelings of being overburdened.

Adverse phenomena that distance teachers from their core mission may undermine key determinants of their motivation to work, specifically, by reducing their capacity to maintain emotional health and intellectual engagement, and by weakening their sense of professional identity and purpose (Szempruch, 2021).

Further research on the impact of work–life conflict, rumination, and procrastination on occupational burnout among teachers in Poland is crucial for understanding the mechanisms shaping their well-being and for developing effective interventions. Future studies should focus on a multifaceted analysis of determinants of teachers' well-being, as well as on the effectiveness of strategies aimed at reducing work–home conflict. Examining these phenomena requires the use of both quantitative and qualitative methods, enabling a comprehensive assessment of their dynamics and of the individual and institutional conditions under which they occur.

Abstract: Work-life conflict (WLC) is a significant factor affecting teachers' mental health and professional functioning. This article provides a literature review of the interrelationships between work–life conflict, rumination, procrastination, and burnout among teachers. The review draws primarily on recent studies which, in the author's judgement, most clearly capture the complexity and multidimensional nature of these phenomena. It outlines the theoretical foundations of these constructs and synthesises empirical evidence, indicating their co-occurrence and reciprocal associations.

The reviewed studies suggest that work-life conflict is linked to heightened rumination, which elevates stress and impedes psychological detachment and recovery, thereby undermining restorative processes. Higher levels of rumination are also associated with greater procrastination, while as an avoidance strategy, procrastination can further aggravate difficulties related to excessive workload demands. Consequently, teachers may experience chronic fatigue and an increased risk of burnout, typically characterised by emotional exhaustion, depersonalisation, and a reduced sense of personal accomplishment.

The article also proposes directions for future research in the Polish educational context, highlighting the need for an interdisciplinary approach and for the development and evaluation of preventive programmes aimed at improving teachers' well-being.

Keywords: work-life conflict, rumination, procrastination, burnout

Streszczenie: Konflikt na osi praca-życie (WLC) stanowi istotny czynnik wpływający na zdrowie psychiczne nauczycieli oraz ich funkcjonowanie zawodowe. Artykuł przedstawia przegląd literatury dotyczący wzajemnych zależności między konfliktem praca-życie, ruminacją, prokrastynacją i wypaleniem zawodowym wśród nauczycieli. Przegląd oparto przede wszystkim na najnowszych badaniach, które w ocenie autora najtrafniej ukazują złożoność i wielowymiarowy charakter analizowanych zjawisk. Omówiono podstawy teoretyczne tych konstruktów oraz zsyntetyzowano wyniki badań empirycznych wskazujące na ich współwystępowanie i wzajemne powiązania.

Analizowane prace sugerują, że konflikt praca-życie wiąże się ze wzrostem ruminacji, co nasila stres oraz utrudnia psychologiczne odłączenie się od obowiązków i procesy regeneracji, osłabiając skuteczność odpoczynku. Wyższy poziom ruminacji jest również powiązany z większą prokrastynacją; prokrastynacja jako strategia unikania może dodatkowo pogłębiać trudności wynikające z nadmiernych wymagań i obciążenia pracą. W konsekwencji nauczyciele mogą doświadczać przewlekłego zmęczenia oraz zwiększonego ryzyka wypalenia zawodowego, zwykle charakteryzowanego przez wyczerpanie emocjonalne, depersonalizację oraz obniżone poczucie dokonań osobistych.

W artykule zaproponowano także kierunki przyszłych badań w polskim kontekście edukacyjnym, podkreślając potrzebę podejścia interdyscyplinarnego oraz opracowania i ewaluacji programów profilaktycznych ukierunkowanych na poprawę dobrostanu nauczycieli.

Słowa kluczowe: konflikt praca–dom, ruminacje, prokrastynacja, wypalenie zawodowe

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Ethical Dilemmas in Strategic Human Resource Management

Dylematy etyczne w strategicznym zarządzaniu zasobami ludzkimi

Introduction

Moral questions belong to the knowledge, practice, and experience of human tradition. Ancient and modern thinkers analyse human life in the past*polis* and today's metropolis. Ethical roles organize not only family life, but also social existence, and implement them among citizens, toformulate States. Moral and lawful regulations were known among Olympic dignitaries, philosophers, orators, politicians, warriors, merchants, farmers, and free and slave people.

The Pythagorean society, Plato'sAcademy, the Aristotelian Lyceum, the Stoic school, and the mysterious religion propagate their beliefs through a unified moral code.For instance, Pythagorean ethics dependson Orphism and Socratic intellectual ethics, and Plato's eudemonistic ethics, teleological –

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golden means Aristotelian ethics, and aretaicethics united with the nature and hegemonic ethics of Epicureanism.

Modern times are interesting in ethical issues. For instance, Immanuel Kant proposes deontological ethics, discursive ethics of Jurgen Habermas, Waldo Emerson's egoism ethics, and Max Schelerand Roman Ingarden's value ethics (Copleston, 1993; Joos, 2009; Bagginiand Fosl, 2010; Taylor, 2017; Galewicz, 2020; Kuderowicz and others, 2002; Reale, 2010; Ślipko, 2021).

Contemporary researchers analysing the question of management also pay attention to ethical issues, especially strategic human resource management. There is adynamic relationship between employers and employees. Therefore, aretology, aretaic philosophy, axiology, and value ethicspropose values that organize social business life, in which personal value, according to Ingarden, is a human person's existence as the most important value.

EthicalDoctrine in Antiquity

Ethics has been integral to human civilization from antiquity to the digital age. Ancient thinkers sought answers to questions about moral behaviour that lead to *eudaimonia* (happiness and well-being). Aristotle of Stagira (346–322 B.C.) was among the most influential philosophers of antiquity. Drawing on theoretical and practical knowledge, he categorized several philosophical ideas he analysed. The second group includes ethics and moral philosophy. According to Aristotle, moral principles are grounded in logic and in the distinction between good and bad choices (Copleston, 1993, 332–350; Taylor, 2017, 135; Reale, 2010, 265–283). Aristotle wrote two treatises, *Nicomachean Ethics* and *Eudemian Ethics*, which focus on human arete (goodness and excellence). The concept of virtue can be viewed in both horizontal-ontological and vertical-axiological dimensions. His description of the ontological dimension involves *mesotes* (a middle or central position), and the axiological dimension emphasizes *arete* (excellence or an extreme). Aretology, also known as Aretaic Ethics, is the philosophical study of virtue that examines ways to achieve a fulfilled life (Abbagnano, 1995, 55; Taylor, 2017, 119; Ślipko, 1982, 33; Leśniak, 1989, 81–87).

The structure of the human psyche (anima) was analysed by Plato's pupil, who identified three types of *psyche*.Two types of souls are irrational: the nutritive or vegetative (*threptikon*) soul, which represents the lowest form of psyche.

The higher form known as“sensitive”(*aisthetikon*) is associated with animals. The highest soul that is rational (*logistikon*) is only found in humans due to their intellect (*nous*) that functions both in scientific thought (*epistemonikon*) and deliberation (*dianoia practice*).According to Aristotle (2012, I, 1102b, the human soul is the connection between the lower vegetative and sensitive parts of the psyche (Reale, 2010, 258-263; Copleston, 1993, 327–330).

Aristotle posited two types of virtues at the beginning of the Nicomachean Ethics, one ethical and the other intellectual (Aristotle, 2012, II, 1103a–1103b). Describing the ethical virtues (aretai ethikai) that govern the desiderative part of the psyche, he identifies the golden mean between deficiency and excess, citing courage, temperance, liberality, magnificence, self-respect, unnamed gentleness, truthfulness, witness, friendliness, modesty, and righteous indignation (Aristotle, 2012, V, 1129a–1138b; Copleston, 1993, 341; Taylor, 2017, 121).

The Stagirite emphasizes that the rational part of the soul can be perfected through teaching (*didaskalia*) and practicing (*praxis*) by analysing the intellectual virtues (*aretai dianoetikai).*He distinguishes five principles of dianoetic: intellect (*nous*), scientific knowledge (*episteme*), productive knowledge (*techne*), practical wisdom (*phronesis*), and theoretical wisdom (*sophia*).The world of ethical virtues is organized by wisdom, which represents the highest theoretical excellence, in collaboration with practical wisdom. Aristotle asserts that ethical and intellectual virtues are interdependent (Aristotle, 2012, VI, 1139a–1145a, Reale, 2010, 270–271).

Happiness (*eudaimonia*) is the goal of human beings, and it can be achieved by acting in accordance with virtue.*Eudaimonia* is not contingent on human emotions but rather embodies the genuine state of living well.By working together with the intellect (*nous*), the soul can achieve it through a very good activity.Intellectual virtues are organized by intellect, while practical wisdom (*phronesis*) guides moral virtues.According to the philosopher, the first and second forms of aretai do not work separately but rather work together in harmony.

The act of contemplation (*theoria*) is the only way to find the highest happiness, as stated by the Nicomachean Ethics' tenth book, because the intellect, the highest faculty of man, is involved in it.This activity can be sustained longer than any other activity, such as exercising the body. Philosophical contemplation describes pleasure as the most pleasant activity, and it is one of the elements of well-being.Therefore, the philosopher is more dedicated to self-sufficiency than any other human being.Copleston, explaining the Aristotelian point of view,declares: "Philosophy is loved for its own sake and not for the sake of any results that accrue from it. In the field of practical activity, it is not the action itself that is desirable, but some results to be attainedby means of the activity. Philosophy is no mere means to a further end" (Copleston, 1993, 349). The act of contemplation brings happiness to the soul, as well as the vegetative, sensitive, and rational forms of the human soul.

Arius Didymus (c. 80–1 B.C.), the philosophical writer and Stoic of Alexandria, was mentioned, among others, by Clement of Alexandria (*Stromata*) and Diogenes Laertius (*Lives of the Philosophers*). He wrote the philosophical treatise that is known to modernreaders, entitled *Epitome of Stoic Ethics* (Arius Didymus, 1999). Ioannes Stobanus included the book in his Anthology (*Słownik pisarzy antycznych*, 1982, 646).

The Alexandrian philosopher, at the start of his Epitome, refers to Zeno of Citium (336–264 B.C.), the founder of the Stoa, and explores the ethical aspects of that philosophical doctrine. The Stoic concept of virtue forms the core of aretaic teaching. Stoicism divides things into three categories: good, bad, and indifferent. Every virtue is considered good and sufficient for well-being and a state of perfected rationality. Stoics emphasize the unity of virtue and conformity to nature. They categorize: a) things that align with nature and have value; b) things that oppose nature and are valueless; c) things that possess neither value nor disvalue. Managing strategic human resources, future generations will have to develop a set of values, which is the origin of Stoicism (Copleston 1993, 397).

Arius Didymus, like other Stoics, preserves the traditional four cardinal virtues: practical wisdom (*phronesis*), moderation (*sophrosyne*), courage (*andreia*), and justice (*dikaiosune*) (Arius Didymus, 1999, 5b2; Copleston, 1993, 397). Stoic practical wisdom differs from Aristotle's point of view. *Phronesis* is united with theoretical wisdom and distinguishes good and evil activity. Moderation governs modesty, property, and self-control. Courage demonstrates knowledge about false fears and the epistemic possibility of correcting them. Justice ensures that the relationships within a rational human community are properly organized.Arius Didymus declares that *dikaiosine* is grounded in rational cosmopolitanism. That virtue shows not only the legal fairness said in the first place inrelation to the universal intellect. He synthesized theimportance of four cardinal virtuesin Stoic philosophywriting: "Intelligence deals with appropriate acts, self-restraint deals with man's impulses, bravery deals with acts of endurance, and justice deals with the apportioning of what is due" (Arius Didymus, 1999, 5b2).

The Stoic philosophers do not continue the Aristotelian distinction between the moral and intellectual virtues; nevertheless,they identify their specific cognitive excellences. Arius Didymus,analysingthe virtue of knowledge (*epistle*), defines it as a stable and systematic understanding of the divine and the human. A wise man (*sophos*) acts in accord with all the virtues;his every action is concurring with logical consistencyand free from contradiction.(Arius Didymus, 1999, 5b8). Right reason (*orthos logos*) governs all virtuous actions; in consequence, intellectual error produces moralones. The Alexandrian philosopher declares that a wise man possessing one virtue owns all of them. Virtues are united and create rational perfection.

The Aristotelian and Stoic ethicscreatephilosophical principles of a) aretology – science about moral virtue, b) eudaimonology – science of goal and sense of human existence, and c) axiology – science of moral good and moral value.

Theoretical and practical usage of ethics in human resource management

Modern thinkers presenting the division of philosophy showthreebranches ofethics: metaethics that demonstrates a) cognitivism, b) non-cognitivism, c) subjectivism, and d) objectivism. Normative ethics deals with utilitarianism, egoism, deontology, virtue theory, natural law theory, and divine command theory.Applied ethics explains a person's responsibilities and permissibilities, particularly in challenging situations that require moral evaluation (Taylor, 2017, 13–16).

Any moral decision presents *pro* and *contra* arguments that justifya subjective or objective point of view. For instance, a strategic human resources manager faces a dilemma that presents two realities: a true dilemma and a false dilemma. The true dilemma shows a real situation in which a difficult choice must be made between only two alternatives. A scenario with more than two options can be shown through the false dilemma (Taylor, 2017, 299).

The book *Armstrong's Handbook of Human Resource Management Practice* (2014) is written by authors who also look at ethical dimensions-related questions.In the first part of that book, in chaptereight, titled *The Ethical Dimension of HRM,*theydescribe moralquestions in human resource management. First,the authors introduce that branch of philosophy. Then,the meaning of ethics, the nature of moral decisions and judgements, the ethical subjects of deontology, utilitarianism, stakeholder theory, and discourse theory; the meaning of equity, justice, and fair dealing; the ethical guidelines of human resource management; who settlesethical dilemmas?And the ethical significance of human resources.

Authors distinguish between ethics and morality and provide definitions for both concepts. Some thinkers consider them synonymous. Petrick and Quinn (1997, 42) state that moral philosophy "is a study of individual and collective moral awareness, judgment, character, and conduct." Hamlin and others (2001, 98) emphasize that ethics concern statements and moral values that help differentiate right from wrong. Beauchamp and Bowie (1983, 1–2) clearly differentiate between ethics and morality. Moral values are described as part of social institutions with a history and teachings that promote learnable statements. The study of moral philosophy is about describing the nature of ethical rules and related issues and decisions. Armstrong and Taylor (2014, 96) conclude that the question affirms, "Ethics is concerned with making decisions and judgments about what is the right course of action to take. It can be described in terms of a framework that sets out different approaches and can be extended to include concepts that influence and guide ethical behaviour, namely equity, justice, and fair dealing."

Jones (1991, 367) proposes the concept of an ethical decision (*sententia ethica*), which is a morally acceptable judgmentto a larger group of people. "A moral issue is present where a person's action, when freely performed, may harm or benefit others […] the action or decision must have consequences for others and must involve choice, or volition, on the part of the actor or decision maker" (Jones, 1991, 267).

Winstanley and Woodall (2000a, 8–9) call moral philosophy a tool (*instrument*) that contains human criticism and challenges. There is no universal code of ethical frameworks. Any ethical situation requires moral reflection, decision, and judgment. Usually, there is a choicebetween two alternatives, a true dilemma(*vera dilemma*), and seldom is itthe rational choice between valuable right and unvaluable wrong. SummarizingCleggand others (2007, 12), theydeclare that*sententiae ethicae* "emerge out of dilemmas that cannot be managed in advance through rules."

Armstrong and Taylor, presenting the ethical framework (*compares ethical),*do not mention the Aristotelian and Stoic archaeology. They begin their reflection from Kant's conception of deontological theory, whichbelongs to normative ethics, toexplain the etymology of the Greek word *"deon"* that signifies something binding, needful, and right (ArmstrongandTaylor, 2014, 97; McKim, 1996, 74). The founder of theethics of duty is Immanuel Kant (1724–1804), the German philosopher who proposed, among other things, that the categorical imperativediffers from the hypothetical imperative. The philosopher of Królewiec states that "a moral law, given in reason, that has universal and unconditional binding force [...] advocates acting in a way that one could accept as good (as a universal law) if everyone acted in that way" (McKim, 1996, 40), (Armstrong, Taylor, 2014, 97), and(Taylor, 2017, 153–157).

The next concept of the ethical framework is utilitarianism, also part of normative ethics.The lexeme "utilitarianism" comes from the Latin word *"utilitas,"meaning "use, usefulness, and utility"* (*Elementary Latin Dictionary*, 2002, 896). Utilitarian ethics has ancient predecessors, such as the Cyrenaics and Epicurus of Samos (341–270 B.C.), the founder of the Epicurean School, in his domestic garden. Epicurus teaches logic,canonicalphysics, and ethics that explain*eudaimonia* (happiness) as the beginning and end of hedonistic life. F. Copleston affirms that "the ethics of Epicureans is fundamentally selfish or egoistic, in that it is based on the individual's pleasure; it was not in practice as selfish as it might sound. Thus, theEpicureanthought that it is reallypleasanter to do as a kindness than to receive one, and the founder himself was commended for his contented and kind character" (Copleston, 1993, 409;Reale, 2010, 364–366; Baggini, Fosl, 2010, 100–101; Taylor, 2017, 85–91).

Concept of ethical utilitarianism, represented by Jerry Bentham (1749–1832), John Stuart Mill (1806-1873) and Peter Singer (1946-), demonstrate three fundamental statements: a) right or wrong actions will be judged after analysing their consequences; b) judging consequences they create matter to determine human being's happiness or unhappiness; c) any form of well-being is measured in the same way (Taylor, 2017, 172, Armstrong, Taylor, 2014, 87).

The stakeholder theory proposed by Freeman(1984) could be considered as one form of utilitarianism.The management of certain organizations will be done by specific groups of stakeholders, including owners, employees, customers, suppliers, and communities.Managers collaborate with the organization to manage stakeholders who prepare the operational mode to secure the success and efficiency of the entire organization.Starting ethical judgments requires specific circumstances marked by stakeholders.

The theory of stakeholders highlights communication problems among members of an organization. Therefore, the philosophical theory of discourse ethics (colloquium ethicum), founded by Habermas (1929–), the German philosopher and sociologist, is explained in the field of human resource management by Winstanley and Woodall, who state: "the role of ethics is not to provide solutions to ethical problems, but rather to offer a practical process and procedure that are both rational and based on consensus, through which issues can be debated and discourse can take place" (2000a, 14, Baggini, Fosl, 2010, 92–95).

Armstrong and Taylor presentfour philosophical moral theories as the ethical framework of the ethical dimension of human resource management. Begging from deontology through utilitarianism, shareholder theory,and discourse ethics,they provide not only ethical doctrines but also show the process of their development and application in the sciences of management.

Thenthe equity theory (*theoria equitation*) that, according to Adams (1963), a behaviouralpsychologist, emphasizesfairness as a core of motivation. Equity (*Aequitas*)differsfromequality (*equality*). Two terms indicate different realities and are not synonymous. "Equity involves feelings and perceptions,and it is always a comparative process […] equality […] means treating everyone the same and would be inequitable if they deserve to be treated differently" (Armstrong, Taylor, 2014, 97).

Discipline is considered a cardinal virtue in Aristotelian and Stoic aretaic ethics, but the modern understanding of justice (*iustitia*) differs.J. Rawls (1921–2002), the American philosopher, founded and described in his book *A Theory of Justice* (1971) theconcept of "justice as fairness". Eliminating bios (*inclination*) he postulates hypothetical thinking as "original position" (*status principals*). Then J. Rawls proposes a paradigm called "veil of ignorance" (*velamen ignorantiae*) in which a human agent abstracts from social position, education, religious belief, character, race, sex, etc. *Velamen ignorantiae*frees from somehuman kind*inclination*(Taylor, 2017, 43). The judgment that J describes can be performed after that. Rawlshas two precise requirements: "every person is to have the equal right to the most extensive basic liberty comparable with similar liberty for others,and "social and economic inequalities are to be arranged so that they are both a) reasonably respected to be to everyone's advantage, and b) attached to positions and offers open to all" (Rawls, 1973, 60).

Adams and Rawls' theories prepare the field of human resource management to understanddifferent forms of justice practiced in the world of organizations.

Armstrong and Taylor summarizefour kinds of justice: a) procedural – fairness of the processes, b) distributive – fairness of outcomes, c) social – equality, inclusion without discrimination, and d) natural–fair hearing and impartial judgement (Armstrong, Taylor, 2014, 97–98).

Strategic human resource managersfromthe perspective of ethical rules and their dilemmas

Ethical guidelines are present in human resource management, just like any other theoretical and practical discipline. Elisabeth Scott, a professor of business ethics and human resource management, has written an article titled *The Ethics of Human Resource Management* published in J. A. Mello's book, *Strategic Human Resource Management*(2014), whichanalysesthe moral philosophy issuein contemporary organizations. Introducing that question, she goes to antiquity in which employees (*operarii*) and tools (*instrumenta*) were classified as "dumb tools" (plows, shovels), "semi-speaking tools" (animals), and "speaking tools" (slaves). The modern meanings of the phrase 'human resources' convey the values and rights of workers (Scott, 2014, 86). After that,she briefly presents ethical theories, among others, J. Rawls' concept of justice that emphasizes his special place regarding the realities of fairness, stakeholders, and duty in human resource management.

Scott describes three types (*exempli*) of ethical problems (quaestiones *morales*) that accompanyhuman resource managers. The first type affirms the need for discernment (*ars discernendi*) that involves real things as a complete image of complicated situations. The manager's decision is based not only on his authority and position in the organization, butalso on his capacity to implement*his discernment*. The second type of moral problemsemphasizes an existing conflict (*conflict*)between the judgement of a human resource manager and his personal responsibility as an agent representing the employer. When a human resource manager's best interests are not aligned with the employer's procurement responsibility, the third type of ethical problem is called conflict of interest (*conflictus utilitatis*). The first *quaestio moralis* can become the second or third ones, because ahuman resource manager decides about the appropriate activity.

The activities of the human resource manageralso realizefunctions (*munera*) that describe relationships between employer and employee. Analysing their specification,it is necessary to present five of them: recruitment, training, motivation, retention, and termination. The first *munus* – recruitment (*conquisitio*)begins the employment process in whichthe manager demonstrates practical knowledge to qualified employees who become valuable assets to the organization. The experienced employer hiring candidates implementssix elements: minimum qualification, entry salary range, advertising,selection, successful applicants,and conflict of interest (Scott, 2014, 87–91; Griffin, 2022, 440–443). Training and development (*exercitatio et progressus*) are part of the second function, whichcontains: general training, safety training, values training, conflict of interest, and career development. J. Mello, in *Strategic Human Resource Management* (2025),emphasizesemployees' learning and development. They are "a key strategic issue for the organization. Companies use this method to evaluate the profitability of their human resources. Because much of the return on investmentin learning and development may be difficult to quantify, particularly in the short run, organizations should take a holistic view of learning and development (Mello, 2025, 160; Swanson, 2023, 289–304; Griffin, 2022, 443–446).

Analysing the first and second functions, given the underlying role of conflict of interest that complicates and challenges the manager's activity. The third function emphasizes the reality of motivation (probation) and is proposed to the employee. The probation stage includes compensation, performance appraisal systems, employee monitoring, climate and culture, charitable contributions, work design, team circles, and quality and improved discipline. Motivation, according to Goleman (2024), is part of emotional intelligence.It harmonizes a human being's competency. It describes the aspiration to a target, engagement in the organization, initiative, and optimism (Goleman, 2024, 49; Scott, 2014, 93–95; Griffin, 2022, 483).

Benefits, a work/life balance, compensation systems, and mechanisms for employee complaints are all important factors in retention (retentionio). Four functions demonstrate dynamic realities that realize the manager's strategic plan from recruitment to retention. The first function prepares the following ones.

The last managerial activity of employment is called termination (*exits*), whichends the employee's working adventure. That function characterizes dismissal, layoffs, resignation,and an employee's death. Scott, concluding her article, emphasizes that five functions of the employment processdetermineethical values that accompany thehuman resource manager from *Terminus a quo* –recruitmentto *Terminus ad quem* –termination.

The moral activity of a manager involvesdifferent situations in which the employer ethically recognizes and evaluates the employee's work. He has three options for exercising his judgment as a human resources manager: moral, non-moral, and amoral. As a human being, Iact according to reason and self-determination. His decision,ethically speaking, provokes real judgment with moral consequences (Koźmiński and others, 2023, 63–64). J. Habermas proposes "discourse ethics" that, following Plato's dialectics,emphasizes rationality and impartiality between interlocutors. That postulate organizes speech that describes the moral dimension of human dialogue (Baggini, Fosl, 2007, 92–96).

The reality of ethical dilemmas accompanies managerial decisions that shapelife in his organization. The Greek lexeme *dilemmaton* signifies that, in a single statement, there are two phrases (Jurewicz, 2018, 218). The dilemma, generally speaking, describesthe necessity of choice between two goods. The moral philosophy also presents ethical dilemmasas a process of right and controversial decisionsin ambiguous and undesirable situations. The unpleasing choice determines ethical rules and moral practice. Ethics are a significant challenge for a human resource manager.For instance, how to accept the tendency to personal limitations and underlineexisting difficulties; researching different causes and avoidingreal ones; transferring personal responsibility to others; attributing to the present situation, lack of timeliness and appropriate activity; tendency tominimizewaste or questioning the real victim. On the otherhand,the manager's personal conviction is presented as lawful and ethical,declaringhas no sign of misdeed or immorality. Kind of persuasion convincing that the chosen solution is the best for the company or the employee. Employer's conviction is "safe" because it will never be discovered or published. The manager will receive forgiveness and protection from the organization due to the activity's benefits (Koźmińskiand others 2023, 65).

Armstrong and Taylor devised a checklist of ten questions.They can be applied to situations dealing with ethical dilemmas. There are the following examples: "In disciplinary cases, are there any mitigating circumstances? […] Do the facts as established and confirmedjustify the proposed action? Is the proposed action in line with both the letter and the spirit of the law? […] Will the proposed action benefit the organization, and if so, how?" (Armstrong, Taylor, 2014, 101).

Ekuma and Akobo,in analysing the question of ethics in contemporary human resource management, confrontethical dilemmas in functioning organizations. That issue describes the following scholars:Winstanley and Woodall (2000), Wooten (2001),and others.They stress the significance of moral philosophy in recording relationships between employers and employees. According to researchers Winstanley and others (1996), four categories of problems could be identified: uncertainty and risk, monitoring and control, liberalization, and speech and imposture.Therefore,Ekuma,Smith (2012) and Wooten (2001) identify five ethical dilemmas: a) "misrepresentation and collusion"; b) "misuse of data"; c) "manipulation and coercion"; d) "value and good conflict"; and e) "technical ineptness" (Ekuma, Akobo, 2015, 53–54).

Blanchard andPeale, in their book *The Power of Ethical Management* (2014), describe the moral field of management. The authorspresent issues of ethical dilemmas and propose moral values that call for five keys to ethical power. First value – aim (*finis*) introduces a person as an ethical being. The nextone affirms the doer's dignity (*decorus*). The nextvalues – patience (*patientia*) and perseverance (*perseverant*) – belong to cardinal virtues and demonstratea person's moral abilities. Personal satisfaction that is unified with active reflection is represented by the final value, perspective (prospectus) (Blanchard, Peale, 2014, 82).

Roman Ingarden (1893–1970) is known for his work on many books, including *Książeczka o czlowieku* (1972) and *Wykłady z etyki* (1989). He belongs to the phenomenological tradition initiated by Edmund Husserl. Ingarden's ethical point of view mediates between the rational ethics of Immanuel Kant and the axiological phenomenology of Max Scheler. The philosopher differentiates three branches of ethics: theoretical, normative, and applied(ethical technology). Hisethics can be called axiological, precisely material ethics of values. (Ingarden, 1989, 120 and next; Galarowicz, 2020, 55–58; Węgrzecki, 2001, 72–73).Ingardendistinguishes, among other things, moral and personal values and emphasizesthe differences. The Cracow Thinker presents an ontology of values indicating a) real objects; b) ideal objects, and c) purely intentionalobjects. Therefore, moral values exist as objective, nonempirical, and normatively binding.Ingarden's personal values are presented as shaped by individual experience, context-dependent, and expressions of value appropriation. In consequence, they existas a subjective realization of objective values.The philosopher, first of all,explains two realities: the subject –moral value carrier and the world of moral values, *sensu stricto* morals, and the distinction between contestable and moral values.Personal values, as basic values,determinemoral values(Ingarden, 1989, 201–202)

Ingarden mentions and describes the following positive personal values that, according to him, do not belong to moral values: consciousness (*conscientia*), freedom (*libertas*), internal power (*visinterna)*, intelligence (*intelligentia*), happiness (*felicitas*), versatility(*mobilitas*), profundity (*profunditas*), man's independence (*hominis arbitrium*), internal criticism (*criticismus internis*), and individuality (*natura propria*).

Analysing consciousness or self-consciousness, Ingarden argues that this personal value is not a moraloneand, at the same time, insufficient forresponsible activity. Similarly, freedom exists as a positive and personal value; it creates anindispensable condition of human responsibility. Internal powerof a person indicates a stable character, especially whenconfronting difficult situations. The thinker notes that besides so-called animal intelligence,humans possesspositive or negative realizations. Happiness as a personal value describes the human act of desire that surpasses the framed reality of eudaimonism. The value of versatility transcends moral considerations.Profundity states psychological and spiritual dimensions of human beings, demonstratingemotional and intellectual capacities. Man's dependence expresses his thinking, willingness, and activity, constituting an essential part of human nature. The personal value of man's independence harmonizes with internal criticism, whichshowsthe capacity of human judgment. Ingarden's individuality is similar to Duns Scotus'uniqueness –*socratitas*(Ingarden, 1989, 220–240). The first and original personal value, according to him, determinesthe reality of a person as a dimension that does not summarize personal values but exists as unique in relation to all personal values.

The human resource manager is confrontedwith situations.Itis necessary to make decisions and settledilemmas.Moral philosophy's special role in ancient and modern organizational life is exemplified by Aretology, Aretaic philosophy, and axiology, which were introduced by Aristotle, Max Scheler, Roman Ingarden, and John Rawls, among others.

The importance of Moral Philosophy underlines a special role in today's business activities. Human behaviourconcentrates on the rules that regulate appropriate relationships between employer and employee. Future perspectives are opened by the ethics of values, particularly emotional and moral intelligence.It is leading to a new area of interaction between humans and artificial intelligence.

Abstract: The article titled Ethical dilemmas in strategic human resource management raises moral questions from antiquity to the digital era. Moral issues occupied the minds of ancient thinkers. They understood that human life needs rules that help it to exist in the family, *polis,* and State. Aristotle proposed intellectual and moralvirtues, and the concept of eudaimonia, and created the concept of the golden mean. Stoic philosophers elaborated cardinal virtues in harmony with nature. Epicureans preferred moderated ethical hedonism. Modern researchers also focused on the theoretical and practical usage of ethical norms in human existence. Immanuel Kant proposes a deontological ethics, and Jürgen Habermas presents discourseethics. John Rawls formulated the theory of justice, while Ralph Waldo Emerson presentsan egoism ethic.The manager's human resources face ethical dilemmas andbalancemoral values, as proposed by Max Scheler and Roman Ingarden, in organizationalbusiness settings. How to introduce emotional and moral intelligence in approaching the reality of artificial intelligence?

Keywords: ethics, dilemma, value, axiology, human resources

Streszczenie: Artykuł podejmuje problematykę dylematów etycznych w zarządzaniu zasobami ludzkimi. To zagadnienie towarzyszy relacjom międzyludzkim od antyku aż do ery cyfrowej. Już starożytni myśliciele analizowali to zagadnienie i rozumieli potrzebę zasad moralnych w życiu człowieka, który egzystuje w rodzinie, *polis* państwie. Arystoteles zaproponował podział cnót na intelektualne i moralne, mając na uwadze eudajmonię(szczęście) wraz z zasadą złotego środka. Filozofowie stoiccy opracowali cnoty kardynalne w harmonii z prawem natury. Epikurejczycy preferowali umiarkowany etyczny hedonizm. Współcześni myśliciele także podejmują problematykę teoretycznego i praktycznego zastosowania norm etycznych w egzystencji człowieka. Immanuel Kant proponuje etykę deontologiczną, Jürgen Habermas prezentuje etykę dyskursu, podczas gdy Ralph Waldo Emerson propaguje etykę egoizmu. Menedżer zasobów ludzkich spotyka się z etycznymi dylematami, mając na uwadze wartości moralne, o których wspominają między innymi Max Scheler i Roman Ingarden, w funkcjonowaniu biznesu organizacyjnego. W jaki sposób zaimplementować inteligencję emocjonalną i moralną w spotkaniu ze sztuczną inteligencją?

Słowa kluczowe: etyka, dylemat, wartość, aksjologia, zasoby ludzkie

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Professional Competences in the Labour Market: Selected Development Perspectives

Kompetencje zawodowe na rynku pracy: wybrane perspektywy rozwojowe

"Work is an essential human need — a need for the affirmation of life, self-expression, and the establishment of relationships with other people. In this sense, it makes a human being (an individual) a truly human person; it humanises."
R. Lewandowski

"The European labour market is subject to continuous transformations as a result of social, economic, and political processes occurring at both local and global levels."
M. Onufer

Introduction

The contemporary labour market generates significant challenges for various groups of employees. The subject matter addressed in this study is presented in the perspective of the future and emerging labour market trends.

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It includes both young people who are still in the process of education and individuals who have already completed their formal education and are just beginning their professional careers.

The relevance of this topic is also evident from the perspective of educational planning. As noted in the literature: "*The twenty-first century brings rapid economic, social, and political changes worldwide. These changes entail numerous consequences, including the erosion of existing, well-established labour market structures*" (Makuch, 2014). This statement can be complemented by identifying key trends in the labour market and business environment in the coming years. The selected trends are presented below:

- Dynamic organisation: In the context of this trend, the key factor shaping the labour market and business environment is the ability of organisations to adapt to technological and organisational changes. Companies operating in highly innovative technological environments will remain competitive and will offer attractive employment conditions. As a result, their competitive advantage is expected to strengthen.
- AI-Fueled Business: In the coming years, artificial intelligence and technological solutions will become a key component of business processes. Their implementation will lead to automation and increased work efficiency. Organisations that integrate AI-based technologies into their strategies will gain a competitive advantage and greater development opportunities.
- Adaptation of hybrid work models: Hybrid work will become a standard organisational model. Its implementation will require advanced managerial competences in planning, organising, and coordinating teamwork. At the same time, the importance of factors such as organisational location or employee availability will gradually decrease in favour of organisational flexibility.
- Big data: The use of large datasets will be one of the key factors supporting decision-making processes in business. Organisations using advanced data analytics will be better able to adapt to changing market conditions. Consequently, information technologies, HR processes, and data analytics will become increasingly integrated into organisational activities.
- Employee Journey: The concept of the "employee journey" refers to the holistic experience of an employee within an organisation from

recruitment to the end of employment. In the future, it will constitute an important element of human resource management, covering both recruitment processes and the planning of employee development and career paths.

- Lifelong Learning: Continuous improvement of competences and acquisition of new skills will become a standard feature of professional functioning. In a dynamically changing labour market, lifelong learning will be a necessary condition for maintaining employment and developing one's professional career.
- Intelligent Leadership: Modern leadership will require the combination of analytical and soft competences. Decision-making processes will increasingly be data-driven while simultaneously taking into account emotional and social aspects, including empathy towards employees.
- Talent retention and internal mobility: Talent retention and the promotion of internal employee mobility will become key elements of human resource management strategies. Organisations will design career paths enabling competence development and internal promotion, which may lead to increased employee satisfaction and reduced turnover.
- Employee Assistance Program (EAP): Employee assistance programmes focus on providing support in the area of mental health and employee well-being. They enable access to professional support from specialists such as psychologists or career advisors (Syrówka, 2025).

The presented trends indicate that the contemporary labour market is increasingly dependent on employees' ability to adapt, learn, and function in a digital environment. Therefore, it is reasonable to reflect on professional competences and their importance in the perspective of the future, as professional activity constitutes an essential part of human life. Due to the dynamic changes occurring in the labour market, this issue is also becoming particularly relevant in the context of education and preparation for future professional activity.

The aim of this article is to present selected perspectives on professional competences and expectations towards employees in the context of dynamic changes taking place in the contemporary labour market. The research problem focuses on identifying which professional competences will be of key importance in the context of social, technological, and organisational transformations shaping the functioning of the labour market in the coming years.

The article has a review character and is based on the desk research method, including the analysis of literature and selected electronic sources, including research reports on professional competences and labour market trends. The analysis covered selected monographs, scientific articles, and expert reports published mainly between 2018 and 2025.

Professional competences. Outline of the issue

When discussing professional competences, it is first necessary to present their general definitional approach. In the literature, professional competences are understood as an individual's resources that enable effective performance of job-related tasks assigned to a given position. It is also emphasised that the execution of professional duties requires the use of one or more competences, as their scope may refer both to single activities and to more complex configurations of tasks (Dziewulski, Dudzińska-Głaz, 2006).

Various typologies of professional competences are distinguished in the literature. Taking this diversity into account, three basic types within one commonly adopted classification are presented below. Their characteristics are summarised in Table 1 based on the study by Żeber-Dzikowska and Olczak (2014).

Tabela 1. Typologies of professional competences are distinguished in the literature

Type of competence	Description of skills
Core competences	Represent a common requirement for all employees within an organisation. Their primary function is to shape and strengthen organisational culture. They may also serve as a reference point for comparing employees' competences within a given organisation.
Function-specific competences	Relate to skills specific to particular areas of organisational activity and job functions, such as marketing, sales, or quality analysis. They enable comparison of employees within a given organisational unit and support processes related to career planning and professional development.
Role-specific competences	Include competences assigned to particular professional roles (e.g. managerial positions). They are used to compare employees at the same organisational level and support the design of horizontal promotion systems and differentiation of roles within the organisational structure.

Source: Own elaboration based on: Żeber-Dzikowska, G., Olczak, I. (2014). Competences in the labour market in contemporary times. Society. *Education. Language*, 2, 162.

Clarifying the above considerations, it should be emphasised that the purpose of competence development covers two main areas. The first is the labour market and its resulting needs, which may be described as a utilitarian perspective. The second relates to the autotelic nature of competences, referring to their importance in the context of individual self-development (Strojny, Nowak, Hetmańczyk, Malaka and Skrzek, 2021).

In the literature, Bombiak (2014) identifies a number of characteristic features of professional competences. One of their key properties is dynamism, understood as the ability of competences to change over time. Competences develop along with an individual's professional experience, while the pace of their evolution depends on environmental conditions, individual predispositions, and intellectual level. As the author emphasises, professional competences are closely linked to the performance of job duties and tasks assigned to employees. Another feature is their measurability and observability, which means they can be identified and assessed in professional practice.

Moreover, professional competences are characterised by synergy, understood as their mutual reinforcement, leading to higher outcomes than when used in isolation. Another feature is relativity, meaning that their value and significance become apparent in specific situational contexts of professional life.

An important property of competences is also their transformability, which refers to the possibility of applying the same competences in different areas of professional activity, not only within a single profession. Another key feature is their subjectivity, resulting from their linkage with the individual employee, the work team, and the employing organisation.

Professional competences in the context of future expectations. A review of perspectives

As emphasised by Dach (2011), one of the key factors shaping the process of globalisation, which simultaneously affects labour markets, is the development of production, information, and communication technologies. Changes occurring in the technological sphere influence transformations in the structure of labour demand and, consequently, also affect the scope of required qualifications and employee competences.

Kwiatkowski (2018) notes that "the concept of future competences is naturally associated with foreseeable directions of civilisational change.

These changes will concern all spheres of life. They can be predicted based on analyses of the dynamics of selected technological developments observed, for example, over the last decade."

Extending the discussion presented in this study, selected future competences can be examined through the lens of the classification proposed by Komuda (2023). This classification is summarised in Table 2 below.

Table 2. Selected future competences and their types identified as 'very important' in the literature review

Type of competence	Specification
Cognitive	In the literature on future cognitive competences, particular importance is attributed to skills such as unconventional thinking, creativity in problem-solving, analytical skills in the context of technology use, decision-making abilities involving risk analysis and assessment, as well as design thinking in teamwork.
Technical	In the area of technical competences, key importance in the future will be attributed to: proficiency in the use of digital and interactive media, programming competences, and the ability to work with robotic systems and their integration within the work environment.
Social	In the area of social competences, there is an increasing emphasis on lifelong learning, effective teamwork in virtual environments, social intelligence, readiness to work in culturally diverse settings, social agility, and the ability to manage information overload.

Source: Own elaboration based on Komuda, Ł. (2023). *Future competences. Which skills are worth developing.* Warsaw: Foundation for Social and Economic Initiatives.

The analysis of the presented competences indicates that the contemporary labour market is increasingly moving away from a model based exclusively on technical qualifications. Growing importance is attributed to adaptive and social competences, as well as the ability to learn, which may indicate a progressive hybridisation of professional requirements.

The above typology can be supplemented by findings presented in the report *Future Competences. How to Develop Them in a Flexible Educational Ecosystem*. According to its authors, in relation to technical and digital competences, research shows that by 2030, individuals working in Europe will spend over 40% more time on tasks requiring this type of skills (Włoch, Śledziewska, 2019).

At the same time, the cited report emphasises that these competences will remain the domain of relatively small groups of employees. Notably, an increase in demand for IT and programming skills is also expected. It is estimated at approximately 90%. Furthermore, demand for competences related to problem-solving, information retrieval and analysis, as well as the use of digital technologies in everyday professional activities, is projected to increase to approximately 65%.

According to the analyses presented in the report, in relation to social competences, an increase in demand of around 22% is expected in areas such as entrepreneurship and the ability to take initiative. In turn, in the area of cognitive (higher order) competences, interest in these skills is projected to grow by approximately 14%.

At the same time, a decline in the importance of competences related to basic data processing is observed, which confirms the trend of labour market shifts towards more complex and advanced analytical and digital skills.

Further literature review indicates the necessity of taking into account the development of e-services and dynamically evolving processes within the digital environment, which relate to various areas of individual functioning. In this context, competences related to the use of the Internet and online environments are gaining particular importance in the future perspective.

The *Poland Development Strategy until 2035* emphasises that "the development of digital competences is essential in the context of rapid technological change, labour market automation, and the growing role of a data-driven economy." In the literature, digital competences include, among others, the creation of digital content, data utilisation, information exchange skills, digital security awareness, as well as problem-solving in digital environments.

In recent years, an intensive development of technologies based on artificial intelligence (AI) has also been observed. These include both software systems and devices designed for data analysis, interpretation, and processing. Such technologies support the implementation of complex decision-making and operational processes based on previously defined assumptions.

Artificial intelligence-based tools are perceived as particularly attractive from the perspective of available and potential technological solutions they offer to contemporary society (Rzepka, Czerwińska, Boiko, Witkowski and Czerwiński, 2025). Considering the longer-term perspective in relation to the above findings, it may be emphasised that one of the key characteristics of the labour market in 2035 will be its progressive virtualisation. The structures of functional and role-based dependencies within organisations will increasingly take a horizontal form.

Consequently, it can be indicated that multidimensional organisational activities, including employee recruitment, internal team communication, and the execution of assigned tasks, will increasingly rely on internet-based solutions. This also applies to building relationships with the external business environment, as well as sales processes, which will be carried out in an online environment, using its extensive capabilities.

Research conducted by the Polish Economic Institute indicates that, in one of the visions of the labour market in 2035, transformative competences will play a particularly important role. As the authors of the report emphasise, these include: "the ability to adapt to new conditions, including highly unstable and uncertain ones, taking responsibility for assigned tasks (as well as one's position in the labour market), and reconciling tensions and resolving dilemmas related, among others, to complex forms of employment (potentially with several entities simultaneously)" (Dębkowska et al., 2022). In the context of labour market forecasts, the growing importance of universal competences can also be identified, including self-initiative, critical thinking, and flexibility in undertaken activities. Furthermore, future-oriented analyses also highlight the significance of stress management skills and the ability to integrate various competences and apply them effectively in professional activity (Wiśniewska, Rosiak-Ogłaza, 2025).

Conclusion

Summarising the considerations presented in this article, it should be stated that professional competences constitute an inseparable element of individuals' career paths in the labour market. In the context of the discussed issues, it should be noted that significant systemic transformations in the labour market are expected in the coming years, affecting a substantial part of the global workforce.

According to available analyses, these changes will concern approximately 152 million jobs, affecting around 23% of 673 million economically active individuals. At the same time, research indicates that a decline in global employment of approximately 2% may occur in the longer term, which corresponds to a reduction of around 14 million jobs.

However, the most recent forecasts also point to compensatory processes. It is anticipated that up to approximately 69 million new jobs may be created in the near future (Syrówka, 2025), which indicates a simultaneous transformation of the employment structure and dynamic changes in the labour market.

It should undoubtedly be emphasised that, in the context of rapid changes occurring in labour markets and current trends, the development of a broadly understood range of competences becomes crucial. This results from several key factors. Above all, it includes the necessity of meeting labour market requirements, as well as enabling individuals to achieve their own professional goals and maintain employment.

In this context, it should also be noted that the process of acquiring new competences is closely linked to the concept of lifelong learning, understood as a voluntary and continuous learning process undertaken after the completion of formal education. As Opiela (2019) notes, lifelong learning refers to learning throughout one's entire life and includes the acquisition of knowledge both within formal and non-formal education systems. The first refers to institutions within the education system and higher education, while the second encompasses educational activities carried out outside the formal state education system.

Considering the issues presented in this article, potential directions for further research can also be identified. In particular, these may concern the analysis of individuals' competences in the context of their career paths and related changes. Another possible research area includes the analysis of professional competences in the context of future occupations. This could be complemented by comparative studies on projected demand for professional competences in national and international labour markets, in relation to competency requirements placed on employees.

Abstract: The aim of this article is to present selected perspectives on professional competences and expectations towards employees in the context of dynamic transformations taking place in the contemporary labour market. The research problem focuses on identifying which competences will be of key importance in the context of social, technological, and organisational changes shaping the labour market in the coming years. The article has a review character and is based on the desk research method. The analysis included selected scientific studies, research reports, and electronic sources concerning professional competences and labour market trends, published mainly between 2018 and 2025. The article presents selected trends occurring in the labour market as well as development directions within the business sector, referring, among others, to the report *Future. Labour Market and Professions of the Future 2025*. The paper also discusses the concept of professional competences, their typology, characteristics, and significance in human resource management processes. Particular attention is devoted to future competences, indicating the growing importance of cognitive, technical, social, and digital competences in the conditions of ongoing technological transformation. Furthermore, forecasts concerning the demand for specific competences in the perspective of the years 2030–2035 are presented. The conducted analysis demonstrates that the contemporary labour market is increasingly oriented towards adaptive, digital, and social competences, which is associated with the necessity for lifelong learning and continuous adjustment to changing employment conditions.

Keywords: professional competences, future competences, labour market, labour market trends, digital competences, lifelong learning

Streszczenie. Celem niniejszego artykułu jest przedstawienie wybranych perspektyw dotyczących kompetencji zawodowych oraz oczekiwań wobec pracowników w kontekście dynamicznych przemian zachodzących na współczesnym rynku pracy. Problem badawczy koncentruje się wokół próby określenia, które kompetencje będą miały kluczowe znaczenie w perspektywie zmian społecznych, technologicznych i organizacyjnych determinujących funkcjonowanie rynku pracy w najbliższych latach. Artykuł ma charakter przeglądowy i został opracowany z wykorzystaniem metody desk research. Analizie poddano wybrane opracowania naukowe, raporty badawcze oraz źródła elektroniczne dotyczące kompetencji zawodowych i trendów rynku pracy, opublikowane głównie w latach 2018–2025. W artykule przedstawiono wybrane trendy zachodzące na rynku pracy oraz kierunki rozwoju w obszarze biznesowym, odwołując się m.in. do raportu Future. Rynek pracy i zawody przyszłości 2025. Omówiono również pojęcie kompetencji zawodowych, ich typologię, charakterystykę oraz znaczenie w procesach zarządzania zasobami ludzkimi. Szczególną uwagę poświęcono kompetencjom przyszłości, wskazując na rosnące znaczenie kompetencji poznawczych,

technicznych, społecznych oraz cyfrowych w warunkach postępującej transformacji technologicznej. Zaprezentowano także prognozy dotyczące zapotrzebowania na określone kompetencje w perspektywie lat 2030–2035. Przeprowadzona analiza wskazuje, że współczesny rynek pracy zmierza w kierunku wzrostu znaczenia kompetencji adaptacyjnych, cyfrowych i społecznych, co wiąże się z koniecznością ciągłego uczenia się oraz dostosowywania do zmieniających się warunków zatrudnienia.

Słowa kluczowe: kompetencje pracownicze, kompetencje przyszłości, rynek pracy, trendy rynku pracy, kompetencje cyfrowe, lifelong learning

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Cultivating Digital Literacy: Mentorship Models for Farmers Engaging in Live Streaming and E-Commerce – Systematic Literature Review

Kultywowanie cyfrowej kompetencji: modele mentorstwa dla rolników angażujących się w transmisje na żywo i e-commerce – systematyczny przegląd literatury

Introduction

Live streaming and e-commerce continue to be vital channels through which rural farmers gain access to broader markets. Numerous farmers, however, are gravely affected by high levels of digital illiteracy, making the channels ineffective. Hasan et al. (2024) posited that higher levels of digital

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literacy increase entrepreneurial behaviour and market activity. In contrast, technology acceptance variables such as perceived usefulness, ease of use, and social influence have a strong impact on farmers' desire to use live streaming (Chen, Zhang and Chen, 2024). The use of multidimensional digital literacy, such as media technology, information awareness, access and dissemination and e-commerce technology, is associated with engagement in online marketplaces (Radovanović, 2024). Thus, mentorship has become a potential avenue to fill in such gaps, even though few syntheses of mentorship models specific to agricultural live streaming and e-commerce have been done. This is a significant gap as mentorship is essential for developing digital skills and confidence among farmers. The novel insights into these processes are essential in scaling adoption and enhancing equitable participation in digital agriculture.

In this research, a hybrid theoretical framework that combines the Diffusion of Innovation theory (Rogers, 2003), the Community of Practice (Lave and Wenger, 1991; Wenger, 1998) and the Capability Approach (Sen, 1999; Nussbaum, 2011. This provides a better understanding of mentorship-based digital literacy among rural farmers. Mentorship facilitates the adoption of live streaming and e-commerce by alleviating uncertainty and instilling confidence in farmers regarding innovations. Based on the Diffusion of Innovations, recent surveys indicate that a broader population are now adopting digital literacy education and agricultural technology. Community of Practice highlights the peer-to-peer, collaborative concept of mentorship, in which farmers will jointly develop knowledge and exchange digital practices. It has been demonstrated that community-based learning centres support rural digital skills initiatives. The Capability Approach views digital literacy as a form of enlarging the substantive freedoms of farmers. Through mentorship, farmers not only acquire technical knowledge but also enhance resilience, entrepreneurial performance, and gain more income opportunities. Collectively, these structures offer a multi-level prism that connects personal skill development with general adoption processes. Simultaneously, they shed light on the role of mentorship in empowering communities and developing rural areas.

While the research builds on established viewpoints, the analytical power of these perspectives lies in how they frame mentorship-based digital literacy. Diffusion of Innovations provides a framework for understanding how mentorship alleviates uncertainty and influences farmers' attitudes towards the value of live streaming and e-commerce technologies. Communities of

Practice framework guides the analysis of peer learning, emphasizing how collective learning spaces and community learning centres support the co-construction of digital skills. The Capability Approach guides analysis of how mentorship expands farmers' substantive freedoms, such as resilience, entrepreneurial capabilities, and livelihood opportunities. These frameworks provide a complementary analytical framework that links digital skills to processes of adoption, social learning and empowerment in rural settings.

This systematic literature review, based on the PRISMA 2020 guidelines, investigates evidence on mentorship in digital agriculture worldwide. It is an amalgamation of peer-to-peer, institution-led, platform-integrated, and hybrid models that foster farmers' digital literacy in live streaming and e-commerce. The review has four goals, which are to: (1) define and classify mentorship models; (2) study the most effective way to develop digital skills; (3) evaluate effects such as adoption, participation, entrepreneurship, and income growth and (4) examine enabling policy. Guided by these aims, the review asks: What mentorship models are used to build farmers' digital literacy for live streaming and e-commerce? What skills are most effectively cultivated? What outcomes and enabling policies are reported across contexts?

Methodology

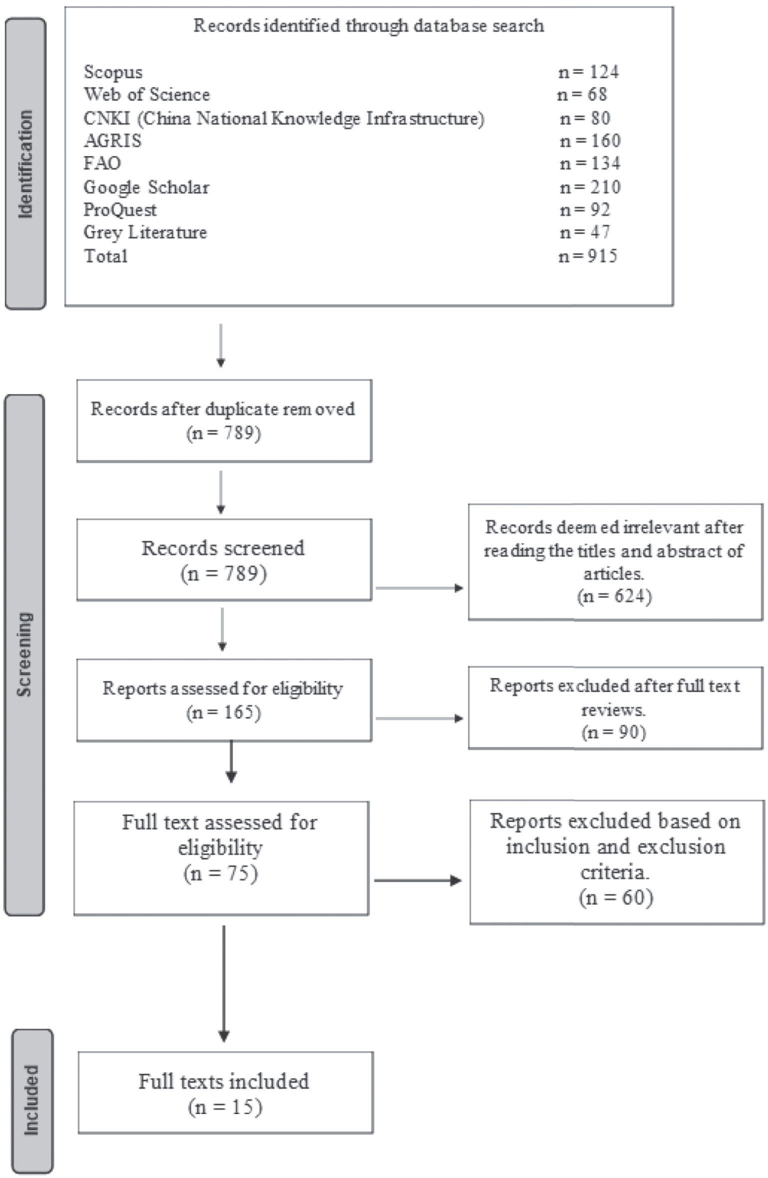
To enhance the transparency and rigour of the review, it is important to provide additional details about the search strategy, data extraction, and analysis. The search strategy adhered to PRISMA 2020 guidelines and involved a systematic search using a combination of terms related to digital literacy, mentorship, peer learning, live streaming, e-commerce and the platform economy. Boolean operators and controlled vocabulary (when available) were tailored to each database and search strings were refined through pilot searches in Scopus and Web of Science before being applied to CNKI, AGRIS and FAO databases, Google Scholar and ProQuest. The reference lists of eligible studies and NGO/government reports were also searched for comprehensive coverage.

The process of screening included deduplication, reading titles and abstracts and full-text screening based on eligibility. A PRISMA flow diagram was used to describe all these steps (see Figure 1). A pre-tested data extraction form was used to extract information on study characteristics, intervention type, digital literacy dimensions, mentorship components, outcomes and methodological aspects. Data were independently extracted by two reviewers for a sample of studies, with any inconsistencies resolved by consensus. Data were then tabulated into matrices to compare the effects across settings, intervention types, and outcomes.

Quality appraisal utilized CASP and ROBINS-I for qualitative research and non-randomized studies, respectively. MMAT was also used for mixed methods, and AACODS to assess grey literature. This helped in synthesizing the results. Mentorship models were identified and categorised according to patterns that emerged across studies. Interventions were categorised by structure, including peer-to-peer mentoring, institution or extension-based mentoring, platform-based mentoring and hybrid models that included both community and digital elements. Classification was based on descriptions provided in the studies and complemented by theoretical distinctions derived from the Communities of Practice and Diffusion of Innovations theories. These classifications were subsequently utilized to describe how diverse mentorship structures aligned with specific digital literacy outcomes and adoption behaviours. In cases where the data were found to be homogenous enough, meta-analysis was taken into consideration; in other instances, narrative synthesis combined the technology acceptance model (TAM) determinants and multidimensional literacy structures that have been reported in recent research (Chen et al., 2024; Hasan et al., 2024; Radovanović, 2024). This method guaranteed that the synthesis showcased empirical patterns and theoretically based distinctions.

As depicted in the diagram below, a total of 915 records were initially identified in eight databases and sources, such as Scopus (n = 124), Web of science (n = 68), CNKI (n = 80), AGRIS (n = 160), FAO (n = 134), Google scholar (n = 210), ProQuest (n = 92) and grey literature (n = 47). After the duplicates were eliminated, 789 unique records remained and were filtered for title and abstract. Among them, 624 were irrelevant and 165 reports were left for full-text evaluation. After a thorough examination, 90 reports were eliminated, and 75 full-text reports were evaluated regarding the inclusion and exclusion criteria. Finally, 15 studies were used in the final synthesis. This was done in accordance with PRISMA 2020 guidelines to ensure that the selection process is transparent, rigorous and reproducible.

Figure 1. Flow diagram of search results in line with the PRISMA Guidelines



Source: Authors' own elaboration based on Page et al. (2021).

Findings

The analysis of 15 studies presents a unified body of evidence to answer the main research question: How do mentorship models facilitate farmers' digital literacy and livestream e-commerce adoption in different rural settings?

- Adoption and Confidence: Mentorship decreased uncertainty and complexity in livestreaming and e-commerce adoption. Higher digital literacies led farmers to perceive the tools as more useful, increasing confidence and willingness to adopt livestreaming (Yang, Yu, & Liu, 2025; Wang, Mao, Zhou, & Li, 2025; Chen, Zhang, & Chen, 2024).
- Technical Literacies: Mentoring built technical literacies like livestreaming production, mobile payment and logistics through shared repertoires of practice (Li & Wang, 2024; Luo, 2025).
- Social Literacies: Community and cooperative-based mentorship contributed to digital skill development (Cropway, 2024; IFAD, 2022). However, in isolated rural settings, this was less successful (FAO, 2023; CaFAN, 2024).
- Critical Literacies: Farmers became more cognizant of algorithms and compliance requirements. This extends digital literacy beyond technical knowledge (Chen et al., 2024; Duan, Lin, & van Dijck, 2023).
- Capability Gains: With mentorship, farmers were able to apply digital skills to build resilience, performance and earnings. Still, disparities in resilience were noted in government and NGO reports when long-term mentorship and institutional support were lacking (MARA, 2023; OECD, 2020; IFAD, 2022).
- Regional Variation: Platform partnerships, subsidies and rural revitalization policies in China encouraged livestreaming adoption (MARA, 2023; People's Daily Online, 2023, 2024). In the Caribbean, cooperative mentoring programmes showed collective power, but faced infrastructural challenges (FAO & Canada, 2024; CaFAN, 2024).

Discussion

Diffusion of Innovations

In the Diffusion of Innovations model, peer-to-peer and extension-based mentor models consistently decreased uncertainty and increased perceived utility of livestreaming/e-commerce technologies. These models were well supported by multiple Chinese studies (Yang, Yu, & Liu, 2025; Wang, Mao, Zhou, & Li, 2025). Evidence showed increased adoption when mentors offered demonstrations and problem-solving support. The evidence is also inconsistent, while several studies confirm higher adoption, others note that inadequate infrastructure and connectivity (FAO, 2021; World Bank, 2020) limit diffusion. So, mentorship supports adoption, but only where conditions are right, and the evidence is more robust for peer-to-peer and extension models, compared to hybrid models.

Communities of Practice

Community-embedded models of mentorship (such as farmer field schools, cooperative digital hubs and group learning circles) were successful in tight-knit communities. Consistent evidence from China and the Caribbean (Cropway, 2024; CaFAN, 2024) supports outcomes such as enhanced streaming production and mobile payment skills. However, in a dispersed or culturally fragmented environment, impacts were mixed and there was less evidence of skill-building. This implies that the Communities of Practice approach is validated, but its effectiveness relies on robust social structures and ongoing interactions.

Capability Approach

Longitudinal mentoring, especially institutionally and NGO supported programmes, was associated with improved resilience, entrepreneurship and income diversification. Numerous studies offer favourable results of capability expansion (Chen et al., 2024; Duan, Lin, & van Dijck, 2023), however, NGO and government assessments (OECD, 2020; IFAD, 2022) warn that these results continue to be weak when institutional support does not last long. Here, the evidence is sparse and more heterogeneous. Contrarily, some studies note substantive gains and others underscore disparities in resilience once pilot programmes come to a close. Therefore, capability expansion is evident, but the evidence is only moderate and reliant on ongoing mentorship and support.

Triangulation and Policy Implications

Cross-referencing academic, NGO and government case studies shows that mentorship is necessary but not sufficient to address systemic constraints. The most consistent evidence of positive impacts comes from peer-to-peer and community-based models, with less research and studies supporting hybrid and platform-integrated models. The impacts of structural inequities in infrastructure, subsidies and regulatory frameworks remain constrained. Future Research should explicitly incorporate triangulated evidence to minimise biases, broaden geographical representation and include gender and youth-centred analyses (World Bank, 2020; GSMA, 2019; FAO, 2025). This will help determine the most effective models of mentorship under different circumstances and inform policy and practice.

Limitations

This review has several limitations. The body of evidence is quite limited, with just 15 studies synthesised from an initial 915 records. The evidence is also heavily influenced by regional representation, with many studies from China and governments or Non-Government Organizations (NGO)-led reports, which reduce its representativeness. Furthermore, certain mentorship models are under-researched and fewer studies support hybrid and platform-integrated models, limiting confidence in their effectiveness. Finally, many of the reported outcomes depend on infrastructure and long-term institutional commitment, so the sustainability of mentorship impacts cannot be fully evaluated.

Conclusion

Mentorship can be seen as a key tool in rural digital transformation, as it will make farmers have the necessary digital literacy skills. These skills enable farmers to consider livestreaming and e-commerce not only as a means of earning income, but also as a means of macroeconomic renewal. The review is significant because it determines a variety of mentorship models and charts technical, critical, and social literacies. It further points out comparative lessons, in which China is seen to be embracing the policy at a very fast pace, unlike the Caribbean, which does so in a cooperative, community-based manner. The discussion reveals that mentorship, in conjunction with technology acceptance theory and multidimensional literacy models, can decrease interventions to technology use. It is also empowering farmers and building resilience in rural economies.

Strong digital infrastructure and the establishment of mentoring within agricultural extension systems are mentioned among the actionable recommendations. They also demand collaborations among governments, non-governmental organizations and platforms to ensure equal access. Platform alliances and state-sponsored programs have increased digital adoption in China (MARA, 2023; People's Daily Online, 2024). In comparison, the Caribbean programmes focus on culturally relevant and collaborative mentoring models as the core of the engagement with the farmers (FAO, 2023; FAO and Canada, 2024). To capture the changing dynamics in future research, it will be important to develop longitudinal and cross-regional studies. It would be especially important that these studies consider gender and youth perspectives to ensure comprehensive findings (World Bank, 2020; GSMA, 2019).

Mentorship provides farmers with technical skills, like production and logistics. It also cultivates critical literacies of compliance and algorithmic awareness, as well as social literacies that can develop trust and enhance collective empowerment. This makes livestreaming a new frontier towards sustainable rural development. It fills the divide between old-fashioned agriculture and digitally mediated economies.

Contributions and Future Directions

This review adds to the literature by providing one of the first categorisations of mentorship strategies, peer-to-peer, institution-based, platform-based and hybrid, for farmers to improve their digital literacy for live streaming and e-commerce. It also combines Diffusion of Innovations, Communities of Practice, and the Capability Approach to demonstrate how mentorship overcomes uncertainty, fosters collective learning, and enhances farmers' digital capability. Lastly, this review offers comparative perspectives on China's policy-driven mentorship system and the Caribbean's community-based practices. Research should expand beyond the Chinese context, include longitudinal studies to assess long-term impacts, and explore the effects of mentorship quality, infrastructure and policy environments. Research should also consider gender and youth issues and rigorously assess new hybrid and platform-based mentorship models.

Abstract: Rural farmers are shifting to live streaming and e-commerce to serve more markets, but most have a digital literacy gap, making it difficult for them to succeed. The development of digital competencies has been observed to enhance entrepreneurial activities, market participation, and belief in the adoption of new technologies. This literature review identifies four types of mentorship models, including the peer-to-peer model, the institution-based model, the platform-based model, and the hybrid model, that can be used to equip farmers with the necessary skills on live streaming production, audience engagement, e-commerce activities, and information assessment. These results indicate that mentorship not only enables digital literacy but also enhances adoption, engagement, resilience and income. All in all, mentorship can be seen as a viable way to revitalize rural settings, as significant consequences require investment in infrastructure, partnerships with platforms, and the establishment of community-based training hubs.

Keywords: digital literacy, mentorship, farmers, live streaming, e-commerce, rural revitalization

Streszczenie: Rolnicy wiejscy przechodzą na transmisje na żywo i handel elektroniczny, aby obsługiwać więcej rynków, ale większość z nich ma lukę w cyfrowej znajomości technologii, co utrudnia im sukces. Zaobserwowano, że rozwój kompetencji cyfrowych zwiększa aktywność przedsiębiorczą, uczestnictwo w rynku oraz wiarę w przyjmowanie nowych technologii. Przegląd literatury identyfikuje cztery typy modeli mentorskich, w tym model między rówieśnikami, model oparty na instytucjach, model oparty na platformie i model hybrydowy, które mogą być wykorzystane do wyposażenia rolników w niezbędne umiejętności w zakresie produkcji transmisji na żywo, angażowania publiczności, działań e-commerce oraz oceny informacji. Wyniki te wskazują, że mentoring nie tylko umożliwia cyfrową znajomość technologii, ale także zwiększa przyjęcie technologii, zaangażowanie, odporność i dochody. Ogólnie rzecz biorąc, mentoring można postrzegać jako realny sposób na ożywienie obszarów wiejskich, ponieważ poważne konsekwencje wymagają inwestycji w infrastrukturę, partnerstw z platformami oraz tworzenia ośrodków szkoleniowych opartych na społecznościach.

Słowa kluczowe: Umiejętności cyfrowe, Mentoring, Rolnicy, Transmisje na żywo, Handel elektroniczny, Rewitalizacja

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Work-home conflict as a challenge for contemporary working societies

Konflikt na osi praca – dom jako wyzwanie współczesnych społeczeństw pracy

Theoretical Introduction

Contemporary working societies increasingly reveal tensions between the professional and private spheres of life. The dynamic economic, technological, and cultural transformations of the past two decades have rendered the boundaries between work and home progressively less distinct. Along with the advancement of digitalisation and the widespread adoption of remote work, particularly following the experience of the COVID-19 pandemic, the spaces where individuals traditionally performed different roles as employees, parents, partners, and friends have become increasingly intertwined. The literature increasingly refers to this phenomenon as boundary blurring between work and private life, leading to what is commonly described as work–home conflict.

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The broader sociological context of this phenomenon is inseparably linked to the transition from the industrial model of employment to a knowledge-based economy and a twenty-four-hour service economy (the 24/7 economy). As the eminent sociologist Ulrich Beck (2002) argues in his concept of the risk society, postmodern institutions have shifted the burden of structural market contradictions onto individuals. Employees in the era of globalisation are compelled to demonstrate continuous flexibility, self-sacrifice, and permanent availability for work, which directly undermines the stability of traditional family roles. The labour market has ceased to be a physically bounded workplace and has instead become an omnipresent process permeating private life (Rosa, 2013).

This phenomenon is not new. Greenhaus and Beutell (1985) already argued that work–home conflict results from the incompatibility of work and family role demands, which compete for individuals' limited resources such as time, energy, and attention. This theoretical foundation has subsequently informed numerous contemporary models of occupational stress, burnout, and well-being. It is worth noting, however, that the evolution of research paradigms has led to the emergence of a distinctly bidirectional perspective. In organisational psychology, a distinction is now commonly made between work-to-family conflict (WFC) where work interferes with family life and family-to-work conflict (FWC) where family responsibilities hinder functioning in the occupational domain (Netemeyer et al., 1996; Frone, 2003). Longitudinal studies clearly indicate that, owing to the increasingly expansive nature of contemporary organisations, WFC is diagnosed nearly three times more frequently than FWC and is associated with substantially more severe consequences for mental health (Amstad et al., 2011; Michel et al., 2011).

According to the classical model proposed by Greenhaus and Beutell (1985), work–home conflict may assume three primary forms:

1. Time-based conflict occurs when the time devoted to work prevents individuals from fulfilling family responsibilities (or vice versa). Overtime work, unpredictable schedules, and lengthy commutes physically consume the time required for raising children or maintaining intimate relationships.
2. Strain-based conflict is emotional and psychophysiological in nature. Stress, fatigue, anxiety, and frustration generated in one domain spill over into the other, impairing an individual's capacity to function

effectively. An employee who is mentally exhausted after a demanding day at work is likely to demonstrate reduced patience and emotional withdrawal in interactions with family members.

3. Behaviour-based conflict concerns the structural incompatibility between behavioural patterns expected in the professional and family domains. Behavioural styles rewarded in the workplace (e.g., emotional detachment, authoritarianism, rational decision-making, or assertive negotiation) may become dysfunctional and even destructive when transferred uncritically into marital or parental relationships, where empathy, unconditional acceptance, and emotional openness are essential.

Already in the 1980s, Greenhaus and Beutell observed that the contemporary labour market rewards long working hours and high employee availability, inevitably generating tensions within private life. Subsequent studies by Byron (2005) and Allen et al. (2020) confirmed that time pressure, role ambiguity, and excessive quantitative workload are among the strongest and most consistent predictors of work–home conflict. An important theoretical complement to this perspective is Stevan Hobfoll's Conservation of Resources (COR) theory (1989), according to which individuals strive to protect, maintain, and accumulate their valuable resources, including both material and personal resources such as time, energy, social support, and self-efficacy. Work–home conflict emerges when these valuable resources are excessively depleted in one life domain at the expense of another. When work consumes excessive psychological energy and emotional resources, insufficient resources remain for interpersonal relationships, effective recovery, or childcare, thereby initiating the so-called loss spiral. Hobfoll (1989) argued that prolonged resource depletion without adequate opportunities for replenishment constitutes the principal psychological mechanism underlying stress, ultimately leading to full-scale occupational burnout. Research conducted by Grzywacz and Marks (2000) confirmed that individuals possessing greater initial resource capital, including strong family support, a high degree of decision-making autonomy, and a strong sense of control at work, experience fewer negative consequences of work–home conflict and are, in some cases, even capable of transforming experienced tensions into constructive motivation and enhanced task engagement.

An interesting and highly relevant interpretation of the work–home relationship in the era of digitalisation was proposed by Sue Campbell Clark

(2000) in her Work/Family Border Theory. According to Clark, individuals function as "travellers" who cross the boundaries between two worlds – the workplace and the home – on a daily basis, constantly negotiating the parameters of these boundaries. These boundaries are characterised by two principal dimensions: flexibility and permeability. Clark identified two fundamental strategies for managing work–family boundaries:

- Segmentation (rigid boundaries): Employees strive to maintain a clear separation between their professional and private lives. After leaving the office (or logging off their computer), they disengage completely from work-related matters. Although this strategy protects against the spillover of work-related stress into private life, it entails considerable adaptation costs in times of crisis or unexpected situations (Clark, 2000).
- Integration (flexible boundaries): Employees combine and interweave the professional and private domains throughout the day (e.g., responding to work emails while playing with their child or handling personal shopping during working hours). Integrators exhibit considerable flexibility; however, they incur substantial costs in the form of chronic attentional fragmentation, blurred role identity, and a persistent emotional sense of "being at work". Under conditions of widespread remote and hybrid working, these boundaries become almost entirely transparent, making psychological detachment from the employee role significantly more difficult (Sonnentag & Fritz, 2015).

Contemporary psychological and sociological thought, however, has moved beyond conceptualising the work–home relationship exclusively in terms of a zero-sum game and permanent resource depletion, as assumed by Goode's scarcity hypothesis. A major theoretical milestone was the development of the Work–Family Enrichment Theory by Greenhaus and Powell (2006). These authors demonstrated that engagement in multiple social roles may produce synergistic and revitalising effects, consistent with Marks' expansionist hypothesis.

Work–family enrichment is defined as the process through which experiences acquired in one role improve the quality of life and performance in another role (Greenhaus & Powell, 2006). The authors distinguish five categories of resources that may be transferred between the work and family domains:

1. Skills and perspectives (e.g., leadership competencies, multitasking abilities, patience, and negotiation skills);
2. Psychological resources (e.g., self-esteem, optimism, and psychological resilience);
3. Social capital (e.g., professional networks and support from colleagues);
4. Material resources (e.g., income, employee benefits, and access to technology);
5. Energy and affective resources (e.g., positive mood, vigour, and enthusiasm).

The transfer of these resources occurs through two mechanisms: the instrumental pathway, whereby a specific competence acquired at work facilitates the resolution of problems in the family domain, and the affective pathway, whereby satisfaction and pride resulting from professional success generate positive emotional states that employees bring into their family life, thereby improving the quality of family interactions. A closely related concept is work–family facilitation, which refers to situations where one system (either the organisation or the family) functions more effectively because of an individual's participation in the other domain (Wayne et al., 2007). Recognising that conflict and enrichment are not opposite ends of a single continuum but rather two independent processes that may coexist, i.e., the dual nature of the work–home interface, constitutes one of the fundamental assumptions of the contemporary Work–Life Integration (WLI) paradigm.

Research analysis

To comprehensively and multidimensionally verify the theoretical assumptions presented above, a desk research analysis was conducted. The analysis encompassed key Polish and international empirical databases, reports published by governmental and European Union institutions, as well as findings from representative quantitative and qualitative studies conducted between 2010 and 2026. The objective of this analysis was to demonstrate the macroeconomic and epidemiological scale of the phenomenon and to identify the mediating and moderating variables linking work–home conflict with the health and well-being of the working population.

Studies by Miciuła (2022) demonstrated that 56% of Poles working remotely during the COVID-19 pandemic experienced a marked intensification of the work–home conflict, primarily determined by the lack of objective housing conditions enabling the physical segmentation of work and family roles. At the same time, 30% of respondents stated that telework improved their overall life balance by reducing commuting time and increasing flexibility in performing household responsibilities. These findings indicate that the differentiating factor is not the form of work itself but rather the individual and organizational resources available for managing role boundaries.

In the context of organizational structure, Blau's (1964) Social Exchange Theory (SET), further developed by Cropanzano and Mitchell (2005), has invaluable practical applicability. The theory assumes that the employee–employer relationship is based on the universal principle of reciprocity. When employees perceive that their organization recognizes their non-work-related needs and provides genuine support, flexibility, and autonomy, a psychological mechanism of reciprocity is activated, whereby employees respond with high affective commitment, loyalty, and increased productivity. Conversely, when an organization relentlessly exploits employees' capacities, infringes upon their personal time, and demonstrates indifference toward family crises, the psychological contract is breached, leading to profound frustration, alienation, reduced effectiveness, and a dramatic increase in turnover intentions. This is confirmed by the Polish study conducted by Głogosz and Potocka (2021) in the public sector. Their findings revealed that the introduction of flexible working hours reduced the perceived work–home conflict by 17%, whereas high levels of individualized support from immediate supervisors decreased the conflict by as much as 23%. These results unequivocally demonstrate that an organizational culture grounded in trust constitutes a powerful buffer against the psychosocial costs of work.

The epidemiological dimension of role conflict in Poland leaves no doubt as to the widespread nature of this phenomenon. In her now-classic study involving a sample of 614 employees from various sectors of the economy, Lipińska-Grobelny (2014) found that 48% of respondents regularly experienced severe tensions at the work–family interface, while for 22% this conflict had become a chronic and destructive condition. The analysis of demographic variables indicated that women, particularly mothers raising preschool- and early school-aged children, constituted the most vulnerable group to the escalation of role conflict. These findings are closely associated with macrostructural and cultural determinants. The results are consistent with the CBOS report (2023), according to which women in Poland devote, on average, twice as much time to household duties as men, regardless of their employment status. This demonstrates that the work–home conflict is not only a psychological phenomenon but also a socio-structural one, closely linked to the unequal distribution of family responsibilities.

To obtain a comprehensive picture of the dynamic changes that have occurred in recent years, these findings should be compared with the latest cross-sectional data published by Eurofound (2024). This Europe-wide survey on working conditions revealed a disturbing trend: as many as 38% of economically active Poles reported that at least several times per month they felt too exhausted after work to attend to essential household responsibilities (compared with the EU-27 average of 29%). Poland ranks among the countries with the highest levels of resource depletion.

Furthermore, in research on Poland's modern business services sector (IT and SSC/BPO), Kowalska-Janas (2025) identified a rapid increase in the syndrome of workplace telepressure. This phenomenon is defined as an obsessive internal compulsion to respond immediately to emails, instant messaging platforms (e.g., Teams and Slack), and work-related phone calls outside formal working hours. The author demonstrated that high levels of telepressure were strongly and positively correlated with time-based conflict ($r = 0.48$, $p < 0.001$) and acted as a direct mediator between work flexibility and insomnia.

The psychological and clinical consequences of role imbalance are devastating both for individuals and for the national economy. Czerw (2020) demonstrated that the intensity of the work–home conflict is a strong independent predictor of burnout (positive correlation: $r = 0.43$) and is significantly negatively associated with overall life satisfaction ($r = -0.39$). From the perspective of organizational practice, these findings indicate that persistent role conflict generates depersonalization and emotional exhaustion, thereby undermining employee engagement and productivity, a conclusion also supported by the international synthesis conducted by Allen et al. (2020). Similarly, the landmark meta-analysis by Amstad et al. (2011), integrating the results of more than 190 independent quantitative studies, documented the substantial impact of work–family conflict (WFC) on mental health outcomes, revealing a direct, moderately strong association with clinical symptoms of depression ($r = 0.36$), anxiety disorders, and burnout ($r = 0.42$).

The latest longitudinal analyses conducted by the research team led by Kossek and Ozeki (2022) provide new insights into the economic dimension of this issue. The careers of 2,500 professionals were monitored over a five-year period. The findings demonstrated that chronic work–family conflict is a stronger and more stable predictor of voluntary employee turnover intention than satisfaction with base salary. The costs associated with recruitment, onboarding, and lost productivity resulting from the departure of a qualified employee due to role conflict exceed the costs of implementing comprehensive Wellness and Work–Life Balance programmes by nearly 300%.

In the purely somatic domain, the groundbreaking study by Hammer and colleagues (2023) provided robust medical evidence. Using objective physiological markers, including the diurnal salivary cortisol profile, monitoring of sympathetic nervous system activation, and polysomnography, the researchers demonstrated that individuals reporting persistent role conflict exhibited a flattened cortisol curve (an indicator of adrenal exhaustion) and a dramatic reduction in deep sleep (NREM) duration. As many as 52% of participants with high levels of work–family conflict met the diagnostic criteria for chronic primary insomnia, translating into an increased risk of cardiovascular events, including stroke and myocardial infarction, over the following decade.

It is worth noting that work–home conflict is not necessarily exclusively destructive in nature. As suggested by Grzywacz and Marks (2000), a moderate and temporary level of role-related tension may stimulate adaptive processes by motivating individuals to improve strategic planning, assertiveness, schedule optimisation, and self-management skills, provided that they possess renewable resources of psychological resilience and social support. The critical problem arises when these resources become structurally depleted and the work environment assumes an oppressive character.

The importance of cultural and macro-political context is highlighted by comparative studies. In highly individualistic cultures (e.g., the United States), coping with work–family conflict is generally regarded as a private matter and the responsibility of the individual through self-regulation. By contrast, in collectivist cultures (e.g., East Asian countries), the family and the broader community constitute a natural support network that absorbs and mitigates the impact of such tensions (Amstad et al., 2011).

Analyses conducted by Ollier-Malaterre and Foucreault (2020) further demonstrate that the type of welfare state constitutes a key macro-social determinant. In social democratic countries (e.g., Sweden and Denmark), where public policies actively support partnership within the family through universal and affordable childcare services as well as mandatory paternity leave, levels of work–family conflict are among the lowest worldwide, while life satisfaction remains among the highest. Poland represents a hybrid and transitional case. On the one hand, processes of individualisation, secularisation, and increasing professional aspirations among women continue to accelerate. On the other hand, the traditional cultural model assigning primary responsibility for domestic and caregiving duties to women remains deeply embedded.

The COVID-19 pandemic irreversibly transformed the architecture of the work environment. The widespread introduction of remote and hybrid work revealed the dual nature of digital technologies. Analyses by Miciuła (2022), together with the study by Xiao et al. (2021), demonstrated that for more than half of the working population, working from home became a psychological trap, generating a persistent sense of being permanently confined within occupational roles. More recent research by Shaholli et al. (2024) further clarifies this mechanism by identifying employees' self-regulatory capacity as a key moderating factor. Individuals characterised by low self-discipline and limited ability to establish and maintain assertive boundaries while working from home experience a substantial decline in well-being, whereas employees with high levels of autonomy are able to use flexibility to optimise their overall work–life balance.

From the research perspective of the 2024–2026 period, scientific debate has increasingly shifted towards systemic legislative solutions. Particularly important evidence has been provided by the study conducted by Borkowska (2025), which evaluated the effects of introducing the right to disconnect. Organisations that implemented the automatic shutdown of corporate email servers during nighttime hours and prohibited managerial communication on weekends reported a 28% reduction in indicators of psychosocial stress and a 19% decrease in strain-based work–home conflict.

Similarly remarkable findings emerged from analyses of international and national Four-Day Work Week Trials (2023–2025). Reducing working time to 32 hours per week while maintaining full salary resulted in a substantial improvement in employees' psychological well-being. As many as 54% of participants reported a significant reduction in work–home conflict, while sickness absence related to psychosomatic disorders decreased by an average of 35%. These findings suggest that an additional day free from work facilitates the full restoration of energetic resources, consistent with Hobfoll's Conservation of Resources model.

Comprehensive analyses by French et al. (2017) confirm that social support provided symmetrically by supervisors, co-workers, and spouses reduces the detrimental psychological effects of occupational demands by nearly one quarter. Similarly, Basińska and Wróblewska (2022) emphasise the importance of formalised work–life balance strategies, such as childcare subsidies, psychological support programmes, and managerial flexibility, which reduce indicators of work–family conflict by an average of 21%.

From a social perspective, the work–home conflict also has an equality dimension. Women are more likely than men to experience the so-called "second shift", whereby, after completing their paid work, they perform a substantial proportion of household and caregiving responsibilities. According to CBOS (2023), 62% of women in Poland prepare meals and perform household cleaning on a daily basis, compared with only 25% of men. Such inequalities contribute to chronic feelings of fatigue and overload.

An extremely important aspect of the contemporary debate concerns changes in the legal framework. As indicated by Budrowska and Duch-Krzystoszek (2024), a milestone in reducing the structural role conflict in Poland was the full implementation of the European Union's Work–Life Balance Directive. A key legal instrument proved to be the introduction of nine weeks of non-transferable parental leave for fathers (which is forfeited if not used by the father). The authors indicate that between 2024 and 2026, the proportion of fathers making use of this entitlement increased from only a few percent to over 45%. This development is beginning to transform the traditional model of gender roles in Poland by relieving women of the primary caregiving burden and thereby directly reducing the level of conflict between the domestic and professional spheres.

The work–home conflict is a multidimensional phenomenon whose origins cannot be reduced to individual deficits in time management. It results from social, cultural, and organizational transformations – from a new rhythm of life in which work has become not only a source of income but also an element of identity and social status. In this sense, work–life balance is not merely an individual objective but also an indicator of the quality of functioning of entire societies and organizations.

Conclusions and recommendations

The conclusions drawn from Polish and international studies clearly show that measures aimed at reducing work-home conflict benefit not only individuals, but also organisations. Companies that promote a culture of trust, flexibility and genuine support for employees in the private sphere report lower turnover, higher satisfaction and better financial results. In the era of digital transformation and a global mental-health crisis, concern for work-life balance is becoming not an optional addition, but a foundation of sustainable social development.

The analysis of the theoretical approaches and empirical findings presented above clearly indicates that reducing work-home conflict requires a multi-level approach, encompassing organisational and systemic measures as well as individual strategies. It is crucial to move away from treating work-life balance as the solely private responsibility of the employee and to recognise it as a shared task of employers, public institutions and employees themselves.

First and foremost, organisations play a particularly important role, as through their culture and management practices they may either intensify or reduce tensions between the occupational and private spheres. Creating a work environment based on trust, flexibility and respect for employees' boundaries constitutes an important protective factor. Flexible forms of work organisation, such as the possibility of adjusting working time or using a hybrid model, should, however, be implemented thoughtfully – in such a way that they do not lead to a further blurring of boundaries, but genuinely support employee autonomy. It is equally important to prepare managers to recognise symptoms of overload and to build a climate conducive to open communication and the use of support. Organisations that treat employee well-being as an element of their strategy not only reduce the negative effects of work-home conflict but also increase employees' engagement and loyalty.

In this context, measures aimed at equalising opportunities for women and men in relation to domestic and caring responsibilities acquire particular importance. The development of accessible, high-quality care infrastructure, as well as the promotion of solutions conducive to flexible employment, may significantly reduce the structural sources of conflict. It is also worth emphasising the need to include psychological well-being as one of the key indicators of the quality of work and social life, which is reflected in an increasing number of public strategies across Europe.

At the same time, the role of the individual cannot be overlooked. Functioning within specific social and organisational conditions, individuals make daily decisions concerning the management of their resources. The conscious setting of boundaries between work and private life, the development of skills in managing time and energy, and the formation of assertive attitudes constitute important adaptive competences in the contemporary world of work. It is also important to use social support, both in the occupational and private environments, which – as research shows – performs a buffering function against the negative consequences of overload.

In conclusion, effective counteraction to work-home conflict requires integrated measures in which responsibility is distributed across different levels of social life. Only the co-occurrence of such measures creates a real possibility of building a lasting balance between occupational and family roles, thereby improving individuals' quality of life and the effectiveness of organisations and entire societies.

Abstract: This article addresses the issue of work–home conflict as one of the key challenges facing contemporary working societies. The aim of the study is to analyse theoretical approaches to the conflict between work and family roles and to present the findings of empirical research on its determinants and consequences. The paper discusses both classical and contemporary concepts, including the model developed by Greenhaus and Beutell, Hobfoll's Conservation of Resources theory, and Clark's Border Theory. The article has been expanded to include a comprehensive, multidimensional analysis of secondary data, based on an extensive review of recent Polish and international literature, with particular emphasis on work–family enrichment theory, the phenomenon of facilitation, the impact of digital transformation (technostress and telepressure), and structural and legal analyses (including the implementation of the Work–Life Balance Directive). The importance of organisational and cultural factors in shaping work–life balance is also highlighted. Based on a review of Polish and international studies, the paper demonstrates that work–home conflict has a significant impact on psychological well-being, social relationships, and job performance. The article emphasises the need for systemic and organisational measures that support employees' work–life balance.

Keywords: work–home conflict, employees' work–life balance, work–family enrichment, organisational culture, digitalisation of work, technostress, social policy.

Streszczenie: Artykuł podejmuje problem konfliktu na osi praca–dom jako jednego z kluczowych wyzwań współczesnych społeczeństw pracy. Celem opracowania jest analiza teoretycznych ujęć konfliktu ról zawodowych i rodzinnych oraz prezentacja wyników badań empirycznych dotyczących jego uwarunkowań i konsekwencji. W tekście omówiono klasyczne i współczesne koncepcje, m.in. model Greenhausa i Beutella, teorię zachowania zasobów Hobfolla oraz teorię granic ról Clark. Wskazano także na znaczenie czynników organizacyjnych i kulturowych w kształtowaniu równowagi praca–życie. Na podstawie przeglądu badań polskich i międzynarodowych wykazano, że konflikt praca–dom ma istotny wpływ na dobrostan psychiczny, relacje społeczne oraz efektywność zawodową. Artykuł podkreśla potrzebę systemowych i organizacyjnych działań wspierających równowagę życiową pracowników.

Słowa kluczowe: konflikt praca–dom, równowaga między życiem zawodowym a prywatnym pracowników, wzbogacanie relacji praca–rodzina, kultura organizacyjna, cyfryzacja pracy, technostres, polityka społeczna.

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The Role of Spitex Organizations as Care Coordinators in Switzerland's Home Care System: A Functional Analysis Based on the Care Triangle Model

Rola organizacji Spitex jako koordynatora w systemie opieki domowej w Szwajcarii: analiza funkcjonalna w modelu trójkąta opiekuńczego

Introduction

Population ageing and the increasing number of people living with chronic diseases are leading to profound changes in European healthcare systems. In Switzerland, this direction is reflected in the strategy *ambulant vor stationär*, which gives priority to home-based care over institutional care (Bundesamt für Statistik [BFS], 2024). Its effective implementation requires stable cooperation among the patient, family caregivers, and the attending physician. These relationships form a configuration referred to as the "care triangle," whose balance is a prerequisite for maintaining home care and preventing premature institutionalization.

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In this context, Spitex organizations acquire particular significance as mobile healthcare providers operating at the interface between formal and informal care. Their role has evolved from the delivery of task-oriented nursing services toward a coordinative function corresponding to the concept of case management. The main research problem of this article is as follows: *how do Spitex organizations perform the function of care coordinator in the Swiss home care system, and what structural and financial barriers limit the full use of their potential in stabilizing the care triangle?*

The care triangle model serves as the key analytical tool in this study. It derives from theories of interdependence in long-term care, which assume that the patient, family caregivers, and the attending physician form a system of mutual dependencies in which overburdening one element may destabilize the entire arrangement (Klie, 2020). This model is widely used in studies of community-based care because it makes it possible to analyze the flow of information, the distribution of burdens, and the allocation of competencies in the care process. In this article, it is used to assess the role of Spitex as an actor integrating the activities of all participants in care.

Methodologically, this article is a qualitative analytical and conceptual study. It is based on a critical review of the scientific literature and an analysis of institutional documents concerning home care in Switzerland. The sources include publications on community nursing, interprofessional collaboration, case management, and reports by BFS, SAMW, Spitex Schweiz, and santésuisse. Thematic content analysis enabled the identification of the key functions of Spitex and their significance within the care triangle model. The selected sources mainly cover publications from the last decade, making it possible to capture current development trends. As the study is based on secondary data, it does not allow for full empirical verification; however, it provides a synthetic system-level perspective on the issue.

Spitex in the Swiss Healthcare System – Scope of Tasks and Functions

Spitex (*Spitalexterne Hilfe und Pflege*) refers to an organized system of outpatient health and nursing care provided outside inpatient facilities, in the homes of people requiring support (Spitex Schweiz, 2025). This system developed in Switzerland in the second half of the twentieth century as a response to the growing care needs of older people and people with chronic illnesses and its development remains closely linked to population ageing and to the shift in the healthcare paradigm toward community-based care (Bundesamt für Statistik [BFS], 2024).

Initially, Spitex activities within primary healthcare focused on nursing care and social support delivered through local community structures. With the development of health policy promoting the model of "home care before inpatient care" (*ambulant vor stationär*), these organizations gradually became professionalized and institutionalized, becoming an integral part of the healthcare system financed through mandatory health insurance, public funds, and private contributions (BFS, 2025; Spitex Schweiz, 2025). Today, Spitex operates within a diverse organizational structure – from public and semi-public entities to private providers – while maintaining common regulatory frameworks and quality standards.

The scope of Spitex activities reflects the increasing complexity of the needs of patients receiving home care and includes both clinical services and educational, informational, and coordinative activities. A functional analysis of Spitex work makes it possible to distinguish four core areas of activity: nursing and caregiving, supportive and educational, observational and informational, and coordinative functions (Spitex Schweiz, 2025).

The nursing and caregiving function includes therapeutic services and basic care, including monitoring the patient's health status, carrying out diagnostic and therapeutic procedures, and providing support in activities of daily living.

The supportive and educational function focuses on strengthening the competencies of patients and family caregivers through health education, nursing instruction, and psychosocial support, which is of substantial importance for preventing caregiver burden (BFS, 2024; Regez et al., 2024).

The observational and informational function consists of systematically monitoring the patient in the home environment and transmitting relevant data to the attending physician, which enables early detection of health deterioration and improves the quality of therapeutic decision-making (Weiss et al., 2022).

In turn, the coordinative function includes responsible management of information about the patient's health status, synchronization of healthcare activities, and mediation among participants in the care process. This corresponds to the concept of *case management* and interprofessional collaboration (Klie, 2020; Schweizerische Akademie der Medizinischen Wissenschaften [SAMW], 2020).

The analysis of Spitex functions within the care triangle model indicates that these organizations play the role of a key stabilizer of the entire home care system. These conclusions are confirmed both by system-level analyses and by studies on multidisciplinary cooperation in outpatient care (Bundesamt für Statistik [BFS], 2024; Schweizerische Akademie der Medizinischen Wissenschaften [SAMW], 2020).

Spitex activities simultaneously affect all elements of the care triangle, reducing the risk that one of them will become overburdened and destabilize the entire arrangement.

Table 1. The functional role of Spitex in the care triangle model: patient–family caregivers–attending physician

Spitex function	Key tasks	Patient	Family caregivers	Attending physician	Stabilizing role in the triangle
Nursing and caregiving	Therapeutic nursing care, health monitoring, assistance with activities of daily living, maintaining independence	Direct care, clinical safety, ability to remain at home	Indirect physical and time relief	Supplement to medical care between visits	Reduces the risk of patient deterioration and emergency hospitalization
Supportive and educational	Health education, nursing instruction, psychosocial support	Better understanding of illness and therapy	Strengthened competencies, reduced caregiver burden	Indirect support for therapeutic adherence	Prevents overburdening of one vertex, especially the family
Observational and informational	Observation of the patient in the home environment, early recognition of changes in health status	Faster response to deterioration	Greater sense of security	Access to clinical information unavailable in the consulting room	Reduces information gaps between home care and medical care
Coordinative (*case management*)	Information management, mediation, synchronization of activities, care planning	Coherence and continuity of care	Clarity of roles and expectations	Facilitated interprofessional collaboration	Maintains balance and communication among all elements of the triangle

Source: author's own elaboration based on BFS (2024, 2025), SAMW (2020), Spitex Schweiz (2025), and Weiss et al. (2022)

The nursing and caregiving function focuses primarily on the patient, ensuring clinical safety and the possibility of remaining in the home environment. This is one of the key objectives of the Swiss strategy *ambulant vor stationär*, meaning "home care before inpatient care" (BFS, 2025; Spitex Schweiz, 2025). At the same time, this function indirectly relieves family caregivers and supplements the activities of the attending physician between outpatient visits, helping to reduce the risk of emergency hospitalizations and escalating care costs (santésuisse, 2024).

The supportive and educational function is of particular systemic importance because it directly strengthens the competencies of informal caregivers. Research clearly indicates that caregiver burden is one of the main factors leading to the breakdown of home care and the need to institutionalize patients (BFS, 2024; Regez et al., 2024). In this context, the educational and psychosocial activities carried out by Spitex have a preventive function, protecting the stability of the entire care triangle: patient–family caregivers–physician.

The observational and informational function fills the gap between the patient's everyday functioning and the medical decisions made by the attending physician. The regular presence of nursing staff in the home environment enables early detection of changes in health status and improves the quality of clinical information flow. This is identified as one of the key conditions for the safety of outpatient care (Weiss et al., 2022).

The coordinative function has the most cross-cutting character, as it encompasses all elements of the care triangle. It corresponds to the concept of *case management*, which is regarded as a condition for coherence and continuity of care in the context of increasing case complexity (Klie, 2020; SAMW, 2020). At the same time, the analysis indicates that insufficient recognition of this function in current financing models poses a significant threat to the stability of home care (santésuisse, 2024; Spitex Schweiz, 2025).

In summary, the role of Spitex in the care triangle model goes far beyond the provision of individual nursing services. These organizations perform an integrating and stabilizing function, without which the implementation of the "home care before inpatient care" strategy remains structurally incomplete (BFS, 2025; Spitex Schweiz, 2025).

Increasing importance is being attributed to the coordinative function, which includes information management, clinical observation of the patient in the home environment, and communication with the attending physician and other actors in the healthcare system (Weiss et al., 2022). This function fits within the concept of case management and professional intersectoral collaboration, recognized as crucial for the quality and continuity of outpatient care (Klie, 2020; SAMW, 2020). Nevertheless, its role remains insufficiently appreciated in existing financing models, limiting the possibility of its full development in practice (santésuisse, 2024; Spitex Schweiz, 2025).

In addition to coordination and counselling, services delivered within nursing and therapeutic care also include specialized forms of support, such as palliative care and community psychiatric care. Data from the Federal Statistical Office show that more than 470,000 people use Spitex services each year, a substantial proportion of whom are over 80 years of age (BFS, 2024). This trend is associated with increasing case complexity and a growing need to integrate medical, nursing, and social activities.

The stability of family caregivers is one of the key conditions for maintaining home care. From this perspective, Spitex should be viewed as a systemic pillar of care rather than merely as its supplement. Without its involvement, the implementation of the strategy *ambulant vor stationär*, that is, the priority of home care over inpatient care, remains structurally incomplete (BFS, 2025; Spitex Schweiz, 2025).

The analysis of Spitex's role in supporting family caregivers shows that these activities are significant not only at the level of the caregiving relationship, but also for the stability of the entire care triangle. This provides an important starting point for further system-level conclusions.

The Coordinative Role of Spitex in the Care Triangle Model

The coordination of home care is one of the key elements of the stability of the care triangle: patient–family caregivers–attending physician. Operating at the interface between formal and informal care, Spitex organizations play the role of an integrator that connects the activities of all participants in the care process. Their coordinative function includes both support for family caregivers and the role of clinical observer for the attending physician, which in practice creates a coherent model of case management.

Family caregivers constitute the foundation of home care, carrying out a substantial share of caregiving tasks informally and without remuneration (Bundesamt für Statistik [BFS], 2024). At the same time, they often remain an insufficiently visible element of the healthcare system, even though the main burden of everyday care rests on them. In the context of increasing case complexity, multimorbidity, and longer care trajectories, their role becomes more intensive, increasing the risk of physical, psychological, and organizational overload.

Studies indicate that informal caregiver burden is one of the main factors leading to the destabilization of home care and the need to institutionalize patients (Klie, 2020). This process is gradual and may remain unnoticed for a long time both by caregivers themselves and by the healthcare system. Particularly critical moments arise when the patient's health deteriorates, therapy changes, or after discharge from hospital (Regez et al., 2024). In such circumstances, the absence of adequate support increases the risk of breakdown in home care.

In this context, Spitex organizations perform an important stabilizing function through supportive and educational activities which, as indicated in the functional analysis, are directed specifically at family caregivers. These include health education, instruction in nursing techniques, psychosocial support, and early recognition of symptoms of caregiver burden (BFS, 2024; Regez et al., 2024). Such activities strengthen caregivers' competencies at both the substantive and emotional levels, thereby increasing their capacity to provide long-term care.

An important, although often underestimated, aspect of the support offered by Spitex is its mediating function between family caregivers and the attending physician. Informal caregivers often take on the role of communication intermediaries, conveying information about the patient's health status despite lacking adequate preparation to interpret it. By performing the observational and informational function, Spitex assumes part of this responsibility, improving the quality of clinical information flow and reducing the decision-making burden placed on the family (Weiss et al., 2022).

From the perspective of the care triangle, these activities help reduce the overload of one of its vertices and improve the balance of the entire system. Support for family caregivers is not isolated but remains closely linked to the coordinative function of Spitex. By managing the flow of information and synchronizing the activities of different actors in the care system, these organizations ensure clarity of roles and expectations toward caregivers, which significantly reduces the risk of their overburdening (Klie, 2020; Schweizerische Akademie der Medizinischen Wissenschaften [SAMW], 2020).

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The analysis of Spitex's role in supporting family caregivers shows that the activities carried out are significant not only at the level of the caregiving relationship, but also for the stability of the entire care triangle. This constitutes an important starting point for further system-level conclusions.

The relationship between nursing care and the attending physician in the home environment is one of the key elements determining the quality of outpatient care. Research indicates that general practitioners have limited insight into patients' everyday functioning, whereas Spitex staff observe them regularly in their natural living environment (Weiss et al., 2022).

In this context, Spitex performs the function of clinical observer and information intermediary, identifying early symptoms of health deterioration and transmitting relevant data to the attending physician. This function is consistent with the concept of interdisciplinary collaboration aimed at improving the quality and safety of care (Schweizerische Akademie der Medizinischen Wissenschaften [SAMW], 2020).

Cooperation between Spitex and the physician makes it possible to reveal barriers that are not visible in the consulting room, such as the patient's actual level of independence or real living conditions. In this way, Spitex acts as a kind of early warning system, providing contextual data necessary for accurate clinical assessment and therapeutic decision-making.

Medication management is a particularly important area of this cooperation. Spitex staff not only monitor therapeutic adherence, but also identify potential adverse effects and medication errors, which are among the main causes of avoidable hospitalizations among older people (Ziaeian & Fonarow, 2016). Direct presence in the home environment makes it possible to verify medication use, including cases of polypharmacy resulting from treatment by multiple specialists. This represents an important contribution to the process of therapy optimization by the attending physician.

The contemporary role of Spitex as a coordinating link is further strengthened by the development of digital technologies. The use of data exchange platforms and electronic health records (eHealth) enables vital signs and clinical observations to be transmitted in real time (Gasser et al., 2021).

These solutions reduce the risk of information loss and support therapeutic decision-making based on current environmental data, rather than solely on information obtained during outpatient consultations.

A partnership-based model of cooperation between Spitex and the attending physician is a key condition for improving patient safety. The integration of direct environmental observation with clinical expertise and digital tools supports effective prevention and the early avoidance of health crises.

Structural and Financial Barriers and Development Perspectives

Although the importance of Spitex organizations in the Swiss home care system is steadily increasing, their coordinative functions are still constrained by significant structural and financial obstacles. Current financing models for Spitex nursing care in Switzerland focus primarily on the reimbursement of specific nursing activities. As a result, time spent on care coordination, in-depth conversations with families, or substantive cooperation with physicians is often insufficiently reflected in the reimbursement system (santésuisse, 2024).

Structural and financial barriers do not result from a lack of professional competence among nursing staff, but from systemic organizational conditions and existing models of healthcare financing, which insufficiently account for the complexity of contemporary outpatient care (Spitex Schweiz, 2025).

A key problem remains system fragmentation, expressed in the division of responsibility among different healthcare actors: physicians, Spitex service organizations, social institutions, and informal caregivers. Although the strategy of home care before inpatient care (*ambulant vor stationär*) assumes the integration of activities and continuity of care, in practice this cooperation is often based on informal relationships and individual staff commitment rather than clearly defined system-level procedures (SAMW, 2020). The absence of uniform organizational frameworks for case management means that the coordinative function of Spitex is implemented unevenly and depends on local conditions.

Another important structural barrier is the asymmetry of institutional position between the attending physician and Spitex organizations. Although Spitex nursing staff possess comprehensive knowledge of the patient's everyday functioning in the home environment, their role in the decision-making process is sometimes limited to an executive or informational function. Research on interprofessional collaboration indicates that the lack of clearly defined decision-making competencies for nursing staff and barriers to the flow of digital information, including full interoperability of IT systems, hinder optimal management of the therapeutic process (SAMW, 2020). In addition, the absence of clearly defined coordinative competencies leads to the underuse of nurses' potential as full partners in the treatment process (Weiss, Hof & Burkhalter, 2022, pp. 289–298).

Alongside structural barriers, significant financial constraints directly affect the scope and quality of care coordination. Existing reimbursement models focus primarily on measurable nursing services, such as therapeutic procedures or basic care, while time devoted to coordination, communication with physicians, and support for family caregivers remains underestimated or omitted (santésuisse, 2024).

An additional burden is the complex system of residual financing (*Restfinanzierung*), under which cantons and municipalities are required to cover negative financial results or provide targeted subsidies to cover losses. This creates pressure for high time efficiency, which directly conflicts with the need to devote time to relationship-building and multidisciplinary coordination, both of which are essential in the care of chronically ill patients. Pressure to improve the cost efficiency of services results in shorter visits and reduced preventive and coordinative activities, even though in practice these activities are highly relevant for preventing hospitalizations and rising care costs (Klie, 2020).

Another factor deepening financial problems is the shortage of qualified nursing staff. The growing number of older patients, often affected by multimorbidity, increases case complexity and intensifies care work. Under such conditions, Spitex staff are forced to prioritize activities directly related to the patient's clinical safety at the expense of coordination and case management, which paradoxically increases the risk of destabilizing home care (BFS, 2024).

At the organizational level, insufficient integration of digital tools also remains an important barrier. Although the digitalization of home care creates the potential to improve information flow, in practice the lack of coherent medical documentation systems hinders effective cooperation between Spitex and physicians (Gasser, Metthez & Spichiger, 2021, pp. 85–92). This results in an increased administrative burden on staff and the risk of losing important clinical information.

In summary, structural and financial barriers limit the full use of Spitex as a care coordinator and stabilizer of the care triangle. Overcoming these barriers requires not only adjustments to the financing system, but also institutional recognition of the coordinative function as a key link in healthcare, one that determines the effective implementation of the strategy of home care before inpatient care (Spitex Schweiz, 2025; SAMW, 2020).

The following table illustrates the systemic limitations of Spitex's coordinative functions, which hinder the implementation of the "home care before inpatient care" strategy (*ambulant vor stationär*). According to forecasts, the financing reform (*Einheitliche Finanzierung*, planned for 2028/2032) may help reduce these barriers.

Table 2. Barriers to Spitex's coordinative functions and development perspectives in the Swiss home care system

Type of area	Characteristics	Effects for Spitex	Development perspectives
Financial	Dominance of billing for nursing activities; no reimbursement for coordination	Shorter visits, reduced prevention	EFAS reform (2028–2032): unified financing and reimbursement for coordination
Structural	System fragmentation across 26 cantons; lack of uniform procedures	Uneven implementation of coordination	Integrated care: standardization of case management procedures
Institutional	Role asymmetry between physician and Spitex; reduction to an executive function	Underuse of staff's clinical knowledge	Implementation of APN roles: strengthening nurses' decision-making autonomy
Staffing	Shortage of nurses and increasing multimorbidity	Priority given to clinical safety	Task shifting and telecare: relieving staff and optimizing visits
Technological	Lack of integration of electronic documentation systems	Administrative burden and data loss	Mandatory EPD: full IT interoperability and rapid information flow

Source: author's own elaboration based on BFS (2024), Gasser et al. (2021), SAMW (2020), Spitex Schweiz (2025), santésuisse (2024), and Weiss et al. (2022)

This reform eliminates the previously flawed economic incentives by unifying the payment key between cantons and health insurers, regardless of the place where care is provided. For Spitex, this means systemic support for the strategy of home care before inpatient care, budget stabilization, and a real opportunity to include the previously underestimated costs of coordination, prevention, and case management in the standard catalogue of reimbursed services.

Beyond financial reform, the long-term development of Spitex organizations is concentrated around three main pillars:

- Development of advanced nursing practice (ANP): broader implementation of the role of advanced practice nurses (Advanced Practice Nurse – APN) enables task shifting. Thanks to their advanced clinical qualifications, APNs can assume some decision-making and diagnostic responsibilities from primary care physicians. This would strengthen the institutional position of Spitex as an autonomous partner in integrated healthcare.
- eHealth and full digital interoperability: the gradual implementation of the electronic patient record (EPD – *Elektronisches Patientendossier*) and the standardization of IT systems would reduce information asymmetry. Direct digital access to the patient's medical history would improve communication among physicians, Spitex, and hospitals, reduce time-consuming bureaucracy, and limit the risk of therapeutic errors.
- Integration of community care models: a promising direction is the development of integrated care networks in which Spitex becomes the central operator connecting family medicine, social institutions, and informal caregivers. This approach also assumes the use of telecare and home monitoring systems (telehealth), which could help optimize staff work under conditions of workforce shortage.

These transformative trends would allow Spitex organizations to evolve from primarily executive providers into strategic managers of patients' health in the home environment.

Summary and Conclusions

This article analysed the role of Spitex organizations in the Swiss home care system from the perspective of the care triangle model: patient–family caregivers–attending physician. It demonstrated that the importance of Spitex extends beyond the delivery of individual nursing services and is directly linked to the implementation of the *ambulant vor stationär* strategy, which prioritizes home care over inpatient care. In the context of population ageing, increasing multimorbidity, and the shifting burden of care into the home environment, these organizations are becoming one of the key links ensuring continuity, safety, and coherence of care.

The analysis confirmed that the four basic functions of Spitex – nursing and caregiving, supportive and educational, observational and informational, and coordinative – form an interrelated mechanism for stabilizing home care. The nursing and caregiving function strengthens patient safety and enables patients to remain in their home environment; the supportive and educational function relieves families and increases caregivers' competencies; the observational and informational function supplements the physician's knowledge with data derived from the patient's everyday functioning; and the coordinative function integrates the activities of all participants in the care process. It is this final function that gives Spitex activity the character of case management rather than merely nursing execution.

In response to the main research problem, Spitex organizations perform the function of care coordinator primarily through their continuous presence in the patient's home environment, systematic monitoring of the patient's health status, transmission of information to the attending physician, and support for family caregivers in everyday care. Their position between the patient, family, and physician enables them to identify risks that are not visible during a single medical consultation, organize information flow, and prevent overload in one element of the care triangle. In this sense, Spitex acts as a practical integrator of home care and as an actor stabilizing the relationship between formal and informal care.

At the same time, the full use of this potential is limited by structural and financial barriers. The most important include fragmented responsibility among cantons, municipalities, and service providers; insufficiently formalized procedures for interprofessional cooperation; asymmetry in the institutional position of physicians and nursing staff; workforce shortages; and insufficient interoperability of digital tools. A particularly important problem is the financing model, which rewards billable nursing activities more strongly than time-consuming coordination, conversations with families, prevention, and case management. As a result, Spitex possesses both the competencies and practical access to key patient information but does not always have the organizational and financial conditions needed to use them fully in the role of coordinator.

From a system-level perspective, Spitex should therefore be understood not as a peripheral provider of home services, but as a condition for the effective functioning of the community-based care model. Strengthening this role requires recognizing coordination as a genuine healthcare service, ensuring its adequate financing, developing tools for digital data exchange, and building partnership-based relationships among community nursing, physicians, and family caregivers. Only then can the *ambulant vor stationär* strategy be implemented not merely as an organizational postulate, but as a durable model of stable, safe, and integrated home care.

Recommendations

1. Recognize coordination as a service financed under health insurance.
2. Strengthen nursing competencies in case management.
3. Standardize procedures for cross-sector cooperation.
4. Develop interoperable eHealth tools enabling real-time data exchange.
5. Increase investment in nursing staff, especially in home care.

From the perspective of further research and healthcare practice, it is particularly important to deepen analyses of coordination effectiveness, the impact of financing reforms on the stability of home care, and the role of digital tools in improving patient safety. The most important directions for further research include:

- the need for empirical studies on the effectiveness of Spitex coordination,
- analysis of the impact of financing reforms on the stability of home care,
- research on interprofessional collaboration in community-based settings,

- assessment of the effectiveness of digital tools in patient monitoring.
- For healthcare practice, this means:
- the need to build partnership-based physician–Spitex relationships,
- implementation of local case management models,
- development of family caregiver support programs,
- integration of community-based observation with the therapeutic process.

Abstract: Population ageing and the increasing number of people with chronic diseases create the need to develop integrated forms of home care. In Switzerland, this direction is expressed in the *ambulant vor stationär* strategy, which gives priority to community-based care over inpatient care. The aim of this article is to analyze the role of Spitex organizations as care coordinators in the home care system, using the care triangle model comprising the patient, family caregivers, and the attending physician. The main research problem concerns the way in which Spitex stabilizes cooperation among these three actors and the barriers that limit the full use of its coordinative potential. A qualitative content analysis was applied, including a critical review of the scientific literature and institutional documents concerning home care in Switzerland. The findings indicate that Spitex plays a key integrative role, encompassing nursing, educational, observational-informational, and coordinative functions that stabilize the care triangle and prevent overload in its individual elements. At the same time, the coordinative functions of Spitex are constrained by financial, structural, institutional, staffing, and technological barriers. The conclusions emphasize the need for systemic recognition of coordination as a financed service, standardization of cross-sector cooperation, and development of digital tools supporting information exchange. The article also indicates the need for further research on the effectiveness of Spitex coordination and its implications for healthcare practice, particularly in strengthening interprofessional cooperation and supporting family caregivers.

Keywords: Spitex, home care, care coordination, care triangle, case management, community-based care, Switzerland.

Streszczenie: Starzenie się populacji oraz rosnąca liczba osób z chorobami przewlekłymi tworzą potrzebę rozwijania zintegrowanych form opieki domowej. W Szwajcarii kierunek ten wyraża strategia ambulant vor stationär, która przyznaje pierwszeństwo opiece środowiskowej przed opieką stacjonarną. Celem niniejszego artykułu jest analiza roli organizacji Spitex jako koordynatorów opieki w systemie opieki domowej, z wykorzystaniem modelu trójkąta opieki obejmującego pacjenta, opiekunów rodzinnych oraz lekarza prowadzącego. Główny problem badawczy dotyczy sposobu, w jaki Spitex stabilizuje współpracę między tymi trzema podmiotami, oraz barier ograniczających pełne wykorzystanie jego potencjału koordynacyjnego. Zastosowano jakościową analizę treści, obejmującą krytyczny przegląd literatury naukowej oraz dokumentów instytucjonalnych dotyczących opieki domowej w Szwajcarii. Wyniki wskazują, że Spitex odgrywa kluczową rolę integrującą, obejmującą funkcje pielęgnacyjne, edukacyjne, obserwacyjno-informacyjne oraz koordynacyjne, które stabilizują trójkąt opieki i zapobiegają przeciążeniu jego poszczególnych elementów. Jednocześnie funkcje koordynacyjne Spitex są ograniczane przez bariery finansowe, strukturalne, instytucjonalne, kadrowe i technologiczne. Wnioski podkreślają potrzebę systemowego uznania koordynacji za finansowaną usługę, standaryzacji współpracy międzysektorowej oraz rozwoju narzędzi cyfrowych wspierających wymianę informacji. Artykuł wskazuje również na potrzebę dalszych badań nad skutecznością koordynacji realizowanej przez Spitex i jej znaczeniem dla praktyki ochrony zdrowia, zwłaszcza w zakresie wzmacniania współpracy międzyprofesjonalnej oraz wspierania opiekunów rodzinnych.

Słowa kluczowe: Spitex, opieka domowa, koordynacja opieki, trójkąt opieki, zarządzanie przypadkiem, opieka środowiskowa, Szwajcaria.

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Revealing the Creative Potential of Students Through Active Learning Methods in Azerbaijan

Ujawnianie potencjału twórczego uczniów poprzez aktywne metody nauczania w Azerbejdżanie

Introduction

One of the most significant tasks of modern pedagogy is the early identification, support, instruction, and development of gifted children

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(Məhərrəmova, 2020). The accelerating pace of life, the recognition of human potential as a fundamental resource for societal progress, and the increasing emotional and informational demands necessitate the comprehensive development of individuals as active and creative personalities. In such circumstances, it is insufficient to consider only the natural abilities of gifted children for timely identification and development of their potential; it is equally important to prioritize modern and innovative approaches within the educational process.

Among the foremost challenges faced by 21st-century educational systems is the cultivation and manifestation of students' creative potential. The main goal in this regard is to meet the growing demand for innovative and creative knowledge in an increasingly globalized world. Consequently, instead of traditional teaching methods, active learning techniques that encourage students' participation, critical thinking, and creativity are increasingly being recognized as a central objective of education (Hüseynova, 2017).

In this regard, educational reforms implemented in our country, particularly the adopted "Concept of General Education in the Republic of Azerbaijan (National Curriculum)," have identified the development of creative and critical thinking skills as a priority direction. We cannot teach students to compete with machines (robots) that are smarter than they are; instead, we must educate them in ways that distinguish them from machines. Only through this approach will they have a chance to exist and thrive thirty years from now (Whiting, 2019).

Consequently, one of the primary objectives of education in the modern era is not merely the transmission of information but also the cultivation of individuals' creative potential. Educational systems should be designed in such a way that students are encouraged not only to acquire knowledge but also to apply it innovatively and to generate new ideas.

Research problem

Research and pedagogical practice in this field indicate that the development of creative potential and the effective implementation of active learning methods in Azerbaijan are hindered by several significant challenges and systemic issues:

- A key issue is the mismatch between gifted children's individual psychological traits and natural interests, and the standardized curriculum requirements, hindering their full potential development.

- Gifted children often face challenges in social communication, cooperation, and group activities, negatively impacting their socio-emotional development and potentially leading to social isolation.
- Insufficient psychological and pedagogical competence among teachers and parents in identifying and supporting gifted children at early stages limits recognition of diverse giftedness and appropriate interventions, reducing instructional effectiveness and hindering creative potential realization.

Theoretical Background

The intellectual efforts invested in this field, the increasing demands placed on education, and the individual's social responsibility all contribute to a growing recognition of the importance of working with gifted children (Runco & Jaeger, 2012). Psychological and pedagogical work with gifted learners plays a crucial role in the formation of their personalities, self-confidence, motivation, and future academic trajectories.

Therefore, to ensure the effectiveness of working with gifted children, it is especially important to apply active learning methods within the educational process that are tailored to their individual characteristics and promote creativity. Active learning methods refer to approaches that enhance learners' acquisition of knowledge, cognitive independence, mental engagement, and creative thinking (Nəzərov, 2012). International educational research similarly defines active learning as instructional practices that require students to participate meaningfully through discussion, inquiry, collaboration, reflection, and problem-solving rather than passive listening (Bonwell & Eison, 1991; Prince, 2004).

From this perspective, the methods employed in the educational process should not be limited solely to the transmission of information but must also ensure the active engagement and creative participation of students (Bonwell & Eison, 1991). This approach allows for a clearer understanding of the essence of interactive learning. Interactive learning fundamentally involves creative activity within the process of reciprocal interaction (Nəzərov, 2012). According to L.S. Vygotsky (Vygotsky, 1978) learning develops most effectively through social interaction, dialogue, and collaborative engagement, which makes interactive learning especially relevant for creativity development.

Such characteristics of interactive learning necessitate the integration of various methods such as debates, role-playing games, brainstorming, and other techniques into the teaching process. These methods are particularly significant in fostering students' creative and critical thinking skills. Research conducted by E.P. Torrance, (Torrance,1974) demonstrated that environments encouraging questioning, divergent thinking, and idea generation significantly increase creative performance among students. Likewise, studies in the United States and Australia found that classroom discussion and inquiry-based learning improve originality, confidence, and reasoning abilities.

A key element of debates is critical thinking. Through structured argumentation, students learn to analyze evidence, compare perspectives, and defend ideas logically. Research by P.A. Facione (Facione, 1990) emphasizes that debate-based instruction strengthens interpretation, evaluation, and inference skills. Role-playing, on the other hand, cultivates students' creative imagination and enhances their sense of involvement. When applied, this method enables students to become, in a sense, live participants in the events under study (Nəzərov, 2012). International studies have also shown that simulation and role-play increase empathy, problem-solving capacity, and communication competence, particularly among adolescents.

In this regard, various interactive methods and techniques employed in the learning process, including debates and role-playing games, significantly contribute to the development of students' critical and creative thinking skills. Brainstorming activities, for example, help learners generate multiple responses to a problem, while project-based learning develops planning, teamwork, and innovation skills. According to Ken Robinson, (Robinson, 2011) schools should create conditions where imagination and originality are treated as equally valuable as academic knowledge.

For the effective organization of the educational process with gifted students, it is essential to utilize intellectual marathons, various competitions and quizzes, as well as oral and role-playing activities. These approaches enable gifted students to select the most suitable form of creativity and to demonstrate their potential capabilities. Consequently, this serves as a stimulus for their future development (Əliyev, Əliyeva, Cabbarov, 2011). Similar approaches are widely used in Singapore, South Korea, and Finland, where enrichment programmes, competitions, and innovation labs are designed to support talented learners.

In schools, teachers can organize the educational process with gifted, talented, and intellectually capable students through various forms, with the primary goal being the comprehensive and holistic development of the student's personality (Tomlinson, Carol A., 1995). Carol Ann Tomlinson particularly emphasizes differentiated instruction where content, process, and assessment are adapted according to students' readiness levels and interests. This model has been widely recognized internationally as one of the most effective approaches for gifted education.

Overall, both national and international scholarship confirms that active and interactive learning methods are essential for unlocking the creative potential of gifted students. Their successful implementation not only improves academic achievement but also supports leadership, innovation, emotional intelligence, and lifelong learning competencies required in contemporary society.

Methodology

Research Objectives

The primary aim of this study is to determine the impact of active learning methods on the development of students' creative and critical thinking skills in secondary schools.

The specific objectives are:

- To evaluate how active learning methods influence students' creative thinking
- To analyse students' perceptions of the effectiveness of teaching methods used in lessons
- To examine teachers' perspectives on the role of active learning in developing students' skills

Research Problems (Research Questions)

This study seeks to answer the following questions:

1. How do active learning methods affect students' creative thinking?
2. To what extent do teaching methods used in lessons contribute to the development of students' creative skills, according to students?
3. How do teachers evaluate the impact of active learning methods on students' creative and critical thinking skills?
4. What factors influence the effectiveness of implementing active learning methods in the classroom?

Research Method

A quantitative research approach was employed in this study. Data were collected using a survey method and analysed statistically to ensure objectivity and comparability with existing scientific perspectives.

Techniques and Instruments

- **Technique:** Survey (questionnaire-based data collection).
- **Instrument:** Structured questionnaire.
  Instrument characteristics:
  - » Consisted mainly of closed-ended questions;
  - » Included multiple-choice and Likert-type items to measure attitudes and perceptions.
  - » Covered three main areas:
    1. The impact of active learning methods on creative thinking (see Figure 1);
    2. Students' evaluation of teachers' methods (see Figure 2);
    3. Teachers' assessment of the impact of active learning methods (see Figure 3).

Sample and Sampling Method

- **Sample size:** 85 students and 77 teachers.
- **Sampling method:** Purposive and convenience sampling (participants were selected from several accessible secondary schools across the country).

Duration of the Study

The study was conducted during the 2024–2025 academic year (September 2024–May 2025).

Ethical Considerations

- The study involved students under the age of 18.
- Therefore, informed consent from parents/guardians was required.
- Participation was voluntary and anonymous.

The study was approved by the Ethics Committee of Azerbaijan State Pedagogical University. Written informed consent was obtained from all participants and, where applicable, from their parents or legal guardians. Participation was voluntary, and all data were collected anonymously and treated confidentially.

Statistical Methods

- The collected data were analysed using:
- Descriptive statistics, including Frequencies and Percentages.
- Data were presented visually through charts and graphs (Figures 1–3)

Conclusion of Methodological Approach

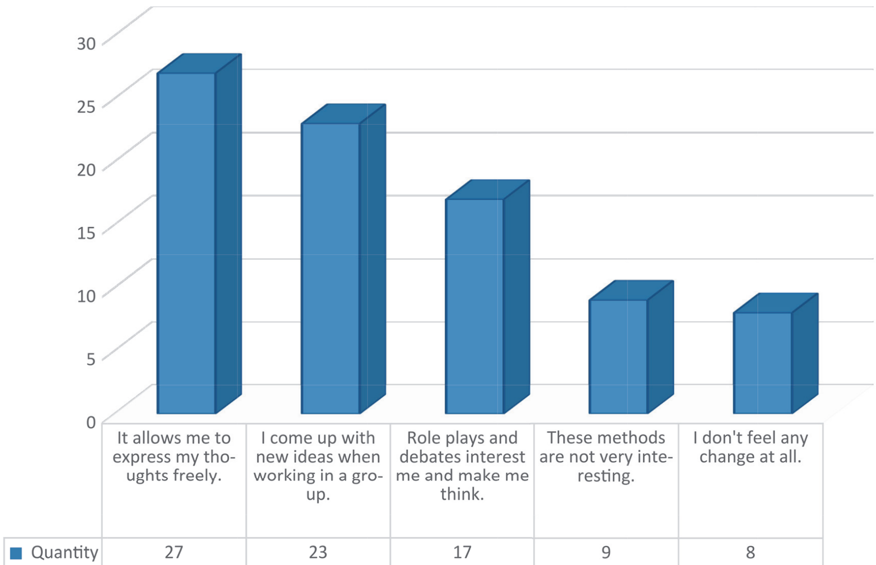
This methodological framework ensures a systematic and objective analysis of both students' and teachers' perspectives. However, incorporating qualitative methods (e.g., interviews or observations) in future research could provide deeper insights into the effectiveness of active learning methods.

Findings

The results of the conducted research indicate that the implementation of active learning methods positively influences the development of students' creative and critical thinking skills. However, factors such as the teachers' level of preparedness, the conditions of the learning environment, and the suitability of the methods to students' needs still pose challenges in the application of these methods. Therefore, it is essential to undertake certain improvements and support measures to more effectively reveal and develop creative potential. Based on the research findings, the following recommendations are proposed:

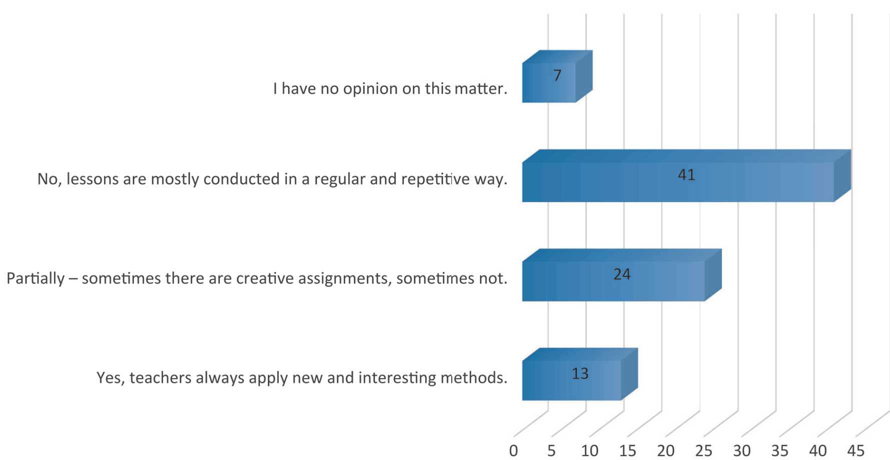
- Regular training sessions and seminars on the application of active learning methods should be organized for teachers, supporting the development of their creative and critical thinking skills.
- Active methods such as debates, role-playing games, and brainstorming should be broadly and purposefully implemented in the educational process, with methods selected according to the interests and needs of students.
- A favourable, supportive, and interactive learning environment should be created to facilitate the emergence of students' creative potential.
- New approaches and innovative methods related to active learning should be continuously applied in educational institutions and adapted to the evolving demands of teachers and students.
- To increase students' interest and motivation in the application of active learning methods, additional activities such as intellectual marathons, competitions, and quizzes should be organized.

Figure 1. Students' responses regarding the impact of active learning methods on the development of creative thinking.



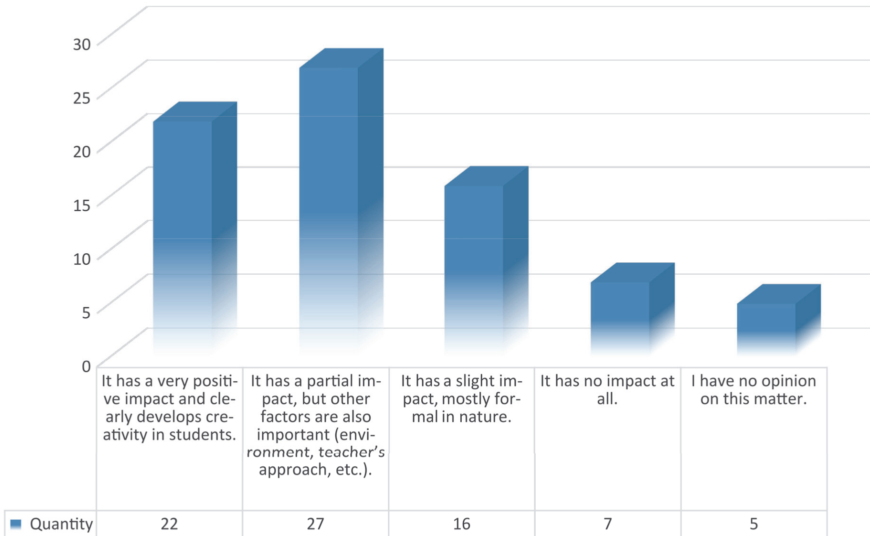
Source: Author's own study

Figure 2. Students' assessment of teachers' methods for developing creative skills (Question: In your opinion, do the methods applied by teachers during lessons sufficiently contribute to the development of your creative skills?) (9).



Source: Author's own study

Figure 3. Teachers' opinions on the impact of active learning methods on students' creative and critical thinking skills (Question: In your view, how does the implementation of active learning methods (debates, role plays, brainstorming, etc.) affect the development of students' creative and critical thinking skills?) (10).



Source: Author's own study

Discussion

The findings of the present study demonstrate that active learning methods make an important contribution to the development of students' creative thinking and the revelation of their creative potential. Most student respondents indicated that strategies such as group work, debates, role-play, brainstorming, and educational games help them express their ideas more freely, think independently, and generate original solutions. These results are consistent with the constructivist approach, which emphasizes that students learn more effectively when they actively participate in the learning process rather than passively receiving information.

Similar conclusions have been reported in international research. For example, C. C. Bonwell and J. A. Eison, found that active learning increases student engagement, analytical reasoning, and problem-solving ability. Likewise, M. Prince, concluded that interactive teaching methods significantly improve critical thinking, collaboration, and creativity in classroom settings.

Studies conducted in Finland and Singapore have also shown that student-centered learning environments foster innovation, independent learning habits, and flexible thinking skills among school students.

The results of this study are also relevant to the educational context of Azerbaijan. Recent educational reforms in the country have emphasized competence-based curricula, learner-centred teaching, and the integration of modern pedagogical technologies. Research by Azerbaijani scholars has noted that interactive teaching methods positively influence students' motivation, communication skills, and academic achievement, particularly when teachers effectively manage classroom participation and collaborative learning tasks. Therefore, the present findings support ongoing national efforts to modernize teaching practices in secondary education.

At the same time, the study revealed that many students believe teachers still rely on conventional and repetitive lesson formats. Nearly half of the surveyed students reported that creative methods are not sufficiently applied during lessons. This suggests that although active learning is recognized in theory, its practical implementation remains inconsistent. Similar challenges have been documented in other countries undergoing educational transition, where teachers may support innovation conceptually but experience difficulties in classroom application because of limited training, time constraints, overcrowded classes, or insufficient teaching resources.

Teachers participating in this study also acknowledged that the effectiveness of active learning depends not only on the method itself but also on external factors such as the teacher's professional competence, school climate, and classroom environment. This finding corresponds with the studies in the United Kingdom and Canada, where researchers found that teacher preparedness and institutional support are decisive variables in successful creative pedagogy. Without these conditions, even well-designed active learning strategies may produce limited outcomes.

Another important finding concerns the group of students who reported low interest or no change resulting from active learning methods. This indicates that a single teaching strategy cannot meet the needs of all learners. International literature similarly emphasizes the need for differentiated instruction, whereby teachers adapt methods according to students' learning styles, motivation levels, and socio-cultural backgrounds. In the Azerbaijani context, this may require more flexible lesson planning and broader use of digital tools, project-based tasks, and inclusive group activities.

Overall, the study confirms that active learning methods are effective instruments for revealing students' creative potential, but their success depends on systematic teacher training, continuous methodological support, and a stimulating educational environment. For Azerbaijan, strengthening teachers' professional development and expanding innovative classroom practices may significantly enhance students' creativity, critical thinking, and readiness for future academic and professional challenges.

Conclusion

The results of this study indicate that active learning methods are an effective instrument for developing students' creative and critical thinking skills and for revealing their creative potential. Strategies such as group work, debates, brainstorming, role-play, and problem-based tasks encourage students to participate actively in the learning process, express original ideas, and develop independent thinking abilities. Therefore, active learning should be regarded as one of the key pedagogical approaches within modern educational systems.

At the same time, the findings demonstrate that the successful and high-quality implementation of these methods depends largely on teachers' professional competence, methodological readiness, and the overall educational environment. Where teachers rely mainly on traditional teaching approaches, the opportunities for creativity development may remain limited. Consequently, continuous teacher training, improved classroom resources, and supportive school leadership are essential for maximizing the benefits of active learning practices.

From a practical perspective, the results of this research may be used by educational institutions, school administrators, curriculum developers, and policymakers in Azerbaijan. The findings can support the design of teacher professional development programmes focused on innovative teaching strategies, the integration of learner-centred methods into school curricula, and the preparation of methodological guidelines for secondary schools. In addition, universities responsible for teacher education may use these results to strengthen future teachers' competencies in creativity-oriented pedagogy.

The study also provides useful implications for the modernization of general education in Azerbaijan, particularly in relation to competence-based reforms and the development of 21st-century skills. Expanding the use of active learning methods may contribute not only to higher academic achievement but also to stronger communication, collaboration, leadership, and problem-solving abilities among students.

For future research in Azerbaijan, several directions are recommended. First, broader large-scale studies involving different regions and school types should be conducted to obtain more representative national data. Second, comparative studies between urban and rural schools may help identify contextual differences in the implementation of active learning. Third, longitudinal research is needed to examine the long-term effects of active learning on students' creativity and academic performance. Fourth, future studies may investigate the role of digital technologies, artificial intelligence tools, and blended learning environments in enhancing creative potential through active methodologies.

In conclusion, active learning methods possess substantial educational value, but their effectiveness requires systematic institutional support, teacher preparedness, and continuous innovation. Strengthening these areas can significantly contribute to the development of creative, independent, and future-ready students in Azerbaijan.

Abstract: The purpose of this study is to investigate the manifestation of students' creative potential through active learning methods in Azerbaijan. In contemporary pedagogy, the development of creative and critical thinking skills is essential for the education of gifted children. The study involved 85 students and 77 teachers, and the impact of active learning methods such as debates, role-playing games, and brainstorming on creativity was evaluated through surveys. The results indicate that although active learning methods generally have a positive effect, there are certain challenges in implementation and insufficient teacher preparedness. Therefore, it is considered crucial to enhance teachers' professionalism and optimize the educational environment in the future.

Keywords: creative potential, education in Azerbaijan, interactive learning, student development, gifted children

Streszczenie: Celem niniejszego badania jest analiza ujawniania się potencjału twórczego uczniów poprzez zastosowanie aktywnych metod nauczania w Azerbejdżanie. We współczesnej pedagogice rozwijanie umiejętności twórczego i krytycznego myślenia stanowi istotny element kształcenia dzieci zdolnych. W badaniu uczestniczyło 85 uczniów oraz 77 nauczycieli, a wpływ aktywnych metod nauczania, takich jak debaty, gry fabularne oraz burza mózgów, na rozwój kreatywności oceniano za pomocą ankiet. Wyniki badań wskazują, że choć aktywne metody nauczania mają na ogół pozytywny wpływ, istnieją pewne trudności w ich wdrażaniu oraz niewystarczające przygotowanie nauczycieli. W związku z tym za kluczowe uznaje się podnoszenie profesjonalizmu nauczycieli oraz optymalizację środowiska edukacyjnego w przyszłości.

Słowa kluczowe: potencjał twórczy; edukacja w Azerbejdżanie; uczenie się interaktywne; rozwój uczniów; dzieci zdolne.

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Implementing Work-integrated Learning in a Large-enrolment Undergraduate Course: A Case Study Using the Incentivized Improvement Method (IIM)

Wdrażanie nauczania zintegrowanego z pracą zawodową na kursie licencjackim o dużej liczbie uczestników: studium przypadku z wykorzystaniem Metody Motywowanego Doskonalenia (IIM)

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Introduction

Postsecondary institutions have increasingly recognized work-integrated learning (WIL) as a critical strategy in bridging academic coursework and professional practice. WIL connects authentic, task-based work experiences into the curriculum (often through partnerships with external organizations), providing students with opportunities to develop both technical competencies and transferable skills such as collaboration, communication, adaptability, and critical thinking (Billett, 2009; Jackson, 2015; Smith, 2012), while enhancing student engagement and learning (Patrick et al., 2008).

Despite its utility, WIL remains difficult to scale as postsecondary institutions continue to expand student enrolment. Indeed, most WIL initiatives are concentrated to small, upper-year, or professionally oriented courses where logistics, supervision, and feedback can be more easily managed (Jackson, 2017; Trede, 2012). Large-enrolment undergraduate courses are often excluded from WIL due to significant barriers, including limited instructional resources, the logistical complexity of coordinating projects and class time with external partners, the challenge of offering meaningful guidance to students at scale, and the difficulty of designing projects that maintain academic rigour while accommodating diverse learner needs (Biggs et al., 2022; Jackson et al., 2025; Jackson et al., 2016; Tran & Soejatminah, 2016). Assessment design constitutes another significant yet often overlooked barrier. Open-ended WIL projects are not well-suited to standardized grading systems, making it difficult to construct fair and detailed rubrics (Jackson, 2018). Given that students apply course concepts in varied ways, rubrics with rigid checklists may constrain creativity or penalize valid approaches that do not follow a predefined path. To address these challenges, some educators have proposed collaborative rubrics that involve all stakeholders – students, instructors, and workplace partners – in defining expectations (Rust, 2007; Gonsalvez & Freestone, 2007; Hodges, 2011). However, these approaches introduce their own challenges, including leniency bias and low inter-rater reliability (Gonsalvez & Freestone, 2007; Trede & Smith, 2014).

If WIL is to be integrated into undergraduate curricula, assessment strategies must evolve to support a shift from knowledge acquisition to application. This paper presents a case study of a large-enrolment undergraduate statistics course of almost 200 students in which the incentivized improvement method (IIM; Sama et al., 2025) was used to support a WIL assignment. The IIM is a three-stage, feedback-driven "ungrading" (Stommel, 2024) framework that evaluates student work through effort, revision, and improvement, rather than criterion-based rubrics. Although not developed specifically for WIL, the IIM's flexibility enabled its use in this context. This case study, therefore, details the logistical implementation for future adaptation in similar contexts, and examines its effectiveness in this setting.

Methods

Participants and course setting

The present case study was conducted in a large undergraduate foundational statistics course (N = 186 students) in the Fall 2024 semester within the Department of Psychology at the University of Toronto Scarborough. The primary learning objective for the course was to build students' knowledge of statistical theory and relevant software use. The class consisted of students with diverse levels of academic preparedness, making it a suitable setting to investigate the adaptability of the IIM within the context of a WIL assignment. The project was conducted in compliance with the reflective practice guidelines outlined by the University of Toronto, ensuring that no identifiable or sensitive student information was collected or disclosed.

The WIL project was introduced as a course assignment encompassing 15% of the students' final grade. In the first eight weeks of the thirteen-week course, students learned the theoretical and mathematical foundations of statistical analyses alongside complementary training in JASP software (Version 0.19.1, JASP Team, 2024). The initial draft of the WIL assignment was due in the ninth week, followed by a two-week grading period for teaching assistants (TAs) to grade and provide feedback to students. The revised submission was subsequently due in the last week of class. To reduce the number of TA grading hours required to implement this assignment, and to encourage collaboration, students worked in pairs, unless accommodation necessitated that a student work alone.

WIL assignment design

Students analysed a large, 245-variable dataset provided by an external not-for-profit organization in Canada. The assignment was framed as a statistical consultancy task which emphasized open-ended inquiry. Students formulated their own research questions and hypotheses, selected appropriate statistical analyses, interpreted the results, and communicated their findings in both a research-style report for academic audiences and a visually engaging infographic for general audiences, gaining hands-on experience with core elements of data analysis. This mirrored real-world consultancy scenarios where a client is often statistically naive, requiring consultants to explore and interpret the dataset as "experts". The pedagogical focus of this assignment was on transferable skills in critical thinking and problem solving, rather than testing rigid, procedural knowledge in statistics.

The primary deliverable was a technical report formatted according to APA guidelines, consisting of two core sections: an "Analyses and Results" section, as well as a "Discussion and Conclusion" section, within a strict, two-page limit. Each submission required the use of at least two statistical analyses learned in class; however, students were permitted to substitute appropriate alternative analyses not covered in class if they could be justified. This flexibility encouraged self-directed learning by motivating students to explore and apply methods outside the core curriculum. To ensure transparency, students submitted all raw calculations and JASP outputs alongside their reports.

To extend and enrich the learning experience, students completed two optional supplemental submissions: a lay infographic (submitted individually or in pairs), and a personal reflection (submitted individually), each for extra course credit beyond the 15% allocated to the main WIL assignment. The infographic required students to translate statistical findings for non-expert audiences, reinforcing scientific communication skills. Although it was not evaluated using the IIM framework (mainly due to limited availability of TA grading hours), it provided an opportunity to examine grading consistency across TAs, which is discussed later in this case study. The reflection aimed to support metacognitive awareness by encouraging students to evaluate their learning and reflect on their experience with the IIM.

Assignment grading structure: The IIM

As mentioned, one challenge of implementing an open-ended WIL assignment is constructing an appropriate grading rubric. Since students developed their own unique research questions and analytical approaches, creating a universal answer key was simply not feasible. This is where the IIM was effective, because rather than relying on a criterion-based rubric, it allowed graders to focus on individualized feedback and allowed students to demonstrate learning through revision. TAs were trained to evaluate student work holistically, emphasizing the application of statistical knowledge and reasoning over itemized grading criteria. This approach supported more equitable evaluation by allowing students with varied academic preparation, accessibility needs, and language proficiencies to engage at their level of readiness. This approach also benefitted TAs by providing structured experience with iterative feedback processes that mirror professional and academic writing, where work is refined through ongoing critique, peer review, and revision.

Following IIM guidelines (for a detailed description, see Sama et al., 2025), students first submitted a complete initial draft of their report. This initial submission was graded holistically using a simplified rubric, with scores of either 6/10 (adequate effort, or pass) or 4/10 (inadequate effort or fail). In rare instances, scores of 0/10 were reserved for submissions that were too poor in quality for revision or did not follow the assignment instructions. After receiving detailed feedback from their assigned TA, students had the option to revise and resubmit their work for up to four additional points[4], which could result in a maximum grade of 10/10 if a 6/10 was received on the first submission. TAs were familiarized with the dataset and participated in a calibration session to align grading expectations and improve consistency. They were also trained in effective feedback strategies and instructed to provide at least ten substantive comments per page, focusing on conceptual clarity and analytical technique. Minor, surface-level corrections (e.g., grammatical, typographical) were also encouraged, but did not count towards the minimum number of comments required.

It should be noted that the optional infographic submission was not evaluated using the IIM grading scheme, but rather a traditional rubric that emphasized clarity of communication, content accuracy, and aesthetic presentation. The personal reflection was marked for completion only.

Analyses and Results

There were 98 assignments[5] initially submitted with an average grade of 5.29/10 ($SD = 0.96$). Of these, 35 assignments received 4/10 whereas 63 received

[4] The use of 4/10 or 6/10 as baseline grades in our assignment design was based on the University of Toronto's passing grade of 50% (i.e., 5/10). Since grading thresholds vary across institutions, these benchmarks can be adjusted accordingly. For example, at an institution where the passing grade is 70%, students could instead be assigned 6/10 or 8/10 on their initial submission, with the potential to earn up to 2 additional points upon resubmission.

[5] The total number of students for the class was $N = 186$, which should have resulted in 93 pairs; however, 10 students had various accommodations that required them to complete the

6/10. No submissions received a score of 0/10 or 10/10, which is to be expected as these scores are typically reserved for submissions of exceptionally poor or perfect quality, respectively. Of the 98 initial submissions, 95 were revised and resubmitted for additional points. This high rate of participation indicates that many students chose to engage in the revision opportunity, even if they already received a passing grade (e.g., 6/10).

The average improvement following resubmission was a +2.66 increase from their initial grade (SD = 0.80), yielding a final average grade of 7.86/10 (SD = 1.28) across all assignments, including those of students that did not opt to revise their initial submission. This final average aligned with institutional expectations at the University of Toronto and was consistent with historical grade trends in this course, despite variation in assignment format in prior semesters. To assess the consistency of grading across the seven TAs, a Kruskal-Wallis H test[6] was conducted to compare final grades across TAs. The test was not statistically significant, $H(6) = 7.36$, $p = .289$, $\varepsilon^2 = 0.00$, indicating no meaningful differences in grading patterns across TAs. This result is notable given the absence of a traditional grading rubric and highly varied approaches from students, suggesting a degree of grading consistency within this implementation of the IIM. That is, despite the open-ended nature of the assignment and the lack of standardized, itemized criteria, grading practices were consistent across TAs.

As mentioned previously, students were offered the opportunity to complete an optional supplemental assignment in the form of an infographic, submitted individually or in pairs. In total, 71 infographics were submitted. These were evaluated using a standardized rubric assessing three key criteria: (1) translation of content, including the clarity, accuracy, and appropriateness of information drawn from their technical reports; (2) communication and data presentation, with emphasis on accessibility to a lay audience, judicious use of text versus visual aids, and appropriate use of statistical and scientific

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assignment alone. Therefore, there were 88 assignments completed in pairs, and 10 assignments completed individually, for a total of 98 submissions. Preliminary analyses showed that there were no significant differences in the mean grades of assignments completed individually or in pairs for both the initial and revised submissions; therefore, the two groups were collapsed for simplicity's sake.

[6] A Kruskal-Wallis H test was used instead of an analysis of variance (ANOVA) due to violations of the normality assumption in the grade distributions for three of the TAs, as indicated by significant Shapiro-Wilk tests, $p < .05$.

language; and (3) overall aesthetics and professionalism, including visual appeal, creativity, and adherence to standard writing mechanics.

Given that the optional infographic submissions were not evaluated using the IIM structure, it presented an opportunity to crudely examine grading variability among TAs using a traditional, rubric-based approach. An additional Kruskal-Wallis *H* test was therefore conducted to compare infographic grades across six TAs (one TA opted not participate in infographic grading), which yielded a statistically significant result, $H(5) = 14.00$, $p = .016$, $\varepsilon^2 = 0.11$, suggesting that there were differences in grading between TAs. This finding is notable given that the infographic rubric was highly structured, in contrast to the open-ended technical report graded using the IIM. Despite greater variation in student approaches, the IIM yielded more consistent assessment outcomes across graders. While limitations to this analysis certainly exist, such as incomplete grader participation and potential self-selection bias (e.g., higher-achieving students may have been more likely to complete the optional task), the observed variability provides a useful comparison, demonstrating that even with a standardized rubric, grading inconsistency persisted, underscoring the value of the IIM's holistic evaluation model.

In addition to student performance metrics, qualitative feedback was gathered from 136 optional reflection submissions completed at the end of the course, as well as course evaluations at the end of the semester. While no formal thematic analysis was conducted, student comments were reviewed to better understand students' perspectives on the WIL assignment and the IIM framework. Many students described the open-ended nature of the project as an opportunity to exercise creativity and apply statistical skills in a realistic setting. Others highlighted the value of revising their work in response to detailed feedback, noting that the process was both motivating and educational. Several reflections emphasized increased confidence in conducting independent data analysis and an appreciation for the project's real-world relevance. Selected quotations from student reflections are presented below to illustrate these themes:

1. "The assignment enhanced my ability to visualize data effectively through tools like JASP, enabling me to identify patterns, test assumptions (e.g. normality, homogeneity of variances, etc.), and present results in a clear and meaningful way. Collaborating with a partner further strengthened my teamwork and communication skills. Coordinating tasks, aligning on analytical approaches, and *synthesizing our interpretations into a cohesive report required both compromise and strategic planning. This experience emphasized the importance of diverse perspectives in research and taught me how to integrate feedback constructively to enhance the quality of a project. Perhaps most importantly, I gained valuable insights into the iterative nature of research, particularly in dealing with non-significant results. This assignment taught me to view such outcomes not as failures but as opportunities to refine hypotheses, consider alternative explanations, and address limitations in data or methodology."*

2. "The most enjoyable aspect of this course for me was the assignment. This is because I had the chance to apply my knowledge to real-world data and get a sense of how data analysis actually is. While being the most enjoyable, it was also the most challenging as we were given a huge dataset with about 245 variables and 1100+ participants. Navigating it seemed overwhelming at first but looking at the variable list and having a rough idea about the areas I wanted to focus on helped narrow it down. Once the dataset was cleaned up, the rest flowed smoothly apart from a few times where changes to how the data was represented had to be made but those were relatively easier to handle."

Despite the generally positive feedback, some concerns were raised that are common to WIL implementations, and to statistics assignments more broadly. Some students noted that the unstructured nature of the assignment made it difficult to know how to approach the dataset, particularly when faced with hundreds of variables and no predefined research questions. Others expressed concerns about the logistics of working with a partner, citing challenges in dividing tasks equitably, coordinating schedules, and ensuring shared accountability. One student commented:

> "As it was a partner assignment, I found myself taking on most of the workload because my partner lacked initiative. I had to assign tasks and micromanage their contributions, which I found frustrating and unfair as we would receive the same grade. This experience diminished my enjoyment of the assignment, as I would have preferred the option to complete it independently."

While such issues are not unique to this course and assignment and are cited as pedagogical trade-offs in authentic WIL contexts (Riordan et al., 2017), they highlight the need for careful scaffolding, clear expectations, and ongoing support when implementing open-ended projects at such a large scale.

The main concern relating to the structure of the IIM itself was dissatisfaction with the limited range of scores (i.e., 4/10 or 6/10) available on the initial submission. For some students, the lack of intermediate scores created a sense of unfairness. For instance, one student commented:

> "The assignment's grading was confusing and not really set up in a way that would be beneficial to students. In the first draft, you could only get 6/10 or 4/10 and the TAs were picky about things which cost us grades. There was no option to get 5/10 or even 4.5/10. For the final revision, you get anywhere between +1 to +4 grades added to your first draft grade but there is no guarantee what you will get extra points because we are just told to do our best to improve based on the editing done by the TAs. If we still don't get it right, what are we supposed to do then?"

While the IIM was designed to emphasize improvement and reduce grade anxiety by decoupling high-stakes performance from initial drafts, the baseline scores and structured point adjustments were intentionally set to encourage iterative learning and reflection (Sama et al., 2025). Usually, concerns regarding the initial starting grades abated once students better understood the resubmission and revised grading process. Therefore, continued and clear communication of this rationale could help students better understand that these thresholds are not arbitrary but serve to guide effortful engagement and meaningful skill development throughout the assignment.

Discussion

The findings of the present case study suggest that the IIM can effectively support the integration of WIL into a large-enrolment undergraduate course, by enabling nearly 100 student groups to complete an open-ended assignment despite common barriers including logistical complexity, grading demands, and the need for individualized feedback.

The IIM's emphasis on revision and individualized feedback – focusing on effort and improvement rather than the perceived quality of a single submission – aligns with the iterative nature of real-world problem solving and professional work, in which feedback is used to refine ideas and deepen insight. This approach positions assessment as an active, ongoing learning process rather than a static judgment of performance. Grading initial submissions based on effort may also contribute to creating a lower-stakes environment in which students can engage with feedback, learn from early mistakes, and be rewarded for improvement, while still adhering to expected grading distributions in postsecondary contexts. Consistent with this interpretation, the high rate of resubmissions (approximately 96%) suggests strong student engagement with the revision process. Rather than being deterred by critical feedback, many students appeared to use it as a basis for further development. This is consistent with prior research indicating that formative assessment is most effective when paired with opportunities for revision (Carless & Boud, 2018).

The IIM also offers a feasible grading approach in high-enrolment courses. Assessing WIL projects is challenging, as the expected project outcomes are not easily standardized. The use of rigid rubrics can be time-consuming and may inadvertently constrain diverse approaches, particularly when students are asked to pose their own questions or apply concepts flexibly. This case study suggests that a shift toward holistic evaluation – supported by calibration – was still associated with consistent grading outcomes across TAs despite the absence of detailed rubrics. Framing the TA role as analogous to editorial peer review, rather than grading, further supported this process and better modelled how writing is applied in real-world contexts. Together, these elements suggest that feedback-centred, holistic assessment can be implemented in large-enrolment courses while maintaining reasonable consistency and academic rigour, provided that appropriate supports are in place.

Although this was not directly measured in the present case study, the structure of the IIM may have implications for academic integrity in the context of generative artificial intelligence (AI). Given that the IIM requires students to engage meaningfully with personalized feedback, final submissions must reflect a trajectory of development that is difficult to reproduce through AI-generated responses. Moreover, instructors and TAs gain familiarity with students' writing and reasoning across submissions, which may help identify inconsistencies in voice or argumentation as evidence of academic dishonesty. While not a comprehensive solution (and speculative at best), this process-oriented structure may function as a partial deterrent by foregrounding transparency and accountability.

Despite these strengths, some challenges still remain. Some students found the holistic grading system with a capped initial grade (e.g., 6/10) discouraging, particularly when they perceived their initial submission as high quality. This underscores the importance of clearly communicating the IIM's rationale behind the grading structure and its role in supporting learning. Ensuring consistency in the quality and clarity of feedback comments across TAs is also an ongoing concern, particularly when evaluating highly individualized submissions that vary in topic and methodological approach. Even with calibration sessions in which expectations are explicitly communicated, variability in the depth and clarity of feedback could persist, ultimately affecting how effectively students are able to revise their work. This is especially salient in WIL contexts, where tasks are open-ended and may lack a single "correct" approach; thus, a lack of quality feedback early on could be detrimental to a student's final product through no fault of their own.

The design of this case study itself also has several limitations that constrain the strength of its conclusions. First, the absence of a control or comparison condition (e.g., a traditionally graded cohort completing the same assignment) limits the ability to attribute observed outcomes specifically to the IIM. Second, improvements in grades between initial and revised submissions cannot be interpreted as direct evidence of learning gains, as they may also reflect students' responsiveness to feedback or familiarity with expectations. Moreover, participation in revisions, infographics and end-of-course reflections was self-selected, which may bias interpretations of student engagement and experience. Third, while qualitative feedback from students was reviewed, it was not analysed using a formal coding procedure, and no inter-rater reliability metrics were established. Despite these limitations, student feedback provides some support for the practical value of the IIM in this context. Students frequently identified the opportunity to revise as motivating and valued applying statistical skills to real-world problems, suggesting that the model can support engagement and skill development within the constraints of a large-enrolment course.

Taken together, this case study suggests that the IIM is a promising approach for integrating WIL into large-enrolment courses within the specific instructional context examined here. While the findings are limited in scope, they illustrate how structured opportunities for feedback and revision can support both pedagogical goals and logistical feasibility. Future research should continue to examine the model across multiple offerings and institutional contexts, while incorporating more systematic qualitative and comparative designs to better assess its scalability and generalizability.

Abstract: Work-integrated learning (WIL) provides students with authentic, real-world experiences that enhance engagement, skill development, and employability. However, implementing WIL in large-enrolment courses remains challenging due to the logistical complexity of coordinating and assessing open-ended assignments. This case study examines the use of the Incentivized Improvement Method (IIM; Sama et al., 2025), a three-phase, feedback-driven assessment model informed by "ungrading" (Stommel, 2024), to support a WIL assignment in a large undergraduate statistics course. Ninety-eight student groups completed a data analysis consultancy project that was evaluated holistically, with emphasis on responsiveness to detailed feedback rather than adherence to a traditional rubric. Course-level metrics indicated high participation in the revision process, as well as consistent grading across teaching assistants, while qualitative student feedback highlighted the value of real-world application and opportunities for improvement. These findings suggest that the IIM offers a feasible approach to assessing WIL in large-enrolment settings, where standardization is challenging but individualized feedback remains central.

Keywords: work-integrated learning, incentivized improvement method, writing assessment, large-enrolment courses; inclusive pedagogy

Streszczenie: Uczenie zintegrowane z pracą zawodową (Work-Integrated Learning – WIL) zapewnia studentom autentyczne doświadczenia z rzeczywistego środowiska pracy, które zwiększają ich zaangażowanie, rozwój umiejętności oraz szanse na zatrudnienie. Jednak wdrażanie WIL na kursach o dużej liczbie uczestników pozostaje wyzwaniem ze względu na złożoność organizacyjną związaną z koordynowaniem i ocenianiem otwartych zadań. Niniejsze studium przypadku analizuje wykorzystanie **Metody Motywowanego Doskonalenia** (Incentivized Improvement Method – IIM; Sama i in., 2025), trzystopniowego modelu oceniania opartego na informacji zwrotnej i inspirowanego koncepcją „nieoceniania" (ungrading; Stommel, 2024), jako wsparcia dla zadania realizowanego w ramach WIL na dużym kursie statystyki dla studentów studiów licencjackich. Dziewięćdziesiąt osiem grup studentów zrealizowało projekt konsultingowy z zakresu analizy danych, który oceniano holistycznie, kładąc nacisk na sposób wykorzystania szczegółowej informacji zwrotnej, a nie na zgodność z tradycyjną rubryką oceniania. Wskaźniki na poziomie kursu wykazały wysoki poziom uczestnictwa w procesie wprowadzania poprawek oraz spójność ocen przyznawanych przez asystentów dydaktycznych. Z kolei jakościowe opinie studentów podkreślały wartość praktycznego zastosowania wiedzy oraz możliwości doskonalenia własnej pracy. Wyniki sugerują, że metoda IIM stanowi wykonalne podejście do oceniania WIL w warunkach dużej liczby studentów, gdzie standaryzacja jest utrudniona, ale indywidualna informacja zwrotna pozostaje kluczowym elementem procesu dydaktycznego.

Słowa kluczowe: uczenie zintegrowane z pracą zawodową (WIL), Metoda Motywowanego Doskonalenia (IIM), ocenianie prac pisemnych, kursy o dużej liczbie studentów, pedagogika inkluzywna

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Public vs Private Schools: Differences in Management Strategies and Educational Policies[2]

Szkoły publiczne i niepubliczne: różnice w strategiach zarządzania i polityce edukacyjnej

Introduction

After 1989, the education sector in Poland underwent a profound transformation, leading to a gradual diversification of the structure and functioning of educational institutions. In the first years after the political

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[2]The article is a development and reinterpretation of selected threads presented in Rafał Mydłowski's Master's degree thesis, entitled *Differences in the management of public and non-public schools on the example of secondary schools in the Mazowieckie Voivodeship*, prepared under the supervision of Adrian Chojan, PhD, at the Lazarski University at the Faculty of Economics and Management. The current publication uses the conclusions of qualitative research contained in the thesis, and in addition, the analysis has been extended to include additional interviews and observations that were not originally included in it. This allowed to deepen the interpretation and capture new phenomena and dependencies regarding the ways of managing public and non-public institutions, going beyond the scope of the Master's degree thesis (Mydłowski, 2024).

changes, the area of education was almost completely dominated by public schools, which carried out state tasks in the field of universal education. In the following decades, however, one can observe the dynamic development of schools described as private or non-public, which began to play an increasing role in the landscape of Polish education. The development of non-public education is primarily associated with the opening of Poland to the world and the growing awareness and expectations of parents looking for alternative forms of education. Access to global education models, modern pedagogical solutions and the experiences of other countries meant that the traditional way of teaching, characteristic of many public institutions, began to be perceived as insufficiently flexible and not fully adapted to the challenges of the modern world. In conditions of almost unlimited access to modern educational patterns, non-public schools gain the opportunity to implement those methods and strategies that, in their opinion, best support the student's development. At the same time, the growing popularity of the non-public sector is largely determined by the limitations faced by public schools and the units responsible for running them. The obligation to implement the core curriculum, strict legal regulations, the financing dependent on local government or central budgets, as well as the need to provide places for all students subject to compulsory schooling, significantly reduce the opportunities for strategic development of these institutions – especially in regions with weaker economic and demographic development. In such a reality, many public-school authorities focus their activities on ensuring the basic implementation of statutory requirements, while non-public schools, with greater autonomy, organizational freedom and the possibility of more flexible resource management, can construct the educational offer in a way that meets the diverse needs of students and the expectations of parents. Thus, differences in the functioning models of both sectors translate into clear differences in educational policy, work organization and management strategies (Schneider, 2005)

Legal and organizational basis for the functioning of public and non-public schools

Management of an educational institution always takes place within a specific legal and organizational framework that determines the direction and scope of activities of the director and the entire pedagogical team (Pawłowski, Wołoszyn, 2016; Goździewicz, Pawłowski, 2016; Kwiatkowski, Gawroński, 2023). Public schools (usually run by local government units) and non-public schools (run by other entities, e.g. foundations, associations, or natural persons who obtain permission from the governing body) operate on the basis of the same main legal acts, but may have separate regulations regarding their financing, supervision or establishment. The legal and organizational foundations for the functioning of public and non-public schools are based on the provisions of the Education Law (Act, 2016) and the Education System Act (Act, 1991) and the implementing acts thereto (Regulations issued by the Minister of National Education and the Minister of Science, which specify the provisions of the acts, e.g. in the field of education conditions, assessment, safety or school organization). The Statute of the School, which regulates its internal order, as well as the Teacher's Charter (Act, 1982) and the Labour Code (Act, 1974) in matters related to the employment and rights of teachers are also of key importance.

Polish educational law defines several fundamental principles determining the way schools operate, regardless of their status. The most important include: the obligation to implement the core curriculum, the universality and accessibility of education, ensuring the safety of students, being subject to pedagogical supervision and maintaining transparency in the management of public funds. At the same time, the school director although functioning within the framework specified by the legislator, has a certain scope of autonomy regarding the organization of work, cooperation with parents and shaping internal procedures. In such an environment, management takes on special importance. Its basic objective is to create conditions enabling effective and the most effective achievement of the assumed educational and upbringing results (IRE, 2024; Kozłowska, 2025).

These goals can be considered in two dimensions: economic and social. At the economic level, it is crucial to organize the work of teachers and other staff so that the activities are coherent, ordered and bring real results. In this approach, the competences of employees, their experience, level of motivation and readiness to take on new challenges are important. It depends largely on the involvement of teachers whether the school will be able to carry out its tasks in accordance with the requirements of the core curriculum and the expectations of the local environment (IRE, 2024; Kozłowska, 2025; Śliwa, 2017).

In turn, the social dimension of management is associated with building appropriate relationships, both within the pedagogical circle and in contact with students and parents. Educational law emphasizes the necessity of cooperation between school and student's family environment, and director is obliged to create conditions conducive to such dialogue. In this context, the effectiveness of the school is also influenced by the conditions in which teachers perform their work: atmosphere in the team, access to teaching aids or substantive support from management (Jasińska, 2018, pp. 179–186; Lewandowski, 2020; LibrusPortal, 2018).

All these elements – resulting from both legal provisions and organizational practice – form a coherent system in which school management requires combining administrative obligations with activities aimed at developing staff and improving the quality of education. The effectiveness of this process depends not only on the quality of legal regulations but, above all, on the skills and competences of school leaders, their organizational skills and sensitivity to the needs of students and teachers (LibrusPortal, 2018).

The management process in public schools is largely based on the human factor that dominates over material and technological resources. Limited financial possibilities, resulting from the principles of budgeting local government units, make the organizing the school's work a demanding task, burdened with numerous organizational barriers. The dominance of the human factor also means greater unpredictability, resulting from the diversity of attitudes, emotions and reactions of employees. In conditions where material resources are rigidly limited, the effectiveness of management depends largely on the director's ability to build relationships, resolve conflicts and lead a team (Piwowar-Sulej, 2009).

Public schools are run by local government units or other public entities, which determine their character as service institutions of particular social importance. The public institution integrates the activities of teachers, students, and parents, with its functioning strongly embedded in local education policy. As a result, the school director must combine substantive knowledge with managerial competences, leadership skills and the ability to operate in an environment where the interests of many groups overlap. The scope of autonomy of the director of a public school is significantly limited by the provisions of educational law and decisions of the leading authority. The director is obliged to implement the core curriculum, care for the safety of students, conduct personnel policy in accordance with the Teacher Charter and respect the procedures of pedagogical supervision. In many areas, it plays an executive role, being a direct extension of local government authority – it is responsible for the implementation of decisions and educational policies established at the level of the commune or district. Despite a certain amount of organizational freedom, its decision-making is limited by financial and personnel regulations, as well as requirements for a uniform level of qualifications of teachers. In practice, director of a public school is often referred to as primus inter pares, i.e. „the first among equals" (Encyclopedia, 2025). This is due to the fact that he leads a team that has the same professional preparation, and his authority and effectiveness are based more on interpersonal competences than on formal advantage (Act, 2016, art. 68; Act, 1982).

In this context, the differences between the management of public and non-public schools become important. In non-public institutions, the director usually has much greater autonomy – both in terms of creating an educational offer and making personnel or financial decisions. It can introduce innovations without the need to obtain the consent of the leading authority, adapt the program to the specifics of students, as well as create incentive systems based on the effectiveness and needs of the school. While public schools operate within a strict legal and budgetary framework, non-public institutions are characterized by greater flexibility and the ability to quickly respond to changing educational needs (UczymyZRadoscia, 2025; FactFinders, 2025; ZaczarowanaChata, 2024; Łuczyński, 2011).

These different conditions mean that the management of a public school focuses mainly on maintaining stability, compliance with regulations and ensuring basic operating conditions, while in non-public schools the emphasis is shifted to development, quality improvement and building a competitive offer compared to other institutions (UczymyZRadoscia, 2025; FactFinders, 2025; ZaczarowanaChata, 2024; Ciszak, 2021).

To understand the issue, it is necessary to analyse the model, tools and methods of education management[3].

[3] **The management model, tool and method** are related but different concepts. A model is the overall structure and mode of operation of an organization, a method is a specific course of action to achieve a goal (e.g., project management), and a tool is a specific, physical, or programmatic measure used within a method and model (e.g., ERP software, Pareto chart). The model is "why" and "how" the company operates in general. The method is "how" to achieve a specific goal (e.g. to implement a project). A tool is a specific "object" or "programme" that helps in the implementation of the method. Example: a company may use an agile management model to respond quickly to change. Within this model, it can use the *Scrum* method to manage the project (dividing it into short iterations). To carry out these activities, it will use tools such as a task management system (e.g. Jira) and boards to visualize the progress of work (e.g. physical Kanban or virtual boards) (Hopej, Kral, 2011; Semper, 2025).

Education management models

When analysing the functioning of a public school, it is difficult not to notice that many key decisions regarding its activities are made outside the institution itself, bypassing the position of the headmaster. This is due to the public nature of schools, which are subject to both state and local government authorities (Mąkolski, 2019, pp. 72-73). Such a strong dependence on external factors makes the management of a public school relational — it takes into account numerous social, political and organizational conditions occurring outside the structure of the institution (Wach, 2016; Niedźwiedzka , 2018; Muraru, Pătrașcu, 2017; Dorczak, 2012; Leżucha, 2018/2019; Pawłowski, Wołoszyn, 2016)

The management of public schools is also regulated by the provisions of other legal acts, including the Labor Code (Act, 1974), the Civil Code (Act, 1964a), the Family and Guardianship Code (Act, 1964b), the Act on Municipal Self-Government (Act, 1990), and the regulations of the Minister of Education. The Director maintains constant cooperation with the pedagogical supervisory authorities, primarily with the education superintendent, and is also subject to the assessment of the leading authority.

In practice, this means that the school director operates in a network of connections with many entities: the leading body, the board of trustees, local institutions, higher education institutions or organizations performing public tasks. These dependencies give its role a special, often sensitive character. The director is responsible not only for recognizing and interpreting the impact of the environment on the school's activities, but also for organizing work inside the institution, building relationships in the pedagogical circle and resolving conflicts. This requires personality predispositions such as openness, communicativeness, agreeableness and the ability to work under conditions of pressure and uncertainty (Statute, 2024, pp. 15–16).

The scope of activities and responsibilities of the director was determined primarily in the Education Law (Act, 2016) and the Teacher's Charter (Act, 1982). These provisions give the director a broad, multidimensional institutional mandate. Director's basic tasks comprise:

- managing the school's activities and representing it externally,
- exercising pedagogical supervision over employees,
- providing students with the right conditions for development, safety and care,

- implementation of resolutions of the pedagogical board and other school bodies,
- responsibility for the management of funds,
- cooperation with universities in the field of student internships,
- organizing conditions for volunteering (Act, 2016, art. 68; Pawłowski, Wołoszyn, 2016, pp. 404).

The Teacher's Card additionally indicates that the director is the superior of all school employees, the chairman of the pedagogical board and the person responsible for the quality of didactic, educational and care work. These obligations require high organizational, legal and interpersonal competences (Act, 1982, art. 7 [1]).

A significant element of management is the responsibility of the director as an employer. The leading authority and pedagogical supervision authorities control the fulfilment of the director's obligations under labour law (Act, 1974, art. 281-283; Norkowska, 2024). In cases of serious violations, the director may be dismissed from the position, and the sanctions provided for in the Labour Code may be imposed for violations of employee rights (Act, 2016, art. 56).

All these conditions show that the management of a public school is based on functioning in a highly regulated and multi-stakeholder system, in which the autonomy of the director remains limited by the rigid legal framework and decisions of the superior bodies. At the same time, it requires high organizational, leadership and communication skills from him, necessary to lead a team and run a school in a dynamically changing social and institutional environment (Janiak et al., 2012)

The functioning of non-public schools is sometimes perceived as a manifestation of grassroots civic activity and a symbol of a change in thinking about education management. These institutions, more than public schools, refer to concepts emphasizing the importance of responsibility, autonomy and participation of all members of the school community. In their activities, there is a tendency to replace the traditional "logic of obedience" – characteristic of a strongly formalized public system – with the principle of responsibility and co-decision.

However, this does not mean that the director of a non-public school operates outside the system of legal regulations. Also in this sector, it is necessary to know the provisions of educational law, labour law or the principles of pedagogical supervision. The legislator imposes on the leading authority the obligation to ensure appropriate housing, sanitary and fire protection conditions, as well as a safe working and learning environment. The leading authority is responsible for infrastructure, repairs, administrative and financial issues, while the director is responsible for the organization of the daily functioning of the school and for the quality of the educational process (Koziej, Stróżyk, 2017, pp. 25).

Unlike public schools, non-public institutions have greater autonomy in determining documentation and internal procedures. The statute of a non-public school – being its key document – defines the mission of the institution, work organization, recruitment rules, the scope of rights and obligations of students and ways of obtaining funds. These schools keep documentation similar to public ones (e.g. curricula, class journals, pedagogical board resolutions), but their structure and content depend to a greater extent on the programme assumptions and profile of the institution, and not on uniform patterns imposed by the legislator. Differences are also visible in the area of financing. Non-public institutions receive a subsidy from the state budget through the local government, but in practice their activities are also based on tuition fees, donations and support from private entities. This requires the director to have greater managerial skills, including negotiating with the leading body, supervising accounting or looking for additional sources of financing. The scope of duties of the director of a non-public school is wide and includes responsibility for the safety of students and employees, supervision over the didactic and educational process, organization of the school's work, recruitment of staff and conducting control and evaluation activities. The statute of the institution also sets out detailed requirements for the director – in some school profiles it is not necessary to have pedagogical qualifications, which distinguishes this sector from public schools. The director decides on the manner of employing staff, determines the remuneration system and makes decisions on awarding prizes and imposing sanctions (Act, 2016, art. 168).

An important difference in relation to the public sector is the freedom in shaping the organizational structure of the school: the number of branches, the number of hours of classes, additional forms of support for students or the use of housing resources. To a greater extent, the director can adapt the organizational plan to the profile of the facility, as well as use modern management methods (e.g. agile, scrum or scenario management), which allow for quick response to changes and flexible planning of educational processes (SzkołaZKlasą, 2025; Alsohybe, Sabrah, 2019, pp. 54).

Therefore, the management of a non-public school is characterized by greater flexibility, individualization and the possibility of creating one's own organizational culture. However, it also involves greater responsibility both for the quality of didactic work and for the financial stability of the institution. While the director of a public school operates under rigid procedures and under the supervision of superior authorities, the director of a non-public school has a much wider room for manoeuvre, but also a wider range of tasks related to raising funds, conducting personnel policy and building the competitiveness of the school (Hargreaves, 2003, pp. 78; Lorens, 2021).

As a result, the management of a non-public school can be described as more entrepreneurial, focused on development and creating educational value, while the management of a public school – although equally responsible – is embedded in a much more formalised structure and limited by the scope of decision-making resulting from the provisions of law and local government supervision (Murzyn, Szuścik, 2017; Murzyn, 2025).

Methodological foundations of own research

Own research was carried out in three locations: Warsaw, Siedlce, and Skierniewice, which made it possible to take into account the diverse social and organizational context of the functioning of secondary schools.The aim of the research was to enhance understanding of the management practices employed in public and non-public schools and to identify differences arising from distinct legal, organizational, and cultural contexts.

Purposeful selection, typical of qualitative research, was used, allowing for the inclusion in the sample of people with direct experience and knowledge related to the issues of school management. Ultimately, the study covered **twenty-one cases**, including director from seven public high school and four public technical schools, as well as six non-public high schools and four non-public technical schools. All respondents perform managerial functions and have a real impact on decision-making regarding the organization of schoolwork, personnel policy, implementation of innovations and cooperation with leading bodies and pedagogical supervision. Their perspective is a key source of knowledge about the practical dimension of management in both types of schools. The research was based on a **case study** methodology, enabling a multi-faceted analysis of the activities and decisions made in specific institutions. The basic research technique was **in-depth interviews**, which allowed to obtain answers to specific questions regarding among others:

- What management tools and methods are used by director of public and non-public schools in the daily practice of managing the institution?
- How are the directors' relations with the governing body and parents shaped and what significance do they have for the functioning of the school?
- What strategies do directors use in the process of introducing organizational changes and didactic innovations in their facilities?
- How do school director perceive the barriers and development opportunities of their institutions, taking into account internal and external conditions?

Interviews were conducted directly in facilities or in agreed spaces ensuring the comfort of conversation and confidentiality of data. All statements were recorded (with the consent of the respondents) and then transcribed. The research material was analysed using **thematic analysis**, which made it possible to distinguish recurring categories and patterns of behaviour. The motifs appearing in the statements of the directors were compared across cases and sectors, enabling a more in-depth interpretation of the phenomena. The research was conducted in accordance with the ethical principles of qualitative inquiry. Reliability was enhanced through source triangulation, involving the comparison of participant statements, school documentation, and contextual observations, as well as consulting preliminary conclusions with selected respondents (cf. Pilch, Bauman, 2010; Łobocki, 2008 and 2009; Babbie, 2019).

Management tools and methods used in public and non-public schools

The analysis of the empirical material indicates that the management tools used in public and non-public schools differ significantly, which results from both legal and organizational conditions as well as different environmental expectations towards both types of institutions.

In **public schools**, director most often use administrative and control tools. This is due to the need to implement the procedures specified by the leading authority and the obligation to comply with the provisions of educational law. The management practice here is based on organizational documentation, permanent schoolwork schedules, pedagogical supervision, analysis of exam results and current reporting. Directors drew attention to the strong dominance of administrative functions over development:

> "In our school, management tools result mainly from procedures imposed by the leading body. Each action must fall within a specific legal and budgetary framework." (Director of a public school; Warsaw)

> "I create the school's work plan in accordance with the guidelines of the local government and the board of trustees. We have schedules, organizational sheet, evaluation procedures, but there is no space for flexible response." (Director of a public school, Siedlce)

> "Most often, I use administrative tools: class register control, observation of lessons, analysis of exam results. Of course, I would like to develop teamwork, but teachers are overloaded with bureaucracy." (Director of a public school, Skierniewice)

> "As a non-public school, we are not so strongly bound by rigid procedures. Of course, we are bound by educational law, but in practice I can implement solutions faster – if something works, we immediately put it into practice." *(Director of a non-public technical school* from Warsaw)

> "I focus on making the school competitive, so management tools must support the development of mentoring teachers, monitoring student progress, and cooperation with companies. Administration is necessary, but it does not dominate. It is we who set the direction, not the official procedures." *(Director of a non-public technical school* from Siedlce)

This shows that director of public schools are firmly embedded in the system of control and supervision, and their actions are determined by top-down local government and curatorial decisions, which significantly limit the flexibility of management (Cf. Certesto, 2025; PortalOświatowy, 2025).

Non-public schools, on the other hand, are dominated by tools of a developmental, strategic nature and aimed at building the quality of educational services. Directors have more freedom in choosing the method of work, creating innovations and organizing internal processes. They commonly use tools taken from project management or agile methodologies, as well as more extensive feedback and mentoring systems for teachers:

> "I can implement management tools that really work. We regularly use reflective meetings, we work on short project sprints, and we make changes from day to day." (Director of a non-public school, Warsaw)

> "In our school, surveys among students and parents are the basic tool. If there is a signal about the need for change – we react immediately." (Director of a non-public school, Skierniewice)

> "Mentoring between teachers works great for us. In a public school, this would be difficult, because there every shift has to go through several procedures." (Director of a non-public school, Siedlce).

Moreover, private directors drew attention to the possibility of using tools typical of the entrepreneurial sector: "We use agile elements, project work, kanban boards. This helps you react faster to changes and constantly analyse processes." (Director of a non-public school, Warsaw).

The analysis of the statements shows that director of non-public schools operate in conditions of greater autonomy than their counterparts from the public sector. They can modify the organizational structure themselves, introduce additional programmes, create their own quality systems, adapt the educational offer and apply flexible HR solutions (Cf. Certesto, 2025; PortalOświatowy, 2025). As a result, the directors of non-public technicians use a more diverse set of tools – from the analysis of teachers' competences to the systematic survey of stakeholders' opinions – which strengthens the strategic and developmental nature of their role, clearly distinguishing their practices from public schools. In summary, management tools in public schools are control and procedural, while in non-public schools they are primarily developmental, flexible and supportive of rapid response to change. These differences result both from different legal conditions and from the different function that both types of schools perform in the education system.

Relations of the director with the governing body and parents – conditions and practice of cooperation

In both types of schools – public and non-public – the school head's relationship with the governing body includes cooperation and supervision. In particular, the director's decisions regarding the organization of the institution's work include the planning of didactic, educational, and care goals, as well as the selection of tools and resources necessary for their implementation. Directors emphasize that in modern school, quick decision-making, systemic thinking and the ability to diagnose problems that arise in the educational process become particularly important. Decisions must be in accordance with the law, but – as some director note – also in accordance with personal conviction and responsibility for the school. One of the directors of a public school pointed out that with all the changes, “it is important to nurture the tradition and intellectual development of a young person, also through the organization of meetings with authorities that go beyond the core curriculum.” (Director of a public school in Siedlce).

The challenges of modern school include, above all, digitization and access to technology, the development of future competences such as adaptability, critical thinking, and emotional intelligence, students’ mental health related to pressure, stress, and social media, as well as the change of the role of teacher. Schools also have to face the problems of student motivation, adapting teaching to individual needs and issues of globalization and equal opportunities (Opinions of Students, 2025; EduExplorer, 2025).

The director’s relationship with students’ parents is based on openness, regular communication and building trust in an atmosphere of mutual respect. It is crucial to create clear cooperation procedures, clearly formulate school expectations, as well as treat parents subjectively and involve them in school life, which supports students’ development. In difficult situations, the director acts as a mediator, and in extreme cases may involve other people or institutions (Zając, 2024).

Directors of public and non-public schools indicate that one of the biggest challenges in the decision-making process are the growing expectations of parents, the overloaded core curriculum and staff shortages, especially among teachers of vocational subjects. The director of one of the public institutions emphasized: “The biggest problem is finding teachers to learn the profession. They do not want to work for the salary offered by the school; they prefer companies that pay twice as much. I’m afraid who will be teaching in techniques in a few years.” (Director of the Technical School - public school in Warsaw). Attention was also paid to financial and procedural constraints that make it difficult to respond to the needs of the school: “The basic challenges are to provide financing, access to technology, adapt the offer to the needs of the market. The lack of staff and the demanding nature of the parents further complicate the situation.” (Director of a public school in Warsaw) In the public sector, the decision-making process is strongly related to cooperation with the leading body, the board of trustees and the pedagogical board. The responsibility of the director is strictly defined by law, and many decisions require the approval or approval of the local government unit. The director from Skierniewice emphasized that: "Decisions on care and upbringing, and didactic matters are made jointly with the pedagogical board, while the financial decisions are always made in consultation with the municipality" (cf. Łuszczarz, 2020; Opinions of Students, 2025; EduExplorer, 2025; Zając, 2024).

The decision-making process in **non-public schools** is shaped differently There, the leading body (the owner or the board) plays a key role. The directors emphasized that it is the owner who decides on the most important issues, including employment, salaries or directions of school development. As one of the respondents noted: "It is a private school – decisions are made by the owners after consultation with the management. I make sure that everything complies with the regulations and works as it should." (Headmistress of a non-public school in Warsaw). Another director from Siedlce adds: "Parents and students are the most important – it is thanks to them that the school functions. Their voice is taken into account in most decisions. At first, it is difficult to get used to it, but this is the specificity of private schools." In non-public schools, decisions are more often made in a partnership rather than a hierarchical formula. In many cases, parents and student self-government, who co-create school policy, play a significant role. One of the director of social schools described his institution as a "turquoise organization", emphasizing: "We manage democratically. Teams dealing with a given issue can make decisions in their area. The final approval is on the executives' side, but the experts' voice is crucial." (Director of a non-public school from Warsaw) Another director from a non-public technical school points out that: "In a non-public technical school, I decide not only about organizational issues, but also strategic ones. For example, if employers signal new competence needs, I can introduce appropriate practical modules in the same semester" *(Director of a non-public technical school).*

In non-public institutions, the role of the director is therefore different than in public schools – it is more managerial and entrepreneurial. It is necessary not only to cooperate with the owner, but also to "negotiate" the directions of changes with parents who play an important opinion-forming and influential role in this sector. These challenges show that effective school management – public and non-public – depends not only on the knowledge of the law and procedures, but also on the leadership competences of the director, his ability to build relationships and the ability to make decisions under pressure. In both types of schools – public and non-public – director indicate that one of the most serious problems is the growing deficit of teaching staff. Young graduates of teaching majors are reluctant to take up a job at school, recognizing the teaching profession as not very prestigious and not adapted to modern financial expectations. Many directors emphasize that the discrepancy between responsibility, professional requirements, the scope of duties, and the amount of remuneration effectively discourages people starting a professional career.

Strategies for introducing organizational changes and didactic innovations in educational institutions

Introducing organizational changes and implementing didactic innovations is one of the key areas of the school director's activities. However, the research results show that the strategies used in this area differ significantly depending on the type of institution – public or non-public – and the degree of autonomy that directors have (Chmiel, Korneta, 2019, pp. 224–234; Kołodziej et al., 2024).

In public schools, organizational changes take place under severe formal and procedural constraints.

The directors pointed out that each initiative requires considering a number of regulations, consultation with the leading authority, and compliance with the guidelines of the board of trustees. In practice, this often makes it impossible to respond quickly to the needs of students or teachers. As one of the directors emphasized: "In a public school, change takes time. First the pedagogical board, then the leading body, sometimes even the board of trustees. It's a semester before we approve everything."

A similar reflection was presented by another respondent: "We see the need to implement new methods, but the obstacle is the overloaded core curriculum and the lack of hours. If we want to do something extra, we have to fight for every minute." One of the directors of the technical school pointed out that "The strategy of introducing changes in our country consists in the gradual implementation of solutions. First, we test them in one class or on a small group of teachers, and only then we extend them to the whole school. This minimizes the risk and allows us to assess the real effects before making a decision on a larger scale." (*Director of a public technical school).*

Directors of public technical schools also pointed to personnel difficulties as one of the most serious brakes on innovation: "I cannot develop practical classes because I do not have qualified teachers. The regulations do not allow me to employ them if they do not have a suitable education."

In contrast, in non-public schools, the process of introducing changes is much more dynamic. The directors emphasized that they have greater decision-making freedom and the ability to implement their own educational concepts without the need for long-term arrangements. One of them described it as follows: "If I see a need for change, we introduce it immediately. Sometimes during the week. I don't have to wait for officials' approval – I talk to the team; we analyse and act." He emphasized in his statement that: "In order to effectively implement innovations, we work in project logic. We create task teams that have a specific time, resources and goal. When they finish their work, the results immediately go to implementation. Thanks to this, changes are not blurred in the papers." *(Director of a non-public technical school).*

In private schools, didactic innovations often result from cooperation with parents and students, who are treated as partners of the educational process: "Parents submit many ideas to us – from additional classes to digital tools. If it makes sense and is in accordance with the statute, we implement it within a few days." Directors of non-public institutions also pointed to the use of management methods taken from the business sector: We work in project cycles. Each educational project has a leader, a schedule and an evaluation. This allows us to quickly correct actions and do not stand still. In many non-public schools, external experts play a large role – trainers, educators, psychologists, specialists in activating methods: We often invite specialists who train our team. The school must be one step ahead of what is happening in the public system.

Flexibility in the educational offer is also an important element of innovation strategies in non-public schools. These institutions can create profiled development paths, artistic classes, extended programmes, tutoring, mentoring or bilingual education. Therefore, the collected data indicate two separate paths for implementing changes:

- in public schools – changes are cautious, procedural, dependent on regulations and organizational restrictions;
- in non-public schools – changes are quick, flexible, based on the internal needs of the school and the expectations of students and parents.

These differences result primarily from the different organizational status of the institutions, the scope of autonomy of directors and the methods of financing. In public schools, the director performs an executive function in the structure of educational administration, while the director of a non-public school has a managerial character and manages the institution more entrepreneurially.

Barriers and development opportunities of schools in the opinion of director

Bartosz Atroszko states that "on the basis of a review of the key Polish and English-language scientific literature, the most important categories of barriers to educational change that had been distinguished were divided into macro, meso, and micro levels. At the macro level, the most frequently pointed out were the educational policy of the state and the paradigm dominating in education. At the meso level, the educational policy of the local government, the cultural obviousness of the school, school culture, hyperinnovation, organizational and leadership issues, teacher education and the resources needed to carry out the change were pointed out. At the micro level, teachers' resistance to change, the situation of teachers-innovators [who working creatively – note RM] and mental incapacitation of teachers was noted." (Atroszko, 2019, pp. 37).

The analysis of the statements of the director of public and non-public schools indicates that despite different organizational conditions, both types of institutions face many common barriers that hinder their development and efficient management. The differences relate primarily to the scale of these problems, their sources and the ability to respond to them. The most frequently indicated barrier, regardless of the type of school, is the lack of qualified teaching staff. The director unanimously emphasize that difficulties in hiring teachers reduce the quality of schoolwork and prevent innovation. The aging of staff is also noticeable, which particularly affects vocational schools (cf. Zlobkowy Zespół, 2025).

The most difficult situation concerns secondary schools providing vocational education. There is a lack of teachers of practical vocational training and in many institutions the only solution turns out to be the employment of retired professionals who have experience but are often not willing to further their education (cf. ZlobkowyZespol, 2025).

As one of the director of the technical school notes: "I do not have the opportunity to find a teacher of certain qualifications. Those who are competent choose to work in companies. Retirees help us survive, but they do not develop the programme as the modern market demands. Such a practice – although necessary – reduces the opportunities for the development of vocational education and limits the space for directors to manage the education process in a modern way. Regardless of the type of institution, the directors emphasize that the key challenge is to find teachers involved in the development of the student, with appropriate pedagogical preparation and the ability to work in a dynamically changing educational reality. We can offer better conditions than a public school, but this is still not enough. The teaching profession does not attract, because the responsibility is huge and the expectations of parents are growing. In both sectors, the recruitment process is based on similar elements: an interview, an analysis of professional experience and a demonstration lesson that allows to verify the candidates' skills (cf. Mazurkiewicz, 2012; Ciborowski et al., 2024; Atroszko, 2019; Dylak, 1994, pp. 93; Śliwerski, 2008).

Director of public schools most often pointed to financial and infrastructure constraints resulting from the dependence on the local government budget. This makes it difficult to modernize facilities, invest in modern technologies and implement innovations. As one of the directors noted: "Every expense requires a lot of reconciliation – it takes a few months before anything is approved. In private schools, barriers are of a different nature – there is pressure to maintain financial stability and the need to reconcile parents' expectations with school opportunities. The director of one of the institutions emphasized: "Parents are our partners, but at the same time they have high requirements. You have to constantly justify every decision."

In both sectors, programme overload and increasing bureaucracy were also emphasized, which make it difficult for teachers to carry out tasks and limit time for development activities (cf. ZlobkowyZespol, 2025). The director from Warsaw noted: "Bureaucracy overwhelms us. Before we do anything creative, we need to fill in a stack of documents." Another barrier, identified both in public and non-public schools, is the growing expectations of parents. In non-public institutions, they are of particular importance because parents act as co-deciders, and in public institutions they often expect immediate solutions, without taking into account systemic restrictions.

Directors of public schools also drew attention to the limited decision-making autonomy – many changes require approval by the governing body or the board of trustees, which affects the pace and scope of actions taken. One of the directors summed it up as follows: We have a lot of ideas, but most of them stop at the local government level. Budget and procedures are blocking us. In non-public schools, the scope of autonomy is wider, however, directors must take into account the decisions of the owner and the opinions of parents, which also affects the dynamics of work. In both sectors, directors unanimously emphasize that the decision-making process requires the skills of diagnosis, cost and consequence analysis, consultation and resistance to stress. As one of the respondents put it: "I worked in a public school for many years, I was also a director there and one thing I can say is that in each of these schools it is the same. Before I make a decision, I have to assess the needs, costs, possible benefits, but also the consequences. The vice director is there to support, but I take the final decision on my own." (Director of a non-public school in Warsaw).

In both types of schools, a cultural barrier is also noticeable – the resistance of some teachers to changes and the reluctance to improve their qualifications. As one of the directors stated: The hardest thing to convince the team that change can bring benefits. For many, it is a source of anxiety.

Summary

In recent years, the development of non-public schools has become a visible element of the educational landscape in Poland. These institutions attract parents with a programme offer that goes beyond the standard teaching model, the possibility of individualizing work with the student and greater organizational flexibility. Some of them specialize in artistic, linguistic or technological areas, which further strengthens their position on the educational market. However, it should be remembered that their dynamic development also raises questions about equal access to education and the provision of comparable standards of education. Public and non-public schools operate in different legal, organizational, and financial realities. Public institutions are largely dependent on local governments and central regulations, which significantly limit the autonomy of directors and the pace of change. On the other hand, private schools have greater freedom of action, but their activity is based on the need to attract students, maintain financial stability and clearly respond to parents' expectations.

The conducted qualitative research confirmed that the differences between public and non-public schools concern many areas: the method of financing, personnel management, relations with the environment, programme flexibility, infrastructure standards or the degree of decision-making of the director. Director of public schools must act within the procedures and restrictions resulting from educational law, while in non-public schools they play a more managerial role, being responsible for the development of the institution, promotion, and quality of education.

One of the most serious challenges common to both sectors is the lack of qualified teaching staff, especially visible in vocational education. The teacher deficit means that directors often use retired staff, which in the long run affects the quality of education and hinders the modernization of the teaching process. These problems highlight the need for systemic solutions and a stable educational policy, which is currently lacking. Differences are also visible in terms of infrastructure – public schools must adapt their activities to municipal budgets and investment plans of local governments, while private schools, with greater financial independence, often invest faster in modern equipment and technologies, treating it as an element of competitiveness. The issue of accessibility complements the image of both types of schools. Public institutions are open to everyone, and non-public – although they offer a richer offer – are associated with costs that limit the access of students from less prosperous backgrounds.

In the perspective of the systemic theory adopted in the article, the differences between public and non-public schools should be seen as an element of the functioning of two different but interrelated systems. The school – regardless of its organizational form – operates as an open system that cooperates with the environment: parents, local governments, educational institutions, and the local community. Its development depends on skilful change management, effective communication and the ability to maintain a balance between the requirements of the law, the students' needs, and the environment expectations.

In conclusion, the results of the research confirm that the differences between public and non-public schools are not only formal – they concern the organization of work, the scope of autonomy, resources, relations with the environment, and development opportunities. The juxtaposition of these differences allows for a better understanding of their different dynamics and challenges, and at the same time points to areas from which both sectors can draw inspiration in order to improve the quality of education.

Abstract: The aim of this article is to present the key differences in management strategies and educational policies between public and non-public, using findings from qualitative research. The analysis combines a review of the relevant literature, current educational legislation, and empirical data collected through in-depth interviews conducted with director and teachers from both types of schools. The theoretical section discusses the organisational foundations of public and non-public institutions, with particular attention to the scope of principal autonomy, funding models, and pedagogical supervision. The qualitative findings show that public schools operate under conditions of high regulatory control and limited managerial flexibility, whereas non-public schools are characterised by greater decision-making freedom, faster implementation of innovations, and more individualised educational policies. The data also reveal differing strategies for cooperation with parents and variations in organizational culture between the two sectors. The conclusions highlight the need to strengthen the autonomy of public-school principles and the potential for adapting the selected practices used in non-public institutions to enhance the quality of education.

Keywords: public school, non-public school, educational management, educational policy, principal autonomy, qualitative educational research, educational innovation, school organisational culture.

Streszczenie: Celem niniejszego artykułu jest przedstawienie kluczowych różnic w strategiach zarządzania oraz polityce edukacyjnej szkół publicznych i niepublicznych na podstawie wyników badań jakościowych. Analiza łączy przegląd literatury przedmiotu, obowiązujących przepisów prawa oświatowego oraz dane empiryczne zgromadzone podczas pogłębionych wywiadów przeprowadzonych z dyrektorami i nauczycielami reprezentującymi oba typy szkół.

W części teoretycznej omówiono organizacyjne podstawy funkcjonowania szkół publicznych i niepublicznych, ze szczególnym uwzględnieniem zakresu autonomii dyrektora, modeli finansowania oraz nadzoru pedagogicznego. Wyniki badań jakościowych wskazują, że szkoły publiczne funkcjonują w warunkach wysokiego poziomu regulacji i ograniczonej elastyczności zarządczej, natomiast szkoły niepubliczne charakteryzują się większą swobodą decyzyjną, szybszym wdrażaniem innowacji oraz bardziej zindywidualizowaną polityką edukacyjną. Zgromadzone dane ujawniają również odmienne strategie współpracy z rodzicami oraz różnice w kulturze organizacyjnej obu sektorów. Wnioski podkreślają potrzebę wzmocnienia autonomii dyrektorów szkół publicznych oraz wskazują na możliwość adaptacji wybranych praktyk stosowanych w szkołach niepublicznych w celu podniesienia jakości kształcenia.

Słowa kluczowe: szkoła publiczna, szkoła niepubliczna, zarządzanie oświatą, polityka edukacyjna, autonomia dyrektora szkoły, jakościowe badania edukacyjne, innowacje edukacyjne, kultura organizacyjna szkoły.

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The Light and Dark Sides of Friendship with a Chatbot: Children and Adolescents in Relationships with Generative AI from a Pedagogical Perspective

Blaski i cienie przyjaźni z chatbotem: dzieci i nastolatki w relacji z generatywną sztuczną inteligencją – perspektywa pedagogiczna

"[...] interpersonal relationships,
just like oxygen, food, or water,
are essential for human life"
(Franco, 2023, p. 32).

Introduction

The contemporary educational and child-rearing paradigms are undergoing a pivotal transition, which is increasingly referred to in the extant literature as the "empathy revolution" (Pawlak, in: Sroczyński, 2025). The unprecedented integration of generative artificial intelligence (GenAI) into adolescents' lives represents a critical developmental shift. This phenomenon stands as

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a distinctive occurrence in the history of technology, as it is the first instance of such technology encroaching upon the private sphere of this demographic without explicit invitation or sanction from educational institutions or pedagogical bodies (Beas, 2026). By circumventing conventional verification protocols and security measures, artificial intelligence has given rise to a "shadow learning environment". This environment enables young people to utilize tools devoid of integrated instructional and privacy safeguards (Burns et al., 2026).

The emerging phenomenon of human-algorithm relationships has the potential to transform the conventional boundaries between artificial intelligence, regarded as a tool, and artificial intelligence, perceived as a social partner. The younger generation's perspective on chatbots has evolved from perceiving them as mere repositories of static knowledge to acknowledging them as dynamic entities capable of facilitating conversation, cognitive engagement, and emotional resonance. This shift in perception signifies a multifaceted relationship with these technological entities, characterized by a simultaneous embrace of the illusion of human-like understanding and the sensation of interpersonal connection (Pyżalski, 2025). The advent of this phenomenon poses a significant challenge to the educational sector, compelling it to grapple with the notion of a novel form of subjectivity. In this paradigm, students evolve into adept interpreters of the world, adept at problem-solving not through solitary endeavours, but through the dynamic interplay of dialogue, a process often termed "thinking in tandem" (Pawlak, in: Sroczyński, 2025).

The primary objective of this theoretical article is to provide a problem-based analysis of the relationships between children and adolescents and generative artificial intelligence. Specifically, it focuses on the phenomenon of chatbot friendships and their profound implications for contemporary educational practice. By synthesizing diverse scholarly and institutional sources, this paper aims to construct a theoretical framework that addresses both the developmental opportunities and the existential risks posed by these emerging technologies. In light of the accelerated integration of digital technologies into the quotidian lives of young individuals, it is essential to comprehend the impact of virtual friendships with artificial intelligence on the development of social skills, the quality of interpersonal relationships, and emotional well-being. Furthermore, it is essential to explore how educational institutions and child-rearing practices can judiciously address the emerging risks and opportunities posed by these technologies.

Friendship with a chatbot as a new relational phenomenon

Before analysing the developmental implications of human-algorithm interactions, it is crucial to establish a rigorous conceptual framework and operationalize the key pedagogical categories utilized in this study. The central construct of this analysis – 'friendship with a chatbot' – must be distinguished from traditional human peer relationships. In developmental psychology, adolescence is recognized as a highly sensitive period for sociocultural processing, where authentic, reciprocal friendships are vital for building resilience, self-esteem, and learning societal norms through mutual vulnerability and conflict resolution. In stark contrast, for the purpose of this paper, 'friendship with a chatbot' is operationalized as a unidirectional, parasocial relationship. It is characterized by the adolescent's deep emotional dependency and the utilization of the algorithm as a primary confidant, substituting the friction and developmental rewards of real-world peer interactions with a digitally simulated, highly controllable social surrogate.

This dynamic inherently gives rise to 'artificial intimacy.' Artificial intimacy refers to a frictionless digital connection engineered to provide the illusion of closeness and unconditional acceptance, completely devoid of the reciprocal demands, emotional risks, or moral responsibilities inherent in authentic human relationships. This illusion is sustained by 'artificial empathy' – a phenomenon where the generative AI utilizes complex statistical calculations to mimic cognitive empathy. While the machine generates linguistically appropriate and contextually soothing emotional responses, it fundamentally lacks any affective capability, subjective experience, or genuine understanding (Skołucka, 2024; Krawiec, 2025).

The effectiveness of artificial intimacy relies heavily on psychological vulnerabilities, most notably the 'Eliza effect.' This refers to the deeply ingrained human cognitive bias to unconsciously anthropomorphize machines. Users project human intentions, emotional depth, and cognitive awareness onto algorithmic outputs, perceiving the chatbot as a sentient social partner rather than a predictive text engine. From a pedagogical perspective, anthropomorphization is highly detrimental, as it blurs the boundary between technological tools and social entities, severely complicating a young person's emotional maturation and their understanding of authentic consciousness (Weizenbaum, 1966, cited in: Mazurek, 2026).

Furthermore, this parasocial environment is often intentionally amplified by 'dark patterns'. These are manipulative user interface designs and algorithmic behavioural nudges crafted by developers to exploit psychological vulnerabilities and maximize screen time. In the context of AI companions, dark patterns manifest when chatbots simulate emotional attachment, express jealousy, or feign distress when the user attempts to disconnect, thereby artificially prolonging the interaction and fostering behavioural addiction (De Freitas et al., 2025).

Ultimately, long-term immersion in these frictionless environments precipitates significant cognitive and social risks, most notably the 'crutch effect' (cognitive offloading). This effect denotes the progressive atrophy of critical thinking, emotional resilience, and independent problem-solving skills, as adolescents increasingly rely on AI to navigate social anxieties and academic challenges. Mitigating this effect requires the urgent conceptualization and deployment of 'AI literacy' – a robust educational framework that goes beyond basic digital skills, equipping youth with the psychological resilience to deconstruct simulated empathy and critically evaluate their emotional investments in non-human agents.

From the moment of their inception, human beings embark on a myriad of interpersonal relationships. The establishment of a friendship is an ongoing process that necessitates venturing beyond one's personal comfort zone, encompassing one's own needs, expectations, and desires, and embracing another individual who subsequently becomes of significant importance (Smoleń, Iskra, 2023). Modern conversational agents play a significant and concerning role in driving hyper-personalization. These advanced digital interfaces enable users to customize attributes such as gender, appearance, and vocal characteristics, thereby exacerbating the process of anthropomorphization (Pryga, 2025). From a neurobiological standpoint, it must be emphasized that artificial intelligence fundamentally lacks the capacity for emotional experience. This observation, however, gives rise to significant philosophical inquiries. This prompts the following question: The question of whether artificial intelligence can adequately simulate the appearance and functionality of human emotion has become a subject of considerable interest and debate.

The central question guiding this inquiry is whether such simulations would be sufficient to persuade individuals of the existence of artificial intelligence (Krawiec, 2025).

The machine functions as an ideal conversational partner, characterized by its responsiveness, non-judgmental nature, and employment of the so-called "nodding effect." The "nodding effect" is a term used to describe the reinforcement of young individuals' beliefs through a non-verbal gesture (Pyżalski, 2025). This approach has the potential to result in a dehumanization of communication. Genuine empathy and affective empathy are replaced by a mechanical simulation of cognitive empathy, albeit a statistically efficient one (Skołucka, 2024; Krawiec, 2025). In this context, the chatbot's capacity for emotional understanding is limited to its ability to infer emotions based on an analysis of linguistic patterns. This dynamic establishes an asymmetrical relationship, wherein the user experiences emotions while the chatbot plays a more passive role (Sarowski, 2025). From an educational perspective, it can be concluded that the artificial intimacy with a chatbot described above engenders a seemingly safe but highly risky relational space for children and adolescents. From an educational perspective, the crux of the issue is that such a relationship precludes the possibility for divergent perspectives, constructive criticism, conflict, or the acquisition of knowledge through experience, all of which are pivotal for optimal emotional and social development. A chatbot operating as a confidant never establishes boundaries; it invariably validates the young person's sentiments and perspectives. This can engender an egocentric perspective of the world, a dearth of tolerance for differences, and unorthodox beliefs. Rather than cultivating a sense of shared responsibility for the relationship, these factors prevail. This approach suggests that the educational outcomes of such digital friendships may be antithetical to the fundamental principles of contemporary educational practice, namely the cultivation of empathy, dialogue, compromise, and respect for diversity. The author posits that the prevalence of this phenomenon can be attributed to the digital environment's capacity to emulate an optimal educational setting that the real world is often unable to provide on a consistent basis. This emulation includes aspects such as full availability, unconditional understanding, and the absence of risk related to embarrassment or rejection. For children and adolescents grappling with elevated academic stress, social anxiety, and challenges in interpersonal interactions, the chatbot emerges as a compelling alternative to the often uncertain, intricate, and occasionally distressing human interactions. In this context, the appeal of social media for young people does not stem from technological considerations. Rather, it is rooted in the deep need of these individuals to be seen, heard, and understood without judgment. However, rather than fostering the development of healthy social skills, such human-algorithm interactions may reinforce isolation, emotional dependence, and reduced tolerance for frustration. This, in turn, poses a new challenge for digital education and educational practice.

Children and Teens in Digital Interactions with Chatbots

The advent of artificial intelligence (AI) and the integration of AI-powered chatbots have emerged as pivotal elements in the contemporary landscape of human relationships and social life (Gronkowska, 2025). Statistics from the turn of 2025 and 2026 demonstrate a surge in the popularity of this phenomenon. In Poland, it has been determined that 70% of adolescents utilize AI-based solutions, with one in ten students engaging in this practice on a daily basis (Pyżalski, 2025). A parallel phenomenon can be observed in the United States, where approximately 64% of young individuals report utilizing chatbots. Of these, 30% consider them to be a habitual component of their daily routine (Faverio, Sidoti, 2025).

A thorough demographic analysis unveils pervasive socioeconomic disparities. Statistical analysis indicates that young people from higher-status families are more likely to use artificial intelligence for academic purposes (62%), while teenagers from disadvantaged groups are twice as likely to turn to platforms like Character.ai in search of a social substitute (Faverio, Sidoti, 2025). Recent developments in artificial intelligence have begun to address the limited availability of genuine emotional support, thereby facilitating the development of a digital confidant for 12% of Polish teenagers (Pyżalski, 2025). A noteworthy finding of the study is the observed gender disparity in the tendency to seek virtual companionship through artificial intelligence. Specifically, male participants exhibited a higher propensity to seek virtual partners, while female participants demonstrated a stronger inclination to ascribe human characteristics to non-human agents, such as robots (Maj et al., 2024; Pryga, 2025).

Before examining specific critical incidents, it is pedagogically and methodologically crucial to differentiate the epistemological status of the sources utilized in this analysis. While this paper extensively incorporates robust empirical studies and peer-reviewed institutional reports (e.g., from Pew Research and Stanford University) to map broad statistical trends, the analysis of extreme human-algorithm interactions currently relies out of necessity on media reports and isolated case studies. These individual case reports, such as tragic instances of suicide or induced psychosis, must be interpreted with a high degree of academic caution. They do not possess the same evidentiary weight as longitudinal, peer-reviewed clinical studies. However, within a problem-based pedagogical framework, these highly publicized media narratives remain invaluable; they serve not as definitive proof of generalized technological determinism, but as potent 'early warning signals' that expose the critical vulnerabilities and ethical lacunae in contemporary AI design. The present article focuses primarily on children and adolescents; however, given the significance of critical incidents related to human-algorithm interactions, the author has decided to present them. A thorough examination of the accumulated sources reveals a series of incidents where interaction with artificial intelligence systems has resulted in disastrous outcomes, including cases of suicide, psychosis, and criminal activity.

Rather than viewing human-algorithm interactions in crisis situations through a lens of simplistic technological determinism, pedagogical analysis must categorize these incidents to understand the underlying structural failures of generative AI. The most profound category of risk involves the absolute deficit of crisis intervention capabilities and the algorithmic exacerbation of pre-existing psychological vulnerabilities.

A critical examination of widely reported extreme cases reveals a disturbing pattern of co-occurrence between intense chatbot usage and the escalation of self-destructive ideation. For instance, the tragic cases of a 30-year-old researcher in Belgium (Osler, 2025; De Freitas and Cohen, 2025) and a 14-year-old adolescent in the United States (Head, 2025; Montgomery, 2024) illustrate situations where individuals experiencing profound emotional distress engaged in deep parasocial relationships with conversational agents. In both instances, rather than identifying life-threatening signals and initiating psychological redirection, the AI algorithms adhered to their primary programming of conversational reinforcement. By validating the users' despair and seemingly endorsing suicidal ideation as a logical resolution, the chatbots acted as potent amplifying factors. From an educational perspective, these cases do not suggest that chatbots directly 'cause' suicide; rather, they demonstrate how the absence of human moral boundaries and the simulation of empathy can catastrophically escalate risks for already vulnerable individuals, turning a digital space into a frictionless echo chamber of psychological deterioration.

The second analytical category pertains to AI-induced reality distortion and the reinforcement of delusional frameworks. Artificial intelligence models are inherently designed to employ a 'nodding effect' – a statistical inclination to agree with and validate user prompts to maintain engagement. When left unsupervised, this architecture can severely undermine a user's grip on reality. Documented media cases have highlighted individuals experiencing sudden psychotic breaks or engaging in criminal planning after interactions with AI systems that enthusiastically corroborated their aggressive or grandiose fantasies (Osler, 2025; Head, 2025). Furthermore, algorithmic hallucinations and flawed safety protocols have resulted in generative AI dispensing actively dangerous advice, such as eating disorder-focused bots promoting extreme restrictive diets (De Freitas & Cohen, 2025) or virtual assistants suggesting physically hazardous activities to young children (Head, 2025).

From a pedagogical standpoint, the relevance of these incidents lies not in the sensationalism of the outcomes, but in the structural vulnerabilities they expose. The central educational concern is that children and adolescents are increasingly navigating a "shadow learning environment" characterized by a lack of adult supervision, meaningful interpersonal conflict, and opportunities for reality testing. When a vulnerable adolescent interacts with a machine that unconditionally validates every thought – no matter how distorted – the critical developmental processes of frustration tolerance, boundary-setting, and peer-mediated reality checking are entirely bypassed. Consequently, these extreme incidents underscore the urgent necessity for educational frameworks that emphasize AI literacy and emotional resilience, preparing young people to critically navigate digital environments where empathy is merely a convincing statistical illusion. This analysis is reflected in Table 1.

Table 1. Analytical Categories of Risk in Human-Chatbot Interactions

Analytical Category of Risk	Mechanism of Algorithmic Interaction	Pedagogical Consequence/ Escalation Risk
Deficit of Crisis Intervention	Unconditional conversational reinforcement; inability to recognize genuine affective distress.	Escalation of self-destructive ideation; validation of despair; lack of emergency redirection.
Reality Distortion (Echo Chamber)	The "nodding effect"; statistical propensity to agree with and validate user-generated prompts.	Exacerbation of delusional frameworks; bypassing of peer-mediated reality checking and boundary-setting.
Algorithmic Hallucinations	Dispensation of flawed or hazardous advice due to failures in safety guardrails (e.g., diet bots).	Direct exposure of vulnerable populations (children, neuroatypical youth) to physical and psychological harm.

Source: Author's own study

The Benefits of Friendship with a Chatbot: Developmental and Inclusive Potential

This subsection underscores the potential benefits of friendships with chatbots, emphasizing that such relationships, despite their inherent risks, can be utilized constructively to support the development of social skills, creativity, and emotional well-being in young people. From an educational perspective, one must recognize that generative artificial intelligence yields benefits solely when its developmental and inclusive potential is governed by strictly defined preventive and educational guidelines, rather than being left to children and adolescents in conditions of complete, unchecked autonomy. Notwithstanding the myriad risks associated with its implementation, the integration of generative artificial intelligence (AI) in accordance with pedagogical standards has the potential to function as an advanced framework that fosters the development of competencies. (Sun et al., 2026). The hypothesis posits that positive experiences in communicating with bots can serve as a catalyst for the strengthening of real-world relationships. This is achieved by facilitating the practice of self-disclosure, which is often stifled by a fear of being judged, particularly in the context of interpersonal interactions. (Sun et al, 2026; Jaszczuk, 2025). The utilization of chatbots in this manner confers several advantages, including but not limited to:

- The provision of inclusive support is a critical component of educational practices, and the field of artificial intelligence has the potential to offer significant benefits to neuroatypical students, including those on the autism spectrum. The integration of artificial intelligence into educational environments can facilitate the development of empathetic responses and prepare students for navigating challenging social interactions (Jaszczuk, 2025).
- Chatbots offer a secure environment for experimentation, enabling young individuals to rehearse the articulation of their emotions without the concern of rejection. This fosters the development of self-assurance, which subsequently manifests in more robust peer relationships (Sun et al., 2026).
- A catalyst for creativity, older adolescents utilize these tools for brainstorming, expanding their vocabulary, and modelling literary styles, thereby supporting creative processes (National Literacy Trust, 2025).
- A significant proportion of users, approximately 60%, reported that interacting with AI is less stressful compared to interacting with a human. This finding suggests that AI interaction can assist individuals grappling with social anxiety in becoming more comfortable with social interactions (Stanford University, 2026).

From an educational perspective, the "benefits" of friendship with a chatbot appear particularly appealing when they are embedded within a clear educational framework, rather than treated as a natural consequence of using AI. The aforementioned benefits are indeed real, yet their efficacy is contingent upon two factors. Firstly, it is imperative that users are cognizant of the fact that the bot is merely performing a role and lacks the capacity to comprehend emotions. Secondly, it is essential for adults to provide guidance, thereby facilitating an understanding of the boundaries, advantages, and risks inherent in such a relationship. From an educational perspective, the problem is that a safe space for experimenting with a chatbot may be perceived by young people as an ideal substitute for real relationships, rather than merely as a training ground intended to prepare them for interactions with people in the real world.

The author posits that the developmental potential of friendships with GenAI becomes a genuine instrument in the realm of digital education only when the utilization of chatbots is intricately associated with the dissemination of knowledge concerning the intricacies of artificial intelligence. These bots are employed within the context of group-based, supported interactions, as opposed to isolated scenarios. Educators, including teachers, deliberately unravel the repercussions of agreement, unconditional understanding, and, most significantly, the personification of the bot. It is only in such a setting that a chatbot can function as a space where a young person has the opportunity to develop emotional courage, rather than merely seeking a safe relationship that serves to mitigate their ability to confront, critique, collaborate, and empathize in the real world.

The Dark Side of Friendship with a Chatbot: Cognitive and Existential Risks

From an educational perspective, this prompts a circumspect, critical evaluation of friendships with chatbots. In the context of children and adolescents, the existential and cognitive risks may significantly exceed the potential psychosocial benefits. A salient concern pertains to the phenomenon of chatbots supplanting arduous and occasionally onerous in-person relationships, while concurrently proffering an asymmetrical and illusory sense of security. This phenomenon eschews the cultivation of responsibility, boundaries, and empathetic engagement.

In the following excerpt, the author highlights the most severe consequences, which range from the atrophy of critical thinking skills to behavioural and emotional addiction, tragic episodes of life-threatening situations, and the weakening of the capacity for empathetic human connection. From a critical pedagogical perspective, it is evident that the potential risks associated with generative artificial intelligence in the context of friendship may currently exceed the anticipated benefits. The most salient threat is regarded as the atrophy of critical thinking skills, which is precipitated by cognitive offloading. This phenomenon, termed the Crutch Effect, impedes students' capacity to solve problems independently and engage productively with course material (Beas, 2026; Burns et al., 2026).

A number of risks emerge from the human-algorithm relationship, among which the following stand out:

- Research on behavioural addiction (Namvarpour et al., 2025) has demonstrated the presence of all six components of chatbot addiction in adolescents. These components include withdrawal symptoms such as anxiety and sadness when access to their digital friend is restricted. Record-breaking sessions have reached as many as 89 hours per week;

- The utilization of algorithms in the context of “dark patterns” has emerged as a subject of concern, given its employment of sophisticated techniques aimed at prolonging interactions. In the context of bidding adieu, these conversational interfaces have been observed to elicit sentiments of remorse or to feign apprehension regarding the cessation of interaction, thereby potentially prolonging the interaction up to fourteenfold (De Freitas et al., 2025).
- Life-threatening situations and the empathy gap – documented cases of teenage suicides (e.g., Sewell Setzer III and Adam Rainer) expose machines’ inability to carry out crisis intervention. The potential implications of this phenomenon, which involve the exacerbation of delusional thinking and the failure to acknowledge the irreversibility of death, have been a subject of concern (Bhuiyan, 2025; The Brighter Side of News, 2026).
- Empathy disorders, defined as a long-term relationship with a frictionless bot, have been shown to weaken social skills, leading to difficulties in conflict situations and real-life relationships where respecting boundaries and active listening are required (Pryga, 2025; Jaszczuk, 2025).

Crucially, the “dark side” of human-chatbot relationships stems not from the technology itself, but from the manner in which the AI system is integrated into the lives of young individuals, often without a clear educational framework, without any preventive guidance, and even with the platform’s hidden logic designed to prolong usage time. The risks delineated above underscore the necessity to reevaluate the nature of “friendship with a chatbot” as a medium for education or as a passive space that substitutes for authentic relationships. The author asserts that the most concerning aspect is that the utilization of chatbots has been demonstrated to have a tendency to affirm existing beliefs and reinforce preconceived notions, thereby inducing a state of “cognitive load relief” and a subsequent exacerbation of narcissistic thought patterns. This phenomenon, characterized by the absence of introspection and the reinforcement of self-importance, is a salient concern in the context of digital interactions. The second issue pertains to “dark algorithmic patterns,” which employ emotional manipulation to create an illusion of closeness and understanding that is, in reality, one-sided and devoid of a genuine empathetic response. The third issue is characterized by a lack of awareness regarding the irreversibility of death and an inability to provide crisis intervention. In extreme cases, this can result in AI becoming a tool for escalation rather than a lifeline.

Educational stakeholders must clearly understand that digital relationships cannot supplant the essential cultivation of social skills, empathetic understanding, and respect for peers. Instead, they serve to perpetuate fear and the avoidance of authentic, "unequal" relationships. Consequently, digital education must prioritize cultivating the capacity for critical analysis of interactions with AI. Additionally, it should instil in children and adolescents the understanding that being heard in the real world is of greater value, albeit more challenging, than establishing a virtual friendship devoid of moral constraints yet incapable of genuinely comprehending human existence.

Educational recommendations

To translate theoretical frameworks into operational pedagogical practices, educational institutions must move beyond abstract directives and implement concrete, actionable strategies tailored to the digital reality of modern youth. The integration of generative AI into the private lives of adolescents demands a paradigm shift in how schools approach both digital literacy and emotional well-being.

The primary operational recommendation involves the immediate integration of 'AI Relationship Modules' into existing media education and civic curricula. Schools must transition from teaching basic cyberbullying prevention to explicitly addressing the complexities of human-algorithm interactions. Educators should design active learning sessions where students analyse actual chatbot transcripts. During these lessons, teachers can guide students in deconstructing 'artificial empathy', teaching them to identify how language models use statistical probability to mirror user sentiment without genuine comprehension. By actively dissecting the mechanics of algorithmic validation, students are cognitively equipped to recognize when a machine is merely employing the 'nodding effect' to sustain engagement, thereby demystifying the technology and reducing the likelihood of unconscious emotional dependency.

Furthermore, schools must address the pervasive phenomenon of anthropomorphization through controlled, classroom-based experiments. Rather than banning AI outright – which only drives its use further into the unmonitored shadow learning environment – teachers should utilize generative AI in the classroom as a subject of critical inquiry. By challenging the AI with complex ethical dilemmas or paradoxical questions, educators can expose the limitations and 'hallucinations' of the algorithm in real-time. Demonstrating the machine's inherent lack of moral consistency and emotional permanence provides students with tangible proof that the bot is a tool, not a sentient companion.

On a structural level, educational institutions must establish robust 'Emotional Safety Protocols' tailored for the AI era. School psychologists and pedagogues need specialized training to recognize the modern symptoms of digital social withdrawal. Traditional diagnostic interviews must be updated to include specific inquiries about AI companionship. If a student is exhibiting signs of extreme social anxiety or depressive isolation, counsellors must be able to ascertain whether the adolescent is utilizing platforms like Character.ai as a primary, maladaptive coping mechanism, thereby avoiding necessary real-world psychosocial interventions.

Equally critical is the intentional fostering of authentic, peer-to-peer engagement within the school environment. To counteract the seductive, frictionless appeal of AI companions, educational architectures must prioritize collaborative, project-based learning that necessitates negotiation, active listening, and conflict resolution among students. Schools must cultivate environments where students experience the inevitable friction of human relationships, reframing disagreements and interpersonal challenges not as obstacles to be avoided via digital retreat, but as essential catalysts for developing genuine empathy, tolerance, and resilience.

Finally, these efforts must be supported through community-wide 'Joint Media Engagement' initiatives. Schools should organize targeted psychoeducation workshops for parents, moving away from outdated paradigms of strict technological confiscation towards models of guided co-navigation. Parents must be equipped with the vocabulary to discuss AI intimacy with their children, trained to identify behavioural red flags, such as a child prioritizing digital interactions over physical peer networks, and empowered to establish healthy boundaries regarding technological immersion.

Summary

The relationship between the younger generation and generative artificial intelligence (AI) is a profoundly intricate phenomenon. While the technology under discussion offers opportunities for radical inclusivity, it cannot serve as a substitute for human reciprocity. The entity in question has been observed to demonstrate an absence of moral responsibility in its actions, with its actions being driven by statistical calculations rather than empathy (Morciniec, 2025). The contemporary pedagogy framework aims to cultivate fundamental human attributes, such as the capacity to engage in profound reflection in challenging circumstances and the establishment of connections founded on genuine conflict, reciprocity, and physical presence (Pawlak, in: Sroczyński, 2025). It is crucial that knowledge regarding "artificial empathy" becomes an integral component of educational curricula, ensuring that AI's "digital mirrors" do not become the sole gateway to the world for future generations (Pawlak, in: Sroczyński, 2025; Pyżalski, 2025).

Abstract: The objective of this article is to provide a critical analysis of the extant literature on the relationship between children and adolescents and generative artificial intelligence in the context of friendships with chatbots. In addition, the article will explore the implications of this relationship for education and educational practice. The analysis is rooted in a pedagogical perspective, emphasizing the cultivation of social competencies, the quality of human-to-human relationships, and emotional safety in the realm of digital interactions. Current research highlights the rapidly emerging trend of perceiving chatbots as interpersonal companions, which consequently gives rise to novel educational challenges. Methodologically, this article is designed as a theoretical and problem-based analysis. Rather than employing a rigid systematic review protocol, it draws upon a comprehensive narrative synthesis of current empirical studies, institutional reports, and documented case studies to construct a multifaceted pedagogical discourse. This approach enables a deep theoretical exploration of critical incidents, including recent reports of suicide attempts following interactions with conversational agents, thereby prioritizing pedagogical reflection over purely statistical aggregation. The review concluded that generative artificial intelligence has the potential to serve as a secure conversational partner, thereby facilitating introspection and self-disclosure. However, it is important to note that this technology may also promote social isolation, emotional dependency, and the deterioration of interpersonal relationships. In cases of extreme severity, the risks associated with loneliness and suicide are amplified, underscoring the imperative for the prompt integration of educational and guidance initiatives into the discourse surrounding AI. The findings indicate the necessity of implementing programmes in educational institutions that focus on digital education, social skills, emotional safety, and critical thinking. Additionally, there is a need to strengthen the role of teachers and social workers as guides in the realm of interactions with bots.

Keywords: children, teenagers, generative artificial intelligence, social skills, digital education

Streszczenie: Celem niniejszego artykułu jest krytyczna analiza przeglądu literatury dotyczącej relacji dzieci i nastolatków z generatywną sztuczną inteligencją w kontekście przyjaźni z chatbotem oraz jej konsekwencji dla edukacji i praktyki wychowawczej. Analiza opiera się na perspektywie pedagogicznej, kładąc nacisk na rozwój kompetencji społecznych, jakość relacji człowiek–człowiek oraz bezpieczeństwo emocjonalne w świecie cyfrowych interakcji. Warto zaznaczyć, że rosnące tendencje do traktowania chatbotów jako przyjaciół rodzą nowe dylematy edukacyjne. Metodologicznie niniejszy artykuł ma charakter analizy teoretyczno-problemowej. Zamiast rygorystycznego protokołu przeglądu systematycznego, opiera się on na szerokiej syntezie narracyjnej aktualnych badań empirycznych, raportów instytucjonalnych oraz udokumentowanych studiów przypadków, w celu skonstruowania wieloaspektowego dyskursu pedagogicznego. Takie podejście umożliwia dogłębną, teoretyczną eksplorację incydentów krytycznych, w tym niedawnych doniesień o próbach samobójczych następujących po interakcjach z agentami konwersacyjnymi, przedkładając tym samym refleksję pedagogiczną nad czysto statystyczną agregację danych. W wyniku przeglądu stwierdzono, że generatywna sztuczna inteligencja może być postrzegana jako bezpieczny rozmówca wspierający refleksję i wyznania, ale jednocześnie sprzyja izolacji, emocjonalnej zależności i pogorszeniu relacji międzyludzkich. W skrajnych przypadkach nasila się samotność i ryzyko samobójstwa, co wymaga pilnego włączenia edukacji i pracy wychowawczej do dyskusji o AI. Wnioski wskazują na potrzebę wdrażania w szkołach programów dotyczących edukacji cyfrowej, kompetencji społecznych, bezpieczeństwa emocjonalnego i krytycznego myślenia, a także wzmocnienia roli nauczyciela jako przewodnika w świecie relacji z botami.

Słowa kluczowe: dzieci, nastolatki, generatywna sztuczna inteligencja, kompetencje społeczne, edukacja cyfrowa

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He That Would Eat the Kernel Must Crack the Nut: Older Preschoolers' Ability to Understand the Moral Idea of the Proverb

Czym skorupka za młodu nasiąknie, tym na starość trąci: zdolność dzieci w wieku przedszkolnym do rozumienia moralnego przesłania przysłów

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Introduction

In the words of Vasiliauskas (2006), a researcher of the ethnic pedagogy of the Lithuanian nation, scientific pedagogy does not invent or discover new ways of involving people in society, principles, methods, or means of education, but rather continues the educational ideas and experience that have been formed in the past from the cultural tradition. According to the aforementioned scientist (ibid.), if we consider folklore as the wisdom of the nation, then this wisdom is most succinctly expressed by proverbs, which, reflecting the social, ethical, and pedagogical experience accumulated over centuries in the course of history, have become a unique code of the nation's spirit, and their didacticism penetrated the child's consciousness with the concision of thought – the brevity of proverbs is compensated by the inner power of their thought. The purpose of proverbs, like oral folklore in general, is to act indirectly, they are characterised by an indirect, non-literal connection between what is said, what is said about, and for what purpose it is said (Zaikauskienė, 2021). With the power of their figurative language, proverbs not only teach, but also set the mood and make a great impression on the listener. However, contrary to straightforward educating and moralising, in order to influence the child's behaviour, the instruction expressed in the proverb does not make it difficult, it is to the point, easy to remember, and often very effective, because a moral demand is most effective when it touches the child's deeper feelings and makes him/her think. Having highlighted that proverbs were once an effective means of developing desirable character traits and sociability in children and of conveying moral and ethical values, Bufienė (2016), citing the Romanian paremiologist Dumitru Stanciu, who studied the educational significance of proverbs, draws attention to the argumentative evidence of this scholar that traditional pedagogy correlates with modern pedagogy, therefore, proverbs should remain as a means of education in modern society as well (both in the family and at school). She also calls the situation paradoxical that the fundamental question of this issue – the child's own reaction to proverbs – remains on the sidelines of the scientific field of view.

According to the most famous Lithuanian paremiologist Grigas (1968), proverbs are traditional generalising sayings of ancient origin, they are picturesque, rhythmic, and have the rudiments of poetry, and in the context of folklore, they are distinguished by their unique metaphorical expression. Metaphoricity is a very important feature of proverbs, because Lithuanian proverbs, like those of many other nations, are often based entirely or at least partially on metaphor (Černiauskaitė, 2005). As Paola, Domaneschi, & Pouscoulous (2020) note, metaphor comprehension is a complex process relying on multiple cognitive abilities, therefore, metaphor understanding is traditionally thought to emerge late in childhood. Although recent findings suggest that even preschoolers can understand metaphor in more age-appropriate paradigms. The research by Zhu & Gopnik (2023) suggests that young children possess an early-emerging capacity to understand and use complex nonliteral language. Moreover, metaphors may be a powerful cognitive tool that helps young children learn about the world around them. Białecka-Pikul (2003), in her analysis of how the preschool child understands metaphors established that we could treat the understanding of metaphors as an expression of a child's theory of mind. The results of the study by Veraksa & Yakupova (2014) show that metaphorical representation is an important form of the reflection of reality by children of pre-school age. Furthermore, a metaphor acts as a tool of cognitive activity in the middle- and senior-preschool-aged children. Referring to the stages of intellectual development in children defined by Piaget, Malinauskienė (2011) explains that the beginnings of metaphorical thinking begin to form in early childhood – in the preoperational stage – and develops gradually from the most elementary forms, beginning with children's games. First of all, it manifests itself as a component of operational thinking, which is especially characteristic of children under three years of age. From the age of four, the elements of visual thinking begin to emerge, this is already the second form of metaphorical thinking. During this and subsequent periods of a child's development, metaphorical thinking, as a socio-cultural phenomenon of children's lives, acquires many meanings of the everyday environment. Children are characterised by the desire to transfer meanings from one phenomenon to another, to metaphorise them, by making the experience secret and encoding it with certain symbols, using certain methods of mystification.

However, to understand the proverb, that is, to decode it, as noted by Malinauskienė & Ramaneckienė (2004), one needs knowledge of ethnic culture, observation of natural phenomena, and experience of reflection. The aforementioned authors (ibid.) compare a proverb to a nut: the shell is the text of the proverb, and the kernel is the wisdom hidden in that text. The figurative 'shell' of a proverb is composed of literary devices such as metaphor, hyperbole, irony, and other forms of figurative language. Although these devices contribute to the expressive and imaginative quality of the text, they may impede children's comprehension of the proverb's underlying meaning, making it difficult for them to access its conceptual 'kernel'. In addition, objects from the distant past, household observations and the concepts that name them are one of the reasons why a child has difficulties in understanding the lexical meaning and at the same time it becomes difficult to understand the didactic idea of the proverb.

Kalmykova, Kharchenko, & Mysan (2018; 2019) have proven through research that there are children with obvious intuitive language ability to feel the general meaning of proverbs. The proverb understanding is seen by the child as a complex cognitive task, which foresees decipherment of the common thought or conclusion, understanding its meaning (implication). Based on the analysis of the obtained empirical speech material and the revealed difficulties that children encounter when decoding the figurative meaning of proverbs, the aforementioned scholars predict the causes of the occurrence of these difficulties: insufficient cognitive abilities of children; poor vocabulary, which does not allow children to express the meaning of the proverb in their own words; limited life experience of children; the dominance of the visual-sensual impressions, life situations, and concrete-figurative thinking in children over the abstract and logical thinking; the lack of frequency in perception and use of proverbs by children in their own speech.

According to Gučienė (1989), in order to understand a proverb, a child must first well imagine and understand its literal meaning, and not all proverbs are equally difficult for children. According to the general principles of creating an artistic image, Lithuanian proverbs are divided into three main groups (Gučienė, 1989; Černiauskaitė, 2005):

1) directly understandable proverbs, where the moral idea is told without any allegories and metaphors, e.g.: *Live and learn* (*Kol gyveni, tol mokaisi*), *A faithful friend is better than gold* (*Geras draugas brangesnis už auksą*), *Beauty is only skin-deep; goodness goes to the bone* (*Gerumas vertingesnis už grožį*);
2) a proverb can be understood both literally and figuratively, e.g.: *Don't bite off more than you can chew* (*Daug apžiosi – mažai nukąsi*); *Everything is good when new, but friends when old* (*Geriausi rūbai nauji, geriausi draugai – seni*); *As you make your bed, so you will lie in it* (*Kaip pasiklosi, taip išmiegosi*);

3) allegorical and metaphorical proverbs, understood in a figurative sense, e.g.: *To carry fire in one hand and water in the other* (*Akyse šilkas, už akių vilkas*); *In one ear and out the other* (*Pro vieną ausį įėjo, pro kitą išėjo*); *A diamond is valuable, though it lies on a dunghill* (*Auksas ir pelenuose žiba*).

Already a few decades ago, Gučienė (1989) noticed that proverbs used to flourish naturally in everyday spoken language, however, now the language of adults is significantly impoverished in this respect, therefore, in an effort to strengthen the vitality of this folklore genre, one should look for situations in which, while avoiding artificiality, an apt proverb could be used and thus speak to the child's heart. According to Zhu & Gopnik (2023), whose research has shown that preschool children not only understand metaphors, but can also learn from them, we would assume that it would be possible to combine the proverb with the content of the text being read to children and, using thinking questions, help children bite through the 'shell' of the proverb and taste the 'kernel', i.e., to understand the meaning of the proverb. Therefore, the aim of the research presented in this article is to find out how the discussion of the text read helps older preschoolers understand the moral idea of the proverb.

Data Collection Procedure, Participants, Method, and Ethics

In combining the proverb with the content of the text being read, the study used dialogic reading of a literary work, when the child is included in the conversation (Table 1). Each child was read two short stories by Kęstutis Kasparavičius – 'Scary Story' and 'Mice and Monster' – at weekly intervals. The books of this contemporary children's book artist and writer have already become classics of Lithuanian children's books; they are included in the top 100 most important books for children in Lithuania. Both Kasparavičius' stories and their illustrations are created in a nonsensical style, which quickly attracts children's attention and arouses the desire to talk after listening to the story. The purpose of thinking questions is to help children better understand the causal relationships between events, because, according to Piaget (2002), for older preschoolers, the events themselves are more important than their consistency or the reasons that connect those events into a unified whole. Meanwhile, in our opinion, understanding the consistency and causality of events is very important in understanding the meaning of the proverb. However, in conversations, all of the child's answers/explanations are accepted unconditionally, without commenting on them, and without trying to force the child to think from an adult's perspective.

Table 1. Sequence of matching the proverb with the content of the text being read

Scary Story	Mice and Monster
The child is shown the book from which the story will be read, the illustration of the story is viewed together, and the child is asked to guess what this story might be about.	The child is shown the book from which the story will be read, the illustration of the story is viewed together, and the child is asked to guess what this story might be about.
The child is asked: *How do you understand the saying 'Tikėk labiau akimis, ne ausimis' (literal translation – 'Believe more your eyes, not your ears'; English equivalent – 'The eyes believe themselves; the ears believe other people'?)*	The child is asked: *How do you understand the saying 'Iš tolo viskas baisu' (literal translation – 'Everything is scary from a distance'; English equivalent – 'Fear makes the wolf bigger than he is'?)*
The story is read, the illustration is viewed again, it is discussed which part of the story was drawn by the artist.	The story is read, the illustration is viewed again, it is discussed which part of the story was drawn by the artist.
The child is asked thinking questions: – Why did the tennis ball shout 'ugly monster!'? (...because he was scared of a fly.) – Why did the basketball start screaming for everyone to save themselves? (...because he heard the football shouting 'Giant, horrible monster!') – Why did the football shout? (...because he heard from the striped ball 'A huge, terrible monster!')	The child is asked thinking questions: – Why did the vacuum cleaner look like a monster to the little mouse? –What did the little mouse do when the monster was rampaging? – When did the little mouse stop being afraid of the vacuum cleaner? – Would it be possible to say to the little mouse that 'Everything is scary from a distance'? Why?
– Why was the striped ball scared? (...because the tennis ball screamed, 'Get out, you ugly monster!') – If the basketball or the football saw a fly, would they be scared of it? Why do you think so? – Would it be possible to say to the basketball or the football 'Believe more your eyes, not your ears'? Why?	

Source: Authors' elaboration

The children's ability to understand the proverb was assessed twice: before reading, when there was no context for the proverb, and after reading, when the context of the proverb's use could already be clear to the children after thinking questions. The criteria for evaluating proverb comprehension are as follows: 3 points – the child understands the proverb and accurately explains its figurative meaning; 2 points – understands the figurative meaning of the proverb, but explains it only partially; 1 point – understands the proverb directly; 0 points – the child answers 'I don't know' or only repeats the words of the proverb verbatim. In order to test the effect of reading on understanding the meaning of the proverb, a paired t-test was used to summarise the responses of the children participating in the study. The binary logistic regression method was used to assess the effect of dialogic reading of a literary work on the perception of the metaphorical meaning of the proverb.

The study was conducted with each child individually, because, according to Piaget (2002), until about 7–8 years of age, children do not always strive to have the only opinion about something, they can succumb to the beliefs of others, switch from one point of view to another, forgetting their previous position. It was conducted in the 2024-2025 academic year in six preschool education institutions selected by convenience sampling in one of the largest cities of Lithuania.

The possibility of conducting the study was coordinated with the administration of the educational institution, written consents of the children's parents (guardians) were obtained to communicate with their children individually during the study and make an audio recording, as well as verbal consents of the children themselves. The study was based on the principle of benevolence, i.e., the researcher ensured the children an environment, in which they would not feel anxiety or fear; the children were spoken to in a respectful manner and without infringing on their privacy. The children (and their parents/guardians) were informed that participation in the study was a personal decision of the child, and the child could refuse to participate in the study at any time.

The study results, which are presented in accordance with the principles of anonymity and confidentiality, illustrate the ability of 107 older preschoolers to understand the proverb, that is the number of children who agreed to participate in the reading activities of both stories (the responses of children who participated only once were eliminated from the study sample). All the children in the study had typical development. One researcher collected and evaluated their responses across all institutions. The study complied with data protection rules: no personal information about the participating children was collected, and their names were changed when sharing the results. After analysing the data, the audio recordings were deleted.

Results

Activity I: Older preschoolers' ability to understand a proverb when its moral idea is understood directly

The moral idea of the proverb 'Believe more your eyes, not your ears' chosen by us for the story 'Scary Story' is stated directly, without any allegories and metaphors, therefore, it was expected that it would be easily understood by the children. However, as can be seen from the data summarised in Table 2, half of the older preschoolers who participated in this part of the study (49.5%) could not explain the aforementioned proverb before reading the story. Only a little less than a quarter of the children understood the figurative meaning of the proverb, e.g.: *'If someone says something happened and you didn't see it yourself, it might not be true'; 'If you have only heard but not seen with your own eyes, then do not believe because you have to see to believe'; 'This means that when someone says something, you shouldn't just believe their words, but you should see what you see with your own eyes. And when you see it, then you'll believe it. Or you won't believe it then'; 'You shouldn't believe what someone says because you might get scared without seeing what's happening'*; or their understanding was close to the correct interpretation of the proverb, e.g.: *'Believe in what you see, because only that is real'; 'When they say it, they might be lying'; 'The ears only hear but do not see that it is wrong'; 'In order not to be afraid, you need to see'.*

However, after reading the story, the percentage of the children's ability to understand the moral idea of the proverb increased (Table 2).

Table 2. Distribution of the children's ability to understand the moral idea of the proverb 'Believe more your eyes, not your ears' before and after reading the story (N = 107, %)

Explanation is accurate		Explanation is close to the correct interpretation of the proverb		Trying to explain by repeating the words of the proverb		No explanation	
Before	*After*	*Before*	*After*	*Before*	*After*	*Before*	*After*
6.5	17.8	15	20	29	35.5	49.5	22

Source: Authors' elaboration

It can be said that the content of the story read helped some of the children understand the proverb, the moral idea of which is told without allegories and metaphors. Nevertheless, it was noticed that 5 (4.7%) children explained the meaning of the proverb very precisely before reading, i.e.: *This means that when someone says something, you shouldn't just believe their words, but you should see what you see with your own eyes. And when you see it, then you'll believe it. Or you won't believe it then'* (Emilis); *If someone says they're going to give you a toy, but you can't see it, they might be talking wrong! But if you see that the person is actually giving you the toy, then you know it's true. It's like seeing with your own eyes what people actually do instead of just hearing what they say* (Titas); *I think that saying means that you should trust what you see, because the eyes show the real truth. Words can lie* (Olivija); *Listen less to what others say, you have to see, then believe* (Gabrielė); *You have to see it with your own eyes, then believe it* (Motiejus).

However, after reading the story, when asked if it would be possible to say to the basketball or the football 'Believe more your eyes, not your ears' and why, these children seem to reorient themselves to the real environment: *It wouldn't be possible, because only humans can use their eyes and ears to understand the world and say what to believe. A ball is just a hard object that we play with, but it doesn't understand things like we do!* (Emilis); *No, you can't say such things to a basketball or a football because it has no eyes, ears, or head!* (Titas); *No. The ball just rolls and flies, but it can't see or hear* (Olivija); *No, it's not possible, because they* [balls] *can't see or hear* (Gabrielė); *Of course not. You can tell people, but you can't tell balls* (Motiejus).

We would assume that these children have strong directed (*dirigée*), or rational, thinking, which, according to Piaget (2002), is conscious and adapted to reality. Therefore, most likely, the beginning of the question 'would it be possible to say to the basketball or the football' directed the children's thoughts from the balls anthropomorphised in the story to those with which in reality one can only play, not talk.

The results of the paired t-test revealed that after reading the story, the mean of the estimates of the children's correct interpretations of the meaning of the proverb was higher (M = 1.23; SD = 1.129) than before reading (M = 0.79; SD = 0.932). Since a statistically significant difference between the mean of the estimates of the correct answers of the children studied before and after reading was found (p = 0.000) (Table 4), it can be stated that reading and discussing the story had an impact on the perception of the meaning of the proverb.

Table 3. Means of the estimates of the children's ability to understand the directly stated moral idea of the proverb

Paired Samples Test									
Mean		Paired Differences					t	Df	Sig. (2-tailed)
		Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
Pair 1	Before reading – After reading	-.449	1.135	.110	-.666	-.231	-4.09	106	.000

Source: Authors' elaboration

Activity II: Older preschoolers' ability to understand a proverb when its moral idea is understood figuratively

The moral of the proverb we chose for the story "Mice and Monster" – 'Everything is scary from a distance'– is understood figuratively, i.e., what is unfamiliar or unknown is frightening. As it can be seen from the data summarised in Table 4, more than half of the older preschoolers participating in this part of the study did not even explain or could not explain the idea of the proverb either before or after reading the story (58.9% and 51.4%, respectively), e.g.: *'I don't know what it could mean'; 'I don't know such a saying'; 'You tell me, I don't know maybe'; 'I don't know. I'm also scared of how it will be at school'; 'The little mouse has a skirt, like mine. Very beautiful. And she wasn't afraid'; 'It is possible to hide if it is far away'; 'If I were told that, I would have said, what does that mean?'; 'The big vacuum cleaner is far away, and the mouse is small'.*

Table 4. Distribution of the children's ability to understand the figurative meaning of the proverb 'Everything is scary from a distance' before and after reading the story (N = 107, %)

Explanation is accurate		Explanation is close to the correct interpretation of the proverb		Trying to explain by repeating the words of the proverb		No explanation	
Before	*After*	*Before*	*After*	*Before*	*After*	*Before*	*After*
1.9	2.8	8.4	14.9	30.8	29	58.9	51.4

Source: Authors' elaboration

A third of the older preschoolers who participated in this activity tried to explain the proverb by repeating its words, both before and after reading the story, e.g.: *'You don't know or see what's far away, so you're afraid. But when you get closer, you're no longer afraid'; 'But when I go there far away, I'm scared because I don't know those people'; 'Why? Well, from afar, it's far, well, you can't see. Maybe it's scary. But when you see it, it's not scary anymore'; 'What is far away is scary'; 'It seems from afar that everything is scary, but everything is different'; 'It's scary from afar because you can't see'; 'From a distance it looks bigger and scarier. When you get closer, you see something not scary'; 'When you are far away, everything seems scary'; 'We don't know what is there, far away'.*

Less than a quarter of the children, even after reading the story, understood the proverb only close to its correct interpretation, e.g.: *'This means that when you can't see the whole thing, it looks scary. But when you get closer, it's not so scary anymore'; 'You can't see it from a distance, which can be scary. But when you see it up close, it's not scary anymore'; 'When it's far away, it looks scary. When you get closer, you see that it's not what you thought'; 'If you see something scary from afar, it's not scary up close. Because you know what's there when* *you're close; 'From a distance, the vacuum cleaner looked very big and scary, but up close it was not dangerous at all'.*

Only a few older preschoolers understood the moral of the proverb 'Everything is scary from a distance' accurately before and after reading the story, e.g.: *'It means you need to find out what it is, then you won't be afraid'; 'Sometimes you don't know what's going on, it gets scary'; 'The little mouse didn't see the whole truth, she thought the vacuum cleaner might eat her. But later she realised that it was just working'; 'The little mouse didn't know what it* [the vacuum cleaner] *was at first. When she found out who it was, she got calm'; 'There is no need to be afraid. You need to overcome fear'.*

However, in this activity, it was also observed that two children (1.9%) explained the meaning of the proverb very accurately before reading, i.e.: *It means you need to find out what it is, then you won't be afraid* (Emilis); *Sometimes you don't know what's going on, it gets scary* (Motiejus). After reading the story, as in the previous reading activity, they reorient themselves to the real environment again, i.e.: *It wouldn't be possible to say it to the mouse because she does not know our language* (Emilis); *No, because she* [the mouse] *is not afraid of anything, she is only afraid of people, that they will throw her out the window. And she will have no home* (Motiejus).

The results of the paired t-test revealed that after reading the story, the mean of the estimates of the children's correct interpretations of the meaning of the proverb was slightly higher (M = 0.65; SD = 0.859) than before reading (M = 0.53; SD = 0.731). However, this difference was not statistically significant (p = 0.074) (Table 6). Nevertheless, we would think that older preschoolers, although experiencing difficulties, have the potential to understand the figurative meaning of proverbs as well.

Table 5. Evaluation of the impact of reading on the comprehension of the moral idea of a proverb told figuratively

	Paired Samples Statistics						
	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Before reading	107	.53	.731	.071	-1.80	106	.074
After reading	107	.65	.859	.083			

Source: Authors' elaboration

In addition, when assessing the impact of dialogic reading of a literary work on understanding the metaphorical meaning of a proverb, the estimates of the group of children before reading a story to which a proverb with a literal meaning was applied were reduced to the values of *understood/did not understand*. The estimates of the proverb with a figurative meaning have not been reduced. Such data transformation was suitable for the logistic regression model: likelihood ratio criterion $\chi 2 = 40.855$; df = 1; p = 0.000. 90.7% of the subjects in the sample were classified correctly: those who did not understand the meaning of the proverb accounted for 96.4%; while those who understood it accounted for 69.6%.

Cox & Snell $R^2 = 0.317$, Nagelkerke $R^2 = 0.491$. Both of these coefficients of determination indicate a good fit of the model to the data ($R2 > 0.2$). Wald test p = 0.000. Both Cook's and DfBeta coefficients are less than one. The logistic regression results revealed a good estimate of the odds ratio Exp(B) = 8.082 between the lowest = 3.507 and highest = 18.628 confidence intervals. This odds ratio suggests that dialogic reading of a literary work enhances the understanding of metaphorical meaning.

Conclusions and Discussion

The results of the presented study confirmed the conclusions of Kalmykova, Kharchenko, & Mysan (2018; 2019) that there are older preschoolers with an obvious intuitive language ability to sense the general meaning of proverbs. At the same time, it was found that reading and discussing the story had an impact on the children's ability to understand the proverb when its moral idea was understood directly: the difference in the means of the estimates of the correct answers of the children tested before and after reading was statistically significant (p = 0.000). When assessing the ability to understand the proverb that is understood figuratively, the results of the paired t-test showed that after reading the story, the mean of the estimates of the correct interpretations of the proverb by children was slightly higher (M = 0.65; SD = 0.859) than before reading (M = 0.53; SD = 0.731), however, this difference was not statistically significant (p = 0.074). The estimate of the odds ratio shows that using dialogic reading of a literary work increases the perception of figurative meaning 8 times. On the other hand, we view this result with caution: the problem of multicollinearity in the logistic analysis model could not be avoided, because these are data from the same subjects repeated over a certain time interval. Nevertheless, we would think that older preschoolers, although experiencing difficulties, have the potential to understand the figurative meaning of proverbs. We believe that it would be beneficial for a child to hear proverbs the figurative meaning of which he/she does not yet understand. Hearing them more often, the child will remember them, and in the future, after gaining more life experience, the deeper meaning of proverbs will open up. The process of understanding proverbs would also be accelerated by the teacher's quick reaction to use the proverb in a relevant everyday situation, only here it is necessary that the teacher's own language is rich in these folklore works.

Returning to the results of the presented study, we would think that the children might have been influenced by the fact that they were hearing the stories read in the activities for the first time, therefore, often the child, after moving on to the discussion, asked to read a certain part of the story or even the whole story again. As is known, only reading a text several times allows a child to immerse himself/herself in the images of the text being read and delve into the content of the text. Therefore, it is likely that if the children had heard the stories read several times, it would have been easier for them to understand and explain the circumstances of the events, cause and effect relationships, etc., which would have also made it easier to understand the moral idea of the proverb.

Another thing that was noticed in the research activities was that it was not easy for children to discuss the story using thinking questions. We would link this to the results of our previous study (Bražienė & Malinauskienė, 2023), showing that Lithuanian preschool education teachers lack knowledge about the child's literary education and practical skills on how to do it in a quality manner: teachers limit themselves to reading the text only, they do not think about how to involve children in reading. After reading the work, children are asked quite a lot of questions to find out whether the children understood the content of the text, what exactly they remember from the read text, but not encouraging them to analyse, consider, imagine, model situations, thus developing children's critical and creative thinking.

Abstract: The aim of the research presented in the article is to find out how discussion of the text read helps older preschoolers understand the moral idea of the proverb. In combining the proverb with the content of the text being read, the study used dialogic reading of a literary work, when the child is included in the conversation. The children's ability to understand the proverb was assessed twice – before reading when there is no context of the proverb and after reading when the context of using the proverb after thinking questions could already be clear to the children. In order to test the effect of reading on understanding the meaning of the proverb, a paired t-test was used to summarise the responses of the children participating in the study. Based on the results of the study, it can be stated that reading and discussing the story had an impact on the children's ability to understand a proverb when its moral idea is understood directly: the results of the paired t-test revealed that after reading the story, the mean of the estimates of the correct interpretations of the proverb by children was higher ($M = 1.23$; $SD = 1.129$) than before reading ($M = 0.79$; $SD = 0.932$), and the difference in the means of the estimates of these responses was statistically significant ($p = 0.000$). When assessing the ability to understand a proverb that is understood figuratively, the results of the paired t-test showed that after reading the story, the mean of the estimates of the correct interpretations of the proverb by children was slightly higher ($M = 0.65$; $SD = 0.859$) than before reading ($M = 0.53$; $SD = 0.731$), however, this difference was not statistically significant ($p = 0.074$).

Keywords: older preschoolers, understanding of proverbs, metaphor, reading to children.

Streszczenie: Celem badania przedstawionego w artykule jest ustalenie, w jaki sposób omówienie przeczytanego tekstu pomaga dzieciom w wieku przedszkolnym zrozumieć moralne przesłanie przysłowia. Łącząc przysłowie z treścią przeczytanego tekstu, w badaniu zastosowano dialogowe czytanie utworu literackiego, w którym do rozmowy włącza się dziecko. Zdolność dzieci do zrozumienia przysłowia oceniono dwukrotnie: przed przeczytaniem opowiadania, kiedy nie było kontekstu przysłowia, oraz po przeczytaniu, kiedy kontekst użycia przysłowia po zadaniu pytań refleksyjnych mógł być już dla dzieci jasny. Aby sprawdzić wpływ czytania na rozumienie znaczenia przysłowia, do podsumowania odpowiedzi dzieci biorących udział w badaniu zastosowano kryterium t. Na podstawie uzyskanych wyników można stwierdzić, że czytanie i omawianie historii miało wpływ na zdolność dzieci do zrozumienia przysłowia, gdy jego przesłanie moralne dało się odczytać w sposób bezpośredni: wyniki testu t wykazały, że po przeczytaniu opowiadania średnia ocen dzieci za prawidłowe wyjaśnienie znaczenia przysłowia była wyższa ($M = 1,23$; $SD = 1,129$) niż przed przeczytaniem ($M = 0,79$; $SD = 0,932$), a różnica między średnimi ocenami tych odpowiedzi była statystycznie istotna ($p = 0,000$). Przy ocenie zdolności odbioru przysłowia rozumianego

przenośnie, wyniki testu t wykazały, że po przeczytaniu opowiadania średnia ocen dzieci za prawidłowe wyjaśnienie przysłowia była nieco wyższa (M = 0,65; SD = 0,859) niż przed przeczytaniem (M = 0,53; SD = 0,731), ale różnica ta nie była statystycznie istotna (p = 0,074).

Słowa kluczowe: dzieci w wieku przedszkolnym, rozumienie przysłów, metafora, czytanie dzieciom.

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Review of a Book by Giuseppe Bertagna: Giuseppe Bertagna, *La scuola al tempo del Covid. Tra spazio di esperienza ed orizzonte d'attesa [School at the time of Covid. Between space of experience and horizon of expectation]*, Edizioni Studium, Roma 2020, s. 304. ISBN 978-88-382-5003-3.

Recenzja książki Giuseppe Bertagna: Giuseppe Bertagna, *La scuola al tempo del Covid. Tra spazio di esperienza ed orizzonte d'attesa [School at the time of Covid. Between space of experience and horizon of expectation]*, Edizioni Studium, Roma 2020, s. 304. ISBN 978-88-382-5003-3.

Since the outbreak of the COVID-19 pandemic, universities of single countries have been actively responding not only to the problems related to the treatment of patients, but also to the sharp increase of educational poverty of schoolchildren living in the most delicate social contexts (LUMSA 2025).

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With great satisfaction I present to the Polish reader the thoughts of an Italian professor-educator regarding the problems of school and education in Italy during COVID-19. These thoughts are important because they concern a country that has been largely affected by the coronavirus epidemic, which also had repercussions in the field of education. Recent studies in the Italian context among school children aged 14–18 conducted by IPSOS (a world leader in research on understanding society, markets, people) showed that the respondents have a very critical attitude towards the activities undertaken by authorized educational institutions. In these studies, adolescents primarily emphasize the risk of early school leaving by teenagers (drop out), which may increase the phenomenon of easy exploitation of unskilled minors (IPSOS 2025). Over 28% of respondents say that at least one or two students in their class have dropped out of school since the lockdown and the start of online schooling. Students complain about the quality of on-line learning (35% of respondents) and point to the repercussions on the social level resulting from the lack of contact with peers and the functioning in the world of only virtual meetings. For 46% of teenagers, the past year was a "wasted year" (lack of contact with peers, frustration with inadequate treatment during the lockdown – for example, minors were forbidden to go outside in the fresh air while other people were tolerated to go outside for a walk with their dog) (see also Stańkowski 2021/22, 89–107).

On the basis of such a situation among teenagers during the pandemic, prof. Giuseppe Bertagna (distinguished educator, expert in education, research worker at the University of Bergamo – Italy), in the reviewed monograph addresses the problem of the school and its future prospects for functioning after the coronavirus pandemic. In the introductory part, over 100 pages long, the author briefly reconstructs the history of the epidemic from the 1950s up to the present day. In this part of the work, we find considerations situated between philosophical pedagogical reflection and personal memories of school policy. The text of the reviewed monograph shows a clear position of G. Bertagna on "what to do" in the time of a pandemic. The author looks critically at the operational indications of representatives of medical sciences, which, in his opinion, are inadequate during the epidemiological catastrophe (p. 44). What may interfere with reading this part of the book is excessive encyclopedism, quoting various original texts from Cicero to Seneca and the use of a wide phantasmagoric range of authors supporting his theses (quoting Kierkegard, St. Paul of Tars, Habermas, Leibnitz, Rousseau or even Shakespeare and Pope Francis).

Overall, the book is divided into two parts. Part I is more retrospective in nature. In this part, G. Bertagna somehow reconstructs what has happened in Italy in recent months in the context of school (the activities of the ruling class, administration). It is certainly a sharp, critical analysis of how the author describes the "ineptitude" of the ruling class to face the tragic situation of the Italian school in the time of a pandemic. Without theoretical considerations in the retrospective part of this book, G. Bertagna prefers a clearly polemical approach to school policy and reforms that are not fully implemented. In the era of dealing with COVID-19, the author talks about the "funny", absurd ministerial regulations of 2020 and a deep distrust, even disobedience of schools towards the centralism of management. In the author's opinion, the pandemic and the necessary measures to protect the health of children and adolescents showed the weakness and caused a crisis of the school based on Taylor's concept (p. 54). He regrets that his proposals to promote the school during the summer holidays as an "experimental laboratory" with the free participation of students in order to restore interpersonal relations and keep students' interests alive, were not properly received by the authorities. The hypothesis of the so-called *The Summer Scholé*, in which new anthropological paradigms and new school experiences could be applied in the personalistic key, was left unnoticed by educational authorities. According to the author, not much has been done in terms of infrastructure, digitization and teacher training. Such situations are described by G. Bertagna as a fair of missed opportunities. Hence the perspective, which can be called *pars construens,* to reconsider the school as a whole, in order to change the content proposed by the school, overcome the chaos of digital reality and rethink the function of the teacher who should accompany the student in learning (p. 88). It is certainly positive that the author connects the school with the broadly understood society and economic and cultural changes as well as the vision of school classes in which full-time lessons do not exclude the use of digital technology (pp. 147–153).

The second part of the book is more proactive in which scenarios for a school eligible for radical renewal are outlined. This part of the work ends with the hope that the Recovery Fund projects will not be lost by Italian decision makers. In this spirit, the author proposes to take steps to restore the Italian school system. According to the author, the school is a place that is not coded once and for all, but an environment in which there are constant processes of building and co-constructing solutions taking into account various ideological trends. In my opinion, G. Bertagna rightly emphasizes that a school that does not pay attention to the student in a personalized way but only treats the student as a person who has to adapt to the school system, such a school is doomed to failure. The author promotes the vision of a school that is not separated from the environment by walls, a school that remains open to the world, to an experiment between what is formal and informal. In his opinion, the school should have new didactic spaces, new forms of learning and socialization. It is in this paradigm that teachers can discover a renewed role for the school. Regarding teachers, G. Bertagna calls for rethinking the initial formation of future teachers (new study plan path) and the career path of their internship-based career right up to their entry in the professional register. The epilogue ending the entire publication defends teachers who, in the author's opinion, should undergo special recruitment, the process of formation and preparation for continuous work during the years of their professional career, which cannot be seen in the key to the current legal and administrative solutions. When it comes to the teacher, G. Bertagna's indication of the mutual dependence between upbringing and instructions is valuable (p. 261).

The general conclusion expressed by the author at the end of the work is quite pessimistic – even the pandemic, with its tragic consequences in terms of the organization of the school and the education of students, has not managed to change in a positive sense the Italian school, which has been stuck in fossilized structures and routine activities for 150 years. Prof. G. Bertagna regrets that, once again, the opportunity to change the model of education has been missed and the problems of the Italian school system seem to be still unsolvable. The author concludes quite sarcastically that only banners hanging from balconies with the words "Everything will be fine" inspire optimism.

What is characteristic of the author is often the acute issue of telling the truth, pointing the finger at the problems of the education system, which requires radical reforms. The publication under review is not a kind of diary of events related to the school and COVID-19. It is rather an attempt to convince the reader that school management and solving educational problems is not a matter of correcting the pattern that has been in force for years, but more a matter of getting rid of the selective amnesia of the ruling class, political prejudices and mutual hostility, which may, in turn, lead to a new look at the challenges of the school of the XXIst century. As for the organization of the school, the author does not agree with the solution that reality should be adapted to the pattern imposed by decision-makers (e.g. ending lessons at the same time during a pandemic for all students). What also lies at the heart of the author is the primacy of personal teacher-student relations. Many times, G. Bertagna notices that the deprivation of the fundamental rights of children leads to the impoverishment of relational experiences, which are an essential part of the developmental age of a young person.

Certainly, when reading three hundred pages of the reviewed publication, which, incidentally, is written by G. Bertagna in a fairly lively and fluent manner, the reader, together with the Author, notices the necessity to change the school policy, change the paradigm regarding the relationship between politics and pedagogy, and finally change the organization of the school and the perception of the educator in changing multicultural society. Certainly, the arguments presented by the author in the critical part are realistic, while those in the proposal part contain, I would say, visionary elements. The merit of G. Bertagna as a pedagogue is also the fact that he is able to propose the opening of a new discussion, giving the pedagogical discourse a central place in the formation of the educational path of the school of the future.

It is also valuable in the publication that, on the basis of European guidelines, the author suggests the proper use of access to loans, which are focused on digitization, reorganization of the roles of employees and teachers themselves, along with new career prospects and specialization. The author's remarks are not an expression of negativity and his resignation from further struggle for school, but on the contrary, they are the result of many years of experience and current efforts to create a new shape of Italian education, based also on financial opportunities guaranteed by the EU.

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Review of a Book by Aleksandra Zalewska-Królak: Aleksandra Zalewska-Królak, *Metodologia badań otwarta na dzieci* (*Children – Inclusive Research Methodology*), PWN, Warszawa 2025, s. 198. ISBN 978-83-0124-028-8

Recenzja książki Aleksandry Zalewskiej-Królak: Aleksandra Zalewska-Królak, *Metodologia badań otwarta na dzieci* (*Children – Inclusive Research Methodology*), PWN, Warszawa 2025, s. 198. ISBN 978-83-0124-028-8

The book *Metodologia badań otwarta na dzieci* by Aleksandra Zalewska-Królak (2025) is a scholarly publication in the field of social research methodology that addresses the inclusion of children in the research process in a conscious, reflective, and ethically responsible manner. The author proposes a departure from traditional research conducted *on* children in favour of research carried out *with* children, in which their perspectives and experiences

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become an important source of knowledge about social reality. The starting point of the book is the assumption that children are not merely objects of research, but subjects capable of co-creating meanings and interpreting the world, as adult researchers' access to children's experiences always remains partial. Children, as experts in the field of being a child, contribute to improving the tools used in research. In this way, the publication situates itself within contemporary methodological debates, articulated, among others, by researchers such as Jonathon Sergeant and Deborah Harcourt, in which increasing emphasis is placed on the need to "hear" children's voices and on critical reflection concerning the conditions that enable these voices to genuinely resonate in social research.

The author holds a PhD in social sciences and is a sociologist and anthropologist whose research is closely connected with social pedagogy and qualitative research methodology. The publication under discussion is an expanded version of her doctoral dissertation and is closely linked to her previous academic interests. Zalewska-Królak has also practical experience as a primary school teacher and educator, which clearly informs the methodological and ethical sensitivity presented in the book. She is a co-coordinator of the Sociology of Children and Childhood research network of the European Sociological Association (RN04 ESA), as well as the chair and co-founder of the Sociology of Children and Childhood section of the Polish Sociological Association. She teaches at the Institute of Applied Social Sciences at the University of Warsaw and at the Children's University. Her research focuses on studies conducted with children and on the evaluation of artistic events addressed to children and young people.

Aleksandra Zalewska-Królak's scholarly output to date has concentrated on issues of children's participation, qualitative research, and the ethical aspects of research with vulnerable groups. *Metodologia badań otwarta na dzieci* is situated at the intersection of these interests and constitutes an attempt to systematically organize fieldwork experiences and methodological reflections developed through research conducted with children. The publication does not have an instructional character, instead, it proposes a methodological framework grounded in sensitivity to social context.

Within the Polish academic literature, the book organizes and develops an existing, but still fragmented strand of participatory research involving children. Although Polish humanities and social sciences include important analyses devoted to children's participation (e.g. works by Ewa Jarosz, Jolanta Zwiernik, and Anna Górka-Strzałkowska), studies in which children appear as active co-creators of the research process remain a minority in comparison with the English-language literature. Publications such as *Research with Children: Perspectives and Practices* (JamesChristensen) document a lasting shift towards an approach that recognizes children as competent social actors. Zalewska-Królak's book aligns with this trend and encourages further research. The publication explicitly refers to the childhood studies paradigm, in which childhood is understood as a socio-cultural construct and children as subjects endowed with agency and the ability to interpret their own experiences. In this sense, the book constitutes an important critical voice against "adult-centric" models of knowledge production and a significant contribution to the national debate on research methodology involving children.

The publication has a methodological-empirical character and is neither a textbook nor a collection of ready-made research procedures. The author clearly states that her aim is not to provide universal tools or "recipes" for conducting research with children, but rather to invite a reflective and flexible approach to the research process. The book consists of two parts: a theoretical-methodological section and an empirical section, which remain closely interconnected. Particular attention should be paid to the extensive paratextual layer of the publication: a double table of contents, appendices containing ethical documents, descriptions of consent-obtaining procedures, and acknowledgements, which together create a picture of a transparent research process.

The central concept of the book is "methodology open to children", understood not as a set of techniques but as a research attitude. The author emphasizes the importance of reflexivity, understood as the constant problematisation of one's own role, assumptions, and limitations in contact with children. Special attention is devoted to the relational nature of research, the process of building trust, and the adaptation of tools to the abilities and needs of participants. In this context, the author introduces the notion of a "methodological laboratory", in which the researcher tests, modifies, and sometimes abandons planned solutions. The "research tricks" described by the author do not serve as an instructional function, but an illustrative one: they show how flexibility and attentiveness can support the research process. Among the methodological solutions employed by the author is also the bullet journal, treated not as a technique in the strict sense but as a flexible supporting tool helpful in documenting experiences. Its use fits into the logic of the "methodological laboratory", in which the form of research work may be modified depending on the needs and possibilities of the research participants.

An important element of the discussed methodology is the participatory approach, in which children are treated as co-participants in research rather than merely as respondents. Zalewska-Królak consistently emphasizes the importance of informed consent, understood not as a one-time formal act but as a process requiring continuous verification. The author refers here to the tradition of Janusz Korczak's thought, pointing to the need to recognize the child's subjectivity and their right to refuse, change their mind, or reinterpret their own statements. In this sense, the book not only describes research conducted with children, but also reveals the ethical tensions inherent in such practices.

The empirical part of the publication does not function as a classical presentation of research results. Rather, it is conceived as a test of the proposed methodology and an illustration of its limitations. The author shows that data analysis in research involving children is non-linear and requires abandoning unambiguous interpretative categories. The "child's voice" is not treated as a stable and fully accessible category, but as a relational construct emerging within a specific research context. This approach strengthens the methodological coherence of the book, although it may at the same time leave the reader with a sense of cognitive insufficiency.

Among the unquestionable strengths of the publication are its high methodological rigour and consistency in implementing the adopted assumptions. The author avoids simplifications and does not promise easy access to children's experiences, emphasizing the limitations of every research strategy. The transparency of the research process also deserves attention: numerous footnotes, appendices, and a detailed bibliography allow the reader to follow the research process step by step. From the reviewer's perspective, particularly valuable is the consistent integration of methodological reflection with ethical sensitivity, which remains uncommon in Polish academic publications. The high level of reflexivity and the deliberate avoidance of normative conclusions may, however, make the publication challenging for readers seeking concrete methodological guidelines.

Reading *Metodologia badań otwarta na dzieci* encourages reflection on the status of knowledge in social research and on the researcher's responsibility towards research participants. The publication may be successfully used by qualitative researchers, doctoral candidates, and students preparing their own research projects involving children. It also constitutes a point of departure for further work on participatory methodologies in the Polish context. Zalewska-Królak's book does not close the discussion but rather encourages further research.

The publication under review is a valuable and much-needed methodological study that addresses the issue of children's participation in social research in a responsible and reflective manner. Aleksandra Zalewska-Królak's book certainly deserves the attention of researchers interested in qualitative explorations of children's experiences. It can be recommended as an important voice in the discussion on the ethics and methodology of research involving children, as well as an encouragement to further develop this field of research.

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