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Role of higher education institutions in Ukraine in developing students' soft skills under martial law conditions

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Abstract. The full-scale russian invasion of Ukraine placed higher education institutions (HEIs) under unprecedented and immense challenges, demanding adaptive responses across all dimensions of academic life. This study aimed to explore how Ukrainian higher education institutions have contributed to the development of students' soft skills during the dual crises of war and the pandemic. To achieve this aim, the research employed a multi-method qualitative design that combined document analysis, NVivo-assisted content coding, and comparative case study methodology. Data sources included institutional policies, national guidelines, international frameworks, and scholarly publications. This triangulated approach enabled an in-depth understanding of how Ukrainian universities conceptualised and implemented soft skills development in response to systemic crisis. Among the major demands, wartime education requires the enhancement of students' soft skills – non technical transferable abilities such as emotional resilience, adaptability, communication, critical thinking, teamwork, and self-management. The article sought to trace the changing role of Ukrainian HEIs in fostering such competencies under conditions of war, forced migration, psychological distress, and digitalised education. Drawing on theoretical insights from 2020 to 2025 regarding institutional strategies that support students' socio-emotional development in online and hybrid learning environments through community engagement and integrative curricular design, the study also pays special attention to psychological services related to inclusion and peer mentoring for student well-being, as well as civic responsibility. It analyses the correlation between wartime academic persistence and the development of soft skills, placing particular emphasis on institutional resilience and innovative leadership. By reviewing these emerging practices in Ukrainian universities, including case examples from several national HEIs, the article offers practical recommendations for integrating soft skills training into the core mission of universities in times of crisis

Keywords: competence; crisis pedagogy; digital learning environment; student development; resilience; employability

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INTRODUCTION

Technological disruptions and socio-political instability, which accelerate the pace of change in global society, have brought with them a heightened focus not only on credentials but also on non-cognitive or soft skills in higher education. Emotional intelligence, adaptability, critical thinking, and collaboration have therefore been consistently identified as important competencies for success in life, employment, and civic engagement in an increasingly complex and uncertain world. The international policy environment has recommended the mainstreaming of such cross-cutting competencies through formal curricula to ensure resilience and inclusion in the face of future challenges. As global crises intensify and compound the pressures already facing higher education institutions (HEIs), soft skills have moved from being a peripheral concern to becoming a core component of educational strategy. In such conditions, competencies support not only student success but also institutional stability and social cohesion. In Ukraine, this imperative has been further heightened by the onset of the full-scale war in 2022.

The simultaneous implementation of martial law, infrastructural damage, and the displacement of both student and faculty populations, who were not psychologically prepared for such levels of stress, required a rethinking of the very foundations of educational continuity plans as well as of the institutional mission itself. In such unprecedented circumstances, what was once regarded as a strategic objective – the development of soft skills – has now become an immediate necessity. The COVID-19 pandemic added further pressure on HEIs to adopt innovative pedagogical models that incorporated self-regulation and digital literacy, alongside the consistent development of soft skills. A.A.P. Cattaneo *et al.* (2022) explained how the digital competence of vocational teachers affects students' learning experiences and the incorporation of transversal skills in remote education. They highlighted the importance of digital competencies – not only for academic success but also for developing collaborative skills in vocational education. This has become increasingly relevant since the shift to online and hybrid models of learning, accelerated by the pandemic. This digital dimension served as a complement to traditional soft skills and orientations, offering a more holistic perspective on student preparedness. Furthermore, the integration of digital expertise with the growth of soft skills has led to blended teaching methods such as flipped classrooms, collaborative online projects, and self-directed e-learning pathways. These innovations have compelled teachers to reconsider the student journey from a skill-oriented perspective and to seek new structures that integrate the emotional, social, and cognitive dimensions of learning.

In Ukraine, the situation is shaped by the realities of a full-scale war under martial law. N. Ivanenko (2024) highlighted how Ukrainian universities faced immediate challenges in maintaining educational continuity amidst the displacement of students and staff and the destruction of

infrastructure. O. Zakhochai *et al.* (2024) presented digital transformation as critical in this context, noting that it provided a sustainable framework for HEIs during crises. O. Spivakovsky *et al.* (2025b) further emphasised how displaced universities digitally adapted to support students in both academic progression and soft skills development. The intersection of emergency pedagogy with trauma-informed teaching and educational resilience has made the Ukrainian context particularly complex. This environment represents high stakes for both social survival and soft skills development; in such a setting, soft skills helped maintain moral clarity and psychological stability. Ukrainian universities have therefore initiated the redesign of their missions based on humanistic principles such as compassion, responsibility, and solidarity, in order to provide students with an identity aligned with wartime realities. This has created a new challenge for HEIs: to promote civic and socio-emotional competence in wartime, when students are directly affected by conflict and upheaval. While these are critical competencies, there has been little research on their development in Ukraine during martial law. This gap underlines the need for appropriate institutional strategies that, while ensuring academic continuity, also foster psychological resilience and civic responsibility. A. Ramskyi (2023) emphasised that wartime digitalisation – particularly in the area of communication strategies – was not a technical stopgap but an important means of maintaining institutional and social cohesion within Ukrainian HEIs. Similarly, A. Androshchuk (2022) described how the convergence of war and digital transformation has been redefining the role of higher education by compelling institutions to foster not only learning but also societal resilience.

This broadened understanding of institutional resilience in crisis contexts reiterates the fact that digital higher education systems can serve as lifelines during emergencies. It also highlights the lack of context-specific studies on how HEIs can effectively foster soft skills during conflict by translating global insights into practice in line with Ukraine's unique circumstances. This study aimed, therefore, to analyse the institutional strategies of Ukrainian HEIs aimed at fostering students' soft skills between 2020 and 2025, with a focus on how these efforts respond to the challenges of war, forced migration, and digitalisation.

MATERIALS AND METHODS

The study employed an interpretive qualitative research approach aimed at identifying how Ukrainian HEIs facilitated the development of students' soft skills amid dual crises – the COVID-19 pandemic and the full-scale Russian invasion – between 2020 and 2024. It combined document analysis with a comparative case study design under constructivist epistemology, on the assumption that educational practices are situated, evolving, and adaptive even amid systemic disruptions. The research moved beyond description to examine the rationales, contexts, and potential for transformation of practices under wartime constraints.

Data collection took place in several stages to allow for both breadth and depth of analysis. First, an extensive desk review was conducted to capture relevant policy documents and strategic institutional communications that explicitly or implicitly referenced soft skills development in Ukrainian HEIs, alongside academic research articles, international frameworks, and project reports. Over 120 documents were identified and screened initially; a final sample of 65 documents was selected based on three criteria: explicit reference to student-centred or competence-based education; production during the period 2020-2025; and public availability to ensure transparency and replicability. Sources comprised national legislation, ministerial recommendations, internal university policies, conference proceedings, and frameworks developed by international organisations – including OECD, UNESCO, the European Commission, and the World Bank. Institutional documentation was retrieved from the official websites of Ukrainian HEIs, with emphasis on classical, pedagogical, technological, and relocated institutions. Examples included: OECD (2021); UNESCO (2021); European Commission (2020). Institutional documents included the Strategy of Digital Transformation under Martial Law of Kherson State University (2022), Methodological Recommendations for Providing Psychological Support to Participants in the Educational Process (n.d.) of Borys Grinchenko Kyiv Metropolitan University, and the Self-Assessment Report of National Agency for Higher Education Quality Assurance (Ukraine) (2021).

The selection of sources also followed a purposive sampling logic, balancing normative policy texts with situated institutional narratives that reflected bottom-up responses. Particular care was taken to include a variety of genres – from formal regulations to reflective blog posts by university staff – in order to capture both policy intent and lived implementation realities. For example, N. Sulaieva (2023) described how “teaching under sirens” required spontaneous restructuring of group assignments and asynchronous feedback loops to maintain student participation and emotional balance. Similarly, O. Zabrodska (2023) provided narrative accounts of adapting teaching goals towards civic responsibility and stress management. These documents were especially useful in mapping tacit pedagogical shifts that may not be visible in official policy texts. Documents were analysed not only for content but also for tone, discourse patterns, and implicit value structures framing soft skills development. To improve analytical clarity, documents were categorised by function (normative, strategic, operational), format (text, table, visual), and institutional origin. A significant focus was placed on documents produced by groups operating in high-risk or displaced regions such as Mykolaiv, Kharkiv, Donetsk, and Zaporizhzhia. Diversity of topics was ensured by including samples from both large multidisciplinary universities and smaller specialised institutions. The classification of the analysed documents by function, type, and institutional origin is presented in Table 1.

Table 1. Classification of analysed documents by function, type, and institutional origin

Nº	Function	Type	Origin (Institution/Source)
1	Strategic	Internal institutional strategy	Kherson State University (2022)
2	Operational	Policy brief	Borys Grinchenko Kyiv Metropolitan University (Methodological recommendations..., n.d.)
3	Normative	National policy framework	National Agency for Higher Education Quality Assurance (Ukraine) (2021)
4	Normative	International framework	OECD (2021)
5	Normative	International framework	UNESCO (2021)
6	Strategic/Analytical	Research and evaluation report	World Bank (2025)
7	Operational	Self-assessment report	Mykolaiv National University
8	Operational	Instructor blog posts	Borys Grinchenko Kyiv Metropolitan University
9	Strategic	Conference proceedings	Selected Ukrainian HEIs
10	Operational	Online learning platform data	Moodle/Teams/Zoom-based student projects

Source: compiled by the author

To analyse the impact of the crisis on higher education institutions, a crisis exposure matrix was developed. The contextual mapping of source origins enabled the construction of this matrix, through which patterns of institutional adaptation could be associated with geographical and infrastructural stressors. Six universities were selected to examine the patterns of adaptation of educational institutions to the crisis: Kherson State University, Mykolaiv National University, Borys Grinchenko Kyiv University, Zaporizhzhia Polytechnic Institute, Taras Shevchenko National University of Kyiv, and Sumy State Pedagogical University named after A. S. Makarenko. These institutions were

located in different regions of Ukraine and experienced varying intensities of crisis impact. Their selection made it possible to assess institutional responses to a wide spectrum of crisis factors – ranging from active hostilities to pressure on the educational process in the capital and border areas. The criteria for selection included regional vulnerability, the extent of the conflict’s impact on institutional activities, and the current operational status (full functionality, partial relocation, or functioning under threat).

An additional NVivo qualitative content analysis was conducted using version 12 of the software, through systematic coding of themes and recurring categories. First,

inductive open coding generated a primary codebook that covered adaptability, collaboration, emotional resilience, civic competence, digital literacy, and self-directed learning; in total, more than 700 references were coded across the dataset. Subsequently, axial coding grouped these into institutional strategies, pedagogical tools, and embedded values. Three broad categories emerged: crisis-responsive curricular integration of soft skills; support mechanisms for psychological and social resilience; and frameworks for student engagement and civic action in emergencies. The evolving coding scheme was validated through peer review by an independent researcher, with intercoder agreement exceeding 85 per cent; any differences were resolved by consensus. Throughout the coding process, memo-writing and analytic journaling were used to track emerging interpretive insights, paradoxes, and shifts in meaning. NVivo queries, such as matrix coding and word frequency counts, were employed to triangulate qualitative impressions with surface-level textual patterns. This allowed the research to move from descriptive clustering to the articulation of deeper conceptual models of institutional transformation. To enhance the meaning of the themes discussed, the study also used a multiple-case approach. Three Ukrainian universities were selected from different institutional types and regions, with varying degrees of wartime disruption:

1) Pavlo Tychyna Uman State Pedagogical University in Central Ukraine. This pedagogical university implemented formative assessment based on student-centred learning and the integration of soft skills within teaching practicum;

2) Vasył Stus Donetsk National University, relocated to Vinnytsia, offered models of hybrid instruction and civic-oriented volunteering activities as co-curricular support for displaced students;

3) Taras Shevchenko National University of Kyiv was chosen as a metropolitan classical university where the institutionalisation of soft skills development occurred through its digital transformation strategy and online project-based learning initiatives.

Cross-case synthesis focused on how institutional vision, leadership discourse, and infrastructural readiness influenced the depth and durability of soft skills integration. Special attention was given to cross-sectoral collaborations (e.g. partnerships with NGOs or local governments) that expanded the scope of soft skills learning beyond traditional curricula, embedding it in service learning, volunteering, and digital co-creation. Triangulation techniques were applied throughout the study to enhance validity. Policy texts, institutional statements, external evaluations, and scholarly publications constituted data sources whose converging

themes were noted against interpretive bias. Intra-researcher reflexivity was facilitated through memo-writing, which helped track emerging insights and contextual anomalies. The study fully observed ethical standards. Since no personal or confidential information was collected, sources of information were available on official platforms, making the process transparent and repeatable. This research used documents, publications, and institutional materials freely available in the public domain. There was no contact with any individual; hence, no interviews or surveys were carried out that would require informed consent or any kind of ethical approval from an institution.

The method aligned with the basic guideline of ALLEA (2017) by being honest, accountable, and careful in research. In particular, it fulfilled the guideline stating that researchers must ensure the fair and proper handling of data with respect to confidentiality, intellectual property rights, and responsible dissemination. The study also followed the World Health Organization (2015) guideline on ethics in using public data for research, which states that it is ethical to use documentary sources in noninterventional research as long as no personal data are involved and institutional materials are not misrepresented. Accordingly, ethical compliance was ensured by relying solely on publicly accessible institutional reports, policies, and publications; clearly documenting selection criteria and data coding procedures; properly attributing and citing every source; and avoiding any misrepresentation or manipulation of institutional narratives. Therefore, the study adopted international best practices in documentary inquiries that were ethically valid and methodologically transparent.

RESULTS AND DISCUSSION

An examination of the modern shifts in Ukrainian HEIs during the twin crises of the COVID-19 pandemic and the full-scale Russian invasion (2020-2025) revealed a return to approaches of developing skills that had gradually shifted from unspoken curricular side effects to explicit learning goals. As organisational documents and academic sources indicated, online tools, crisis management, purposeful action, and wellness programmes contributed to building students' flexibility, teamwork, community involvement, and emotional strength. This aligned with broader international research and provided a basis for cross-contextual comparison. It also confirmed that Ukrainian HEIs, despite wartime limitations, demonstrated institutional creativity in transforming global trends into actionable educational practices. In Table 2, information on how HEIs from different regions experienced and responded to varying degrees of crisis intensity is summarised.

Table 2. Crisis exposure matrix: Patterns of institutional adaptation in relation to crisis intensity

Institution / Region	Exposure to Crisis	Institutional Status	Adaptation Focus
Kherson State University	High (occupied/displaced)	Relocated	Digital governance, student co-leadership, civic volunteering
Mykolaiv National University	High (borderline combat)	Partially relocated	Emotional resilience, reflective pedagogy, social responsibility in coursework

Table 2. Continued

Institution / Region	Exposure to Crisis	Institutional Status	Adaptation Focus
Borys Grinchenko Kyiv University	Moderate (capital-based)	Stable but pressured	Psychological support systems, hybrid peer mentoring, digital service learning
Zaporizhzhia Polytechnic	High (combat-prone zone)	Functioning under threat	Crisis-informed curriculum, teamwork in virtual project tasks
Taras Shevchenko National University of Kyiv	Low (capital centre)	Fully operational	Internationalisation, soft skills accreditation, inclusive LMS integration
A. S. Makarenko Sumy State Pedagogical University	Medium (bordering russia)	Vulnerable but stable	Cross-border civic learning, digital resilience education

Source: compiled by the author

For instance, high-risk institutions such as Kherson State University and Mykolaiv National University demonstrated significant restructuring of governance, emphasising student co-agency and community outreach. In contrast, institutions in relatively stable zones (e.g. Kyiv) prioritised psychological support and soft skills accreditation systems. The typology showed that adaptation was not uniform but context-sensitive, reinforcing the link between localised stressors and differentiated institutional strategies. The patterns of adaptation strategies indicated that institutions facing the most severe and immediate threats (e.g. Kherson and Mykolaiv) focused on survival and community-oriented skills, such as civic volunteering and social responsibility. This suggests a direct correlation between the severity of the crisis and the prioritisation of skills essential for immediate survival and social cohesion. Furthermore, institutions in medium-risk zones (e.g. Sumy) developed strategies related to their vulnerable position, indicating a focus on long-term stability and continuity despite geographical proximity to the conflict. This demonstrates a proactive approach aimed at ensuring the educational process continued securely. Conversely, institutions in low-risk zones (e.g. Taras Shevchenko National University of Kyiv) were able to shift their focus towards enhancing their offerings, aligning educational goals with global standards and strengthening their competitiveness on the international stage. This reflects a move from reactive, crisis-driven adaptation to a more strategic, future-oriented development.

M.M. Robles (2022) and N.N. Nguyen *et al.* (2023) stressed that emotional intelligence, adaptability, and teamwork were prerequisites for employability in modern economies. OECD (2021) and UNESCO (2021) similarly called for embedding such transversal competencies into formal educational systems to prepare future-ready learners. The need for self-regulation and digital literacy in response to remote learning has also been validated by S. Manca & M. Delfino (2021) and N.N. Nguyen *et al.* (2023), who emphasised psychological resilience as an educational goal under pressure. In the Ukrainian context, S. Semerikov *et al.* (2023) highlighted increased student psychological stress during martial law and advocated for more flexible learning environments. Likewise, N. Ivanenko (2024) and S. Semerikov *et al.* (2023) pointed to the necessity of structural adaptation by HEIs to provide continuity and student

support amid war-induced disruption. At the beginning of the period under review, digital learning environments were perceived as a survival strategy and later as platforms that supported project-based learning and virtual teamwork, with remote servicelearning fostering soft skills. In this context, Ukrainian universities introduced Moodle, Zoom, and Microsoft Teams not only to ensure continuity of education but also to ignite student agency and engagement through interactive tasks and group research, thereby recreating real-world collaboration via synchronous online discussions and strengthening interpersonal and digital communication skills. A. Prykhodko *et al.* (2025) demonstrated how such a redefinition of governance took place through participative digital tools, where shared decision-making enhanced students' leadership capacity as well as self-regulation.

The digital transformation underlined the need for faculty development programmes in digital pedagogy, which were implemented in several Ukrainian HEIs to enhance educators' expertise in remote teaching. As A. Kurapov *et al.* (2023) described, these initiatives not only improved teaching effectiveness but also generated new forms of assessment that fostered students' critical thinking and collaborative skills in virtual settings. Such institutional capacity building acted as a fulcrum in delivering quality education during adverse conditions. These developments aligned with international frameworks such as the European Commission (2020), which called for inclusive, digitally supported pedagogies and emphasised soft skills such as collaboration and adaptability as part of the digital competence portfolio. In particular, institutions that adopted gamification, flipped classroom formats, and asynchronous discussion boards contributed to the operationalisation of the plan's strategic priorities. From a systems perspective, those developments represented not merely reactive efforts but an active reshaping of pedagogical intent towards learner-centred approaches that prioritised long-term resilience. Quantitative evidence from T. Matusevych *et al.* (2024) validated these institutional narratives. Their comparative study of Polish and Ukrainian students revealed a marked increase in indicators of academic resilience among Ukrainians – perseverance, problem-solving, and emotional control – after prolonged exposure to wartime remote education. This appeared to be strongly related to the pedagogical

redesign of assignments into autonomy-based models with peer mentoring and reflective portfolios. In other words, the innovations did not just fill the gap created by the lack of physical presence but also created space for metacognitive growth as well as self-managed learning, which lies at the heart of resilience as a soft skill. Moreover, the longitudinal data collected by Y. Lavrysh & V. Lukianenko (2024) showed that students who took part regularly in collaborative online projects demonstrated statistically significant improvements not only in academic resilience but also in empathy and intercultural communication – skills crucial for building social cohesion in post-conflict contexts. Such findings underscored the multidimensional effects of digitally mediated learning communities on soft skills development during prolonged crises. The Ukrainian case illustrated that innovation under pressure could yield sustainable changes in educational delivery and outcomes. These conclusions were consistent with international findings. For instance, T. Tang *et al.* (2020) demonstrated that project-based and collaborative learning settings promoted students' creativity and critical thinking through playful, design-driven tasks. J. Lamri & T. Lubart (2023) emphasised the importance of balancing soft and hard skills in educational design and institutional reform. I. Urkia-Basterra *et al.* (2025) further identified work-based learning as an effective platform for transversal competence growth, especially when paired with mentoring and reflective tools. This resonated with UNESCO (2021), which framed education as a public good and called for socio-emotional learning and solidarity in educational design. Universities that incorporated volunteerism, peer mentoring, and civic engagement fulfilled this vision in practice, anchoring identity and agency within broader community-based learning.

At the level of organisational response, different leadership styles at displaced or affected institutions also played a role. O. Spivakovsky *et al.* (2025a) narrated the crisis response at Kherson State University through agile directives, involving discussions with members and civic engagement, which helped pull students into volunteering activities and governance participation as well as educational initiatives relating to the community. From these situations emerged soft skills such as civic responsibility and ethical reasoning; stress tolerance and value-based crisis management, which therefore proved to be indirect but powerful educational tools. Further alignment could be found with OECD (2021), which emphasised adaptability, autonomy, and reflexivity as key pillars of educational quality. Ukrainian HEIs that implemented reflective portfolios, open digital badges, and peer-based assessments exemplified this agenda by turning resilience from an abstract goal into a practical outcome. At this level, soft skills were not simply outputs of educational design but prerequisites for continuity itself. Service-learning projects, particularly in programmes of management and social sciences, provided an additional crucial space for transformation. A.L. Kenworthy & S. Opatska (2023) documented how such initiatives during wartime enabled students to address real challenges

facing communities through local and virtual engagement. These experiences – civic solidarity and ethical decision-making – created complex soft skills such as empathy, collaborative problem-solving capacity, and strategic communication. Learners who participated in service activities with internally displaced persons (IDPs), digital literacy support, or local aid coordination reported enhanced motivation and a stronger sense of purpose; however, internalisation of soft skills was best interpreted through experience-based learning models.

Another study conducted by I. Kostikova & T. Viediernikova (2023) showed that those servicelearning interactions acted as a means of psychosocial support, allowing students to process trauma individually while bolstering leadership and organisational abilities. The qualitative research they undertook with programme participants demonstrated how reflective journals and group debriefings became part of making soft skills more tangible while strengthening community resilience. In addition to institutional strategies, individual educator narratives provided critical insight into how soft skills were cultivated in practice under crisis conditions. For example, a series of blog entries authored by instructors, N. Sulaieva (2023), documented the use of reflective journaling, real-time student polls, and online peerfeedback practices to promote empathy and self-regulation in hybrid classes. Those informal writings highlighted not only technical improvisations but also the emotional labour involved in fostering socio-emotional development during air raids and blackout schedules. Likewise, O. Zabrodskaya (2023) emphasised the importance of civic framing in coursework, where ethics, volunteering, and local problem-solving were embedded into learning objectives. Such accounts illustrated how lived frontline realities directly shaped pedagogical priorities and how teachers, even in under-resourced environments, actively reconstructed soft skills objectives through storytelling, peer debriefings, and project-based learning.

These informal sources revealed the emotional and moral labour of educators and their strategies to anchor pedagogical value amid chaos. They showed how teacher autonomy and reflective practice could serve as engines of resilience and curriculum transformation. Another key factor was how those efforts connected with the soft skills ecosystem. The connection between psychological safety and educational engagement emerged as a central insight from the data. Y. Suchikova *et al.* (2024) noted that although burnout and anxiety persisted among academic staff and students during the conflict, targeted psychological support systems – such as peer circles, teletherapy, and digital support groups – had received feedback indicating enhanced emotional resilience and social bonding from participants. That setting helped to stabilise psychological well-being, enabling the development of emotional intelligence, self-awareness, and interpersonal support – qualities, which also strengthened adaptability in the long term. In this way, focused efforts encouraging mindfulness and stress relief were added to curricula

and extracurricular activities at several HEIs, as shown by the studies of T. Volotovska *et al.* (2024). Those efforts not only reduced anxiety but also improved students' self-regulation and empathy, making a positive contribution to their overall soft skills profile during the ongoing crisis. What those patterns suggested was that Ukrainian HEIs had not merely responded tactically, but strategically reimagined education through a soft skills lens. Initiatives were rarely isolated; rather, they produced cumulative effects when pedagogical redesign, student involvement, and psychological support were aligned. Particularly effective were those institutions that managed to connect service-learning to broader institutional missions and digital platforms to inclusive student practices. The war-accelerated integration of online project work, intercultural dialogue, and volunteer service created layered learning spaces that transcended disciplinary boundaries. Soft skills thus moved from theoretical intentions to applied, measurable results within educational practice.

Beyond the institutional level, Ukrainian HEIs also drew inspiration from international policy frameworks. The way they interpreted and localised global recommendations further shaped how soft skills became integrated into crisis pedagogy. An important layer of that analysis involved linking institutional practices with international frameworks that indirectly shaped national educational responses. For example, the OECD (2021) call for future-ready and inclusive education found expression in the digital inclusion strategies adopted by institutions such as Kherson State University. The deployment of open-source platforms and LMS tools in wartime reflected the OECD's emphasis on literacy in a digital world, contextualised within wartime resilience. Similarly, UNESCO's (2021) humanistic perspective on education – grounded in equity, solidarity, and well-being – could be traced in initiatives by Borys Grinchenko Kyiv Metropolitan University to develop peer-support networks and digital psychological services. Those efforts not only paralleled UNESCO's agenda but anchored it in trauma-informed realities. The three case universities providing deeper insights were examined through institutional documents and publicly available reports. At Pavlo Tychyna Uman State Pedagogical University, institutional self-evaluation materials highlighted the use of formative assessment, reflective journaling, and interdisciplinary micro-projects, including classroom simulations, as strategies to cultivate empathy, feedback literacy, and self-regulation among pre-service teachers. At Vasyly Stus Donetsk National University (2025), the university's relocation experience was reflected in its hybrid learning models, which facilitated not only academic continuity but also civic volunteering activities, especially with IDPs, where teamwork, ethical reasoning, and communication skills were prioritised. Faculty reports described improvements in student self-organisation, with peer-designed action plans and mentorship circles forming key elements of this transformation. Meanwhile, the digital transformation

strategy at Taras Shevchenko National University of Kyiv placed soft skills modules within learning management systems, supported group-based capstone projects, and incorporated digital storytelling formats. Those platforms supported student development in resilience, collaborative problem-solving, and intercultural communication through fully virtual environments. These institutional cases demonstrated how displacement status, mission orientation, and digital infrastructure shaped differentiated yet converging pathways to soft skills integration. Importantly, graduate tracking and portfolio-based quality assurance mechanisms were used to measure progress.

The analysis of Ukrainian education governance under stress highlighted the need for adaptive leadership and blended delivery. That was evident in the institutional response strategies observed in relocated universities, particularly through the creation of hybrid civic-volunteering projects. Such efforts translated high-level international discourses into localised action, integrating soft skills as practical, context-sensitive outcomes. In this way, the Ukrainian HEIs served as nodes of translational adaptation – where global policy narratives were pragmatically embedded into university culture and student development frameworks. That underscored the dual nature of soft skills development: both globally framed and locally enacted. Further evidence of this was how institutional leaders and teaching staff began to integrate soft skills assessment into accreditation materials and quality assurance cycles, especially regarding resilience, civic engagement, and collaboration. Although not yet systematically embedded at the national policy level, such institutional initiatives indicated a growing trend of embedding soft skills as core outputs within strategic planning. That process appeared especially impactful in those HEIs that were geographically or structurally vulnerable, suggesting that constraints themselves acted as a driver of educational innovation. These findings indicated a developing model of higher education in crisis that saw soft skills as both outputs and strategies. Interpersonal, civic, and adaptive competences – not at all supplemental or peripheral – became ingrained in the very mechanisms by which HEIs dealt with uncertainty and disruption. In that hostile wartime setting, paradoxically, educational intentionality was strengthened in relation to student agency, empathy, collaboration, and leadership. For digitalised universities with inclusive governance and pedagogical agility, that integration was smoother. Even less well-resourced institutions fared better in advancing social and emotional learning through human connection and community responsibility. The practice of Ukrainian HEIs from 2020 to 2025 showed much more than just a reactionary involvement, demonstrating instead the shaping of a pedagogical paradigm where soft skills sat at the very core of academic integrity, social contribution, and student success. It provided a valuable model for unstable educational systems around the world seeking to understand how hardship could be turned into deep and transferable learning when engaged with strategically.

CONCLUSIONS

This article highlighted the experience of transformation in Ukrainian higher education institutions during two periods of crisis – the COVID-19 pandemic and the full-scale Russian invasion – which emphasised the purposeful role of soft skills. Traditionally, rather than falling apart under such pressure, those institutions redesigned their teaching, governance, and student support to build resilience and adaptability as civic competences. Digital spaces shifted from improvised emergency tools to structured environments for collaborative learning and reflection. Universities re-purposed LMS and videoconferencing systems to support project work as well as group interaction, which strengthened digital literacy, teamwork, and communication skills. The redesign of assignments fostered self-regulation, while peer mentoring enhanced academic resilience alongside emotional growth. Inclusive leadership and participatory decision-making at the governance level allowed students to practise civic responsibility and ethical reasoning. Wartime service-learning, volunteer management, assistance to the displaced, and digital support created practical settings for the development of empathy, problem-solving abilities, and strategic communication.

Innovation was pronounced among HEIs in Ukraine, including those under occupation or displacement. Those experiences brought about a realisation that soft skills were

at the core, not the periphery, of educational continuity and social sustainability during crises. The Ukrainian case informed crisis-responsive pedagogy worldwide, proving that, notwithstanding the extremity of circumstances, institutions could nevertheless foster human-centred learning environments that inculcated in students competences that were portable and future-oriented. Future research should analyse how such practices can be systematically embedded into the fabric of national education policy, and how their outcomes can be measured in terms of long-term institutional transformation and student well-being. Future studies should focus on assessing the long-term transferability of soft skills developed during crisis education into students' professional and civic lives, as well as evaluating the sustainability of wartime educational innovations within post-crisis institutional strategies.

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Роль вищих навчальних закладів України в розвитку м'яких навичок студентів в умовах воєнного стану

Анотація. Повномасштабне вторгнення росії в Україну поставило вищі навчальні заклади (ВНЗ) перед безпрецедентними і величезними викликами, що вимагали адаптивних відповідей у всіх сферах академічного життя. Мета цього дослідження полягала у вивченні того, як українські вищі навчальні заклади сприяли розвитку м'яких навичок студентів під час подвійної кризи війни та пандемії. Для досягнення цієї мети в дослідженні було використано багатометодний якісний дизайн, що поєднував аналіз документів, кодування змісту за допомогою NVivo та методологію порівняльного аналізу випадків. Джерелами даних були інституційні політики, національні керівні принципи, міжнародні рамки та наукові публікації. Такий тристоронній підхід дав змогу глибоко зрозуміти, як українські університети концептуалізували та реалізували розвиток м'яких навичок у відповідь на системну кризу. Серед основних вимог освіта в умовах війни вимагає вдосконалення м'яких навичок студентів – нетехнічних переносимих умінь, таких як емоційна стійкість, адаптивність, комунікація, критичне мислення, робота в команді та самоуправління. Стаття мала на меті простежити зміну ролі українських вищих навчальних закладів у формуванні таких компетентностей в умовах війни, вимушеної міграції, психологічного стресу та цифровізації освіти. Спираючись на теоретичні висновки за період з 2020 по 2025 рік щодо інституційних стратегій, що підтримують соціально-емоційний розвиток студентів в онлайн та гібридних навчальних середовищах через залучення громади та інтегративне проектування навчальних програм, дослідження також приділяє особливу увагу психологічним послугам, пов'язаним з інклюзією та наставництвом однолітків для благополуччя студентів, а також громадянською відповідальністю. Воно аналізує кореляцію між академічною наполегливістю в умовах війни та розвитком м'яких навичок, приділяючи особливу увагу інституційній стійкості та інноваційному лідерству. Розглядаючи ці нові практики в українських університетах, включаючи приклади з декількох національних вищих навчальних закладів, стаття пропонує практичні рекомендації щодо інтеграції навчання м'яких навичок в основну місію університетів у кризові часи

Ключові слова: компетентність; кризова педагогіка; цифрове навчальне середовище; розвиток студентів; стійкість; працевлаштування

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The use of multimedia tools for teaching Japanese in higher education institutions

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Abstract. The aim of the study was to examine the impact of multimedia resources on the effectiveness of Japanese language learning in higher education institutions. Educational multimedia platforms for learning Japanese in higher education institutions were analysed and found to constitute an integrated system of digital technologies that combined text, audio, video and interactive components to create a multi-channel learning environment. It was found that the use of platforms such as JapanesePod101, NHK World Easy Japanese, iTalki, Rosetta Stone Advanced Japanese, and LingQ provided access to authentic materials, interactive exercises, and personalised learning paths, which contributed to the development of oral and written communication skills, the consolidation of grammar and vocabulary, and increased student motivation and autonomy. A statistical analysis of student progress showed that regular use of multimedia resources improved results by 15-20%, and the combined use of video lessons, interactive exercises, and digital flashcards ensured comprehensive development of language skills. In particular, approximately 70% of students regularly used mobile applications to learn grammar and vocabulary, 50% used interactive online courses, and the use of authentic materials such as videos and anime (40%), Japanese newspapers (35%), and books and manga (25%) improved reading and listening skills. It was also found that the integration of the recommendations of the United Nations Educational, Scientific and Cultural Organisation allows for a gradual increase in difficulty levels from A1 to C2, developing students' communication skills and cultural competence. The practical significance of the work lies in the fact that the results of the study can be used by teachers and methodologists of higher education institutions to optimise Japanese language teaching programmes, and researchers in the field of language education and digital technologies can analyse the effectiveness of multimedia platforms and implement similar tools to increase student motivation, autonomy and language competences

Keywords: students; digital resources; communicative competence; authentic materials; native speakers

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INTRODUCTION

The intensification of intercultural contacts and the globalisation of education have contributed to a growing interest in studying Japanese in higher education institutions. The expansion of academic programmes and the increase in the number of students choosing this language have led

to a need to improve teaching methods. The use of multimedia tools creates conditions for the formation of communicative competence and the development of listening, speaking, reading and writing skills through interactive platforms, audio and video materials, as well as electronic



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resources with authentic content. The use of such technologies makes it possible to bring the educational process closer to the real language environment of Japan, activates the cognitive activity of students and stimulates the formation of sustainable learning motivation. The growing interest in Japanese cultural codes and traditions in the global information space highlights the importance of developing new didactic approaches and researching the effectiveness of multimedia tools in higher education.

Scientific works of recent years (2020-2025) have reflected a growing interest in the use of multimedia tools in teaching Japanese in higher education. Many researchers have examined this topic and outlined different positions on its implementation. For example, the work of S. Ge *et al.* (2022) noted the influence of multimedia and temporal contiguity principles on students' attitudes and level of memorisation of material. Analysis of the results showed that the combination of audio and visual components in the learning process contributed to the consolidation of Japanese vocabulary and grammatical structures and created a favourable environment for the formation of positive learning motivation. A similar trend was observed by D. Jin & Y. Li (2020), who developed a model for teaching Japanese to college students based on online environments. The work demonstrated that the integration of distance learning platforms allows the creation of interactive modules, combining videos, tasks and tests, which ensures the flexibility and accessibility of educational content. These findings were consistent with the study by N. Kaur *et al.* (2020), who described the creation of a multimedia application for learning Japanese as part of the implementation of policy in Malaysia. In this case, the use of a multimedia platform was aimed at increasing the attractiveness of the course and training future specialists focused on cooperation with Japan. The work of L. Oleksiienko *et al.* (2020) demonstrated the use of interactive methods of teaching foreign languages in higher education institutions. The authors emphasised that a technologically enriched environment allows students to develop communication skills in situations that are closer to real-life conditions. The gradual transition to multimedia-oriented Japanese language teaching logically continued this trend, as such methods create opportunities for students to immerse themselves in the language environment. The study by T. Leung *et al.* (2023) was devoted to evaluating social networks as an auxiliary tool in learning Japanese. The researchers noted that the use of Facebook as a platform for discussion, sharing materials and comments created an informal learning environment that supported student activity and encouraged language practice outside the classroom. R. Majumdar *et al.* (2021) described the experience of using e-textbook technology in Japanese universities during the COVID-19 pandemic. The results showed that digital resources ensure the continuity of the learning process and allow multimedia materials to be combined with traditional teaching methods. The introduction of electronic textbooks contributes to an increase in students' independent work and activates their

participation in educational tasks. This dynamic was confirmed by the work of A. Miller (2022), which examined adaptations to teaching restrictions in Japanese universities. The author emphasised that the transition to digital platforms and the use of multimedia tools helps to support communication and interaction between students and teachers. The use of digital resources increases the flexibility of the educational process and contributes to more effective assimilation of material by students.

A systematic review by N. Nhleko *et al.* (2025) revealed the impact of information and communication technologies on student motivation in higher education institutions. A summary of the results of various studies showed that multimedia tools increase interest in the learning material, stimulate active participation in tasks, and foster a sense of belonging to the learning community. Such trends explain the effectiveness of the multimedia approach in teaching Japanese. The scientific work of N. Nychkalo *et al.* (2022) focused on the development of professional competence of teachers through information and communication technologies in Ukraine. Experience has shown that the mastery of multimedia technologies by teaching staff ensures a higher quality implementation of innovative methods and creates the conditions for the integration of such tools into the process of teaching foreign languages, in particular Japanese. S. Symonenko *et al.* (2023) in their work on teaching English to IT specialists (information technology) in Ukrainian institutions emphasised the pedagogical conditions and content of training. The conclusions pointed to the advisability of combining traditional educational content with digital resources and adaptive tools. Although the study concerns the English language, it demonstrated the universality of the approach, which could be applied to the teaching of Japanese.

Despite the aspects highlighted by the above-mentioned authors, gaps included limited research on the impact of multimedia tools on the development of students' oral and communication skills. The long-term effects of using digital platforms and interactive resources in combination with traditional methods of teaching Japanese have not been sufficiently studied. The aim of the study was to determine the impact of multimedia tools on the effectiveness of Japanese language teaching in higher education institutions, in particular on the development of oral and written communication, grammar and vocabulary acquisition, motivation and autonomy of students. The objectives of the study were to analyse educational multimedia platforms for learning Japanese in higher education institutions; to analyse student progress on multimedia platforms for learning Japanese; to present the integration of UNESCO recommendations into the study of Japanese using multimedia tools.

MATERIALS AND METHODS

An analysis was conducted of multimedia systems such as JapanesePod101, NHK World Easy Japanese, iTalki, Rosetta Stone Advanced Japanese, and LingQ. These multimedia

resources were selected based on their ability to provide students with authentic materials, multi-level interactive courses, opportunities for direct communication with native speakers, and comprehensive development of linguistic and cultural competencies. Content analysis, for which sources Zoom Japan (2025) and K. Hemendra (2025) were selected, revealed the structure of the courses, levels of difficulty, the availability of authentic audio and video materials, interactive exercises and tasks for developing all language skills, including academic writing. Sources such as Prep Insight (2025) and Luca Lampariello (2025) were also selected for content analysis. Based on the analysis method, statistical data on student progress on these platforms was collected and analysed: students' level of Japanese language proficiency, availability of authentic materials, availability of multimedia tools, types of interactive exercises, course difficulty levels, coverage of different age and educational groups, frequency of use of digital platforms, effectiveness of oral and written language development, impact on motivation and autonomy of learning. The statistical data was collected from studies by the Japan Foundation (2021a; 2021b). In particular, statistics were presented on the study of Japanese among students and educational institutions in countries such as Ukraine, Japan, Poland, and Uzbekistan.

An analysis of topics and language structures was carried out based on UNESCO (2025) recommendations for students of Japanese language using multimedia tools, including basic topics and structures for everyday communication, such as "Greetings and introductions", "Self-presentation", "Asking for directions", "Ordering in a café/restaurant", polite expressions and social formulas such as "Apologies and thanks", "Requests and invitations", grammatical constructions for different tenses and modalities, for example "Present, past and future tenses", "Modal verbs for permission and prohibition". Kanji were also included ("Basic 50 kanji"; "Kanji for numbers, Days of the week, months"), along with lexical themes such as "Family and Friends", "Shops and Shopping", "Weather and Seasons", "Hobbies and free time". Dialogues and situational exercises comprised "University Conversations", "Situations in Transport", "At a Hotel or Airport". Listening tasks included "Recognising Short Statements" and "Listening to dialogues with questions". Each topic was presented through multimedia resources, including interactive exercises on platforms, video lessons with subtitles, audio textbooks, online games and dialogue simulations, mobile applications with adaptive tests and digital flashcards, which allowed students to practise specific constructions and consolidate lexical and grammatical structures in various communicative situations.

RESULTS

Analysis of educational multimedia platforms for learning Japanese in higher education institutions. Multimedia tools for learning foreign languages constitute an integrated system of digital technologies, software and electronic resources that combines text, audio, video and interactive

components to create a multi-channel learning environment. Such resources support communication-oriented learning, provide access to authentic materials, gamified tasks, adaptive testing, and individualised learning paths. In language education, multimedia tools serve to simulate real-life communication situations, practise grammar and vocabulary, develop auditory and visual memory, and build intercultural competence, which is particularly relevant for Japanese with its complex hieroglyphic writing system and specific etiquette speech patterns. An analysis of the multimedia systems JapanesePod101, NHK World Easy Japanese, iTalki, Rosetta Stone Advanced Japanese, and LingQ showed that each of them implements different pedagogical approaches and has unique opportunities for students. In particular, JapanesePod101 offers a multi-level system of lessons from A1 to C2, containing over 4,000 video and audio lessons and over 200 hours of audio content. Each module includes dialogues, grammar explanations, dictionaries, and interactive exercises. The platform features an adaptive repetition and reminder system that analyses user performance and offers personalised lists of words and topics. Recordings by native speakers help develop listening and pronunciation skills, which is important for preparing for certification exams such as the JLPT Japanese-Language Proficiency Test (JLPT). For example, NHK World Easy Japanese provides access to authentic language and cultural content from Japan's public broadcaster. The course consists of 48 audio lessons, each lasting 10 minutes, supplemented by text and multimedia materials. The programme combines language lessons with news and examples of modern Japanese, allowing students to learn vocabulary and grammar in a real-life context. The availability of materials in several languages allows the resource to be used in multilingual student groups, enhancing its versatility.

The iTalki platform functions as a global platform for individual and group lessons with native speakers in a video conference format. The system has over 1,500 registered Japanese language teachers, including certified teachers and native tutors. Students have access to teacher calendars, integrated chats for sharing materials, and a rating and review system. A special feature of iTalki is the ability to create a personalised study plan together with a teacher and take trial lessons at reduced rates. Over 10 million registered users worldwide create a powerful communication environment and motivational effect for high school students. Rosetta Stone Advanced Japanese uses the Dynamic Immersion method, which involves presenting material exclusively in Japanese with a gradual increase in complexity without translation. The programme includes interactive dialogues, speech recognition, automatic pronunciation checking, and a mobile app for training at any time. Artificial intelligence algorithms adapt tasks to the individual pace of the student, which increases the effectiveness of learning. Rosetta Stone also offers corporate packages for universities, allowing teachers to track student progress and combine the programme with traditional teaching

methods. With LingQ, students can immerse themselves in texts and audio, importing articles, podcasts, and videos in Japanese and turning them into interactive lessons. Students can tag new words, create their own dictionaries, track their progress, and practise listening and reading with real-world materials. The LingQ database contains over 1,000 hours of authentic Japanese podcasts, integrated with dictionary hints and learning statistics (Luca Lampariello, 2024). This approach provides flexibility and personalisation, as users choose the topics and level of difficulty of the material themselves.

The criteria for evaluating these multimedia systems include the level structure of the courses, the volume and quality of authentic content, interactivity, the possibility of personalising learning, support for academic writing, and

functions for teachers. JapanesePod101 stands out for its large number of lessons and flexible selection of topics. NHK World Easy Japanese provides a balance between educational content and cultural and informational environment. iTalki offers real communication with native speakers in a synchronous format. Rosetta Stone implements algorithmic immersion and artificial intelligence to adapt tasks. LingQ enables the creation of personal text and audio corpora and the integration of learning into one's own media environment. Table 1 shows the results of a content analysis of multimedia systems for teaching Japanese in higher education institutions, reflecting the number of lessons and hours, levels of difficulty, types of authentic audio and video materials, interactive exercises, and opportunities for developing academic writing for each platform.

Table 1. Results of content analysis of multimedia systems for teaching Japanese in higher education institutions

Platform	Number of lessons/ hours	Levels of difficulty (JLPT)	Authentic audio/ video	Interactive exercises	Academic writing development
JapanesePod101	1,850 lessons/450 hours	N5-N1	Podcasts, video interviews, dialogues with native speakers	Tests, flashcards, dialogues	Essays, grammar exercises, text structuring exercises
NHK World Easy Japanese	48 lessons/24 hours	N5-N4	Radio lessons, video lessons with subtitles	Flashcards, audio repetition, comprehension exercises	Short texts, basic writing exercises
iTalki	1,000+ individual lessons/500 hours	N5-N1 (individually)	Live online lessons with native speakers	Live lessons, discussions, homework assignments	Teacher review of written work, comments on structure
Rosetta Stone Advanced Japanese	200 lessons/300 hours	N5-N2	Video lessons, audio recordings with native speakers	Tests, pronunciation exercises, interactive dialogues	Writing assignments, sentence construction exercises
LingQ	2,500 lessons/600 hours	N5-N1	Podcasts, video materials, import own texts and videos	Flashcards, interactive reading, word marking	Creating and editing texts, maintaining personal dictionaries

Source: compiled by the author based on Zoom Japan (2025), K. Hemendra (2025), Prep Insight (2025), Luca Lampariello (2025)

Content analysis has shown that it is advisable to combine these resources in higher education. For example, JapanesePod101 and NHK World Easy Japanese form fundamental knowledge and listening skills, iTalki provides live communication and speaking practice, Rosetta Stone trains automatic recognition and pronunciation, and LingQ develops academic reading and vocabulary based on authentic materials. Such integration of multimedia resources contributes to the comprehensive development of students' linguistic and cultural competences, increases motivation and adaptability of the learning process. The overall conclusion is that the content analysis of multimedia systems for learning Japanese revealed a variety of course structures, levels of difficulty, volumes of authentic audio and video materials, forms of interactive communication, and opportunities

for developing academic writing skills. JapanesePod101 and LingQ provided a large volume of lessons and materials for self-study, NHK World Easy Japanese focused on compact programmes for beginners, iTalki on personalised communication with native speakers and practical tasks, and Rosetta Stone Advanced Japanese combined video lessons with interactive exercises on pronunciation and sentence construction, which generally confirmed the effectiveness of the comprehensive use of multimedia tools for developing all language and cultural competencies of students.

Statistical analysis of student progress on multimedia platforms for learning Japanese

In Ukraine, Japanese language studies among students began in the second half of the 20th century, mainly at

large universities, including Taras Shevchenko National University of Kyiv, Ivan Franko National University of Lviv, Borys Grinchenko University of Kyiv, and Oles Honchar Dnipro National University, where specialised courses and laboratories for studying Asian languages were created (Asadchikh, 2017). Students mostly started with basic courses in grammar, vocabulary and writing, gradually moving on to listening and speaking practice.

Nowadays, learning is largely supported by multimedia tools and digital platforms that provide access to authentic audio and video materials, interactive exercises, online tests, podcasts, and platforms for communicating with native speakers. Table 2 shows comparative statistics on the number of students, teachers and educational institutions for studying Japanese in Ukraine and other countries.

Table 2. Statistics on Japanese language learning among students and educational institutions in countries such as Ukraine, Japan, Poland, and Uzbekistan

Country/region	Number of students	Number of teachers	Number of educational institutions
Ukraine	2,052	105	17
Japan	3,794,714	74,592	18,272
Poland	5,008	234	120
Uzbekistan	3,579	129	35

Source: compiled by the author based on research by the Japan Foundation (2021b)

The statistics in the table show that as of 2021, the number of students studying Japanese in Ukraine was 2,052, which is relatively small compared to Japan, where more than 3.7 million students are studying, but sufficient to maintain a stable level of language teaching at universities and specialised educational institutions. The number of teachers, 105, indicates the availability of qualified teaching staff capable of providing the educational process, and 17 educational institutions demonstrate that Ukrainian students have limited but organised opportunities to study Japanese. For students, this number means that they can receive a systematic education, but the choice of courses and levels may be limited compared to countries where Japanese is more widely spoken, such as Poland or Uzbekistan. Overall, these data indicate a stable but narrow market for Japanese language teaching in Ukraine, which requires support and development of multimedia and interactive resources to improve the accessibility and quality of student learning. The correct and systematic use of a wide range of multimedia tools, including interactive online platforms, audio and video materials, podcasts, online tests, digital dictionaries, virtual laboratories, and platforms for communicating with native speakers, will help attract more students to study Japanese and improve the effectiveness of the learning process. The combination of these tools allows for the integration of traditional academic learning with practical language acquisition, promotes the development of all language skills, increases student motivation, fosters autonomy in learning, and creates conditions for an individualised approach to learning Japanese at different levels of complexity and in different age and educational groups. An analysis of current educational practices shows that the level of Japanese language proficiency among students in different countries varies significantly depending on the availability of authentic materials and multimedia resources. According to a report by the Japan Foundation (2021a), more than 3.8 million people worldwide are learning

Japanese, with the largest share coming from East Asia and Southeast Asia. The level of training is mainly limited to levels A1-B1, and only about 5% of students reach levels C1-C2, which is due to the lack of authentic materials and the difficulty of accessing native speakers.

Research by V. Song (2023) shows that authentic materials such as Japanese newspapers, literature and videos have a positive effect on the development of reading and comprehension skills. At the same time, access to them is often limited due to the language barrier and the lack of adapted electronic resources. Japanese language students most often use videos and anime (40%), newspapers, in particular Asahi, Yomiuri & Mainichi (35%), as well as books and manga, such as works by Haruki Murakami, Natsume Sōseki and popular manga series (25%), which contribute to the development of reading and listening skills and vocabulary expansion. These tools can be used according to the following algorithm: first, choose short and understandable texts or videos with subtitles to familiarise yourself with new vocabulary and grammar, then complete translation, retelling or listening comprehension tasks and repeat the material in simulations or dialogues. This approach ensures a gradual transition from passive perception to active use of the language and reinforces reading, listening and vocabulary skills. In addition, according to G. Kovács (2013), the use of authentic materials at the initial stage of learning helps students develop correct intonation and tone, as well as adapt more quickly to the specifics of Japanese grammar. These tools are useful in the initial stage of language learning because they immerse students in a natural linguistic context, help them develop correct pronunciation, intonation and grammatical patterns, and develop communication skills. Multimedia tools include mobile applications with interactive tasks, online games, video lessons with subtitles, and digital flashcards, which significantly increase student engagement (Obojska & Vaiouli, 2025). For example, the use of interactive plat-

forms allows students to practise grammatical structures in realistic dialogues, simulating everyday situations in cafés, on public transport or at university. This helps to develop speaking skills and builds confidence in communicating with native speakers. Types of interactive exercises in a multimedia environment include listening to short dialogues, working with adapted texts, interactive games for practising vocabulary, and simulations of real-life communication situations. According to C. Tarchi (2023), the effectiveness of such exercises increases by 25-30% compared to traditional textbooks, as they activate cognitive processes and maintain motivation through gamification elements. It is especially important that such tasks provide instant feedback, allowing students to quickly correct mistakes and consolidate their knowledge. This shows that in Japanese language learning, interactive exercises with gamification elements increase grammar and vocabulary acquisition, improve reading, writing and listening skills, maintain student motivation and allow for quick correction of mistakes thanks to instant feedback. The difficulty levels of Japanese language courses are structured in accordance with UNESCO's Common European Framework of Reference for Languages (2025). At levels A1-A2, the emphasis is on simple phrases, basic dialogues, and hieroglyphs for numbers and days of the week. Levels B1-B2 focus on developing the ability to hold discussions and write short texts. Only at levels C1-C2 do students achieve the ability to work with academic texts and translate. According to statistics from the Japan Foundation (2021b), only about 5% of students worldwide reach level C1 or higher, while the majority stop at intermediate levels.

Coverage of different age and educational groups also varies. In secondary school, Japanese is most often taught as an elective subject, while in universities it acquires the status of a core discipline. According to the Japan Foundation (2021a), about 60% of those studying Japanese belong to the 15-24 age group. This is due to the growing interest of young people in Japanese culture, particularly anime, manga, and popular music. At the same time, adult learners are more likely to use digital platforms for self-study, which allows to learn at a comfortable pace. The frequency of using digital platforms for learning Japanese is steadily increasing. According to M. Obojska & P. Vaiouli (2025), more than 70% of students regularly use mobile applications to learn grammar and vocabulary, while about 50% use online courses with interactive elements. Multimedia courses that combine video, audio, and interactive exercises are particularly popular. This ensures the comprehensive development of the four basic skills: listening, speaking, reading, and writing. The integration of authentic materials and multimedia tools into the learning process also significantly increases the effectiveness of Japanese language learning. In particular, V. Song (2023) found that students who used multimedia tools at least three times a week showed 20% better results in spontaneous speaking and 15% better results in writing tasks than those who studied using traditional methods. In addition, digital platforms promote

autonomy, as students have access to additional materials, video lessons, and forums for sharing experiences, allowing them to build their own learning trajectories. In summary, it should be noted that only a small percentage of students achieve high levels of language proficiency (C1-C2); the use of digital platforms, interactive exercises and multimedia tools significantly improves the quality of learning, promotes the development of oral and written communication, increases motivation and supports student autonomy in the language acquisition process.

Integration of UNESCO recommendations into Japanese language learning using multimedia tools

According to UNESCO's recommendations (2025) on digital education (which focus on integrating technology into the learning process to improve the quality and accessibility of education), in order to effectively learn a foreign language using multimedia tools, it is necessary to structure the learning process in such a way that that topics and language structures are logically combined, gradually increasing the complexity of the material and ensuring the comprehensive development of all language skills. The initial stage of learning should include basic topics such as "Greetings and introductions", "Self-presentation", "Asking for directions", and "Ordering food in a café/restaurant". These topics form the basis for everyday communication and familiarisation with basic language structures. At this stage, students learn simple grammatical structures such as "this is" (これは ~ です), "I am" (私は ~ です), "where is?" (~はどこですか?), "I want" (~が欲しいです). The next step is to learn polite expressions and social formulas such as "Apologies and thanks" (すみません/ありがとうございます), "Requests and invitations". These topics help students develop etiquette skills and formulate polite requests. The language structures studied at this stage include "please" (~おねがいします), "may I?" (~てもいいですか?).

In parallel with studying vocabulary and grammar, it is important to familiarise students with kanji. At the initial stage, it is recommended to learn the basic 50 kanji that form the basis for reading and writing. This allows students to recognise and use basic kanji in the context of everyday communication. In particular, language development includes studying lexical topics such as "Family and Friends", "Shops and Shopping", "Weather and Seasons", "Hobbies and Free Time". These topics help students expand their vocabulary and learn new grammatical structures such as "I have" (~があります), "I do" (~をします), "I often" (よく ~ます). In addition, listening comprehension exercises such as "Recognising Short Statements" and "Listening to dialogues with questions" help students improve their ability to understand and respond to spoken Japanese. This includes learning constructions such as "What is this?" (これはなんですか?), "How is it?" (どうですか?), "When?" (いつですか?). The use of multimedia tools such as interactive exercises on video lesson platforms with subtitles, audio textbooks, online games and dialogue simulations, mobile apps with adaptive tests, and digital flashcards allows

students to practise and master grammatical structures and lexical expressions in various communicative situations. This is in line with UNESCO's (2025) recommendations on integrating technology into the learning process to improve

the quality and accessibility of education Table 3 summarises Japanese language proficiency levels according to the CEFR scale, from beginner (A1) to advanced (C2), with characteristics of language skills for each level.

Table 3. Levels of Japanese language proficiency according to the Common European Framework of Reference for Languages

Level	Level name	Meaning/competencies	Japanese language knowledge and skills
A1	Beginner	Can understand and use familiar everyday expressions and simple structures to meet specific needs	Simple phrases and sentences, basic vocabulary (greetings, family, numbers, time), basic tonal differences, basic kanji (about 150), ability to introduce oneself and ask simple questions
A2	Elementary	Can understand sentences and frequently used expressions related to everyday life	Larger vocabulary (about 300-400 kanji), simple dialogues in shops, restaurants, transport; basic grammar (parts of speech, word order), polite expressions
B1	Intermediate	Can cope with more complex situations and express their thoughts on familiar topics	600-800 kanji, constructing simple paragraphs, understanding short texts, describing events and experiences, using simple modal constructions and tenses
B2	Above intermediate	Can communicate confidently with native speakers, understand the main ideas of complex texts	1,200-1,500 kanji, reading newspaper texts, writing essays, participating in discussions, more complex grammar, conditional and modal constructions, ability to describe causes and consequences
C1	Advanced	Can use language effectively in professional and academic situations	2,000-2,500 kanji, reading specialised texts, writing reports and articles, free use of complex grammatical structures, accuracy and richness of vocabulary
C2	Fluent	Can understand practically everything heard or read, express thoughts spontaneously, freely and accurately	3,000+ kanji, professional and academic communication, translation, ability to recognise nuances of meaning and style, adaptation of language to different situations

Source: compiled by the author based on UNESCO (2025)

To help students progress from one level of Japanese language proficiency to the next, they effectively use various types of multimedia tools, including interactive exercises, video lessons with subtitles, audio textbooks, mobile applications with adaptive tests, and digital flashcards, which allow for the comprehensive development of reading, writing, listening, and speaking skills. At the beginner levels (A1-A2), the emphasis is on consolidating basic vocabulary, simple grammatical structures and phrases through interactive tasks and audio-video materials, which helps to form basic communication skills in everyday situations, such as greetings, asking for directions or ordering in a café, while at intermediate and advanced levels (B1-C2), complex digital platforms, online dialogue simulations, listening comprehension tasks and writing exercises are used to develop complex grammatical structures, paragraph construction, participation in discussions and academic or professional communication. While combining different types of multimedia resources ensures effective assimilation of material, maintains motivation and promotes autonomy in learning, which is necessary to achieve higher levels of language competence.

DISCUSSION

The use of multimedia tools in teaching Japanese in higher education institutions contributed to an increase in students' language proficiency. Interactive platforms, digital tools, and hybrid multimedia resources increased motivation and activity in the learning process. These results were

consistent with the findings of K. Adnyani *et al.* (2022), who demonstrated the effectiveness of using game-based tests to develop lexical and grammatical competence in schoolchildren in Indonesia. The results confirmed that game elements and interactivity contributed to the activation of learning activities and increased student interest. The use of multimedia tools ensured effective assimilation of material in the areas of listening and pronunciation. These observations coincided with the results of A. Busso & B. Sanchez (2024), who noted that digital tools and artificial intelligence in teaching Japanese as a foreign language improve students' communicative competence. At the same time, the study showed that the level of effectiveness depended on the individual preparation of students to work with digital platforms, which is partly confirmed by the conclusions of N. Giang *et al.* (2021) on the readiness of higher education institutions for digital transformation and its impact on the quality of education. The analysis showed that multimedia tools allowed traditional teaching methods to be combined with distance learning platforms, creating a hybrid form of learning. This coincides with the findings of F. Farida *et al.* (2024), who noted that technology and hybrid multimedia resources contributed to the development of intercultural communication and language skills among students in higher education institutions. The use of multimedia materials, in particular video lessons and interactive exercises, ensured greater independence for students in their studies and contributed to the formation of self-control and self-regulation skills.

The use of multimedia tools had an impact on increasing classroom activity and engaging students in the learning process. These findings are consistent with the research of C. Chan & W. Hu (2023), who noted that students' assessments of the advantages and challenges of using generative artificial intelligence in higher education reflect the importance of interactive technologies for learning motivation. However, it was found that excessive dependence on technology could reduce critical thinking and independent analysis skills, which confirmed the results of S. Kot & S. Nykyporets (2024) on the use of artificial intelligence (AI) for the development of English language competence, which noted that technologies are effective when combined with traditional methods. It was highlighted that multimedia tools contributed to the individualisation of the learning process, allowing students to work at their own pace and choose the format of the materials. These results are consistent with the findings of M. Alam *et al.* (2023), who studied students' attitudes towards the digitisation of higher education in Bangladesh and identified the positive impact of digital platforms on independent learning and students' adaptation to innovative methods. At the same time, it was found that the level of student success depends on prior preparation and digital literacy, which is consistent with the data of I. Aizawa & H. Rose (2020), who showed that the transition from school education to university courses in English in Japan requires additional support resources for students with different levels of preparation. The analysis also showed that multimedia tools facilitate the integration of the intercultural component into the Japanese language learning process. This coincided with the findings of D. Baiseitova (2023), who noted that distance learning during the COVID-19 pandemic promoted the use of multimedia resources to familiarise students with the cultural characteristics of Japan. Video materials, presentations, and interactive tasks allow students not only to develop language skills but also to improve their intercultural competence. The introduction of multimedia tools supports the development of students' digital competences, which is consistent with the data of A. Abo-Khalil (2024) on the integration of sustainable development principles into higher education, where digital tools have contributed to the development of independent learning skills and adaptation to global challenges. Digital platforms allow for the effective combination of classroom and extracurricular forms of learning, which increases the overall level of language competence and ensures a more individualised approach to students with different learning styles.

This combination of technological resources and language training reflected the trend towards the integration of digital tools into linguistic education, as noted in the work of O. Kuchai *et al.* (2022), which demonstrated the link between multimedia education and the computerisation of society. The results of this study are consistent with the conclusions of the authors mentioned above, as multimedia resources contributed not only to the transfer of knowledge but also to the development of flexible thinking skills

necessary in a globalised economy. Interactive platforms and mobile applications during Japanese language learning increased student engagement, expanded opportunities for listening, speaking and writing practice, and created conditions for adaptive learning. A similar effect was previously described by S. Mirza *et al.* (2025), who found that mobile applications for learning foreign languages in higher education had a positive impact on students' motivation and perception of the learning process. The comparison showed that the use of multimedia applications in Japanese language learning had a comparable effect, confirming the trend towards mobility and personalisation of learning. The analysis demonstrated an increase in students' ability to self-organise their learning, which is consistent with the findings of L. Su *et al.* (2023), who conducted a systematic review of the effectiveness of self-regulated learning programmes in foreign language learning at the university level. The conclusions about improving learning outcomes through autonomy and planning coincide with the results of this study, where multimedia resources served not only as a source of content but also as a tool for managing one's own learning trajectory. Separately, the development of students' digital and language literacy was identified. This confirms the results of V. Yu & A. Zadorozhnyy (2022), who studied the development of language and digital literacy using multimedia presentations. The study shows that the systematic introduction of multimedia presentations into training courses improved the quality of material assimilation and the level of interactivity in classes. Similar trends were observed in the teaching of Japanese, where multimedia tools facilitated the assimilation of the hieroglyphic system, improved pronunciation, and integrated cultural content. It was also analysed that the use of multimedia platforms allows for the integration of gamification elements, which stimulated interest in the learning material.

A comparison of these data with the results of D. Pérez-Jorge & M. Martínez-Murciano (2022), who systematised the experience of gamification in higher education, revealed common patterns. In Japanese language studies, similar gamification proved effective for learning grammatical structures, vocabulary, and kanji, demonstrating the universality of this approach for different disciplines. The results obtained reflected the impact on the formation of students' intercultural competence. This observation correlates with the work of G. Poole *et al.* (2020), which investigated the transformation of the concept of global educational effect in Japanese higher education. The researchers showed that globalisation trends and technological support for educational programmes contributed to a broader understanding of cultural aspects. A similar effect was observed in this study, where multimedia tools integrated cultural texts, authentic video materials and audio resources, which formed sustainable intercultural communication skills. It was found that the introduction of multimedia platforms based on service-oriented architecture made it possible to adapt content to the needs of different groups of students. This was consistent with the

findings of Y. Liu (2020), who designed and implemented multimedia platforms for teaching, emphasising the flexibility and scalability of such systems. Similarly, the multimedia platforms used in the article made it possible to vary the complexity of tasks, expand training modules, and integrate real-time feedback.

One of the components was the assessment of the quality of digital content and online courses. The results obtained correspond to the data of R. Wolniak & K. Stecula (2024), who studied the quality of innovative e-learning at Polish universities. The researchers noted that evaluation by students and teachers made it possible to improve curricula and maintain high motivation to learn. A similar approach in the study of Japanese ensured increased satisfaction with the learning process and improved final test results. The use of multimedia tools activated the creative component of learning and stimulated the development of innovative methods of material assimilation. A comparison of these results with the work of S. Wang *et al.* (2023), which examined the role of artificial intelligence in higher education and its impact on students' self-esteem, creativity, and learning outcomes, showed similar patterns. In Japanese language research, the integration of artificial intelligence elements (e.g., adaptive chatbots for dialogue training) enhanced the effect of personalised learning and developed students' creative thinking. In addition, the results were compared with data from V. Marin *et al.* (2020), who studied national infrastructures for digital open educational resources in higher education. The researchers found that the availability of advanced digital systems supported the integration of multimedia into curricula. It was established that access to open multimedia resources (online dictionaries, interactive platforms, video archives) contributed to the flexibility of learning and faster content updates.

CONCLUSIONS

An analysis of educational multimedia platforms for learning Japanese in higher education institutions showed that multimedia tools constitute an integrated system of digital technologies, software and electronic resources that combine text, audio, video and interactive components to create a multi-channel learning environment. Such resources support communication-oriented learning, providing access to authentic materials, gamified tasks, adaptive testing, and individualised learning paths. Content analysis of JapanesePod101, NHK World Easy Japanese, iTalki, Rosetta Stone Advanced Japanese, and LingQ revealed that each platform implemented different pedagogical approaches and provided unique opportunities for students.

JapanesePod101 offers a multi-level system of lessons from N5 to N1 with a large number of video and audio lessons, interactive exercises, and dictionaries, allowing students to practise listening, pronunciation, and preparation for certification exams. NHK World Easy Japanese provides access to authentic language and cultural content from Japan's public broadcaster, combining lessons with news and examples of contemporary language, thereby supporting the acquisition of vocabulary and grammar.

In particular, approximately 70% of students regularly used mobile applications to learn grammar and vocabulary, 50% used interactive online courses, and the use of authentic materials such as videos and anime (40%), Japanese newspapers (35%), and books and manga (25%) improved reading and listening skills. Students who worked with multimedia resources at least three times a week showed 20% better results in spontaneous speaking and 15% better results in writing tasks, while the integration of interactive exercises, video lessons with subtitles and digital flashcards contributed to the development of oral and written communication, the consolidation of grammar and vocabulary, and increased student motivation and autonomy. The data also showed that only about 5% of students achieved high levels of Japanese language proficiency (C1-C2).

An analysis of the implementation of UNESCO recommendations for learning Japanese using multimedia tools showed that the gradual integration of topics and language structures from basic (A1-A2) to complex (B1-C2) allows students to consistently develop communication skills, learn vocabulary and grammar, and develop reading, writing, listening and speaking skills. The study was limited to the analysis of selected multimedia platforms and sources that provided access to authentic materials and interactive exercises, and also covered statistical data from several countries and educational groups. Prospects for further research include expanding the scope of analysis of multimedia platforms and studying their impact on the development of language competences, incorporating statistical data on the study of Japanese in other countries, researching the improvement of individual language skills, etc.

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<https://orcid.org/0000-0002-3488-6159>**Застосування мультимедійних засобів
для викладання японської мови у закладах вищої освіти**

Анотація. Метою дослідження було вивчення впливу мультимедійних ресурсів на ефективність вивчення японської мови у вищих навчальних закладах. Було проаналізовано освітні мультимедійні платформи для вивчення японської мови у вищих навчальних закладах і встановлено, що вони становлять інтегровану систему цифрових технологій, яка поєднує текстові, аудіо-, відео- та інтерактивні компоненти для створення багатоканального навчального середовища. Було встановлено, що використання таких платформ, як JapanesePod101, NHK World Easy Japanese, iTalki, Rosetta Stone Advanced Japanese та LingQ, надає доступ до автентичних матеріалів, інтерактивних вправ та персоналізованих навчальних програм, що сприяє розвитку навичок усного та письмового спілкування, закріпленню граматики та лексики, а також підвищенню мотивації та самостійності студентів. Статистичний аналіз успішності студентів показав, що регулярне використання мультимедійних ресурсів покращило результати на 15-20 %, а комбіноване використання відеоуроків, інтерактивних вправ та цифрових флешкарт забезпечило всебічний розвиток мовних навичок. Зокрема, приблизно 70 % студентів регулярно використовували мобільні додатки для вивчення граматики та лексики, 50 % використовували інтерактивні онлайн-курси, а використання автентичних матеріалів, таких як відео та аніме (40 %), японські газети (35 %) та книги і манга (25 %), покращило навички читання та аудіювання. Також було виявлено, що інтеграція рекомендацій Організації Об'єднаних Націй з питань освіти, науки і культури дозволяє поступово підвищувати рівні складності від A1 до C2, розвиваючи комунікативні навички та культурну компетентність студентів. Практичне значення роботи полягає в тому, що результати дослідження можуть бути використані викладачами та методистами вищих навчальних закладів для оптимізації програм викладання японської мови, а дослідники в галузі мовної освіти та цифрових технологій можуть аналізувати ефективність мультимедійних платформ та впроваджувати подібні інструменти для підвищення мотивації, автономності та мовних компетенцій студентів

Ключові слова: студенти; цифрові ресурси; комунікативна компетентність; автентичні матеріали; носії мови

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Abstract. In the conditions of globalisation and the growth of the role of English as a universal means of international communication, effective pedagogical assessment in the process of its study is of particular importance. The combination of conventional and innovative forms of assessment contributed to the development of communicative competence, increasing students' motivation and readiness for successful activity in an international environment. The purpose of the study was to define and substantiate the types of pedagogical assessment in the process of teaching English, and to reveal their functions, forms, and motivational potential. The research methodology was based on a theoretical analysis of scientific and pedagogical sources, a comparative analysis of approaches to the classification of assessment, and a generalisation of the results of previous studies to develop a systematic vision of its role in the language training of students. As a result of the analysis, it was found that pedagogical assessment performs a controlling, diagnostic, corrective, motivational, developmental, and prognostic function. The forms of assessment were generalised – formative, summative, self-assessment, and mutual assessment – considering their impact on the learning activity of students. It was showed that the use of various tools (testing, project work, electronic portfolios, game and simulation tasks) contributed to increasing the interest and autonomy of students. It was emphasised that motivational potential increases under the condition of transparent criteria, timely feedback, and differentiated tasks. It was determined that an effective assessment system in teaching English should integrate linguistic and professionally oriented parameters, especially in the preparation of students of non-linguistic specialities. The practical significance of the study lied in the possibility of using its provisions by English teachers and methodologists to improve the assessment system, focused on increasing learning motivation and developing foreign language communicative competence of students

Keywords: control; language training; cognitive activity; educational diagnostics; student motivation; language teaching methodology

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INTRODUCTION

Control of student knowledge is a key component of the educational process, serving not only as a means of measuring results but also as a channel for feedback between teacher and learner. Objective and impartial assessment ensures fairness, fosters trust in the learning environment, and enables the timely identification of difficulties in mastering material, making it possible to adapt educational

trajectories to individual needs. In this way, pedagogical assessment also fulfils psychological and developmental functions, supporting personal growth and creating conditions for shaping an individual educational pathway.

Pedagogical assessment played an important role in supporting the psychological development of students, since its partial subjectivity contributes to the implementation



of an individual approach in teaching and education. In the work of Ukrainian researchers, in particular P. Luzan *et al.* (2021), the task of pedagogical assessment was not limited to identifying the fact of mastering the material; it also involved evaluating the effectiveness of the applied pedagogical methods, techniques, and strategies. Such assessment helps to determine whether there is positive progress in academic achievements, whether the quality of knowledge indicators is improving compared to previous results, or whether they remain at a stable level. Thus, assessment is not the ultimate goal, but a means of monitoring, analysing, and improving the educational process as a whole. Therefore, if the assessment process is mostly focused on the result, rather than the process, it often causes students to fear making a mistake, an increased sense of anxiety, loss of self-confidence and, as a result, a decrease in motivation to study – especially in case of failure. The educational model is increasingly moving away from the conventional idea of assessment as an exclusively tool for checking acquired knowledge, instead it is considered as a multifunctional process that involved not only recording results and diagnosing the educational process as a whole, but also, according to P. Luzan *et al.* (2022), became a dynamic means of feedback between participants in the educational process. This facilitates timely identification of both successful strategies for learning the material and difficulties that require pedagogical intervention.

According to E. Furtak (2022), assessment was designed to determine the level of students' mastery of educational material based on a daily analysis of the results of their work and special tests, considering the completeness, awareness, strength of knowledge, the ability to apply them in practice, and the ability to think independently. In the scientific community, there was also a steady interest in studying the motivational function of assessment. Thus, R. Majeed & M.S. Hagger (2025) emphasised that the greatest motivational effect was achieved when assessment contributed to a sense of autonomy (the ability to choose), competence (awareness of personal progress), and social inclusion (constructive interaction with others). According to C. Krijgsman *et al.* (2025), effectively organised assessment played an important role in increasing learning motivation, as it aroused interest in the educational material and encouraged active participation of applicants in

the learning process. Researchers Z. Yan & L. Yang (2021) found that assessment was associated with interest in the learning process, in particular, through involvement in project activities or self-assessment practices, which significantly enhanced motivation and contributed to improving academic results. J.D. Meier (2025) argued that assessment could perform not only a controlling but also a stimulating function; however, with the wrong approach, it suppressed cognitive activity. Moreover, P. Kanecki (2024) warned that using assessment exclusively as a means of punishment led to a decrease in internal motivation, increased the level of anxiety, and formed an externally oriented behaviour, the basis of which was the fear of making a mistake, rather than interest in learning. The purpose of the study was to substantiate and reveal the types of pedagogical assessment in the process of teaching English to future ship mechanics for professional purposes, to determine their functions and potential in combination with professionally oriented tasks, and to clarify the role of assessment in the development of English language communicative and professional competence of students.

MATERIALS AND METHODS

The study used a set of interconnected theoretical and empirical methods that ensured the systematic and comprehensive substantiation of the scientific problem and allowed confirming the reliability and validity of the results obtained. At the theoretical level, analysis, synthesis, comparison, systematisation, and generalisation were used to explore scientific and pedagogical approaches to assessing educational achievements, to identify key trends in language experience, and to determine the methodological principles of the study. The empirical stage included three components: pedagogical observation, questionnaires, and conducting a pedagogical experiment. Pedagogical observation was carried out over one semester in groups of second-year cadets of the speciality "Operation of ship power plants" (64 participants). An observation scheme was used, which provided for the recording of the following indicators: student activity during the exercises, level of motivation, independence in working with educational tasks, degree of involvement in communicative exercises, and manifestation of initiative. To ensure objectivity, observations were conducted by several teachers using uniform criteria (Fig. 1).

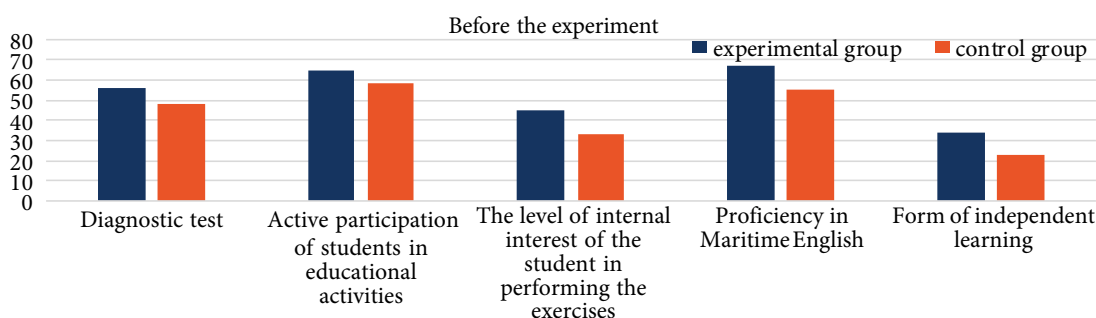


Figure 1. Data before the experiment

Source: compiled based on research data collected

The cadets were surveyed to identify their attitude to the proposed teaching and assessment methods, difficulties in learning the material, and expectations regarding the organisation of language training. Two types of questionnaires were used: with closed questions (scale and test) for quantitative analysis and open questions for qualitative analysis. Examples of questions: “What forms of control do you consider to be the most effective for the development of professional English?”; “What motivates you most when performing tasks in Maritime English?”. The pedagogical experiment was conducted in three stages: confirmatory, formative, and control. At the summative stage, an initial diagnosis of the level of cadets’ English language training was carried out using a standardised test based on the requirements of the CEFR and IMO Model Course 3.17. The formative stage involved the implementation of the developed methodology: in the experimental group (33 students), an integrated assessment system was used, which included formative assessment, peer assessment, role-playing games, and an electronic portfolio; in the control group (31 students), training was carried out using conventional methods with an emphasis on summative testing and written tests. At the control stage, final testing and repeated questionnaires were conducted, which allowed comparing the dynamics of changes in the two groups.

Assessment tools included standardised language tests (based on the Cambridge Placement Test, adapted to the professional context), control tasks with technical terminology (working with manuals, instructions, diagrams), situational role-playing games (modelling emergencies on board a ship), and self-assessment sheets, where cadets determined their level of development of language and communication skills. To evaluate changes in students’ emotional state and anxiety levels, a Likert scale ($N = 64$) was used in a survey. The survey with the Likert scale was administered both before and after the experiment to enable a comparative analysis of the data. This approach helped to quantify the emotional changes experienced by the students. Quantitative data analysis was carried out using mathematical statistics methods: calculation of mean values, standard deviations, Student’s t -test to determine the statistical significance of differences between groups, and Pearson correlation coefficients to identify the relationship between motivational and cognitive indicators. Qualitative analysis was based on content analysis of responses to open-ended questionnaire questions and reflective reports of students. Thus, the comprehensive design of the experiment allowed ensuring the objectivity of the assessment, confirming the validity of the methods used, and carrying out a reliable comparison of the results of the experimental and control groups.

During the research, considerable attention was paid to the implementation of interactive forms of learning, modelling professionally oriented communication situations, and creating conditions for the practical application of language knowledge in future professional activities. This approach contributed not only to the development of

language competencies but also to the formation of a positive attitude towards the process of testing knowledge. In particular, the reduction of anxiety connected with the fear of making mistakes was identified through a combination of diagnostic tools. In this study, complex tasks were operationally defined as assignments that went beyond the reproduction of previously learned material and required students to integrate knowledge from several modules, employ professional Maritime English terminology, and demonstrate decision-making skills in simulated professional contexts. Such tasks included, for instance, writing a technical report in English on the malfunction of a ship’s engine system with suggested corrective measures, performing a case-study simulation in which cadets identified and corrected errors in safety instructions according to the International Convention for the Safety of Life at Sea (1974), conducting role-play dialogues between a chief engineer and a junior engineer aimed at troubleshooting communication during emergency situations on board, and translating fragments of technical documentation (e.g., an engine maintenance manual) into operational English adapted for use by the crew. All procedures carried out in the study adhered to ethical standards, respecting the honour and dignity of participants and taking into consideration their psychological characteristics, including age. Throughout the experiment, the rights of students were not infringed, and anonymity was ensured in line with the ethical guidelines for conducting pedagogical research recommended by recognised organisations, such as the American Educational Research Association (2011) and the British Educational Research Association (2018).

RESULTS AND DISCUSSION

Theoretical part of the results

Any pedagogical assessment should be purposeful, justified and perform a specific function in the structure of the educational process, because it is on its basis that further pedagogical decisions are made, corrective actions are planned, and an individual educational trajectory is built, as noted by V. Drychuk (2020). Assessment should not be limited only to fixing the result – it is considered an integrated component of learning, which performs diagnostic, regulatory, corrective and motivational functions. L. Duesbery & P. Justice (2024) suggested that in this sense, assessment becomes an active tool for shaping the quality of education and the development of the student’s personality. Thus, according to Osvita.ua (2024), the diagnostic function determines the level of knowledge, skills, and abilities of students at the beginning of their studies to adjust the educational process. For example, before starting to study a new section of English, the teacher gives students a short introductory test (pre-test) or conducts an oral survey to find out how well they already know the basic concepts. Based on the results of this test, the teacher can adjust the lesson plan accordingly: if most students already possess the necessary knowledge, the focus can shift to more advanced tasks; if notable gaps are detected, greater

emphasis should be placed on reinforcing fundamental concepts. An important contribution to this approach was made by B.S. Bloom (1956), whose taxonomy of educational goals includes preliminary assessment as a means of determining student readiness for learning.

S. Naumenko & S. Holovko (2023) noted that educational (formative) function provides tracking of the dynamics of educational progress, helps to provide feedback to students on their mistakes and achievements, promotes self-reflection and self-correction. For example, when writing an essay in English, instead of simply giving a grade, the teacher provides detailed written feedback, indicating specific grammatical errors, lexical inaccuracies, and strengths of the work. The teacher can also offer criteria for self-assessment so that students themselves analyse their essays before submitting. This helps them to understand what they still need to work on and how to improve their writing skills. This function is central to the concept of formative assessment, which was actively developed by D. Wiliam (2023). The researcher emphasised that the main goal of assessment is not just to measure, but to improve learning by providing timely and high-quality feedback. A. Hryvko & L. Vashchenko (2021) concluded that the corrective function of assessment enables the teacher to adapt the educational process, making adjustments to teaching methods, learning materials, or tasks based on the results obtained. For example, after a listening test reveals that most students struggle to recognise English accents, the teacher may determine that standard exercises are insufficient and revise the plan to include a wider range of audio recordings with different accents, along with additional activities aimed at developing prediction skills and identifying key information. This function represents a logical extension of formative assessment. B.S. Bloom (1956), emphasised that assessment should be used to identify learning gaps and subsequently modify instruction so that each learner attains the required level of mastery. According to M. Alqassab & E. Panadero (2022), the controlling or summative function was used to evaluate the final learning outcomes, summarise achievements, and assign grades for a specific period, such as a topic, semester, or academic year. For instance, at the end of the semester, students take a comprehensive English exam that assesses reading, writing, listening, and speaking skills. The results of this exam are then used to assign a final grade, reflecting the overall level of language proficiency attained during the entire period of study. Although summative assessment was criticised for its insufficient motivational potential, it is necessary for reporting and certification. This function is closely related to the early stages of the development of pedagogy and assessment as a way to check the mastery of the curriculum. As for the predictive function, M. Alqassab & E. Panadero (2022) concluded that it sets learning goals for the future, predicts future successes of applicants or possible difficulties. For example, based on the results of an English entrance test in a new class, a teacher notices that some students, despite generally good performance,

have difficulties using grammar. This allows predicting potential learning problems and developing support strategies for these students in advance (e.g., additional tasks, individual consultations).

In turn, the educational function helped in the development of responsibility, independence, and an objective attitude towards personal achievements and shortcomings. For example, R. Xie (2024) noted that after writing a test, the teacher does not simply distribute notebooks with grades, but organises self-analysis and peer review. Applicants evaluate their work and the work of their classmates according to certain criteria, and discuss mistakes and successes. This teaches them to be objective, see their strengths and weaknesses, and take responsibility for their learning. Special attention in pedagogy was paid to the motivational function of assessment because motivation is the driving force that determines the success and intensity of educational activity. It was developed under the influence of both internal factors (cognitive interest, self-esteem, value orientations) and external stimuli, among which assessment occupied one of the leading places. According to C. Krijgsman *et al.* (2025), it is positive reinforcement through assessment that can effectively stimulate the desire to achieve better results, arouse interest in knowledge, and strengthen faith in own strengths. According to J. Xu & Q. Liu (2025), in the context of learning, motivation acts as a multi-level system of incentives, from natural interest in new information to a socially conditioned desire to receive recognition, praise, or a high score. An insufficient level of motivation was manifested in various aspects of educational activity: decreased interest, passivity in classes, avoidance of independent work, a formal attitude to tasks, lack of in-depth study of the material, and in decreased self-esteem and loss of interest in studying individual academic disciplines, in particular English language. In this context, it is important to realise the significance of differentiating assessment types, as each of them performs a specific function in the educational process. In pedagogical practice, several main types of assessment are distinguished, each of which has its purpose, time of application, and didactic goal. One of these is diagnostic assessment, which is carried out at the beginning of studying a new material, topic or training course in order to identify the initial level of training of education seekers.

The main purpose of diagnostic assessment is not only to record existing knowledge, skills, and abilities, but also to identify possible difficulties, gaps in knowledge or deviations in the assimilation of the material. As noted by I.M. Kalynina (2021), it helped to establish the zone of proximal development and to determine corrective measures to eliminate the identified problems. This is what makes further training more targeted, adapted to the individual needs of education seekers, and helps to increase the efficiency of all subsequent stages of the educational process. Summative assessment plays a key role in the educational control system, as it records the level of achievement of the student after completing a certain stage

of training – a module, topic, section, or course. According to K. Johnson (2025), such assessment helps to objectively determine the level of assimilation of educational material, record the results of the student's activities using such tools as exams, essays, projects, written works, etc. In addition to stating the results, summative assessment can stimulate the development of analytical, critical and creative thinking, and activate the application of knowledge in simulated or real-life situations. According to L. Tovkun & L. Lokhvytska (2025), current assessment is carried out at all stages of the educational process and has mainly a controlling and regulatory function. Its goal is to timely identify the level of assimilation of the material, adjust the teacher's actions, and activate the student's educational activities. Ongoing assessment includes oral responses, tests, practical tasks, participation in discussions and other forms of active involvement in learning. It is also an indicator of learning dynamics and can play a motivational role if carried out in a constructive and supportive tone. However, formative assessment, unlike summative, is focused not only on the result but on the dynamics of learning. Its main purpose is to accompany the learner throughout the learning process, providing constant feedback and promoting self-improvement. According to D. Wiliam (2023), formative assessment has the potential to significantly influence internal motivation, self-confidence, and increased interest in learning.

Based on its implementation, assessment is transformed from a control tool to a means of pedagogical support, development of personality and educational autonomy. As noted by I.M. Kalynina (2021), formative assessment helps to increase cognitive interest, forms a responsible attitude to learning, and creates an atmosphere of pedagogical support. E. Furtak (2022) considered that formative assessment involves the use of various methods and forms, including: self-assessment, peer assessment, portfolio, and project learning. In particular, self-assessment is an important tool for the development of reflection – the student's awareness of their progress, skills, mistakes and ways to overcome them. It contributes to the development of skills of self-analysis, goal setting, responsibility for learning results and critical thinking. D. Wiliam (2023) defined formative assessment as all actions performed by a teacher and a student during learning, to obtain feedback, which is used to improve teaching and learning.

Empirical part of the results

During the survey, students were asked to evaluate their emotional state when performing oral and written tasks in English. A comparative analysis of responses in the pre-experiment and post-experiment stages revealed a noticeable decrease in the number of students who reported high levels of anxiety (Fig. 2).

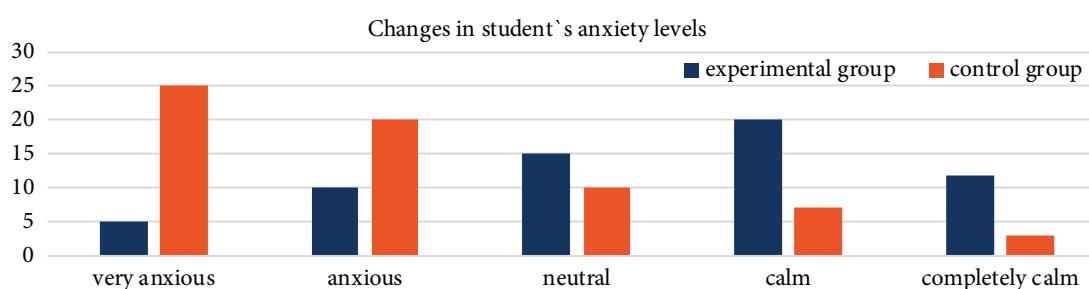


Figure 2. Changes in student's anxiety levels

Source: compiled based on research data collected

During the pedagogical observation, indicators such as hesitation before answering, avoidance of participation in role-playing tasks or asking for additional confirmation from the teacher were recorded. In the experimental group, the frequency of such manifestations decreased, which indirectly confirmed greater confidence in their own abilities. The increased involvement in self-assessment and reflection was evidenced by the systematic use of self-assessment sheets and reflective journals, where students independently analysed their mistakes, suggested ways of correction, and tracked their progress. The qualitative analysis of these materials showed that cadets gradually shifted from focusing only on errors to recognising their achievements, planning further improvement, and formulating realistic learning goals. An important role was played by the objectivity and fairness of the assessment, which ensured a positive emotional climate in the learning environment

and motivated applicants to actively participate in the educational process and achieve personally significant results (the criteria for assessing academic achievements were explained in advance and discussed with students). The results confirmed the positive trend: a gradual increase in the level of internal motivation was observed, which was manifested in a change in attitude towards the learning process, an increase in interest in acquiring new knowledge, and in the desire to apply the studied material in professionally significant contexts.

Regarding the theoretical material presented above, the findings of the experimental study confirmed the importance of comprehensively applying diagnostic, formative, corrective, and motivational functions of assessment. In particular, the introduction of motivational assessment, interactive methods and professionally oriented tasks contributed to a decrease in the share of participants who

did not connect English learning with professional needs. Notably, at the beginning of the experimental study, the determination of this indicator was carried out by means of questionnaires and interviews of participants aimed at clarifying their attitude towards the English language and their awareness of its role in future professional activities. The indicator was determined based on the questionnaire survey conducted among cadets. In particular, one of the questions asked students to evaluate the relevance of English to their future professional activity. Respondents had to choose from several options: “directly connected with my profession”, “partially connected”, “not connected at all”. The group of students (22.3%) who selected “not connected at all” or “partially connected” was classified as those who perceived English without a clear professional orientation. After the introduction of motivational assessment, interactive teaching methods and professionally oriented tasks, the proportion of such responses almost halved – to 11%. Such dynamics indicated a positive transformation of the attitude of applicants to the subject, which is based on the

awareness of the applied value of English proficiency in the future professional activities of ship mechanics.

The changes also affected the level of educational activity of applicants. The indicators included voluntary responses in classes, participation in mini-projects, and independent work with additional sources of information. These data served as the foundation for comparing subsequent dynamics. By the end of the experiment, significant positive changes were observed in the experimental group. There was a noticeable increase in participation in the learning process: the number of voluntary responses in classes, involvement in the implementation of mini-projects, and independent work with additional sources of information increased by an average of 27% compared to the initial level. These results clearly demonstrated the effectiveness of the introduced model of assessment in motivating cadets to be more active and autonomous in their studies. The comparative data are presented in Table 1, which shows the dynamics of the main indicators before and after the experiment.

Table 1. Dynamics of students' participation in the learning process (%)

Indicator	Before the experiment	After the experiment	Growth
Voluntary responses in classes	42	71	+29
Participation in mini-projects	38	64	+26
Independent work with additional sources	35	61	+26
Average increase	-	-	+27

Source: compiled by the author

During the final test, not only were the total scores recorded, but also the number of completed tasks of increased complexity. A comparison of indicators showed that the average score increased by 1.4 points on a 10-point scale, which reflected a tangible improvement in the quality of mastering the material. Before the experiment, the average score of students in the experimental group was 6.2 points, while at the final stage it reached 7.6 points. This growth confirmed not only a quantitative but also a qualitative enhancement of knowledge acquisition. Particularly noticeable was the increase in the

share of correctly completed complex tasks, which rose by 38% compared to the initial results. These assignments were considered complex because they combined several assessment criteria: correctness of terminology, grammatical accuracy, coherence of presentation, compliance with international standards (International Convention for the Safety..., 1974), and the ability to transfer linguistic knowledge into a professional context, which confirms the development of the ability to independently apply the acquired knowledge in new, professionally oriented situations (Fig. 3).

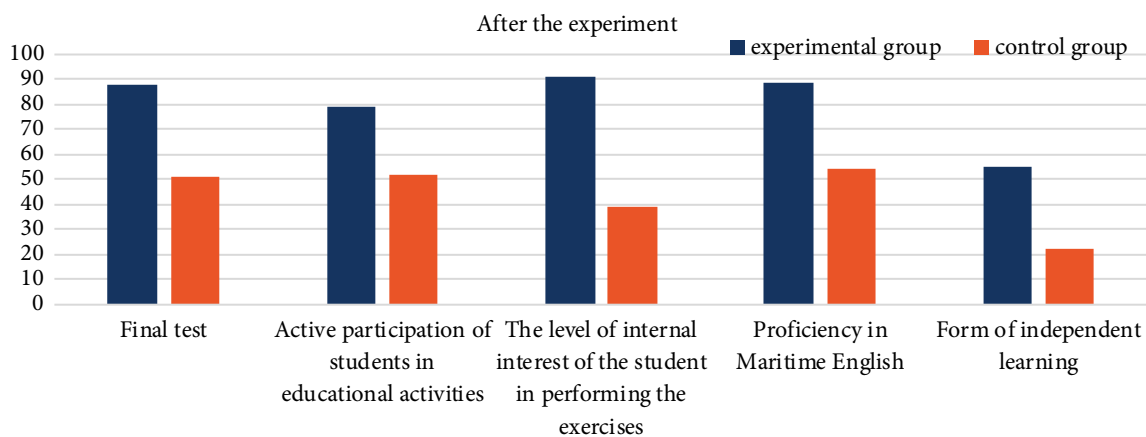


Figure 3. Results of the second survey

Source: compiled based on research data collected

The results of the study confirmed that the use of assessment tools plays a key role in developing an active position of students in the educational process and increasing the level of internal motivation. A significant increase in students' initiative was observed, especially when performing communicative tasks, participating in role-playing games, and modelling situations. Students began to interact more actively with each other, showing a willingness to improve language skills not only during classroom lessons but also within the framework of independent training. Special emphasis was placed on creating conditions for students to be aware of their progress in learning, develop reflective skills and internal responsibility for results. The use of various forms of feedback, self-assessment and mutual assessment practices, and targeted individual recommendations, contributed to the establishment of a trusting educational environment in which assessment was perceived as support, not punishment.

At the research stage, observation was the main empirical method, enabling the recording of student involvement levels in learning activities during classes in the discipline "English for Specific Purposes". The analysis showed that at the beginning of the experiment, passivity prevailed: most applicants completed tasks exclusively on the initiative of the teacher, avoiding interpersonal communication in English and demonstrating a limited desire to cooperate in groups. The motives for learning were mostly external – the desire to get a grade prevailed over interest in the content of the subject. However, after the targeted introduction of elements, active and interactive learning methods (games, project activities, cases, role-playing), significant changes were achieved. Learning activity increased: applicants began to more often initiate participation in collective work, independently search for additional information, and also more actively use English in a professionally oriented context. Such dynamics confirm the feasibility of the systematic use of motivational assessment as an effective means of increasing the effectiveness of language training for future technical specialists. However, it is important to note that the results of the study have a local character, since the experiment was conducted on a relatively small sample of cadets within one educational institution. Therefore, the findings cannot be automatically generalised to all higher education institutions or to students of other specialities without additional large-scale research. The results of the pedagogical experiment confirmed the importance of integrating various forms and methods of assessment, focused not only on knowledge control, but also on the development of motivation, self-assessment, and professional competencies. Comparison with scientific publications gives grounds to assert that the results of this study are consistent with global trends, although they also have specifics related to the features of training future ship mechanics.

An important confirmation was the study by M. Alqasab & E. Panadero (2022), in which peer assessment was defined as one of the key tools for the development of students' evaluative competence. Similar results were found

in experiment: peer assessment contributed to increasing the responsibility of cadets for their own learning, formed objectivity in the perception of results, and also developed communication skills, which is especially important for future specialists in the maritime industry. However, this research noted that in the context of professionally oriented training, peer assessment should be closely linked to the modelling of production situations, which is not always emphasised in general pedagogical research. No less significant is the educational portfolio method. G. Martin-Kniep (2022) interpreted it as a tool for tracking a student's educational path, which facilitates a comprehensive recording of their progress. The current study confirmed this idea, as the use of an electronic portfolio by cadets contributed to the development of reflection skills and awareness of their achievements. L. Perminova *et al.* (2024) emphasised that the portfolio forms the independence and motivation of students. However, the portfolio had another feature – it contained professionally oriented tasks, which allowed cadets to track the dynamics of professional English-language training. An important element was also the method of project-based learning. The study by Z. Pučko & N. Šuman (2023) emphasised that projects allow students to acquire knowledge through the performance of practically significant tasks. Experiment showed that the use of project tasks with the simulation of real maritime situations (for example, drawing up instructions in English or reproducing emergency dialogues) significantly increased the interest of cadets and contributed to the development of interdisciplinary competencies. Thus, it confirmed the conclusions of the above researchers but specified them in a professional and technical context.

The importance of game and simulation methods was emphasised by L. Duesbery & P. Justice (2024), indicating their role in increasing motivation. Similar results were obtained by the current study: the use of business games and role-playing situations in training classes had a positive effect on the communicative activity of cadets. However, in contrast to L. Duesbery & P. Justice, general conclusions have showed that for cadets it is important not only to simulate communication situations, but also to work with English-language technical documentation, which combines language and professional training. Additional confirmation of the effectiveness of differentiated tasks is the findings of C.P. Dwyer & H.A. Butler (2025), who emphasised their impact on the development of self-regulation and critical thinking. In experiment, task differentiation allowed considering the different levels of initial training of cadets, which reduced the level of anxiety and contributed to greater interest in studying the material. Thus, the data obtained are fully correlated with the conclusions of these researchers. The paper by H. Bondarenko (2021) deserves special attention, which emphasises the role of project technologies in the development of key competencies, such as organisation, sociability, and creativity. Results confirm this, but add that for cadets of maritime specialities, the competencies of teamwork and responsibility for collective

decisions become especially important, since they are decisive in professional activity on a ship. It can be noted that the results of experiment are confirmed by a number of studies of recent years. However, the specificity of the study lies in the combination of linguistic and professionally oriented tasks, which provides a closer connection of the assessment with the future activities of ship mechanics. This is what distinguishes this study from most papers that consider only the general linguistic aspect of the assessment. Thus, the study confirms the relevance of global approaches to innovative pedagogical assessment, while demonstrating the need for their adaptation to the conditions of maritime professional education. This indicates the significant potential of combining conventional assessment methods (tests, control tasks) with innovative forms (portfolios, peer evaluation, projects, business games), which not only improve the quality of English-language training, but also contribute to the professional development of future ship mechanics.

CONCLUSIONS

The conducted research confirmed that pedagogical assessment in the process of teaching Maritime English plays a multifunctional role. It was not limited to monitoring achievements but became a powerful tool for motivation, stimulation of cognitive activity, and regulation of the educational process. The effectiveness of assessment increases significantly when it has clearly defined goals, meets the learning objectives, and is integrated into the content and practical aspects of training. The empirical results demonstrated noticeable progress in the experimental group. In particular, the average final test score increased by 1.4 points on a 12-point scale, compared to the baseline results. The proportion of correctly completed complex tasks (case studies, simulation-based assignments, and analysis of professional documentation) grew by 38%. Participation in educational activities also improved: the number of voluntary responses, engagement in mini-projects, and independent work with additional sources increased on average by 27% compared to the initial level. Moreover, the level of internal motivation and interest in completing assignments showed a steady upward trend, while indicators of anxiety related to English language use decreased, as reflected in the self-assessment survey results. The use of various

forms of assessment – formative assessment, peer assessment, self-assessment, automated testing with feedback, portfolio, and project tasks – ensured the individualisation of learning, promoted the development of critical thinking, independence, and responsibility for results. An important factor of success was the integration of assessment practices with authentic, professionally oriented communicative situations, which helped students to apply language skills in the context of their future professional activity.

A differentiated approach allowed considering varying levels of student preparation, providing targeted feedback, and creating conditions for adaptive learning. Such approaches contributed to the comprehensive development of both linguistic and professional competencies, which is particularly significant for students of technical and professional specialities. However, the obtained results should be interpreted with caution. The study was conducted on a relatively small sample of cadets (64 students) within one educational institution, which limits the possibility of generalising the findings to all higher education institutions. Thus, properly structured and student-oriented assessment strategies can be considered a key factor in enhancing the quality of education. These approaches foster sustained motivation, promote a deeper understanding of the subject matter, and develop the ability to transfer acquired knowledge and skills into real professional contexts. In this sense, pedagogical assessment becomes not merely an indicator of achievement but an effective instrument for shaping competent, independent specialists, well-prepared to meet professional challenges. Areas for further research include expanding the sample to students of different technical specialities and institutions, testing the long-term impact of formative assessment, and analysing the role of digital assessment tools in developing professional competencies.

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CONFLICT OF INTEREST

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Викладач

Відокремлений структурний підрозділ «Морський фаховий коледж

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Види педагогічного оцінювання в процесі навчання англійської мови: функції, форми, мотиваційний потенціал

Анотація. В умовах глобалізації та зростання ролі англійської мови як універсального засобу міжнародного спілкування особливого значення набуває ефективна педагогічна оцінка в процесі її вивчення. Поєднання традиційних та інноваційних форм оцінювання сприяло розвитку комунікативної компетентності, підвищенню мотивації студентів та їх готовності до успішної діяльності в міжнародному середовищі. Метою дослідження було визначити та обґрунтувати види педагогічної оцінки в процесі навчання англійської мови, а також виявити їх функції, форми та мотиваційний потенціал. Методологія дослідження базувалася на теоретичному аналізі науково-педагогічних джерел, порівняльному аналізі підходів до класифікації оцінювання та узагальненні результатів попередніх досліджень для формування системного бачення його ролі в мовній підготовці студентів. В результаті аналізу було встановлено, що педагогічне оцінювання виконує контролюючу, діагностичну, корекційну, мотиваційну, розвивальну та прогностичну функції. Форми оцінювання були узагальнені – формувальне, підсумкове, самооцінювання та взаємне оцінювання – з урахуванням їх впливу на навчальну діяльність студентів. Було показано, що використання різних інструментів (тестування, проектна робота, електронні портфоліо, ігрові та симуляційні завдання) сприяло підвищенню зацікавленості та самостійності студентів. Було підкреслено, що мотиваційний потенціал зростає за умови прозорих критеріїв, своєчасного зворотного зв'язку та диференційованих завдань. Було визначено, що ефективна система оцінювання у викладанні англійської мови повинна інтегрувати лінгвістичні та професійно орієнтовані параметри, особливо у підготовці студентів нелінгвістичних спеціальностей. Практичне значення дослідження полягало у можливості використання його положень викладачами англійської мови та методистами для вдосконалення системи оцінювання, орієнтованої на підвищення мотивації до навчання та розвиток комунікативної компетентності студентів у іноземній мові

Ключові слова: контроль; мовне навчання; пізнавальна діяльність; освітня діагностика; мотивація студентів; методика викладання мови

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Organisation of scientific activities of postgraduate students in the context of the educational environment transformation: Factors and current trends

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Abstract. The relevance of the study is determined by the need to update approaches to the scientific training of third-level education seekers in line with contemporary challenges, such as the fragmentation of scientific activity support, the gap between theory and practice, and the insufficient motivation of postgraduate students for scientific work. The purpose of the study was to identify effective models of organisations of scientific activity in postgraduate studies and analyse tools for supporting the scientific work of graduate students. The methodological basis of the research was the analysis of scientific sources, an empirical survey of graduate students and analysis of their responses, and statistical processing of the results. A comprehensive approach was applied, combining pedagogical, psychological, and organisational aspects, including the analysis of educational conditions, structural support mechanisms, features of academic behaviour and digital integration. Descriptive statistics and Spearman's rank correlation coefficient were used for quantitative analysis; data were processed using SPSS 28 software suite. For a qualitative analysis of the interviews, thematic coding was used in NVivo 14, which allowed helped to identify dominant patterns and regularities in the respondents' experiences. The results showed that access to international scientific databases correlated with higher self-assessment of scientific progress ($\rho = 0.42$; $p < 0.05$). It was revealed that the effectiveness of scientific activity of graduate students largely depended on comprehensive scientific support, methodological support, digital tools, and participation in international academic networks. The study confirmed that systematic mentoring and institutional support contributed to the growth of publication activity, professional mobility, and integration of graduate students into global scientific communities. The conclusions emphasised the importance of holistic provision of academic activities, and outlined the prospects for further research related to the psychological well-being of graduate students and the assessment of the effectiveness of digital tools in the process of scientific training. The practical significance of the study lies

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in the development of a holistic approach to supporting graduate students, which can be integrated into the activities of higher education institutions

Keywords: academic competence; mentoring; digital resources; scientific support; publication activity; international integration; institutional support

INTRODUCTION

The transformation of higher education in Ukraine is accompanied by a number of challenges that significantly affect the system of training doctors of philosophy. In the contemporary conditions of digitalisation, globalisation of science, and military conditions, the issue of organising the scientific activities of graduate students is becoming particularly relevant. Conventional models of scientific leadership, which focus mainly on administrative control and formal evaluation of results, are no longer able to fully ensure the effective functioning of postgraduate studies. They do not consider the growing requirements for the quality of research, the need for academic mobility, and the need for integration into international scientific networks. Simultaneously, graduate students increasingly need holistic institutional support that combines access to digital tools, advanced mentoring practices, and flexible professional development trajectories.

In contemporary research, the issue of reforming graduate school is highlighted in a multidimensional way. L. Khoruzha *et al.* (2022) analysed the impact of the COVID-19 pandemic on the digitalisation of doctoral programmes. The researchers emphasised that the crisis conditions demonstrated the potential of distance learning and digital platforms to ensure interaction between graduate students and supervisors. They noted that digital formats cannot completely replace the conventional academic environment, as they require additional mechanisms of social and psychological support for applicants. This gives grounds to consider digitalisation not as a self-sufficient solution, but as a tool that is integrated into a comprehensive system of support for graduate students. M. Orechova (2021) examined the processes of internationalisation of postgraduate studies in Europe and emphasised the importance of academic mobility, participation in international projects, and access to interdisciplinary research. These results demonstrated the need to create dedicated support programmes to integrate graduate students into the global academic environment. For Ukrainian postgraduate studies, this means that effective scientific training requires not only local support, but also providing opportunities for international cooperation. In times of war, it is necessary to consider restrictions on access to resources and logistical difficulties that can reduce the effectiveness of international exchanges.

Research has shown that mentoring is critical to developing graduate students' autonomy and research competencies. For example, N. Kachynska (2022) noted that the role of a supervisor is being transformed from a formal controller to a mentor and partner in the scientific process,

which is especially important in crisis settings, when graduate students face increased demands for autonomy and the ability to adapt to rapid changes in the academic environment. The use of digital tools in the scientific activities of graduate students also contributes to improving their communicative and collaborative competence. In particular, I.I. Novosad *et al.* (2021) demonstrated the effectiveness of cloud services, open scientific platforms and digital laboratories in developing publication activity and integration into the international scientific community. Access to such resources is uneven, which requires attention from universities and government agencies.

Organisational challenges of postgraduate studies in war conditions were confirmed by the findings of I. Kuchyn *et al.* (2024), who noted limited access to resources, impaired academic mobility, and reduced job seekers' motivation. In this context, regular mentoring adapted to the distance format is key to maintaining the academic performance and psychological well-being of graduate students, which is confirmed by recommendations of C.A. Mullen (2022) on supporting graduate students in crisis situations. An important aspect of Ukrainian practice is the regulatory support for the training of doctors of philosophy. In particular, based on open and officially published regulatory documents of leading universities in Ukraine (Uzhhorod National University, Ivan Franko National University of Lviv, Volyn National University, V. Hnatiuk Ternopil National Pedagogical University, and Mukachevo State University), it has been established that they determine the organisation of the educational process, academic integrity, mentoring procedures, and access to academic mobility. This forms the legislative and regulatory framework for the introduction of innovative models of scientific support, in particular, the use of digital platforms and the development of mentoring practices. Thus, although scientific research has already highlighted the technological, organisational, and psychological aspects of supporting graduate students, the comprehensive integration of all factors – digital resources, mentoring, international mobility, and institutional support – in war conditions has not yet been sufficiently analysed. The purpose of the study was to identify the factors that affect the effectiveness of research activities of graduate students, and to assess the role of various forms of support – scientific support, methodological assistance, access to digital resources and international networks – in the development of academic competence and improving the effectiveness of research in higher education institutions of Ukraine in the conditions of war.

MATERIALS AND METHODS

The study was conducted using an integrated approach that combines pedagogical, psychological, and organisational aspects of evaluating the scientific activities of doctoral students. The methodological basis included the analysis of educational conditions, the study of the features of academic behaviour of applicants and the study of structural mechanisms for supporting scientific activities. This approach allowed systematically assessing the factors that affect the effectiveness of scientific work of graduate students, and the role of various forms of support, including scientific support, methodological assistance, access to digital resources

and international networks. The study was conducted during March-May 2025 and included three main stages: theoretical and analytical, empirical, and analytical. At the theoretical and analytical stage, a systematic analysis of scientific literature, regulatory documents, and internal regulations of higher educational institutions on the organisation of postgraduate studies was carried out. For this purpose, methods of analysis, generalisation, and systematisation of sources were used, and content analysis of educational and scientific programmes, regulations on postgraduate studies, and academic integrity policies. Approximately 15 documents presented in Table 1 were reviewed.

Table 1. Local regulatory documents of universities

University	Documents
State Higher Educational Institution “Uzhhorod National University”	Uzhhorod National University (2016); Uzhhorod National University (2020); Uzhhorod National University (n.d.).
Ivan Franko National University of Lviv	Ivan Franko National University of Lviv (2017); Ivan Franko National University of Lviv (2023); Ivan Franko National University of Lviv. Postgraduate and Doctoral Studies Department (n.d.).
Mukachevo State University	Mukachevo State University (2020); Mukachevo State University (2021); Mukachevo State University (n.d.).
Ternopil Volodymyr Hnatiuk National Pedagogical University	Ternopil Volodymyr Hnatiuk National Pedagogical University (2020); Ternopil Volodymyr Hnatiuk National Pedagogical University (2023); Ternopil Volodymyr Hnatiuk National Pedagogical University (2025).
Lesya Ukrainka Volyn National University	Lesya Ukrainka Volyn National University (2020); Lesya Ukrainka Volyn National University (2024); Lesya Ukrainka Volyn National University (n.d.).

Source: compiled by the authors

The analysis of these regulatory documents allowed comprehensively assessing local approaches to organising scientific training of graduate students and identifying key areas for improving academic support in Ukrainian universities. At the empirical stage, comprehensive work was organised with the study participants. The research involved 87 postgraduate students in their 1st to 4th years of study (54 in economics and 33 in education) and 12 academic supervisors (9 doctors of science, professors; 3 candidates of science, associate professors) working at three higher education institutions in Ukraine (Mukachevo State University, Uzhhorod National University, Lesya Ukrainka Volyn National University). The respondents were selected based on a target sample, considering their activity in scientific activities, experience of cooperation with scientific supervisors for at least 6 months, and willingness to participate in the study on a voluntary basis. The survey was conducted online in an individual form. Filling out the questionnaire took 20-25 minutes. To collect data, the author's questionnaire “Assessment of the conditions and resources for

postgraduate research” was developed, which included 22 open and closed questions. For example, an open question: “What resources of the university do you consider most useful for your own scientific progress?” Closed question (Likert scale): “Rate the level of availability of scientific databases at your university (from 1 – completely inaccessible to 5 – fully accessible)”. A separate block of questions was devoted to subjective self-assessment of the scientific progress of graduate students, in particular: “How satisfied are you with your own progress in preparing your dissertation?” (score on a 5-point scale from “1 – not satisfied at all” to “5 – completely satisfied”), and the opportunity to give additional open comments regarding scientific achievements.

Semi-structured interviews with research supervisors lasted 40-50 minutes, were conducted online individually, and were aimed at identifying practical problems accompanied by graduate students and effective mentoring strategies. Examples of questions: “Which mentoring methods were most effective?”; “How do you integrate graduate students into collective research projects?”. The interviews

received were subjected to qualitative analysis using the thematic coding method in the NVivo 14 software suite, which allowed structuring the main barriers and supporting factors in the respondents' experience. The analysis of the actual functioning of scientific schools and laboratories allowed assessing the involvement of graduate students in grant and publication activities, and identifying practical aspects of integrating applicants into the scientific environment. Methods of descriptive statistics (mean values, percentage distribution, response ranking) and verification of relationships between indicators using the Spearman rank correlation coefficient were used for quantitative analysis. Data processing was performed in the SPSS 28 software suite. For qualitative analysis of interviews, the method of thematic coding using NVivo 14 was used, which identified dominant topics and patterns in the respondents' experience. The choice of these methods was explained by their ability to comprehensively cover various aspects of the scientific activity of graduate students, ensure the reliability of results, and combine descriptive, analytical, and practically oriented approaches. The main limitation of the study was the use of a target sample and focus on three higher education institutions, which limited the representativeness of results for the entire postgraduate system in Ukraine. The ethical aspects of the study included obtaining informed consent from participants, ensuring confidentiality, voluntary participation, and anonymity of responses. The research was carried out in accordance with the ethical principles of the Declaration of Helsinki (2013) for conducting research involving human subjects.

RESULTS AND DISCUSSION

Transformational processes in the field of training doctoral students are caused by both global challenges (digitalisation, internationalisation of science, implementation of ESG and Open Science standards) and local circumstances (military operations, changes in the legal field of higher education in Ukraine). Consequently, the need to review approaches to the organisation of scientific activities of graduate students is being updated. Doctoral degree seekers are a key link in the development of the scientific potential of the state, and therefore, the effectiveness of their scientific training directly affects the quality of scientific personnel capable of ensuring the innovative development of society. Despite the existence of regulatory support for postgraduate studies, in practice there are problems associated with insufficient integration of graduate students into real research projects, lack of systematic mentoring, unequal access to resources, limited opportunities for international mobility and publication activity. In addition, not all HEIs have a developed infrastructure to support scientific activities (laboratories, interuniversity centres, scientific schools).

Organisational conditions and access to resources

As a result of a comprehensive empirical study, data were obtained on the access of doctoral students to organisational, scientific, methodological, and resource support for scientific activities. The individual results presented in Table 2 demonstrate the distribution of graduate student responses regarding access to various forms of support.

Table 2. Results of the postgraduate student survey

Type of support	Yes (%)	No (%)	Difficult to answer (%)
Availability of an institutional scientific training programme	45.9	34.5	19.5
Access to internal grant programmes	26.4	61.6	12.0
Opportunity to participate in academic mobility	26.4	62.1	11.5
Academic writing advice	36.8	48.3	14.9
Access to international databases (Scopus, WoS)	52.9	33.3	13.8
Publications in scientific professional publications of higher educational institutions	72.4	21.5	6.1
Availability of a digital laboratory	18.4	71.3	10.3

Source: developed by the authors based on the results of a comprehensive empirical study

The highest level of support was recorded in the sphere of publishing opportunities in professional publications of higher educational institutions (72.4%). This indicates that there is a well-developed institutional framework for testing the results of scientific research within universities. This indicator can be explained by the fact that internal publications are more accessible to graduate students, since universities are interested in publishing activity and create their own journals for this purpose. The conditions for entering international publications remain more difficult due to high financial barriers and language requirements. Therefore, university publications serve as the "first step" in the scientific career of graduate students. 52.9% of respondents have access to international databases (Scopus, Web of Science).

This can be assessed as a positive result, since international bases form the basis for high-quality bibliographic support of research, and ensure academic integrity. However, the fact that almost half of graduate students are deprived of such access indicates inequality between universities. The reason is the high cost of subscriptions and insufficient financial support for scientific activities. As a result, many applicants are limited to local resources or open databases, which reduces the level of their research work.

Less common is the practice of consulting academic writing: only 36.8% of graduate students indicated that such assistance was available. This suggests that systematic training of scientists often depends on their own initiative, and universities do not always create specialised centres for

academic writing. The likely reason is insufficient funding and personnel shortages in this area. As a result, graduate students often face difficulties in the design of publications, which reduces their chances of success in international publications. The level of access to internal grant programmes (26.4%) and academic mobility opportunities (26.4%) was low. This situation indicates limited stimulation of scientific activity of graduate students both inside and outside the HEI. The reasons may be insufficient development of grant infrastructure in Ukraine and the impact of military conditions, which significantly limited opportunities for travel, internships, and international research projects. As a result, graduate students remain deprived of important mechanisms for integration into the global academic space. Digital infrastructure became the least well-off area: only 18.4% of graduate students noted the presence of digital laboratories (in particular, in shelters). This indicator is explained by the fact that most universities do not have the resources to create

full-fledged virtual or cloud laboratories. In military conditions, the lack of digital solutions becomes even more critical, because they could compensate for limited access to physical equipment and ensure the continuity of scientific work.

In general, the data show that conventional forms of support (publications in internal publications) remain the most accessible, while contemporary tools for scientific development (grants, mobility, digital environment) remain inaccessible. This makes it difficult for graduate students to integrate into the global academic community and reduces the quality of training for young scientists. The data in Table 3 reinforce this conclusion. In particular, 68% of the surveyed graduate students noted limited access to full-text scientific databases (Scopus, Web of Science, JSTOR). The reason lies in the high cost of subscriptions, which not all universities can afford. This creates inequality of opportunities between different institutions and directly affects the quality of preparation of research papers and dissertations.

Table 3. Access of graduate students to organisational and resource support for scientific activities ($n = 87$)

Indicator	Share of respondents, %
Access to the scientific library of the HEI	83.9
Possibility of publication in professional publications of HEIs	72.4
Satisfaction with contact with the supervisor	70.1
Access to full-text electronic databases	43.7
Possibility of using research equipment	35.6
Access to academic mobility	26.4
Participation in a research school or research group	28.0
Involvement in interuniversity/international projects	22.0
Participation in grant activities	12.0
Regular meetings with the supervisor (monthly and more often)	43.0
Regular access to international databases	18.0

Source: developed by the authors based on the results of the survey

57% of respondents reported irregular scientific consultations with managers. This can be explained by the overload of scientific supervisors and the lack of systematic mechanisms for monitoring the quality of supervision. As a result, the effectiveness of scientific work of graduate students decreases, and the time frame for preparing dissertations may be delayed. Another issue is the low level of integration into collective research projects: only 28% of graduate students participate in the activities of scientific schools, projects or laboratories. This indicates the dominance of the individual format of work, which does not meet international standards, where collective science is the norm. The reason may be the limited number of active research groups in the HEIs and the weak development of a team research culture. As a result, graduate students lose the opportunity to gain collaboration experience, which makes it difficult for them to integrate into international academic networks. The results show that conventional forms of institutional support remain the most stable. A significant proportion of graduate students use libraries (83.9%), have the opportunity to publish in professional publications of educational institutions (72.4%), and support scientific supervisors (70.1%). This indicates the

preservation of the basic elements of the academic environment that ensure a minimum level of scientific activity. However, these forms mainly reproduce the Soviet model of training scientific personnel and do not meet the contemporary challenges associated with digitalisation, international integration, and grant competition.

More problematic is the regularity of scientific support: only 43% of graduate students have monthly or more frequent meetings with supervisors. This limits the possibility of timely adjustment of research and creates the risk of a superficial approach to methodological issues. Irregular consultations may be conditioned by an excessive burden on academic supervisors or the lack of a system of formalised control over the quality of support. The level of access to full-text electronic databases remains low (43.7%). This situation has direct consequences: it complicates the drafting of literary reviews, limits the updating of research topics, and increases the risk of violating the principles of academic integrity through the use of outdated sources. This result also explains the low level of publication activity in publications included in international databases. Only 35.6% of graduate students have access to research equipment. This critically narrows the possibilities for conducting empirical

work, especially in the natural, technical, and biomedical sciences. In fact, a significant proportion of graduate students remain limited only to theoretical research, which reduces the innovative potential of their work.

International integration was also minimal: only 26.4% of graduate students took advantage of academic mobility, 22% are involved in interuniversity or international projects, and only 18% have regular access to international databases. Participation in grant activities is 12%, which actually indicates the lack of an established grant culture in graduate school. Such indicators indicate the fragmentary integration of Ukrainian graduate students into the global scientific space and the imperfection of institutional mechanisms to support international activity. It is also important that only 28% of graduate students belong to research schools or research groups. This limits opportunities for teamwork, academic mentoring, and socialisation in the scientific community. The lack of systematic integration into research teams increases the sense of isolation of graduate students and reduces the level of academic culture. Thus, on the one hand, graduate students have access to basic resources (libraries, local publications, scientific supervisors), but on the other hand, there is a significant shortage of development tools: international bases, grants, equipment, digital laboratories, and integration into research teams. This imbalance forms a model of “minimum support”, which allows meeting the formal requirements for preparing a dissertation, but limits the competitiveness of Ukrainian graduate students in the international scientific environment. Consequently, the results indicate structural inequality in graduate students’ access to organisational, infrastructural, and international support. On the one hand, basic institutional support (libraries, managers, internal publications) is functioning. On the other hand, the lack of resources in the field of digital infrastructure, academic mobility and grant opportunities hinders the realisation of the full scientific potential of young researchers. This requires a review of state and institutional policies to support the scientific development of graduate students, especially under martial law.

Profile of methodological training and academic activity

The results of the study revealed an insufficient level of methodological competence among the majority of graduate students surveyed. Only 36% of respondents indicated that they have a sufficient level of methodological training that allows them to independently formulate hypotheses, choose adequate research methods, form a sample and perform statistical data processing. Other graduate students (64%) reported significant difficulties at each of these stages, in particular: 32% admitted that they are not sure about the correct choice of research methods; 18% experience difficulties in determining the target sample and methods of its representative selection; 14% have limited knowledge in the field of mathematical and statistical processing of results; 8% do not have access to qualified methodological support or advice. This indicates that a significant part of

applicants needs additional training in the field of scientific research methodology, including contemporary quantitative and qualitative approaches.

As for academic activity, it is also characterised by unevenness and poor results in individual graduate students. In particular: only 17% of respondents have three or more scientific publications indexed in international scientometric databases (Scopus, Web of Science, etc.); 42% of graduate students have from one to two publications, mainly in national journals or collections of conference abstracts; 41% either have no scientific publications at all, or are limited to participating in conferences without further publication of materials. The reasons for low publication activity include: lack of academic writing skills in English; insufficient motivation or unclear understanding of the requirements for high-quality publication; organisational difficulties (insufficient support from scientific supervisors, difficulties with funding publications in the public domain). Thus, the profile of methodological training and academic activity of graduate students demonstrates the need for systemic changes in the programme of training highly qualified personnel. Especially relevant are the introduction of mandatory courses in research methodology, classes on academic writing, and mentoring support in publication activities.

Views of scientific supervisors and factors of effectiveness of scientific activity of graduate students

Research supervisors in semi-structured interviews noted the increased workload and lack of time for individual support of each graduate student. All respondents stressed the importance of creating internal academic communities, mentoring programmes, and interdisciplinary seminars. About three-quarters of respondents consider it necessary to introduce a centralised digital platform that would provide planning, recording, and monitoring of scientific activities of graduate students. Generalisation of the answers of scientific supervisors identified several factors that significantly limit the realisation of the scientific potential of doctoral students. Supervisors noted that support for graduate students within the university is fragmented: consultations are provided mainly on request, but there is no systematic research support programme. In addition, graduate students often do not receive regular feedback and are forced to independently search for sources of scientific and methodological support. According to the author’s interpretation, this situation is explained by the lack of clearly structured mentoring mechanisms in most higher education institutions. As for methodological support, seven managers noted the lack of specialised courses in academic writing and scientific ethics. It was noted that they could only provide advice on writing papers, but there were no full-fledged courses in academic writing and ethics. On the contrary, it was also emphasised that graduate students often did not have the skills to work independently with Scopus and Web of Science databases without the help of scientific supervisors. According to the author’s interpretation, such results were conditioned by limited resources of

universities and insufficient attention to the development of academic competencies within structured programmes. In addition, eight supervisors reported the limited international communication of graduate students. It was noted that opportunities for sending graduate students for internships or conferences abroad were significantly limited due to the war. In addition, even if students had a desire, academic mobility programmes temporarily did not function. According to the author's interpretation, this significantly reduced the integration of Ukrainian graduate students into global scientific networks and limited their experience in interdisciplinary collaborations.

Five managers positively assessed the impact of digitalisation on the scientific training process. It was noted that, despite the lack of opportunities to travel abroad, remote webinars and online conferences helped to maintain contacts with international colleagues. Other supervisors noted that the active use of video conferencing for consultations provided graduate students with regular feedback. Such results showed partial compensation for wartime restrictions due to digital solutions. Thus, the responses of managers confirmed the existence of both problematic and positive trends: structural gaps and limited resources significantly hinder the development of graduate students, while digitalisation and remote support open up compensatory mechanisms to support their scientific activity. Analysis of local regulatory documents of Ukrainian HEIs confirmed that the institutional framework of postgraduate studies remains insufficiently complete. The most significant issue was that the requirements for organising scientific training differ significantly between universities, which creates unequal conditions and the dependence of the quality of support on the local initiative of the institution. Individual plans of graduate students are mostly formal in nature and perform only a reporting function, without providing systematic monitoring of research progress. Mechanisms for internal evaluation of research quality are poorly integrated: regulation is mostly limited to procedural aspects, while academic integrity checks, relevance of the topic, and quality of publications are ignored. There is also weak institutional support for publication activity, because most documents do not have incentives for publication in publications indexed in international databases. Finally, the issues of providing digital resources are fragmented: library collections are mentioned, but the system policy regarding access to full-text electronic databases, digital laboratories, and research tools is practically not traced. As a result, the results of the content analysis show that the regulatory and institutional conditions for the functioning of postgraduate studies in Ukraine are largely focused on formal compliance with procedures and only partially aimed at the development of research competencies and international integration of young scientists. The results of the quantitative analysis revealed the main trends in the assessment of graduate students' level of scientific training, level of support, and barriers to research activities. In particular, the correlation analysis showed a moderate positive interdependence

between graduate students' access to international scientific databases (Scopus, Web of Science, EBSCO, etc.) and their subjective self-assessment of scientific progress (rated on a 5-point Likert scale) ($\rho = 0.42$; $p < 0.05$). This showed that the systematic use of full-text sources is associated with a higher level of satisfaction with their own research results and greater publication activity, which emphasised the importance of information support as a factor of academic socialisation and integration of young scientists into the global scientific community.

However, limited access to international databases for a significant part of graduate students may explain the overall low effectiveness of dissertation research and the insufficient level of representation of Ukrainian applicants in international publications. This indicates a direct impact of inequality in the use of digital resources on the scientific productivity and competitiveness of future PhDs. The results of a qualitative analysis of semi-structured interviews confirmed key barriers and support factors. Interviews with research supervisors have shown that increasing workload and lack of time limit the possibilities of individual support for graduate students. The managers emphasised the importance of internal academic communities, mentoring programmes and interdisciplinary seminars, and the positive impact of digitalisation, which allows for remote consultations and participation of graduate students in online events. The generalisation of quantitative and qualitative results emphasised that the level of information and methodological support is one of the key predictors of graduate student success. Providing systematic access to international databases, combined with the development of mentoring and academic communities, can increase the efficiency of scientific work and the overall competitiveness of Ukrainian science. The results of the study are consistent with the conclusions of researchers on the problems and prospects of organising the scientific activities of graduate students, confirming the systemic nature of the challenges faced by doctoral students. The analysis of empirical data, interviews with scientific supervisors and content analysis of local regulatory documents obtained from open and officially published sources on the websites of Ukrainian universities identified a number of key factors that significantly affect the effectiveness of scientific activities of graduate students.

The first critical factor is the level of scientific support and mentoring. As noted by A. Samko (2021), the quality of supervision directly affects the academic growth of applicants, while executive overload and lack of a clear mentoring structure limit the progress of graduate students. The results of the study confirm this thesis: scientific supervisors noted a significant workload and lack of time for regular consultations. Graduate students require comprehensive support that combines academic, methodological and psychological aspects. Research by M. Hladchenko (2023) also emphasised the need for a strategic rethinking of the supervision model in Ukrainian postgraduate studies – through the development of structured mentoring

programmes, co-supervision, and a supportive learning environment. The study by M. Polkinghorne *et al.* (2023) proved that involving multiple consultants or co-mentors for various aspects of research contributes to improving the quality of research papers and motivating applicants. The study also found that universities that implement multi-mentoring demonstrate higher effectiveness of graduate students in research planning and publication preparation. In addition, respondents stressed the importance of a personalised approach and regular feedback, which correlates with international results by C.A. Mullen (2021), who pointed to the role of supportive online mentoring during crisis situations, particularly the COVID-19 pandemic.

The second factor is methodological and academic support. As noted by P. Luzan & O. Titova (2025), insufficient development of courses in academic writing, scientific ethics, and work with scientometric bases limits the ability of graduate students to work effectively with scientific information and form a research culture. But in the study, more than 60% of respondents reported a lack of methodological assistance. Digital tools for scientific communication partially compensate for this shortfall, confirming the potential of online training and remote consultations in maintaining academic competence. Interviews with supervisors have shown that structured courses in methodology and academic writing significantly increase graduate students' confidence in completing research tasks and stimulate their publication activity. It is important to note that unequal access to such programmes in different universities of Ukraine, which was emphasised by M. Hladchenko (2025), creates an imbalance in the training of graduate students and requires systematic institutional solutions at the level of the Ministry of Education and local regulations.

The third factor is access to digital resources and technologies. The research by S. Tolochko (2021) and Ye. Kuznetsov (2025) emphasised that digitalisation of education contributes to the academic socialisation of graduate students and expands their opportunities for integration into the international scientific community. The data of the study show a moderate positive correlation between access to international databases and subjective self-assessment of scientific progress ($\rho = 0.42$; $p < 0.05$). However, access to statistical and analytical programmes (SPSS, R, Atlas.ti, NVivo) limits the productivity of graduate students and reduces their representation in international publications, which is consistent with the findings of M.A. Shynenko *et al.* (2024), which emphasised the role of digital platforms in the development of information and analytical competencies. Respondents noted that the use of cloud services and open scientific platforms significantly increases the effectiveness of teamwork and interdisciplinary projects. Therefore, digitalisation of graduate school is an important tool that can partially compensate for the limitations associated with physical access to resources and academic libraries.

The fourth factor is institutional support and the academic environment. C. Halse & S. Mowbray (2011) noted that effective integration of applicants into research teams

creates interdisciplinary competencies and network connections. Research data showed that only about a third of graduate students have the opportunity to participate in research schools or teams. Participation in collective projects, which are a mandatory practice in European universities, allows developing collaboration skills and improves the quality of research. In the Ukrainian context, most graduate students work in isolation, which reduces motivation and limits opportunities for professional development. Interviews with supervisors have shown that institutional support, in particular, the creation of mini-research groups and providing access to the University's internal resources, can significantly improve the integration of graduate students into the scientific environment.

The fifth factor is participation in international cooperation and academic mobility. Y. Zayachuk (2025) argued that access to international exchange programmes contributes to professional growth and the development of a global network of contacts. L. Filipova & D. Miller (2025) proved that strategic international cooperation is key to the future of Ukrainian higher education after the war. But in the study, only 26.4% of graduate students had access to academic mobility programmes, and only 18% of respondents confirmed regular access to international databases. These data showed significant limitations in the integration of Ukrainian graduate students into the global scientific community. Digital tools and online consultations, as noted by V. Stynska (2024), create alternative ways of academic integration, helping to maintain international contacts even in crisis conditions. Interviews in the study confirmed that graduate students actively use webinars and online conferences to share experiences, which partially compensates for the limitations of physical mobility.

As a result, the discussion of the results shows that the effectiveness of research activities of graduate students is determined by the interaction of several key factors: the organisation of scientific support and mentoring, methodological support, access to digital resources, institutional integration, and participation in international programmes. The identified factors are interrelated: the lack of one of them limits the potential of others, which affects the quality and effectiveness of scientific research. For example, limited access to digital databases reduces the effectiveness of methodological support and reduces opportunities for teamwork. Similarly, the lack of systematic mentoring makes it difficult to use available resources and reduces motivation. Consideration of these factors when developing graduate student support policies can increase the competitiveness of Ukrainian science at the international level. Recommendations include the introduction of structured mentoring programmes, the development of distance methodological trainings, expanding access to digital resources, and encouraging participation in international projects (Everitt, 2024). In addition, it is necessary to integrate psychological support and promote the creation of a collective scientific environment that would allow graduating students to adapt to crisis conditions and maintain

a high level of academic performance. Thus, the results of the study confirm that comprehensive support, which combines academic support, digital resources, methodological assistance and international integration, is critical for the development of effective postgraduate studies in Ukraine, especially in the context of war and the transformation of the educational system.

CONCLUSIONS

The results of the study showed a number of key patterns in supporting the scientific activities of graduate students. In particular, conventional forms of security, such as access to libraries (83.9%), publications in professional publications of HEIs (72.4%), and scientific supervisor (70.1%), remain the most accessible. Simultaneously, regular contact with the manager was provided only for 43% of respondents, which limits timely methodological support. 43.7% of graduate students have access to electronic full-text databases, while only 35.6% of respondents can use research equipment. International cooperation is also limited: 26.4% have participation in academic mobility programmes, 22% – in interuniversity or international projects, and only 18% of respondents confirmed regular access to international databases. Only 12% of graduate students declared participation in grant activities, which indicates a low level of systematic support.

Correlation analysis showed a moderate positive relationship between access to international scientific bases and self-assessment of graduate students' scientific progress ($\rho = 0.42$; $p < 0.05$), which emphasises the importance of information support for the effectiveness of research activities. The analysis of interviews with academic supervisors confirmed the high level of workload and lack of time

for individual support, but simultaneously revealed the importance of mentoring programmes, internal academic communities and digital platforms as factors for improving performance. Content analysis of regulatory documents of HEIs showed the fragmentation of institutional support, insufficient integration of methodological support, and the formal nature of individual plans of graduate students.

The results of the study allowed identified key factors influencing the scientific activity of graduate students: regularity of methodological support, access to information and digital resources, availability of internal grant and research programmes, opportunities for international cooperation and integration into the scientific environment. Prospects for further research are related to the analysis of the effectiveness of various models of support for graduate students in comparison between institutions and industries, and to determining the best practices for digitalisation of scientific support. Additionally, it is advisable to study the impact of mentoring programmes and participation in international projects on the publication activity and academic performance of applicants for an academic degree, which would allow developing recommendations for improving postgraduate studies and increasing the competitiveness of Ukrainian scientists.

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Організація наукової діяльності аспірантів в умовах трансформації освітнього середовища: чинники та сучасні тенденції

Анотація. Актуальність дослідження визначається необхідністю оновлення підходів до наукової підготовки здобувачів вищої освіти третього рівня відповідно до сучасних викликів, таких як фрагментація підтримки наукової діяльності, розрив між теорією і практикою, недостатня мотивація аспірантів до наукової роботи. Метою дослідження було виявлення ефективних моделей організації наукової діяльності в аспірантурі та аналіз інструментів підтримки наукової роботи аспірантів. Методологічною основою дослідження був аналіз наукових джерел, емпіричне опитування аспірантів та аналіз їхніх відповідей, а також статистична обробка результатів. Застосовано комплексний підхід, що поєднує педагогічні, психологічні та організаційні аспекти, включаючи аналіз умов навчання, механізмів структурної підтримки, особливостей академічної поведінки та цифрової інтеграції. Для кількісного аналізу використовували описову статистику та коефіцієнт рангової кореляції Спірмена; дані обробляли за допомогою програмного комплексу SPSS 28. Для якісного аналізу інтерв'ю було використано тематичне кодування в NVivo 14, що дозволило виявити домінуючі закономірності та закономірності в досвіді респондентів. Результати показали, що доступ до міжнародних наукових баз даних корелював з вищою самооцінкою наукового прогресу ($\rho = 0,42$; $p < 0,05$). Було виявлено, що ефективність наукової діяльності аспірантів значною мірою залежала від комплексної наукової підтримки, методологічної підтримки, цифрових інструментів та участі в міжнародних академічних мережах. Дослідження підтвердило, що систематичне наставництво та інституційна підтримка сприяли зростанню публікаційної діяльності, професійній мобільності та інтеграції аспірантів у глобальні наукові спільноти. У висновках підкреслено важливість комплексного забезпечення академічної діяльності та окреслено перспективи подальших досліджень, пов'язаних із психологічним благополуччям аспірантів та оцінкою ефективності цифрових інструментів у процесі наукової підготовки. Практичне значення дослідження полягає у розробці комплексного підходу до підтримки аспірантів, який може бути інтегрований у діяльність закладів вищої освіти

Ключові слова: академічна компетентність; наставництво; цифрові ресурси; наукова підтримка; публікаційна діяльність; міжнародна інтеграція; інституційна підтримка

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Development of the scientific potential of the head of an educational institution in the conditions of martial law and post-war conditions

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Abstract. The significance of the subject under study is conditioned by the need to resolve the contradictions between modern requirements for managerial personnel and the desire for further self-improvement; social order and opportunities for effective quality management; reproductive and productive nature of professional functions, their previous experience, and the latest developments. The purpose of this study was to cover the mechanism of professional development of a manager, identify the key trends, problems of management of an educational institution, challenges, and to identify opportunities for their solution. For this, a set of theoretical methods was employed, including classification, generalisation, comparative analysis, and literature analysis. The study found that the problem of professionalism and quality of management is currently relevant in the conditions of martial law and post-war situation. The study also found that the success of educational institutions in the context of international rankings is contingent upon the professional self-improvement of the manager-scientist, characterised by a constant desire to be aware of both the creation of innovative approaches to the organisation of the educational process and the impact of international rankings on the parameters of the activity of educational institutions and their image. The results present the most authoritative rankings in the world (Massachusetts Institute of Technology, Stanford and Harvard, Oxford, Cambridge and the University of California at Berkeley and California Institute of Technology) and in Ukraine (Taras Shevchenko National University of Kyiv). The expediency of studying administration as a science and the scientific nature of the management process was substantiated. The study proved that the ability to manage is a prerequisite for the acquisition of relevant skills, knowledge, and abilities to transform competitive relations. The considered aspects suggested that competition stimulates rationality, while creativity encourages an individual to fresh ideas, innovations, and creative activity

Keywords: professional competence; management; predictability competition; creativity potential; qualimetric approach; university rankings

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INTRODUCTION

Modern competent heads of educational institutions invest in the development of teachers' creativity potential (CP), focusing on their emotional and intellectual capital and further competitiveness. Therefore, the problem of professionalism and quality of management is relevant in the context of wartime and post-war conditions. Competition, competitiveness, professional growth, and the success of management activities depend on the manager-scientist,

their scientific potential (SP), and professional mobility. It is the ability to manage that serves as a precondition for the dynamic acquisition of the relevant skills, knowledge, and abilities to transform competitive relations.

The researchers consider the activities of a modern manager as the ability to make decisions effectively and take responsibility for them, to skilfully influence society to solve common problems. V. Hladkova (2023) raised the



issue of acmeological competence of heads of educational institutions in the context of change. The study specified the concept of acmeological competence of a manager of a general secondary education institution (GSEI) in the context of changes and characterises the process of professional self-improvement. T. Koroid (2025) summarised foreign practices. Improving the efficiency of management systems is a complex task. The researchers were convinced that by accounting for the complex interaction of influences and areas of optimisation of this system, it is possible to achieve the greatest results that will contribute to the competitiveness of the organisation in the market in the modern business environment. The researcher also provided a comparative analysis of world models of personal development, summarising foreign practices. The conducted study allows determining the role of competition in the development of the CP of an individual through the introduction of world and domestic development models in Ukrainian educational institutions. Therefore, presently, a manager needs the skills of modelling, development, and implementation for cooperation and exchange of skills, which is a guarantee of identity, national traditions, and the experience of predecessors. O. Lozovskyi & M. Horshkov (2023) considered the role of management decisions, their effectiveness at the present stage. The researchers believed that the effectiveness of management decisions lies in the ability of a manager to use available and attracted resources to achieve goals and objectives. This refers to minimising costs and maximising profits. The researchers are convinced that profit is often an indirect result; the difficulty lies in the allocation of management costs, which cannot always be reliably estimated. N. Parkhomenko (2020) identified external and internal competitive advantages of an educational institution, compared the principal international ratings, noting their impact on competitiveness. The result of this increase is the university's recognition in the global educational and academic space. The number of international partners and financial revenues from participation in international projects are increasing, and priority research areas are developing. The brand of the educational institution becomes recognisable, and its reputation improves.

M. Poplavskyi (2021) comprehensively analysed the methodology of ranking the leading international and European university rankings. Only continuous improvement of international systems of monitoring and evaluation of the quality of education, as well as research, can support the national education system at the global level. The researcher addressed the fact that rankings are a powerful argument when attracting foreign students, who perceive reputation and rank as key determinants when choosing an educational institution or country for study. V. Semendiak (2022) noted that science itself is less relevant for the practical work of managers at the present stage. They should consider not only Taylor's teachings, but also the "pyramid of management" using cybernetics and modelling with increasing complexity. And the special learning processes in higher education institutions make self-organisation

possible with increased labour efficiency. Such work is characterised by originality and change to increase management efficiency. N. Stepanenko & O. Kurilets (2023) focused on the primary tasks facing the state in the post-war period. One of them is the restoration of the social sphere. This task ensures the social rights and freedoms of citizens and includes measures such as the restoration of education. This refers to preserving law and order, guaranteeing their protection, regardless of social status and place of residence. M. Zayets *et al.* (2024) focused on competitiveness and competence in terms of activity, adaptability of the organisation, changing environmental conditions, prompt adoption of relevant management decisions by the subject. Improving the efficiency of management systems is a complex task. Analysis of scientific literature provided an understanding of the advances in the field of CP development, of which emotional intelligence (EI) is a component, SP is a relationship between abilities and leadership, and the development of new experience in wartime and post-war conditions. The review of these studies suggested that the problem of EI development and the effectiveness of its use is still understudied, and that certain aspects of EI as an effective resource for success require more detailed research.

The purpose of this study was to substantiate the essence of the concept of manager-scientist, which covers the SP and mechanism of professional development of a manager; to identify challenges in the educational process during wartime and post-war; and to determine the possibilities of their solution to ensure the implementation of long-term strategies and the image of an educational institution. Accordingly, the key tasks were defined as follows: to analyse the theoretical foundations of managing the development of CP and SP; to summarise the practices of managing this development for world and national management practice; to identify the features of scientific competence and self-regulation.

MATERIALS AND METHODS

Thus, the analysis of scientific and methodological literature, as well as online resources related to the subject under study, involved a conceptual examination: tracking and discussing the topic and practices related to managing the development of the CP of Ukrainian language and literature teachers within the context of non-formal education. The study explored the concept of the manager-scientist and its theoretical foundations. The following studies were analysed: O. Bilyakovska & D. Hertsiuk (2025), Z. Ryabova (2019), T. Koroid (2024), L.V. Poleshchuk (2024), etc., as these researchers examined the issues of creativity, conceptualisation of this phenomenon (CP), and its functions; development of managerial and leadership qualities in education managers; the essence of the theory of innovative competition; use of modelling technologies; and issues of managing the development of teachers' CP.

The selection of these studies was based on their academic credibility, their alignment with the thematic scope of the study, and their ability to illuminate the complex

interconnections between leadership, creativity, and organisational competitiveness in education. By synthesising these perspectives, the study sought to build a multi-layered understanding of the manager-scientist concept that reflects both global trends and the specific challenges faced by Ukrainian educational institutions. This method was aimed at reflecting the nature and capacity for the development of an individual's CP and its management. In applying this method, the study followed a structured sequence: identification of core conceptual categories; systematic review of relevant literature; classification of theoretical approaches; comparison of differing viewpoints; and integration of these insights into an original conceptual model. Such an approach ensures that the analysis is both comprehensive and coherent, enabling the identification of key factors that influence the development of CP and SP in educational leaders.

Comparison of the world practices with the state of Ukrainian education encourages rethinking the future vision of improving the quality of education. This comparative process did not aim to establish direct causal relationships but rather to highlight transferable principles and adoptable strategies. The emphasis was placed on identifying patterns of best practices that could be contextualised for Ukraine's wartime and post-war realities, recognising that direct transfer of foreign models is rarely effective without adaptation. At the same time, the study took a reflexive stance, critically analysing the applicability of external experience in the light of internal socio-cultural and institutional conditions. Both the quality of management of the development of CP and SP and the development of Ukraine's future depends on the interest in the quality of the educational institution's products. Consequently, the methodology incorporated elements of systemic thinking, enabling the analysis of the educational management process as an interconnected whole. This enabled the examination of how leadership styles, institutional structures, and external pressures interact to shape the capacity for innovation and sustainable development in the education sector. By maintaining a purely theoretical focus, the study ensured that its conclusions rested on a solid conceptual foundation, thereby enhancing their potential relevance for policy-making, academic discourse, and practical application in educational leadership training.

RESULTS AND DISCUSSION

The martial law in Ukraine has proved the relevance of systematic improvement of the manager-scientist, as well as

their self-affirmation and self-fulfilment. The question of international recognition of SP is being raised. The indicators of its effectiveness are the productivity of the professional activity of a manager-scientist, which makes a significant contribution to the development of the CP of the individual. Notably, the term "manager-scientist" is not yet widely used in the terminology of many sciences. A manager-scientist is an inspirer and teacher of teachers, an educator, and an expert in at least one field of science, who is expedient, conscious, has innovative thinking and fresh ideas. The term "manager-scientist" reflects the level of competence, the ability to correlate strategic and tactical goals in the management of an educational institution, on the one hand, and, on the other hand, the ability to take responsibility for the degree of development and successful functioning of a team of collaborators. That is why such a manager is a creative person who can generate innovative ideas and take effective actions. Increasing the requirements for managers in modern conditions is a key vector of research and teaching potential (RTP) management, as one of its components is the EI.

The individual's ambition and motivation realise their own CP, while understanding and self-fulfilment awaken desire and encouragement, and lead to freedom of choice and competence. Accordingly, they determine the effectiveness of the subject's CP development in the context of high-quality management of this development, the key factor of which is competitiveness. S.V. Zinchenko (2015) believed that self-development contributes to the emergence of a person's need for education. Self-development is a conscious self-regulatory process of personality development, manifested in the desire to take responsibility for successful deeds, actions, in the fulfilment of potential opportunities and abilities, and in the improvement of personal qualities. M.E. Porter (1990) noted that in the modern market, success and leadership are variables, the maintenance of which directly depends on the development model recognised by the company. In this case, the dynamism of the market will dictate the need for continuous qualitative development, which stimulates the development and implementation of innovative approaches to business. Therefore, the quality of management depends on the professional self-improvement of the manager-scientist, constant desire to be aware of both the creation of innovative approaches to the organisation of the educational process and the impact of international rankings on the parameters of the activities of educational institutions and their image (Table 1).

Table 1. World University Rankings as a means of building reputation

The state of national education and world rankings

2024	2015
Ukraine/ Taras Shevchenko National University of Kyiv (ARWU) The top positions in the ARWU ranking are occupied by universities in the USA and the UK.	Ukraine – 38 th The top positions in the OECD ranking were taken by Asian countries: Singapore, Hong Kong, South Korea, Japan (jointly), Taiwan (jointly), Finland (BBC Ukraine, 2015).

Table 1. Continued

The state of national education and world rankings

Quote

“Highly performing countries have high expectations for all students; a strong focus on having good teachers; investment of money and resources in school development and student learning; and building of long-term strategies” (Ukrainska Pravda, 2016).

“Eric Hanushek from Stanford University and Luger Wessmann from the University of Munich are convinced that bad education policy and bad education lead to many countries being in a permanent state of economic recession” (BBC Ukraine, 2015).

Results of the international study of the quality of education PISA

“The PISA-2025 study is science, and the innovation area is teaching in the digital world” (Educational Research Institute, n.d.).

“PISA 2022 results highlight the advantage of students from socio-economically advantaged backgrounds over their peers in creative thinking” (PISA in Focus, 2024).

Quote

“Ukraine is the only country that has conducted research in the context of war. Participation in the study facilitates the monitoring of trends in students’ knowledge and skills.” (Ministry of Education and Science, 2023).

“As for Ukraine, the results of PISA 2022 were lower than the results of the previous cycle, which was influenced by a combination of factors related to the pandemic and the full-scale invasion” (Ministry of Education and Science, 2023).

Source: compiled by the author of this study

The Academic Ranking of World Universities (ARWU) was first published in June 2003 by the Centre for World Class Universities (CWCU), Graduate School of Education (formerly the Institute of Higher Education), Shanghai Jiao Tong University, China, and is updated annually (Shanghai Ranking’s, 2024). American and British universities are among the leaders in 2024: Massachusetts Institute of Technology, Stanford, Harvard, Oxford, Cambridge, the University of California at Berkeley, and California Institute of Technology. Ukraine (Taras Shevchenko National University of Kyiv) is also represented among the best institutions in Europe and the world. Therefore, in the context of rapid changes in understanding the fact of world university rankings, it is necessary to understand the risk-benefit ratio and to be aware of the phenomenon itself. When examining international practices and implementing their experience, it is necessary to constantly monitor and compare them to reduce deviations.

Therefore, the crucial thing for the state is the development of human capital and its effective management. Effective quality management, its development, analysis, control, correction, and improvement lead to the competitiveness and image of an educational institution, and a productive learning environment leads to the satisfaction of each individual’s needs. The present study coincided with the views of O. Bilyakovska & D. Hertsiuk (2025), who highlighted the problem of ensuring the quality of professional training of future specialists in the field of education based on a systematic approach. Current development trends oblige higher education institutions (HEIs) to be guarantors of their intellectual culture, professionalism, and competence. M. Kichurchak (2024) also focused on studying the experience of highly developed countries in managing human capital development, noting that European experience should only be considered based on the adaptation to the realities of the country’s socio-economic development. To

achieve an effective human capital development, management should focus on the professional and cultural components responsible for education, skills, type of thinking, moral and spiritual values, level of culture, etc. Z. Ryabova (2019) addressed the structure of the educational institution as project-oriented with defined deadlines, resources, and quality standards, and the use of knowledge management technology in management activities. Therefore, the quality of management depends on the creation of a competitive environment, image, setting specific goals, motivation, continuous control, innovative technologies, and the implementation of models for managing the development of an individual’s teaching potential (TP).

The key factor in the professionalism of a manager-scientist is the art of managing through trial and error, establishing communication links, efficiency, and awareness of success. In the context of managerial competence, it is imperative to understand the manager’s personal development and evolution. Ensuring the quality of competitive relations and predictability of competition creates the potential for motivating the competitive environment. Therefore, only a manager-scientist is capable of creative activity and productivity through the rational methods of task implementation. Culture, competence, and the greatest degree of professionalism meet the requirements of society. Therefore, in modern conditions, it is necessary to emphasise the awareness of the management personnel of their mission, because the basis of management is the individual’s RTP, support, growth, and experience. The skilful modelling of a development strategy constitutes a process of creating a general action plan, and the implementation of a development strategy for both the GSEI and the individual. This process involves a deep and systematic analysis and search for directions and ways by a manager-scientist. Consequently, leadership and competence necessitate a management culture and awareness, understanding and ability to achieve goals.

The impetus for reflection was an attempt to investigate the competitive selection of heads of secondary schools in Kyiv for 2018-2021 by the Department of Education and Science, which took place before the active phase of the Russian-Ukrainian war. An analysis of the results of the competitive selection process revealed that the current head of the educational institution or their deputy was the main applicant. T. Koroid (2024) emphasised that the involvement of representatives of civil society organisations and the initiation of legislative changes in the work of the competition commission are prerequisites for observing any changes and the transformation of education. It is imperative that a more transparent system of evaluation is implemented for this competition, considering its profound implications for society. The contemporary manager-scientist is a professional who, driven by a profound desire for knowledge,

consciously employs scientific insights in their practice, seamlessly integrating the fruits of scientific progress into their work. The primary focus of this activity is the application of knowledge, the cultivation of awareness regarding interrelationships, norms, and values, and the recognition of personal responsibility. Such a manager is responsible for the establishment and enrichment of results, the creation and procurement of results, interaction and development, and the enhancement of the professionalism of all members of the school team by creating competitive relations in a competitive environment (author's definition). The scientific and professional competence of the administration of general secondary education institutions is ensured by personal self-awareness and self-development, the effectiveness of management decisions, and the professional implementation of management activities (Fig. 1).

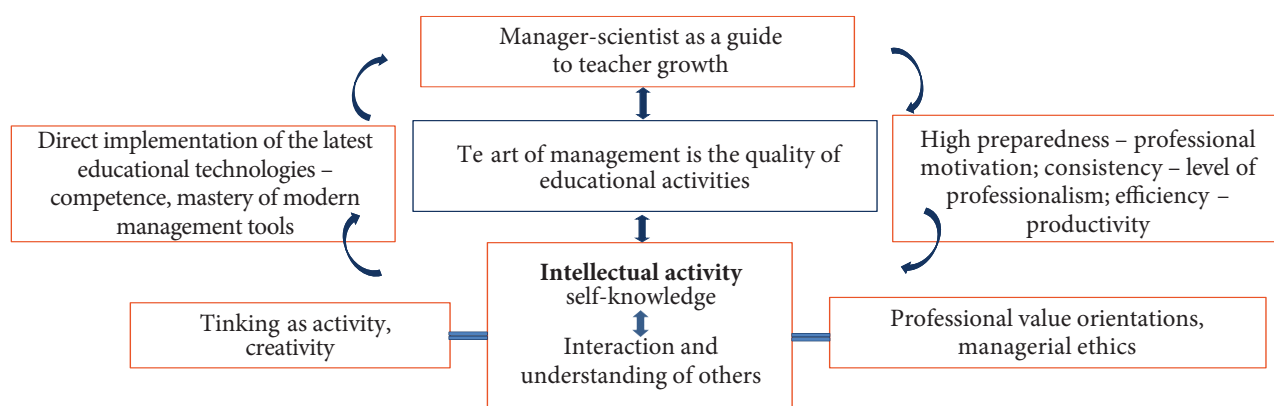


Figure 1. Managerial professionalism – teacher competitiveness

Source: developed by the author of this study

Therefore, the competitive environment is characterised by the development of a competitive strategy, the understanding of its universality, the possibility of its application, its innovative development and its influence on the market situation. K. Konaszewski *et al.* (2025) were convinced that educational sustainability can be analysed in the context of the educational environment of a school, with special attention to the teachers who work there. In terms of “competitive relations”, A. Golota (2013) noted that competitive relations can develop only under conditions of intense competition. Competitive relations imply a broad rivalry. In this case, the competitive environment motivates the subject to develop competitive relations; their constant reflection leads to gaining competitive advantages. Competition and quality are interdependent. In this context, quality is understood as a set of characteristics of a process, while the quality of management is viewed as the teacher’s competitiveness. T. Koroid (2024) examined pedagogical qualimetry, noting that quality management aims at a purposeful process and influence, focused on productivity and achievement. Enhancing the quality, knowledge, skills, and experience of a manager-scientist is essential, as it should be possible to describe quality quantitatively. T.M. Pashchenko (2022) explored the role of the

qualimetric approach in assessing the quality of specialist training. The researcher noted that pedagogical qualimetry emerged as a means of enhancing the quality of education through the application of innovative technologies in the assessment and evaluation activities of educational institutions, aimed at fostering a culture of quality among all participants in the educational process. Therefore, quality management implies quality development.

Competition stimulates rationality, while creativity encourages an individual to produce fresh ideas, innovations, and creative activities. A creative personality has a prominent level of motivation, which is an indicator of success and victory in competition. It is well known that competition is ubiquitous. The coexistence and interaction of cooperation and competition, individual efforts and personal interest can be observed in the studies of many contemporary researchers. N. Parkhomenko (2020) identified the external and internal competitive advantages of an educational institution, stating that for effective management it is necessary to understand the key indicators and motivate teachers to achieve meaningful results. It is the level of competitiveness that determines changes and transformations in professional development, the transition to a new, greater level of professionalism. Emotional

competence as a set of knowledge, skills, and abilities determines the development of CP for effective quality management through competence and experience. Thus, the mentor's awareness and understanding of the mentee generates support, development, and self-confidence. Inner strength and focus on results lead to the ability to critically rethink one's personal experience, encouraging self-mentoring. L. Kharchenko (2013) noted that self-learning helps to reveal initiative for personal growth. Self-learning, arising from independence as a personal quality and representing its greatest level in educational and cognitive activities, is one of the key parameters of the desire to develop one's creativity. It is at the stage of professional and pedagogical communication based on democratic partnership that the connection between the level of security and the manifestation of initiative and creativity, its correlation with the level of intelligence, becomes evident. This refers to cognitive

processes: from the acceptance of information to problem solving. Notably, according to associative theory, it is a consistent and motivated transformation of the quest in general, while according to acmeological research, it is an acmeological constant of professionalism in the greatest CP. Professional competence is an indicator of an individual's productivity through awareness of personal responsibility for success and self-fulfilment. T. Shcherban *et al.* (2022) argued that in the AI era, the motivational element is the central driver of activity determining readiness for self-education, flexibility, responsibility, leadership of innovative thinking. Therefore, by improving the motivational mechanism through the introduction of new management approaches, considering global trends in the management of an individual's RTP, the manager encourages the team of collaborators to develop productively and professionally and succeed (Table 2).

Table 2. Performance as a professional activity of a research manager

Activities	Result
1. Development of methodological materials through high-quality planning, competence-based approach, high organisation (textbook, programmes, lecture texts, methodological recommendations, etc.)	1. Organisation of the process of methodological materials and responsibility for the result
2. Planning ways to organise goals	2. Competence in choosing the means of their implementation (professionalism, pedagogical tools, teaching methods)
3. Teaching pupils/students using advanced educational technologies that develop an active approach to learning, value orientations, and target settings for the expected outcome	3. Effectiveness of the introduction of innovative teaching technologies; quality training, formation of a competitive individual
4. Use of an innovative and promising method of "case technology" in the training of pupils/students, including the method of situational analysis, game design, incident method, discussion method, etc.	4. Improvement of the level of training of pupils/students, development of rational and critical thinking, ability to implement effective management decisions
5. Monitoring and diagnosing performance	5. Positive developments in education and practical training
6. Scientometrics as a research area on cognitive communication in science (frequency of citations of scientific papers, their authors)	6. Evaluation of research performance
7. Use of information resources of international publications; participation in international and national conferences, methodological seminars and workshops, trainings, master classes, debates, etc.	7. Increased integration into the global scientific community
8. Organising a scientific school, creative studio, etc.	8. Increased competitiveness
9. Active participation in the educational and methodological work of the departments of the educational institution	9. Improving teaching skills and methodological support

Source: compiled by the author of this study

However, emotional demands, needs and requests in extreme conditions have been shown to lead to burnout syndrome. There are several types of burnouts, but the focus here is on the emotional aspect of burnout in individuals associated with professional characteristics. S.O. Mashchak & A.I. Oliinyk (2024) noted that this syndrome arises as a result of confrontation with reality, when the employee's ability to help is limited. This can lead to a loss of faith in the effectiveness and meaning of one's work. Consequently, the question arises as to how to maintain one's initial position and avoid a stressful reaction during professional activity. It is imperative to establish clear definitions for the terms "management" and "manager". According to the

A.I. Solovyov (2019), "management" is a concept used to describe management processes, while the term "manager" is a person who has authority and makes decisions within their limits on certain types of organisational. Thus, it all depends on the manager's powers and decisions. The quality of management and its results depend on the effectiveness of decision-making and the efficiency of implementation of management decisions. Therefore, a competent manager should factor in that each result carries both an uplifting and a psychological imprint. When developing and shaping a personality, a manager must know the level of TP so as not to lead to professional burnout. O. Yakymchuk (2021) considered the concept of countertransference, when the

inability to reflect on time and emotionally express such reactions increases the risk of overstrain, which leads to the development of professional burnout syndrome.

It should be remembered that the competitiveness of an educational institution is evident when a thinking manager has created an effective internal environment that is promising for all participants in the educational process. By implementing modern management models, using a set of guidelines, developing qualitative tools, a manager-scientist aims to develop an individual's ability to compete. It is through the scientific organisation of work, strengthening of control, concentration of forces, application of administration and management methods based on a specific goal that such goal is achieved. F. Taylor defined the principles of management science as a scientific approach to mastering the task and developing methods; stimulation of task

performance and introduction of contact with employees and their careful selection, etc. (Matsui, 2022). It is the quality of employees and the development of their TP that demonstrates the team's readiness for professional self-realisation and competitiveness. Therefore, increasing the level of TP, of which EI is a component, implies the quality of interpersonal relationships and the success of a professional career. EI improves the quality of social interaction, increases the scope of socialisation, and makes people aware of the need to resist mobbing and harassment in their professional activities. It is the emotional abilities of an individual that form an integral part of leadership. Thus, intellectual stimulation and strategic vision, motivation, culture of speech and thinking, stimulation of experience, and inspiration are indicators of the creative/high level of RTP of a manager-scientist and effective quality management (Fig. 2).

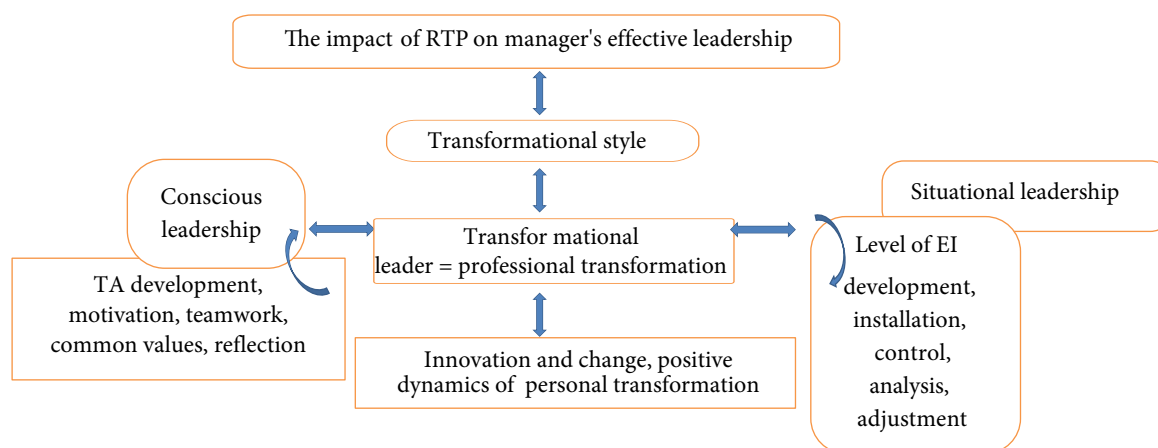


Figure 2. Linking EI to the transformational leadership style of a research manager

Source: developed by the author of this study

It is worth noting the opinion of J. Mayer *et al.* (1990) regarding EI, who considered it as a substructure of social intelligence, capable of observing and using information to manage thinking and actions. One of the components of EI is precisely the ability to identify and align the emotional qualities of objects in the surrounding environment. C. Vestena *et al.* (2020) argued that intelligence can influence creative abilities. Emotions also affect life-creative capacities, as giftedness does not pertain solely to rational aspects. Therefore, to develop CP, one must invest in its growth in much the same way as training muscles. Creativity is a key aspect for gifted children. Admittedly, creativity is a prominent aspect of education for the gifted, as it enables them to systematically enhance their potential, generate innovative ideas, and find effective management solutions. L. Radionova & N. Kozyreva (2024) were convinced that understanding CP as a creative resource becomes a reality without which it is impossible to achieve success in the development of the city, society, and the individual. N. Foster & A. Schleicher (2022) presented arguments in favour of creative thinking. They considered it to be an essential competence for development, adaptation,

and the formation of competent and flexible personnel. Creative self-expression consists of two non-verbal forms: engagement and imagination. Therefore, it is necessary to develop creative thinking in all students, as the product of creativity reflects indicators of their cognitive abilities, productivity, and success. For S. Lin (2021), creativity is a key factor in effective governance and economic development. Moreover, in May 2018, the Council of the EU adopted recommendations as a reference tool in the field of education concerning key competences for lifelong learning, identifying the key competences necessary for self-fulfilment, active citizenship, social inclusion, etc. This document provides essential and practical guidance for the development and fulfilment of personal potential by ensuring the quality of education and supporting teaching staff (European Commission, 2019).

Therefore, the general features of joint creative and scientific activities also include self-awareness, acceptance of partnership, and vertical interaction. Thus, the quality of the conditions created by one person gives rise to the creative drive of another. It is precisely the contribution of transversal competences to a specialist's development and

competitiveness (Langa, 2015) that constitutes their creative self-fulfilment. Within the framework of transversal competences, the teacher plays a dual role, assessing others and engaging in self-assessment. Collaboration and teamwork lead to a heightened awareness of role, which lies in promoting the necessity of lifelong learning. This is consistent with the conclusions of N. Bidyuk (2025) regarding support for leaders and management teams in America. According to comparative analysis, a comprehensive approach to leadership development in the United State academic environment is based on the integration of educational and management strategies, an emphasis on personalising the learning experience, interdisciplinarity, and adaptability to change. Young leaders master modern approaches to management, develop flexible thinking, strategic vision, and the ability to act effectively in conditions of uncertainty. R. Liman (2025) reached the same conclusion, focusing on the professionalisation of military leadership and maximising human potential in the interests of successful operations. Proposed achieving this goal by developing leadership as an organisational capability, supporting the development of strategic thinking, introducing critical analysis of leadership approaches to decision-making, and ensuring the scientific validity of research through the activities of the CAL Research Institute.

It is necessary to note initiative as the highest form of activity, independence, and determination to achieve goals. Activity implies an active life position, creativity, responsibility, and exacting standards for oneself and all team members. Thus, there is a correlation between the level of an individual's self-responsibility and initiative with the level of reflective and transformative processes, awareness, and creative activity, all of which are crucial for their self-fulfilment. Therefore, self-consciousness serves as a manifestation of the purposefulness and significance of the inner "self" of the individual. L.V. Poleshchuk (2024) is convinced that the concept of the "higher self" by R. Assagioli and P. Ferucci in the context of personality psychology and management practices can be an indispensable resource for improving efficiency and quality of life. Its application can contribute to self-regulation, motivation, and achievement of personal goals. The researcher believed that self-understanding and focus on one's inner world contribute to a better understanding of others and to personal adaptation. As for adaptability, it is most influenced by emotional comfort and least by self-esteem. That is why a team of like-minded people has interchangeability skills and is characterised by reliability, coherence, and satisfaction from cooperation. The manager's scholarship becomes evident as a certain status: modern prospects and challenges, the level of responsibility for the effectiveness of management decisions and the efficiency of their adoption determines the unity of strategic management. Such a manager-leader knows enough approaches to the use of competitive strategies and is the legislator of the marketing educational association. This refers to the presence of reciprocity, when the effectiveness of the teacher/lecturer is a

component of quality education, and strategic marketing is a component of marketing management. From motivation to professional growth and competence, as it is the basis for self-development and self-education.

This also correlates with the findings of Y. Bahno & O. Serhiichuk (2023), who highlighted the necessity of shaping a modern type of educational institution leader. It concerns a new way of thinking, a readiness for continuous renewal and self-development, and the adoption of innovative management technologies. Only such a leader-manager can guide others, implementing transformations across all elements and subsystems of the organisation. This style of management plays a major part in improving the quality of institutional performance. A particularly significant factor is the scientific development of a professional and qualification profile of the leader by identifying their key professional and qualification attributes. The researchers emphasised that a scientifically grounded professional profile of a school principal is a benchmark model, a starting point for analysing the professionalism of their activity. That is why the study of administration as a science, the scientific nature of the management process is a priority today.

CONCLUSIONS

The martial law in Ukraine changes the views, habits, awareness, and the individual per se. Therefore, the development of professional competences ensures the implementation of motivational, communicative, control, and evaluation functions in their management activities. A modern manager understands the value of teacher growth and support. This requires consistency, implementation of models of teacher CP development, and management of this development, which involve the creation of a suitable mechanism for managing, incentivising, solving problems, and achieving goals. Performance management of both a teacher/lecturer and an educational institution is the effective implementation of operational actions by a manager-scientist. The use of models and driving mechanisms of managerial analysis of the activities of an educational institution in wartime and post-war conditions leads to the achievement of positive results and performance management. Control, motivation, coordination ensures the growth of an individual and the level of development of SP. The concept of "quality of management" is identical to the concept of "quality of education", and the introduction of a model for managing the development of the CP of teachers of Ukrainian language and literature in non-formal education in general education institutions provides an opportunity for all members of the educational process to change dramatically throughout their personal careers.

Therefore, a competitive environment can be created only by a manager-scientist through competition. The strategic idea of such a manager includes an individual's view of the prospects for improving the level of RTP and professional growth, ways of supporting it through analysis, forecasting, modelling, systemic thinking, control, and

reflection. It is the methods of scientific management and approaches, directions of adaptation to the conditions of the competitive environment that demonstrate the ability to form, develop, and support a personality, ensuring its self-awareness and self-fulfilment. It is the competence, science, and competitiveness of the manager themselves, the study of management as a science that establishes the long-term ability of the subject to compete and the ability to compete and be ranked at the local and global levels. The transformation of education requires not only the dynamics of individual transformation, but also the transformation of the management apparatus. A modern manager-scientist understands the significance of scientifically based work with the school team, their professional growth, and improving the image of the educational institution. Therefore, the definition of the concept of “manager-scientist” was proposed, mechanisms for overcoming professional burnout in crisis situations were analysed, and the relationship between the level of security and the initiative and creativity of the individual, ability to self-motivate and self-educate were examined.

It is the professional competence of the academic leader that serves as a comprehensive indicator reflecting the quality of management, productivity, and result-oriented performance. The qualimetric approach, the effectiveness of managerial decisions, and the improvement of decision-making mechanisms ensure the modernisation of the

educational process, enhance the level of CP and EI, and foster the development of competences, self-organisation, and self-determination skills, thereby achieving self-educational goals. A modern manager positions themselves as a creative and imaginative individual with divergent thinking, intellectually capable of generating ideas, motivating learning, stimulating creativity, and fostering a desire for self-education. The academic leader creates a supportive environment and favourable conditions, experiments, and encourages their team to take initiative and not fear making mistakes. They inspire others, stay at the vanguard, respond to unforeseen changes, and serve as the primary driver of development processes and a valuable source of profitable ideas. The prospects for further research are the study and testing of educational technologies to increase the level of RTP of an individual, SP and the detailed development of technology for marketing support of the effective operation of an educational institution.

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Розвиток наукового потенціалу керівника закладу освіти в умовах воєнного й повоєнного стану

Анотація. Значимість досліджуваного предмета обумовлена необхідністю вирішення суперечностей між сучасними вимогами до управлінського персоналу та прагненням до подальшого самовдосконалення; соціальним порядком та можливостями ефективного управління якістю; репродуктивним та продуктивним характером професійних функцій, попереднім досвідом та останніми досягненнями. Метою даного дослідження було висвітлення механізму професійного розвитку менеджера, виявлення основних тенденцій, проблем управління навчальним закладом, викликів та визначення можливостей їх вирішення. Для цього було використано комплекс теоретичних методів, включаючи класифікацію, узагальнення, порівняльний аналіз та аналіз літератури. Дослідження показало, що проблема професіоналізму та якості управління є актуальною в умовах воєнного стану та післявоєнної ситуації. Дослідження також виявило, що успіх навчальних закладів у контексті міжнародних рейтингів залежить від професійного самовдосконалення менеджера-науковця, що характеризується постійним прагненням бути в курсі як створення інноваційних підходів до організації навчального процесу, так і впливу міжнародних рейтингів на параметри діяльності навчальних закладів та їх імідж. У результатах представлені найавторитетніші рейтинги світу (Массачусетський технологічний інститут, Стенфордський і Гарвардський університети, Оксфордський і Кембриджський університети, Каліфорнійський університет у Берклі та Каліфорнійський технологічний інститут) та України (Київський національний університет імені Тараса Шевченка). Обґрунтовано доцільність вивчення адміністрації як науки та науковий характер процесу управління. Дослідження довело, що здатність до управління є необхідною умовою для набуття відповідних навичок, знань та умінь для трансформації конкурентних відносин. Розглянуті аспекти свідчать про те, що конкуренція стимулює раціональність, а креативність спонукає особистість до нових ідей, інновацій та творчої діяльності

Ключові слова: професійна компетентність; управління; передбачуваність; конкуренція; креативний потенціал; кваліметричний підхід; університетські рейтинги

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Development of social intelligence in older preschool children

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Abstract. The relevance of the study layed in the fact that the targeted development of social intelligence in preschool children was a key preventive measure that ensured their readiness for school, future academic success, and overall well-being. The purpose of this study was to theoretically substantiate the concept of social intelligence and to examine the specific features of its development in preschool children. To achieve this objective, a comprehensive approach was employed, incorporating theoretical analysis, synthesis, systematisation, and comparative analysis of both classical and contemporary scholarly works in psychology, pedagogy, and related disciplines. The main findings indicate that social intelligence is a multidimensional construct encompassing cognitive, emotional, and communicative-organisational components, with emotional intelligence playing a pivotal role. The study traces the evolution of the concept of "social intelligence" and identifies its key components, such as empathy, respect, self-efficacy, social awareness, and adaptability. A direct correlation was established between the level of development of these skills during the preschool years and children's readiness for formal schooling, their subsequent academic success, and overall well-being in adulthood. Furthermore, it was clarified that active play activities – particularly role-play and communicative games – along with targeted drama-based interventions and emotional intelligence development programmes, are most effective in fostering socio-emotional skills, with adult involvement being of critical importance. Accordingly, it has been demonstrated that the intentional development of social intelligence in preschool children serves as a preventive measure to ensure not only individual well-being but also broader societal welfare. The practical significance of the findings lies in their applicability by educators, early childhood teachers, and practising psychologists in designing innovative methodologies for diagnosing, developing, and enhancing social intelligence among children in preschool educational settings

Keywords: psychological development; developmental stages; intellectual development; social environment; cognitive abilities

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INTRODUCTION

In the context of societal transformations in Ukraine, the formation of intellectual potential and the development of personal intelligence acquire paramount importance, as they are essential for social adaptation, well-being, quality of interpersonal relationships, and overall life success. The preschool period constitutes a critical stage in the development of the intellectual sphere, as it is during this time that the foundations of effective interaction with the social environment are laid. Older preschool children actively

integrate into social groups, gain new communicative experiences, and transition to more complex forms of thinking, accompanied by psychological and physiological changes. Consequently, exploring the development of social intelligence in older preschoolers is highly relevant, as timely formation of these skills facilitates successful social communication and adaptation in later life.

The socialisation of older preschool children currently occurs under conditions of societal change and digitalisation.



These factors create new opportunities for child development while simultaneously posing specific challenges to the formation of social intelligence. In this regard, scholarly research by E. Kirilova (2020), O. Babiak (2020), and O. Mateyuk & Yu. Sukhodolia (2021) has emphasised the interconnection between emotional and social dimensions of intellectual development in older preschool children. Specifically, E. Kirilova analysed the process of emotional intelligence development in pre-schoolers, highlighting the significance of peer interaction and teacher communication styles. The researcher underscored that the ability to recognise one's own emotions and those of others substantially influences the success of social adaptation. O. Babiak focused her study on emotional intelligence as a mechanism of psychological self-regulation in communication. Her findings indicated that pre-schoolers with a high level of emotional competence exhibit stronger empathy and greater readiness for cooperation. In parallel, O. Mateyuk & Yu. Sukhodolia conceptualised social intelligence as a multidimensional phenomenon closely linked to cognitive and emotional domains. These scholars pointed out that situational games and role-playing interactions play a pivotal role in acquiring social norms and behavioural models during the older preschool years.

N. Kogutiak & N. Borovska (2022) addressed pedagogical diagnostics of social intelligence. Their studies proposed criteria and methodologies for assessing children's social skills, arguing for the importance of timely diagnostics in targeted development of communicative abilities. In research, D. Ghosh (2024) observed that preschool education as a whole influence the comprehensive development of children aged 3 to 6 years, focusing on cognitive growth, emotional intelligence, and social behaviour. D. Ghosh's findings demonstrated the effectiveness of methods such as play therapy, art therapy, and interactive approaches in fostering social competence. Similarly, X. Fayzullayeva (2024) asserted that enhancing social skills in preschoolers through learning development strategies – emphasising interactive play, guided discussions, and collaborative projects – is crucial for promoting social intelligence and supporting cognitive, emotional, and behavioural growth. A comparable position was reflected in the study by L.C. Luen *et al.* (2024), which suggested that play-based experiences (including imaginative, constructive, and social play) and appropriate toys contribute to the development of multiple intelligences in preschool children by encouraging cognitive, emotional, and social growth. The reviewed research underscores that successful socialisation of pre-schoolers amid societal change and digitalisation is closely linked to the formation of emotional and social intelligence.

Given that the goal of early childhood education is to promote social development and social adequacy in children, the mastery of these skills affects their individual and social well-being. A descriptive-correlational study by N. Moghaddamfar *et al.* (2020) demonstrated that effective intelligence and social adequacy significantly facilitate the social development of preschool children and can be integrated into basic skills within formal education as

well as parental strategies for preventing and resolving interpersonal issues. Findings from J. Leon (2023) indicated that social-emotional competence in pre-schoolers is critical for navigating social norms and achieving emotional regulation. Accordingly, social workers play a vital role in supporting this development, addressing issues that affect children's social intelligence and overall academic achievement. According to J.M. Froiland & M.L. Davison (2020), a positive emotional climate in interactions with adults fosters children's confidence in their social abilities. Thus, in line with the findings, social-emotional competence is essential for preschool children to navigate social norms and regulate emotions effectively.

Despite the substantial body of research confirming the importance of social intelligence and its components during the preschool years, there remains a noticeable gap in examining emotional intelligence in the context of pre-schoolers' socialisation. Therefore, the aim of this study was to substantiate the concept of social intelligence and investigate the specific characteristics of its development in preschool children. To achieve this objective, the following tasks were formulated: to analyse approaches to studying social intelligence within psychology; to examine the key components and factors influencing the formation of emotional intelligence; and to justify effective methods for developing social intelligence in older pre-schoolers.

MATERIALS AND METHODS

In conducting this study, a range of key methods were employed to enable an in-depth analysis and systematisation of information concerning the development of social intelligence in preschool children. Theoretical literature analysis served as the foundational method, encompassing the review and synthesis of both classical works – H.A. Marlowe (1986), J.P. Guilford (1967), G.W. Allport (1937) – and contemporary studies – Y. Ma *et al.* (2024), C. Zehir & D. Karaca (2021), A. Sop (2024) – from psychology, pedagogy, and related domains. This method facilitated the identification of the fundamental concepts of social intelligence, its historical evolution, its key components, and its interrelationship with emotional intelligence. To ensure comprehensiveness and validity, the selection of scholarly works was based on relevance to the research topic, scientific significance, and credibility of sources; chronological coverage (including both foundational works, dating from the early 20th century, and recent research up to 2025 reflecting current approaches and trends in studying and fostering social intelligence in preschool children); and diversity of scientific schools and perspectives.

The method of synthesis and systematisation was employed to integrate disparate data from various sources into a coherent logical framework. Specifically, diverse definitions of social intelligence were systematised, along with its core components (empathy, respect, self-efficacy, social awareness, social adaptability) and psychological dimensions (cognitive, emotional, communicative-organisational). Additionally, comparative analysis was applied to evaluate the

effectiveness of different types of interventions (drama-based interventions, emotional intelligence development programmes, role-playing games), confirming their relevance in cultivating socio-emotional skills in pre-schoolers. The interpretation of findings was grounded in an interdisciplinary analysis of data from developmental psychology, pedagogy, and social psychology. Emphasis was placed on identifying the interconnections between theoretical concepts of social and emotional intelligence and their practical application in early childhood. The results were interpreted to reveal their impact on the holistic development of the child, particularly academic achievement, psychological well-being, and social adaptation. Conclusions regarding the effectiveness of role-playing and other interactive methodologies were considered as evidence supporting the leading role of play in the development of socio-emotional competencies. This analysis helped to identify and justify the most effective methods for developing social intelligence in preschool children. In particular, the consolidated information on key components of social and emotional intelligence, as well as effective interventions, provided a robust theoretical foundation for developing practical recommendations and programmes.

RESULTS AND DISCUSSION

Social intelligence is not merely a collection of isolated abilities, but rather a complex of psychosocial skills enabling individuals to interact effectively with the world. It encompasses the capacity for effective self-expression, comprehension of complex social contexts, and the demonstration of prudent behaviour across various interactions. These abilities constitute cornerstones for personal well-being, professional success, and lifelong adaptability. Research conducted by M. Wirahandayani *et al.* (2023) and R.C. Ghiță & C.C. Sicrea (2024) has confirmed that the early years of childhood represent a true “golden age” for development. During this period, children are most receptive to diverse stimuli shaping their potential, including essential socio-emotional growth. Socio-emotional skills acquired at an early age are not merely desirable but act as critical drivers of school readiness. Indeed, children who can cooperate, comprehend others’ emotions, and resolve conflicts adapt more easily to new environments, interact more effectively with teachers and peers, and thereby directly enhance their academic achievement. Furthermore, these skills constitute the foundation for building strong relationships, achieving career success, developing psychological resilience, and attaining overall life satisfaction (Chen *et al.*, 2024). If social intelligence is insufficiently developed in the preschool years, this may trigger cascading adverse consequences for the child’s entire future life. Such deficiencies may manifest at multiple levels: academic, mental health, and social integration.

At the academic level, children with low social intelligence may struggle with maintaining attention in group settings, adhering to classroom behaviour rules, and collaborating with peers during joint tasks. This may lead to

learning delays and diminished motivation. Inability to interact effectively with others and to understand both their own and others’ emotions may provoke feelings of loneliness, anxiety, and low self-esteem. Such children are more frequently exposed to bullying or, conversely, may themselves display aggressive behaviours due to the inability to adequately express their feelings. Difficulties in communication and in interpreting social cues may result in peer isolation, the formation of a limited social circle, or even the absence of friendships. This, in turn, complicates subsequent social integration, whether within a school community, a higher education environment, or the workplace. Thus, investing in the understanding and purposeful development of social intelligence in preschool-aged children is not merely “useful” or “desirable”; it is a preventive measure ensuring not only individual but also broader societal well-being. By fostering in children, the capacity to understand themselves and others, communicate effectively, and adapt to social demands, educators and parents lay the foundation for a future generation capable of empathy, cooperation, and constructive conflict resolution – thereby contributing to the creation of a more harmonious and productive society. Social intelligence remains a relatively recent construct within scientific research, originating from an in-depth analysis of human behaviour in social contexts and within the scope of social psychology. Its roots trace back to the first half of the twentieth century, when the concept emerged in response to growing interest in interpersonal interaction. According to C. Zehir & D. Karaca (2021), the term was first employed in the context of American psychology and philosophy. Although scholarly interest in the phenomenon of social intelligence dates to the 1920s, its recognition and popularity as a distinct construct have increased significantly only over time.

Historically, E.L. Thorndike (1920) defined social intelligence as “the ability to understand men and women, boys and girls – to act wisely in human relations”. This concept formed part of broader classification of intelligence into three primary categories: abstract intelligence (the ability to manage ideas and symbols); mechanical intelligence (the ability to work with objects and mechanisms); and social intelligence (the ability to interact effectively with other people). E.L. Thorndike considered social intelligence a separate yet equally important form of intelligence that plays a crucial role in an individual’s successful adaptation to society. This definition emphasised the practical dimension of social interaction, highlighting the importance of understanding others’ motives and emotions as well as the ability to influence them to achieve desired outcomes. This idea became a starting point for subsequent research in social and personality psychology. N.A. Marlowe (1986) broadened this definition by incorporating the individual’s ability to understand their own feelings, thoughts, and behaviour, as well as those of others, and to respond accordingly, including through problem-solving skills in interpersonal relationships. Later, J.P. Guilford (1967) developed a multidimensional model of the structure of intelligence, known as the “Guilford’s cube”.

In this model, comprising 120 (later 150) distinct intellectual abilities, social intelligence was identified as one of the five major groups of abilities related to behavioural content. According to J.P. Guilford, social intelligence involves cognition of behavioural information, expressed through the understanding of non-verbal cues (facial expressions, gestures, postures, intonation – conveying significant information about emotional states and intentions); verbal communication (the ability to interpret spoken language, considering context, implicit meanings, and speaker intentions); social situations (the ability to rapidly and accurately assess social contexts, role positions, norms, and expectations); and behaviour prediction (the ability to anticipate others' future actions based on existing information about their emotions, motives, and social situation). For preschool children, the development of the ability to recognise others' emotions and moods is particularly relevant, as it underpins the formation of empathy and appropriate social responses. J.P. Guilford regarded these abilities as integral components of overall intelligence, measurable and developable. G.W. Allport (1937) conceptualised social intelligence as a "special social gift" or "social sensitivity", enabling individuals to adapt effectively to their social environment. It was stressed that it is not merely a set of skills but rather an integrative personality trait allowing comprehension of social contexts, others' motives, and appropriate responses. Consequently, individuals with high social intelligence navigate social norms more effectively, establish relationships more

rapidly, and resolve conflicts more successfully, which collectively fosters their social well-being and life satisfaction.

Building on E.L. Thorndike's research, R.J. Sternberg (1985) expanded the traditional conception of intelligence beyond academic abilities, distinguishing three main components: analytical (componential) intelligence – traditional academic intelligence encompassing analysis, evaluation, comparison, and contrast; creative (experiential) intelligence – the ability to handle novel situations, employ insight, and generate new ideas; and practical (contextual) intelligence – the capacity to adapt to, shape, or select appropriate real-world environments. Within practical intelligence, R.J. Sternberg addressed what many define as social intelligence, describing it as "situational" intelligence manifested in social adaptation and the ability to solve everyday problems in interpersonal interactions. It was emphasised that practical intelligence, or social intelligence in this context, often does not correlate with traditional measures of intelligence quotient (IQ) but is critical for success in real life, particularly in social and professional domains.

Contemporary scholars conceptualise social intelligence as a "set of psychosocial skills", including effective self-expression, comprehension of social contexts, and wise behaviour in social interactions – a perspective shared by Y. Ma *et al.* (2024), C. Zehir & D. Karaca (2021), and M. Frankovsky & Z. Birknerová (2014). Table 1 presents the key components of social intelligence identified through the analysis of the aforementioned studies.

Table 1. Constituents of the social component in preschool-aged children

Component	Characteristic
Empathy	The capacity to understand and share the feelings of another person. The individual determines how well a person relates to the thoughts and emotions of others, recognises moods, and adjusts their reactions accordingly. Both affective empathy (responding to emotions) and cognitive empathy (understanding emotional states and perspectives) enhance relationships with peers
Respect	Adapting one's communication style to the needs of others, seeking compromises, and demonstrating a positive attitude towards the intrinsic worth of others
Behaviour/self-expression	How individuals conduct themselves in social situations, making others feel at ease or uncomfortable, as well as the ability to modify behaviour while retaining core traits
Self-efficacy	The individual feels confident in their own social abilities, leading to reduced stress or anxiety during interaction
Social awareness	The individual recognises and responds to emotional cues and an understanding of group psychology
Social capacity	The individual is capable of establishing communication within groups, organisations, or communities

Source: compiled by the author based on Y. Ma *et al.* (2024)

The analysis of the components of preschool children's social intelligence presented in Table 1 reveals the multi-dimensional nature of this construct: emotional aspects (empathy, respect, social awareness) reflecting the ability to understand and respond to others' feelings; behavioural and cognitive components (behaviour/self-expression, self-efficacy, social competence). Thus, social intelligence in early childhood extends beyond emotional understanding to encompass adaptive behaviour, confidence in social interactions, and effective communication within group settings – underscoring its pivotal role in shaping harmonious interpersonal relationships and successful social

adaptation. Emotional intelligence constitutes a core component in the development of social intelligence, defined as the ability to understand one's own and others' emotions, express them appropriately, and regulate them, as well as comprehend the feelings and experiences of others. M. Brackett & C. Cipriano (2020) conceptualised emotional intelligence as the ability to recognise, monitor, and control one's own emotions and to influence others' emotions, emphasising its critical role in interpersonal relationships and social adaptation. D.N. Singh *et al.* (2021) proposed a four-factor model, framing emotional intelligence not only as the ability to identify and regulate emotions but also as

the competence to perceive, analyse, and utilise emotions to enhance thinking and decision-making. E. Savina *et al.* (2025) and H. Antonopoulou (2024) provided detailed accounts of the key factors contributing to the development of emotional intelligence, identifying self-awareness (awareness of one's own emotions) as its foundational basis in children. Moreover, H. Antonopoulou highlighted the regulatory, adaptive, and stress-protective functions as structural components of emotional intelligence competence, underscoring its applied significance in ensuring emotional comfort, effective adaptation to change, and successful stress management. Although emotional intelligence remains a relatively new and underexplored phenomenon, its development requires a harmonious integration of cognition, emotion, and volitional effort (Tjimuku *et al.*, 2025).

The study by X. Zeng *et al.* (2024) focused on the role of empathy as a key element in the development of emotional intelligence, particularly in early childhood. Findings demonstrated that the ability to understand and share others' feelings forms the basis for the development of social and emotional skills, interpersonal relationships, and moral awareness. In the context of child development, C. Audrin & V. Audrin (2023) emphasised the rapid progress of the emotional sphere during the preschool years. Their research revealed that a child's emotional state significantly influences cognitive processes, and it is at this stage that the formation of basic reflective skills begins. Furthermore, the researchers noted that despite the emerging capacity

for emotional decentration (considering others' feelings), older pre-schoolers remain primarily driven by self-centred desires, indicating the gradual and non-linear nature of emotional intelligence development, where self-orientation tends to prevail over altruistic motives in early stages. The results of the reviewed studies align with the present research findings, confirming that emotional intelligence is crucial for effective social interaction. Although emotional intelligence remains an area of active inquiry, its core components – self-awareness, self-regulation, empathy, and social skills – are essential for social adaptation, psychological well-being, and successful engagement in society. Within the phenomenological approach, intelligence has been conceptualised through the lens of human consciousness and knowledge, assuming that the degree of informational organisation reflects intellectual competence and professional maturity. Intelligence is also understood as a dynamic process of interaction between an individual and their environment, with cognitive flexibility – developed through experience and mediated learning – constituting one of its developmental criteria (Yurchenko, 2023). Contemporary psychological approaches (observational, self-report, neurobiological) aimed at examining the structure of social intelligence view it as a complex, multi-layered, and multidimensional construct, reflected in the diversity of theoretical frameworks for its analysis and substantiation. The core features and key components of these approaches are presented in structured form in Table 2.

Table 2. Psychological traits of social intelligence

Traits of social intelligence	Characteristic
1. Cognitive Component. 2. Emotional Component. 3. Communicative-Organisational Component.	Social knowledge, collective memory, cognitive thinking, predictive ability, perceptual processes, sensitivity, self-regulation potential, adaptability in a social context, as well as social interaction skills
1. Potential Abilities. 2. Actual Abilities. 3. Resultative Level.	Capacity for reflective analysis, empathy, communicative needs, individual aspects of temperament, emotional constituent, creative potential of the individual, diverse role states, behavioural aspects, social creativity, level of self-esteem, and communicative-social competence
1. Social Perception. 2. Emotional Experiences and Feelings. 3. Social Intuition.	Social memory, predictive skills, flexibility in decision-making, cognitive thinking, and reflective capacity

Source: compiled by the author based on Y. Ma *et al.* (2024)

Analysis of Table 2, which presents the psychological characteristics of social intelligence, indicates its multi-level structure integrating cognitive, emotional, and communicative-organisational dimensions. All three represented groups of traits complement one another, conceptualising social intelligence as a complex system. This system encompasses social knowledge, the capacity for prediction and reflection (cognitive dimension), empathy, sensitivity, and the emotional component (emotional dimension), as well as communicative needs, social interaction skills, and flexibility in decision-making (communicative-organisational dimension). Therefore, social intelligence constitutes a dynamic synthesis of internal psychological processes and their external manifestations, aimed at effective interaction

with the social environment. Research in preschool psychology highlights a range of key features and patterns that are fundamental to understanding child development. J. Chu & L.E. Schulz (2023) noted that preschool psychology is characterised by a marked emotional colouring of cognitive processes (sensation, perception, thinking, imagination) and a high degree of emotional saturation across various activities, particularly in play and communication. Significant changes include the development of affects, which manifests in the ability to empathise and feel compassion, prompting the child towards prosocial behaviour. Emotional experiences become more verbalised, although children's utterances remain concise. At this stage, emotional behaviour appears natural and feelings are expressed with sincerity, yet

the child gradually acquires skills for controlling emotional expression. In older preschool years, the socialisation of intelligence reaches a new level, as the child's social orientation shifts from objects to other people. Empathy develops, and although not yet fully stabilised, it enables the child to demonstrate empathy and compassion, contributing to the formation of interpersonal emotional intelligence.

E.J. Short *et al.* (2020) emphasised the importance of the preschool stage as foundational for subsequent intellectual, emotional, and psychological growth. During this period, lasting approximately from 3 to 6-7 years, the child demonstrates high receptivity to environmental influences, which substantially shape worldview and behavioural patterns. Active self-exploration and discovery of the world occur through play, communication, and novel experiences. Complex conditioned reflexes are formed, with the word (the second signal system) playing a pivotal role, and conditional inhibition develops, although irradiation of excitation still characterises behavioural responses. A. Sop (2024) underscored the preschool period as one of the most sensitive stages for establishing fundamental personality characteristics. During this time, favourable conditions are created for the development of motivation for learning and the formation of stable cognitive needs. Particular emphasis is placed on the development of productive strategies and specialised skills necessary for educational activity, such as independent knowledge acquisition and effective learning in structured environments. Individual characteristics and innate talents are revealed and supported. Mechanisms of self-control, self-organisation, and self-regulation improve, facilitating awareness of one's actions and emotions. An adequate self-concept is formed, which is

crucial for psychological well-being and the development of critical thinking. Furthermore, the child assimilates social norms, moral values, and behavioural rules, while developing communicative competence through peer interaction.

C. Guedes *et al.* (2024) highlighted the continuity of intellectual activity in preschool children, which persists across all stages of activity and even after its completion. The findings of C. Guedes *et al.* revealed that pre-schoolers' cognitive processes are emotionally coloured and closely intertwined with the emotional saturation of activity. This underscores that intellectual activity is not purely rational but inseparably linked to the emotional sphere, aligning with the notions of "continuity" and "progressiveness" of development. Accordingly, the results of C. Guedes *et al.* correlate with the current study's findings that the preschool period constitutes a phase of intensive, holistic, and continuous intellectual development, intrinsically connected with emotional processes and social interaction. The intellectual development of personality is inextricably linked to the formation of individual character traits, and these two processes form a complex interplay deeply influencing the overall mental structure of the individual. The process of intellectual development is spontaneous by nature, yet it simultaneously adheres to clearly defined laws of psychological evolution (Rabindran & Madanagopal, 2020). These laws manifest through the sequential formation of operational structures of thinking, which provide the individual with the capacity for complex analytical and creative processes. The developmental process unfolds through several key stages, each characterised by specific changes and achievements. The principal aspects of this development are summarised in Table 3.

Table 3. Key features of intellectual development

Type of intelligence	Age
Sensorimotor	from 8-10 months – 1.5 years
Symbolic	from 1.5-2 – 4 years
Intuitive	from 4 – 7-8 years
Concrete-operational	from 7-8 – 11-12 years
Reflective intelligence	from 11-12 – 14-15 years

Source: compiled by the author based on Rabindran & D. Madanagopal (2020)

According to Table 3, the stages of intellectual development are inseparably linked to the establishment of individual character traits. This periodisation underscores that each subsequent stage builds upon the achievements of the previous one, characterised by the formation of increasingly complex operational structures of thinking, enabling the transition from simple interaction with objects to abstract thought and self-analysis. The proper development of social intelligence is crucial in shaping the growth of preschool children. Researcher S.V. Kharchenko (2017) observed that optimal conditions for the development of social intelligence in pre-schoolers are provided through extra-situational, person-oriented communication with adults, active play, and the implementation of specialised programmes in preschool settings. The researcher placed particular emphasis on engaging children in organised

play and creative activities, as well as artistic endeavours. Narrative role-playing, active, communicative, dramatic, didactic, creative, and linguistic games are especially important and recommended for integration into educational programmes for older pre-schoolers. Play constitutes an essential aspect of child development, fostering cognitive, emotional, physical, and social growth. Symbolic play, characterised by "pretence" or "imaginary" actions, represents cognitive advancement, whereby children use objects to signify others (Wirahandayani *et al.*, 2023). Role-play methodologies have proven highly effective in promoting socio-emotional development in pre-schoolers, leading to increased prosocial behaviour and improved emotional regulation (Frankovsky & Birknerová, 2014). Active participation in role-play stimulates children to express and regulate emotions, fostering communication, interaction,

creativity, and self-confidence. Role-play, in particular, stands out as an active means of teaching socio-emotional competencies. However, E.J. Short *et al.* (2020) noted an important nuance: language, though generally beneficial, may distort play assessment by either masking deficits (e.g., Attention Deficit Hyperactivity Disorder) or unfairly penalising children (e.g., Developmental Language Disorder). This implies that educators and researchers must exercise exceptional sensitivity to the interplay between language and play, especially in diverse populations, to accurately assess and support social intelligence.

Self-regulation, defined as the capacity to manage emotions, behaviour, and cognition in accordance with social demands, constitutes a critical developmental achievement. It is essential for social and academic learning and undergoes significant acceleration during the preschool years (Sop, 2024). Self-regulation fully mediates the association between preschool children's anxiety and life skills, implying that anxiety indirectly exerts a negative effect on life skills by weakening self-regulation. Emotional self-regulation in children positively correlates with academic attainment. High-quality teacher-child relationships (TCRs) and teachers' socio-emotional competence foster emotional self-regulation (Nilfyr & Ewe, 2025). Mediation analysis conducted by A. Sop established self-regulation not merely as a skill but as a mediating mechanism through which anxiety impacts broader life skills. Coupled with its strong correlation with academic achievement and its role in emotional management, self-regulation emerges as a central, foundational competence. This indicates that interventions aimed at enhancing self-regulation in preschool children will yield wide-ranging positive outcomes for their social, emotional, and academic development, rendering it a high-priority objective in early childhood education. Executive functions (attention shifting, working memory, inhibitory control) at age 3 are positively associated with attentional persistence at age 6. Executive functions

significantly influence the development of literacy and numeracy skills as well as learning behaviours (Slot *et al.*, 2017).

The development of a child's social intelligence occurs within a complex "social ecosystem". Family engagement positively affects children's socio-emotional development, with school engagement serving as a complete mediator. Empathy (both affective and cognitive) in preschool children significantly predicts peer relationships (degree and closeness of centrality) one year later. This influence is unidirectional in pre-schoolers: empathy promotes peer relationships rather than vice versa. Cognitive empathy demonstrates a stronger association with peer relationships than affective empathy (Zeng *et al.*, 2024). The development of social intelligence in older pre-schoolers can also be effectively supported through targeted interventions and programmes employing interactive and experiential approaches. The "Dramacionante" programme, a drama-oriented intervention for early childhood education (ages 4-5), aims to foster learning and create an educational environment that maximises opportunities for dynamic engagement with emotions, thereby enhancing social and expressive skills. According to M.A. Arias *et al.* (2025), the programme successfully reduced negative behaviours associated with social skills (externalising and internalising problems) and improved socio-emotional competences, particularly social independence. Research by J. Ounprasertsuk & W. Suksatan (2021) reported that the Emotional Intelligence Promotion Programme (EIPP) for pre-schoolers proved effective in significantly enhancing emotional intelligence. EIPP encompasses five key activities: recreational events, situational analysis, emotional regulation training and practice, creative problem-solving, and self-expression. These programmes underscore the critical role of early childhood in learning and consolidating emotional intelligence, fostering children's development into "quality adults". Table 4 presents a synthesis of intervention types for fostering socio-emotional skills in preschool children.

Table 4. Effective interventions for developing social-emotional skills in preschool-aged children

Type of Intervention	Target skills	Key activities/components	Age group	Effectiveness
Drama-oriented interventions	Emotional intelligence, social skills, social independence, reduction of negative behaviour	Shared reading of children's picture books, facial expression mimicry, imitation, puppets, music-and-movement, and drawing activities	4-5 years (adaptable for 3-6 years)	Reduction of negative behaviour (externalising/internalising problems); improvement of social-emotional skills, notably social independence; sustained positive effects
Emotional intelligence development programmes	Emotional intelligence, emotional regulation, creative problem-solving, self-esteem	Recreational activities, situational analysis, teaching and practising emotional regulation, creative problem-solving, demonstration of self-esteem	Preschool children (3-6 years)	Significant improvement in the level of emotional intelligence post-programme
Role-play game methods	Prosocial behaviour, emotional regulation, communication, interaction, creativity, self-confidence	Direct participation in characterising roles (chef, doctor, parents), use of symbolic props	Preschool children (3-6 years)	Increase in prosocial behaviour, improvement in emotional regulation, development of control over emotional reactions

Source: compiled by the authors based on M. Frankovsky & Z. Birknerová (2014), E.J. Short *et al.* (2020), J. Ounprasertsuk & W. Suksatan (2021), M. Wirahandayani *et al.* (2023), A. Sop (2024)

According to the synthesis in Table 4, drama-based interventions (Dramacionante), emotional intelligence development programmes (Emotional Intelligence Promotion Programme), and role-play methodologies substantially enhance levels of emotional intelligence, emotional regulation, creative problem-solving, and self-esteem in preschool children through recreational activities and practical exercises. Specifically, they promote prosocial behaviour, communication, and self-confidence, enabling pre-schoolers to enact various social roles directly. These approaches demonstrate that intentional, interactive, and play-based methods constitute pivotal strategies for the harmonious socio-emotional development of preschool children. The impact of role-playing methods on the socio-emotional development of preschool children is substantial, as evidenced by various studies. In particular, in their research, L.E. Mureşan & E.S. Turda (2022) concluded that role-play activities provide children with opportunities to engage in social interactions, express emotions, and develop empathy, which are crucial for their overall emotional and social growth. The findings of research demonstrated that children who participate in role-playing games exhibit better emotional regulation and an enhanced understanding of social cues, both of which are essential for building relationships. Similar conclusions were observed in the study by Irmayanti *et al.* (2025). The quantitative results of research revealed that children's socio-emotional skills improved from a very low to a moderate level following participation in role-play activities. According to the study by E. Dowswell & D. Chessor (2014), social intelligence in older preschool children can be developed through targeted social education programmes, such as the 4S programme, which aims to enhance social competence by teaching essential social skills necessary for effective social interaction. In the study by L.S. Daulay & Khadijah (2023), it was noted that the involvement of educators and parents is critical in facilitating role-play experiences, as they provide children with the necessary guidance and support to explore their emotions and social interactions. Therefore, the findings of L.E. Mureşan & E.S. Turda, Irmayanti *et al.*, and E. Dowswell & D. Chessor correlate with the results of the current study regarding the significance of role-playing and adult engagement in fostering the socio-emotional development of preschool children.

Based on the analysis of the studies presented, it can be concluded that social intelligence is an integral and multi-component element of the harmonious development of preschool children, which is essential for their future success. Early childhood is considered a "golden period" for its formation, as children at this stage are highly receptive to external influences shaping their socio-emotional skills. Insufficient development of these skills in the preschool years may lead to significant challenges in academic achievement, mental health, and social integration, manifesting in difficulties with concentration, anxiety, low self-esteem, and social isolation. Emotional intelligence, as a key component of social intelligence, encompasses the

ability to understand and regulate one's own and others' emotions, and its development requires a balanced integration of cognition, emotions, and volitional efforts. Effective methods for developing social intelligence include drama-based interventions, emotional intelligence development programmes, and role-play activities, which contribute to improved emotional regulation, prosocial behaviour, and social independence. In this process, the involvement of adults (educators and parents) plays a crucial role in providing the necessary support and guidance, as intellectual development, while spontaneous, follows specific psychological principles and requires purposeful formation. Thus, investing in the development of social and emotional intelligence in preschool children constitutes a fundamental preventive measure that lays the foundation for creating an empathetic, adaptive, and socially competent future generation.

CONCLUSIONS

The current study identified social intelligence as a multi-component construct encompassing not only cognitive aspects of understanding social situations but also emotional sensitivity, self-regulation, and communicative competence. The paper traced the historical development of conceptualisations of social intelligence, from early definitions to multidimensional models in contemporary research, and established that the concept of "social intelligence" remains under active investigation. The study also identified the key components of social intelligence, including empathy, respect, self-efficacy, social awareness, and social competence. A key finding was the confirmation that emotional intelligence is an essential component of social intelligence, particularly during the preschool period. It was determined that emotional intelligence enables children to recognise and manage their own emotions as well as understand and empathise with the emotions of others, forming the basis for empathy and prosocial behaviour. Importantly, the study established a direct link between the development of these skills in early childhood and children's school readiness, subsequent academic achievement, and overall well-being in adult life.

Based on the theoretical analysis, the study systematised various definitions of social intelligence, identifying its structural components and psychological dimensions (cognitive, emotional, and communicative-organisational), thereby creating a comprehensive understanding of the phenomenon. Specifically, the cognitive aspect of social intelligence encompasses social knowledge, the ability to anticipate others' behaviour, and reflection on one's own and others' actions, enabling preschool children to interpret complex social contexts and evaluate situations. The emotional dimension includes empathy, sensitivity to others' emotions, and the overall emotional component expressed in the ability to understand, express, and regulate one's emotions, as well as to recognise others' feelings. Emotional intelligence is a key element in shaping social intelligence, particularly in early childhood. The communicative-organisational

dimension represents communication needs, social interaction skills, and flexibility in decision-making within social contexts. These skills allow the child to express themselves effectively, collaborate, resolve conflicts, and adapt to diverse social demands. The study also clarified that active play activities, especially socio-dramatic and communicative play, as well as targeted drama-based interventions (e.g., “Dramacionante”) and EIPP, are effective in fostering socio-emotional competencies.

The research emphasised the critical role of adults (educators and parents) in this process, underlining the need for extra-situational interpersonal communication and the creation of a supportive environment. Thus, the study not only provided a theoretical rationale for the importance of social intelligence but also offered specific practical recommendations for its development. A limitation of this research is that it is based on a theoretical analysis and synthesis of existing scholarly data and does not include original empirical research involving preschool children. Furthermore, the dynamic nature of developmental

psychology means that new data and approaches continually emerge, necessitating regular updates. Future research on this topic should include empirical validation of the proposed programmes and techniques in the context of Ukrainian preschool institutions. Another promising direction is an in-depth examination of the influence of cultural and socio-economic factors on the development of social intelligence, as well as the development of standardised tools for its assessment and diagnosis in preschool children. This would enable the creation of more tailored and effective interventions.

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Становлення соціального інтелекту дітей старшого дошкільного віку

Анотація. Актуальність дослідження полягала в тому, що цілеспрямований розвиток соціального інтелекту у дітей дошкільного віку був ключовим превентивним заходом, який забезпечував їхню готовність до школи, подальшу академічну успішність та загальний добробут. Метою роботи було теоретично обґрунтувати поняття соціального інтелекту та вивчити особливості його розвитку у дітей дошкільного віку. Для досягнення поставленої мети було використано комплексний підхід, що включав теоретичний аналіз, синтез, систематизацію та порівняльно-зіставний аналіз класичних та сучасних наукових праць з психології, педагогіки та суміжних галузей. Основні результати роботи показали, що соціальний інтелект є багатокомпонентним конструктом, що охоплює когнітивні, емоційні та комунікативно-організаційні аспекти, де емоційний інтелект відіграє ключову роль. У дослідженні простежено еволюцію поняття «соціальний інтелект» та ідентифіковано його ключові складники, такі як емпатія, повага, самоефективність, соціальна обізнаність та здатність до адаптації. Було встановлено прямий зв'язок між рівнем розвитку цих навичок у дошкільному віці та готовністю дітей до школи, їхньою подальшою академічною успішністю та загальним добробутом у дорослому житті. Також було конкретизовано, що активна ігрова діяльність, особливо сюжетно-рольові та комунікативні ігри, а також цілеспрямовані драма-орієнтовані інтервенції та програми сприяння емоційному інтелекту, є найбільш ефективними у формуванні соціально-емоційних навичок, при цьому ключове значення має залученість дорослих. Відповідно, було доведено, що цілеспрямований розвиток соціального інтелекту у дітей дошкільного віку є превентивним заходом для забезпечення не тільки індивідуального, а й ширшого суспільного благополуччя. Практична значущість отриманих результатів дослідження полягає у можливості їхнього застосування педагогами, вихователями та практичними психологами з метою розробки інноваційних методик, спрямованих на діагностику, розвиток та вдосконалення соціального інтелекту дітей у дошкільних навчальних закладах.

Ключові слова: психологічний розвиток; віковий розвиток; інтелектуальний розвиток; соціум; розумові здібності

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Guided Imagery as an academic discipline: Educational technologies in the development of personal maturity and creative thinking of students

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Abstract. The relevance of the study is conditioned by the growing interest of pedagogy and psychology in the use of guided imagery as an educational technology that can contribute to the development of personal maturity and creative thinking of students. In the context of training future psychologists, the search for innovative approaches to the development of their creativity and emotional competence is of particular importance. The purpose of the study was to identify the influence of guided imagery as an academic discipline on the development of personal maturity and creative thinking of students of psychological specialities. The methodological basis was the use of the guided imagery method (katathym-imaginative psychotherapy), which involved working with controlled mental images and subsequent reflection. The study involved 30 students of the "Psychology" speciality of the Kyiv University of Intellectual Property and Law, who during the semester took a course using basic symbols ("House", "Flower", "Clouds", "Treasure", "Mountain", "Road"). A set of psychodiagnostic techniques was used to assess the dynamics of personal characteristics: Torrance Test of Creative Thinking, a method for determining the level of personal maturity, life orientation, Level of Subjective Control, and Hardiness Test. It has been established that after completing the guided imagery course, students showed a statistically significant increase in originality and flexibility of thinking, level of reflection, responsibility, awareness of life goals, and internalisation. Changes in the development of emotional competence and psychological stability were analysed, which confirmed the effectiveness of the method in the development of personal maturity. Practical recommendations for integrating guided imagery into the training plans of psychologists have been developed. The practical value of the research lies in the possibility of using its results by teachers of psychological disciplines and specialists in the educational sphere to improve the quality of professional training of students

Keywords: therapeutic interaction; pedagogical innovation; creativity; personal growth; reflection; psychological training

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INTRODUCTION

The problems of forming personal maturity and developing creative thinking of students are becoming increasingly relevant in the context of the transformation of the higher education system in Ukraine. The transition to a competence-based learning model involves not only mastering students' professional knowledge, but also developing flexible skills, emotional competence, reflexivity, and the ability to be creative. In this context, innovative educational technologies, in particular, methods of dramatic pedagogy and guided imagery, are effective means of ensuring the holistic personal and professional development of future specialists. The phenomenon of guided imagery as a separate academic discipline in higher education has not yet been sufficiently studied, which causes the need for special research.

In the scientific literature, there is a growing interest in using dramatic and imaginative teaching methods as tools for developing key psychological competencies of students. Thus, Y. Hu & J. Shu (2025) investigated the effectiveness of integrating elements of dramatic education into humanities curricula. The researchers have found that the inclusion of dramatic exercises in the educational process contributes to the development of critical thinking, communication skills, and the ability to work together. It was stressed that dramatic practices increase student engagement, form the experience of co-creation, and increase the level of internal motivation to learn. However, the study did not reveal the deep psychological mechanisms of these processes, in particular, the role of imaginative experience and emotional reflection. The study by F. Şahin (2021) was more applied in nature and aimed to analyse the impact of creative drama on the cognitive flexibility of students with intellectual disabilities. It was proved that participation in dramatic exercises contributed to the development of fluidity of thinking and skills in finding original solutions in difficult educational and life situations. These results confirmed the universal nature of the impact of dramatic methods on the cognitive sphere, but the question of the possibility of their systematic use in educational programmes for ordinary student groups remained open.

The study by S. Horasan-Dogan & P.T. Cephe (2020) analysed the role of creative drama in the professional training of future teachers. The researchers showed that the involvement of students in dramatic practices contributed not only to increasing the level of pedagogical creativity, but also to the development of emotional competence, empathy, and the ability to self-reflect. This approach ensured the development of students' professional identity, but the researcher focused mainly on the pedagogical, rather than psychological aspects of the process. It remains unclear exactly what mental processes and inner experiences contribute to the personal growth of participants in dramatic learning. In turn, T.B. Arda Tuncdemir (2025) investigated the relationship between the use of creative drama and the development of students' self-efficacy. The researcher concluded that regular participation in dramatic exercises increases self-confidence, creates a sense of competence, and has a positive effect on self-esteem. This finding confirmed

the importance of dramatic technology in maintaining students' psychological well-being. The paper did not analyse the impact of such methods on the development of integrated personality characteristics – such as maturity, integrity, or internal consistency.

There is also a growing interest among Ukrainian researchers in integrating dramatic and guided imagery approaches into the educational process. Thus, L. Naidyonova (2022) examined the psychological mechanisms of students' personal maturity and emphasised the potential of methods of working with mental images for developing emotional stability and self-regulation. The findings confirmed that imagination-based visualisation techniques can be a powerful tool for integrating emotional and cognitive experiences. However, the researcher did not investigate the possibilities of systematic implementation of such methods in the educational process as a separate discipline. N.P. Volkova *et al.* (2021) analysed the role of interactive technologies in the development of students' critical thinking. The researchers noted the high effectiveness of methods that activate imagination, imaginative thinking, and reflection. However, the dramatic component of these technologies was considered only in passing, without a deeper analysis of the symbolic content of educational interaction.

Thus, the analysis of scientific sources for 2021-2025 indicates the presence of a wide range of studies that confirm the effectiveness of dramatic and creative-dramatic methods in the development of cognitive, emotional, and social competencies of students. Researchers from different countries emphasised their positive impact on critical and creative thinking, emotional maturity, and social interaction. However, insufficient attention was paid to the analysis of guided imagery as a separate academic discipline that combines educational, therapeutic, and personal development goals. Questions about the methodological foundations of its implementation in the system of training psychologists, pedagogical conditions for effective application, and the specifics of its impact on the formation of personal maturity and the development of creative potential of students remain unexplored. Given the above, the purpose of the research was a comprehensive study of the potential of guided imagery as an academic discipline in the context of professional training of students of psychological specialties, in particular, the assessment of its impact on the development of personal maturity and stimulating the development of creative thinking.

MATERIALS AND METHODS

To conduct this study, a research project was organised at the Kyiv University of Intellectual Property and Law among students majoring in "Psychology". The sample includes the 4th-year students ($n = 30$), aged from 20 to 22 years, of which 24 were women and 6 were men. All participants were trained in the C4 educational and professional programme "Psychology", educational level "Bachelor". The selection was carried out on the basis of voluntary consent, the

presence of internal motivation for self-knowledge and readiness to master projective and guided imagery techniques. Preliminary training included basic knowledge from the following courses: “General Psychology”, “Practicum in General Psychology”, “Psychodiagnostics”, and “Fundamentals of Psychotherapy”. Classes were held in the format of therapeutic group meetings with the number of participants from 6 to 10 people, which provided a psychologically safe atmosphere and promoted individual and group reflection. The course consisted of 15 classes of 90 minutes each, which took place during one academic semester. The procedures for conducting classes included: familiarising students with symbolic dramatic motives and techniques, performing individual and group exercises with working with internal images, group discussion of experiences and reflections, and integration tasks to consolidate the experience gained. To control the research conditions, standardised conditions for conducting classes were provided: a permanent venue, the same time, a consistent structure of classes, the same methodological materials, and the support of a qualified teacher. This approach helped to unify the influence of external factors as much as possible, ensuring intra-group and inter-group stability, which increased the reliability of the results obtained.

The methodological basis of the study was the method of guided imagery (katathym-imaginative psychotherapy), which combines the use of controlled mental images with subsequent reflection and interpretation of participants’ experiences (Leuner, 1984; Leuner & Kottje-Birnbacher, 1994). This approach was based on a combination of psychoanalytic concepts and techniques of working with imagination, which allows activating deep emotional processes, increasing the level of self-knowledge, and stimulating creative thinking. In the educational context, guided imagery is considered as an innovative educational technology that can ensure the development of personal maturity, the development of emotional competence, and the disclosure of students’ creative potential. As part of the study, the guided imagery method was used not only as a psychotherapeutic tool, but also as an educational practice that integrates elements of individual and group work. This allowed combining the individual internal dynamics of participants with a collective discussion of symbolic images, contributing to the development of reflection, empathy, and interpersonal communication skills. The use of guided imagery techniques ensured the creation of a safe educational environment in which students could freely explore their own inner experiences, project them onto mental pictures, and gain new experiences of understanding their own “self”. Thus, the chosen methodology allowed combining the psychotherapeutic potential of guided imagery with its pedagogical capabilities, which is especially important for the development of students of psychological specialties of a deep understanding of the mechanisms of personal development and creative self-realisation.

During the course, the basic motifs of the guided imagery were used: (“House”, “Flower”, “Clouds”, “Treasure”,

“Mountain”, “Road”. The motif “House” was considered one of the key motifs used to diagnose and correct the image of the “self”. The “House” acts as a metaphor for the internal structure of a person, where individual elements (floors, rooms, the state of the building) reflect the nature of their mental organisation. For example, an abandoned or destroyed house can symbolise exhaustion and lack of vital resources; a house without doors or windows – difficulties in communication and interpersonal interaction; a spacious and bright house – harmony, internal comfort, and psychological stability. The motif “Flower” was aimed at updating the topic of personal growth, creative potential and self-esteem. The image of a flower allows tracing the dynamics of self-perception – from the hidden potential (bud) to its disclosure (flower in full bloom). The condition and colour of the flower often reflect the level of vital energy and openness to new experiences. Thus, a withered or broken flower may indicate low self-esteem or a sense of inferiority; a brightly bloomed one may indicate inner strength and harmonious development; a closed bud may indicate a still unrealised potential. “Clouds” – this motif reflects emotional processes and the dynamics of affective states. Clouds can be light and bright, indicating emotional flexibility and the ability to regulate feelings, or dark and static, which are interpreted as a projection of anxiety, depression, or internal tension. Working with a motive promotes awareness, verbalisation, and further regulation of emotions. “Treasure” is a technique aimed at identifying hidden internal resources, values, and life orientations of the individual. A treasure can symbolise meaningful relationships, talents, life goals, or spiritual resources. For example, a gold object or jewellery found reflects an awareness of own capabilities; an empty chest – a feeling of emptiness; the appearance of a treasure guard – difficulties in accessing internal resources (in particular, fear of self-expression). In the process of working, the motive contributes to the discovery of new aspects of one’s own potential and the development of a sense of competence and strength. The motif “Mountain” represents barriers, difficulties, and life’s challenges. The way to overcome obstacles is important: climbing to the top reflects self-confidence and willingness to fight, bypassing the cliff indicates avoiding problems, and retreating can indicate a low level of stress tolerance. A high and inaccessible mountain symbolises difficulties that are perceived as insurmountable, while overcoming it is the dominance of active coping strategies. The motif “Road” symbolises the path of life, orientation to the future and awareness of prospects. The nature of the road (flat, illuminated, winding, or intermittent) indicates a sense of stability or uncertainty in life, and the level of purposefulness of the individual. Thus, a smooth and illuminated road indicates confidence in their own future; a winding or intermittent road indicates doubts and internal instability; a road leading up reflects the desire for development and high ambitions.

The rationale for using these particular psychodiagnostic methods is that they have proven themselves in scientific practice as valid and reliable methods: Torrance Test of

Creative Thinking (TTCT), method for assessing personal maturity, method “Meaningful Life Orientations” (MLO) by O. Leontiev, method “Level of Subjective Control” (LSC), Hardiness Test by S. Maddi. TTCT was used to determine the level of development of creativity, originality and flexibility of thinking (Torrance, n.d.). The study used verbal and figurative subtests, which provided a comprehensive understanding of the creative potential of the individual and its innovative capabilities. Next, the study used the method of investigating the level of personal maturity designed to assess the development of basic value orientations, the ability to self-regulation and reflexivity. Personal maturity within the framework of this approach is understood as the integration of the motivational and semantic sphere, a responsible attitude to own life and readiness for self-development. The method allowed identifying maturity levels and identifying key factors that contribute to or hinder personal growth. Method of MLO by O. Leontiev (StudFiles, n.d.) was used to identify the features of the target orientation, the level of life meaningfulness and subjective responsibility for one’s own choice. The tool was based on the concept of meaning as a system-forming factor of personality and allows assessing the degree of satisfaction with the past, awareness of the present and the presence of long-term life plans, which is an important criterion for psychological well-being. The LSC methodology (Rotter, 1966) in the adaptation of E.F. Bazhyn, was used to investigate the locus of control, that is, the individual’s ideas about the sources of responsibility for the events of their own life. Indicators of internality and externality determine how much a person is inclined to attribute the results of activities to their own efforts or external circumstances. A high level of internality indicates a developed sense of autonomy, the ability to take responsibility and make conscious life choices. The Hardiness Test (Maddi, 2006) was used to assess stress tolerance, uncertainty tolerance, and personal growth in crisis situations. The concept of hardiness includes three key components: engagement, control, and risk acceptance. High scores on these scales indicate an individual’s ability not only to resist stressful influences, but also to transform difficult life circumstances into a resource for development.

The use of these methods facilitated a multidimensional study of the personal characteristics of the study

participants, which allowed obtaining comprehensive empirical data for further analysis of the relationships between creativity, personal maturity, life-meaning orientations, and psychological stability. The study involved two stages: ascertaining (before the start of the course) and control (after the end of the course), which helped to track the dynamics of the development of indicators of creative thinking and personal maturity. The research strategy combined quantitative and qualitative analysis. Quantitative data were subjected to statistical processing (calculation of mean values, comparison of results before and after training exposure), and significance levels were determined using Student’s *t*-test for dependent samples; additionally, the Pearson correlation coefficient was used to establish relationships between indicators. Qualitative analysis included the study of students’ personal reflections, the content of mental images and their symbolic interpretations. The results obtained confirmed the positive dynamics of the development of creative thinking and personal maturity of participants after completing the guided imagery course. The described methodology creates conditions for reproducing research by other scientists under similar conditions. All procedures met the ethical standards for conducting psychological research (American Psychological Association, 2017; The British Psychological Society, 2021). Participants were informed about the goals, conditions, and possible psychological consequences of participating, gave written informed consent, and had the right to opt out at any stage without negative consequences. Confidentiality and anonymity of the results were guaranteed.

RESULTS AND DISCUSSION

Analysis of the data obtained at the ascertaining and control stages of the study showed positive dynamics in the development of creative thinking and personal maturity of students (Table 1). In particular, an increase in indicators of originality of thinking, the ability to generate new ideas, an increase in the level of cognitive flexibility and emotional self-regulation was recorded. Students demonstrated greater openness to new ways of solving problems, increased their ability to reflect and understand their own emotional states.

Table 1. Dynamics of indicators of creative thinking and personal maturity of students before and after students master the course “Guided Imagery” (n = 30)*

Indicator	Before the course (M ± SD)	After the course (M ± SD)	p
Creativity (TTCT, general index)	85.3 ± 9.6	98.7 ± 10.2	< 0.01
Originality (TTCT)	21.4 ± 4.3	27.8 ± 5.0	< 0.05
Flexibility of thinking (TTCT)	18.7 ± 3.9	24.1 ± 4.2	< 0.05
Personal maturity	42.5 ± 6.1	49.2 ± 5.8	< 0.05
Meaningful Life Orientations (MLO)	88.9 ± 11.4	96.7 ± 10.1	< 0.05
Subjective control (LSC, internality)	11.2 ± 2.7	14.5 ± 2.9	< 0.05
Hardness Test	65.8 ± 8.2	74.6 ± 7.9	< 0.01

Note: * – data is shown as the mean ± standard deviation (M ± SD); significance levels were determined using Student’s *t*-test for dependent samples

Source: compiled by the authors

The data showed that after completing the course, there was a statistically significant increase in all key indicators, which confirms the effectiveness of guided

imagery as an educational technology for the development of personal and professional competencies of students (Fig. 1).

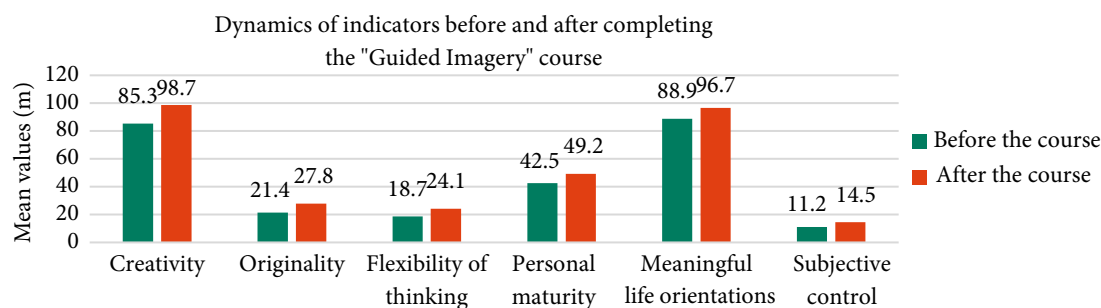


Figure 1. Dynamics of psychological indicators before and after completing the course "Guided Imagery"

Source: compiled by the authors

Analysis of TTCT results showed significant positive changes in the development of students' cognitive characteristics. The average creativity index increased by 15.1%, while the indicators of originality and flexibility of thinking – by 29.9% and 28.9%, respectively, relative to the basic level. If at the beginning of the study the range of results ranged from 72-100 points, then after completing the course it expanded to 90-115 points, which indicates an enrichment of the cognitive repertoire of students, an increase in the ability to associative thinking, and going beyond stereotypical decisions. Standard deviations remained relatively stable (± 9.6 before the course and ± 10.2 after), indicating uniform positive dynamics in most of the sample participants. It is important to note that the increase in creativity indicators was accompanied by changes in other psychological characteristics. Correlation analysis revealed a statistically significant positive relationship between the originality of thinking and the level of motivation to achieve success ($r = 0.43$; $p < 0.05$), and between flexibility of thinking and personal maturity ($r = 0.49$; $p < 0.01$). This indicates the relationship between cognitive and motivational-personal development: the growth of creativity is accompanied by the development of internal motivation, awareness of own potential, and the ability to self-regulate. The results obtained can be interpreted as the activation of divergent thinking, combined with the development of personal qualities necessary for the realisation of creative potential. The growth of creativity indicators not only reflects the development of intellectual abilities, but also confirms the positive dynamics in the field of self-awareness, motivation, and maturity of students, which confirms the complex nature of their psychological growth under the influence of the curriculum.

In the method of studying the level of personal maturity, the average indicator of personal maturity increased by 6.7 points (15.8%), while the standard deviation decreased from 6.1 to 5.8, which indicates a gradual equalisation of development levels within the group. A more detailed analysis showed that the greatest positive changes were observed for the subscale's "reflexivity" (+18.4%) and

"value orientations" (+16.7%), while the dynamics on the scales "self-control" and "social responsibility" were more moderate (+9.3% and +7.8%, respectively). This indicates that the training course primarily stimulated the internal processes of self-knowledge, understanding life priorities, and forming personal autonomy. A comparative analysis of the average values and standard deviations for subscales showed that it was the indicators of reflexivity and value orientations that became the most stable in the group ($SD = 4.9$ and 5.1 , respectively, after completing the course), which indicates an increase in the uniformity of results. A statistically significant positive correlation was found between these two subscales ($r = 0.52$; $p < 0.01$), which indicates the interdependence of the depth of self-reflection and the development of personal values. This connection reflects the integration of cognitive-semantic and emotional-motivational components of personal maturity, which is an important condition for the development of professional competencies of a future psychologist. Qualitative observation data confirm quantitative results. Students were more likely to describe situations in which they showed greater independence in decision-making, awareness of their own boundaries, and responsibility for emotional responses. In reviews of the course, participants noted that the training exercises helped to "see yourself from the outside", "realise that you can manage your condition", "understand what values are really important to me". The results obtained demonstrate the development of a holistic life position, strengthening self-regulation, and deepening the value and semantic sphere of students. This gives grounds to consider an educational programme based on the use of guided imagery as an effective tool for developing personal maturity and professional readiness of future psychologists.

According to the results of the "Life-meaning orientations" method, a noticeable positive dynamic of indicators was observed. The average value of the overall index increased from 88.9 to 96.7 points (+8.8%), while the maximum results reached 115 points (against 102 at the beginning), which indicates an expansion of the range of individual achievements and an increase in the level of life

meaning in more participants. A detailed analysis of the subscale showed that the most pronounced changes were recorded on the “target orientation” scale ($p = 0.04$), where the average value increased by 11.3%, which indicates the development of a clearer vision of the future, certainty of life goals, and strategies for achieving them. Significant positive changes were also found on the “life satisfaction” scales ($p = 0.05$) and “locus of control – self” ($p = 0.03$), which reflects increased internal motivation, a sense of self-confidence and a willingness to take responsibility for life events. Less pronounced, but statistically tendentious changes were noted in the “locus of control – life” scales ($p = 0.07$) and “process of life” ($p = 0.08$), which may indicate a gradual development of the ability to perceive own life as a consistent and meaningful process. A comparative analysis of the distribution of results showed that 67% of participants showed an increase in MLO indicators, 28% – remained within stable values, and only 5% – a slight decrease, which is probably due to individual characteristics of self-esteem or temporary emotional states. These data indicate a predominantly positive effect of the course on the life orientation of most students. A comparison of the average and maximum indicators showed that after completing the course, not only the average values increased, but also the gap between the average and marginal results narrowed, which indicates an equalisation of the levels of life meaningfulness in the group and the establishment of more stable value orientations. In general, the results indicate an increase in internal motivation, awareness of life goals, and an increase in the level of responsibility for own life choices. Participants of the training course demonstrated a tendency to move from externally determined to internally motivated strategies of self-realisation, which is one of the key indicators of personal development and professional maturity of future psychologists.

According to the results of the “Level of Subjective Control” methodology, a significant increase in internality was recorded by an average of 29.5%, which indicates the establishment of greater internal responsibility for own life and professional activities. The most pronounced positive changes were observed on the “achievement” and “interpersonal relationships” scales ($p < 0.05$), where participants were more likely to attribute successes and failures to their own efforts rather than external circumstances or chance. This indicates the strengthening of autonomy, responsibility, and internal position of the individual, which are important components of a mature psychological structure. The likely reason for this increase in internality is the influence of a learning environment focused on self-reflection, analysis of own experience, and the development of a conscious attitude to personal changes. Students’ participation in practical exercises of the guided imagery contributed to the development of the habit of internal analysis of motives, feelings and decisions, which gradually reduced the level of external attribution of events. In addition, the collective form of experience discussion and the supportive atmosphere of the course created conditions for safe awareness

of own strengths, which also contributed to an increased sense of control over own actions. The psychological consequences of these changes were an increase in achievement motivation, an increase in stress tolerance, and increased self-regulation. Students who demonstrated a higher level of internality simultaneously showed better results in tasks that require independence, initiative, and responsibility. This is consistent with data from previous studies, where the development of an internal locus of control was considered as a factor that positively affects academic performance, professional motivation, and emotional stability (Bolton, 1985; Bauckhage & Sell, 2021). A more detailed analysis showed that an increase in internality in the field of interpersonal relationships was accompanied by a decrease in dependence on external assessment and an increase in the ability to resolve conflicts constructively. This indicates the expansion of students’ social and communicative competencies, which is an important aspect of personal maturity. It can be stated that the development of the internal locus of control is not only an indicator of psychological autonomy, but also a powerful predictor of successful self-realisation, adaptability, and professional stability of future psychologists.

Based on the results of the Hardiness Test by S.R. Maddi (2006), average grew by 13.3% ($R < 0.01$), which indicates an overall increase in the level of psychological stability of students. The greatest progress was recorded in the “control” (+17.5%) and “challenge acceptance” scales (+15.1%). This means that study participants were more likely to view difficult life situations as an opportunity for development, rather than as a threat or stressful factor. The growth of indicators on the “control” scale demonstrates an increase in students’ confidence in the ability to influence events in their own lives, which indicates the development of internal responsibility and self-regulation. Such changes can be caused both by the influence of a developing educational environment focused on reflection, self-knowledge and personal growth, and by the participation of students in educational practices that included elements of psychotherapeutic methods, in particular guided imagery. Strengthening hardiness has a positive effect on academic performance, as it increases motivation for achievement, the ability to overcome difficulties, adapt to changes, and maintain internal balance. These results indicate the development of a more mature personal position, characterised by a conscious acceptance of responsibility for own development and a willingness to constructively overcome life’s challenges. Correlation analysis revealed a number of significant relationships between the studied indicators. In particular, the growth of the creativity index significantly correlates with the level of personal maturity ($r = 0.48$; $p < 0.05$), which confirms the interdependence of the development of creative abilities and integration of the individual. This connection can be explained by the fact that creativity implies the ability to self-reflect, flexible thinking, openness to new experiences and the ability to see alternative ways to solve problems – qualities that are

also indicators of personal maturity. Creative activity stimulates awareness of own potential, promotes autonomy and the development of an integral "Self-Concept", which is an important condition for internal development.

There was a significant association between internality (according to the LSC method) and hardiness ($r=0.52$; $p<0.01$). This suggests that an inner sense of control over the events of one's own life enhances the individual's ability to overcome difficulties, maintain emotional stability, and form active stress management strategies. The psychological mechanism of this connection is the development of responsibility, self-regulation and self-confidence. Thus, the identified correlations are of great practical importance for building programs of psychological support for students, since they emphasise the role of creative potential and internal responsibility as factors of personal growth and life adaptation. A qualitative analysis of student reflections confirmed not only the statistically recorded positive dynamics, but also revealed the internal psychological mechanisms underlying personal changes. The interpretation of the images that the participants worked with showed the activation of the processes of self – reflection, integration of emotional experience, and reconstruction of personal meanings – key components of the formation of a mature personality of a future psychologist. One participant noted: "While working with the image of the road, I saw for the first time that it led up, and this gave me a sense of confidence in my own future". Another emphasised: "Working with the flower motif helped me understand that my self has a hidden resource that I am gradually beginning to discover". These statements illustrate the deep processes of self-knowledge and meaning-making that occur within the framework of guided imagery.

The image of "Road" became a symbol of movement towards goals, professional development, and personal growth. Awareness of the "road leading up" indicates the formation of a long-term vision of life and the ability to perceive professional development as a process of constant self-improvement. This is consistent with the idea of V. E. Frankl (1962) regarding the existence of a "semantic vector" as a determining factor of psychological well-being. The motif of "Flower", which participants associated with the discovery of an internal resource, reflects an awareness of their own self-esteem and creative potential. The symbolic "opening of the flower" can be considered as a metaphor for the process of individuation according to C.G. Jung (1964), which involves the gradual integration of unconscious aspects of the individual and the achievement of internal integrity. The motif of "Mountain" actualised the archetype of support, stability, and strength. One of the students said: "The mountain turned out to be a symbol of support for me – I saw that there was something unshakable in me that I could rely on". Such experiences indicate the establishment of basic self-confidence, increased subjective control, and the development of internality. This can be interpreted as a transition from external dependence to internal support, which is a sign of psychological maturity. The

image of "Clouds" has become a symbol of emotional dynamics, variability and acceptance. One participant wrote: "When I watched the movement of clouds, I felt that I could afford to let go of past experiences", while another noted: "Clouds helped me to see the variability of emotions and accept them as a natural part of my life". These statements indicate an increase in emotional-reflexive flexibility, the development of the ability to self-regulate and accept own emotions, which corresponds to an increase in the level of emotional intelligence. The "Treasure" motif reflected the discovery of inner values and meanings. One of the students wrote: "When I found the treasure, I realised that it was not something material, but my inner light". This interpretation of the symbol demonstrates the transition from external to internal motivation, reorientation from the desire for achievements to awareness of one's own life mission. Thus, the results of qualitative analysis indicate that guided imagery motives play the role of catalysts for deep personal processes: the development of self-knowledge, self-acceptance, emotional maturity, internal consistency, and meaning-making. Working with images contributes to the harmonisation of cognitive, emotional and motivational spheres, forms the ability to reflect, internal self-control and psychological stability. All this creates favourable conditions for the formation of professional identity of the future psychologist, since it is personal maturity, autonomy, and creativity that are the key characteristics of a specialist in the helping profession.

Thus, the results of a comprehensive study convincingly confirm the effectiveness of the guided imagery course as a means of psychological development of students. Not only quantitative growth of creativity indicators is revealed, but also qualitative changes in the structure of personal functioning. In particular, there is an increase in the level of personal maturity, meaningfulness of life, internality, and hardiness, which indicates an increase in the ability of students to self-reflection, self-regulation, and conscious decision-making in life. Such results can be interpreted as evidence of the formation of a more holistic and harmonious "self" concept where cognitive, emotional and semantic components interact in a single system. The growth of creativity reflects the development of flexible thinking, the ability to symbolically comprehend experience, and search for new ways of self-expression. Increasing hardiness and internality demonstrates strengthening the internal locus of control, which is an important condition for mature, responsible behaviour. In general, the results obtained indicate that participation in the guided imagery course contributed not only to the development of creative potential, but also to deep personal transformations: the growth of psychological autonomy, emotional flexibility, and the ability to constructively overcome life challenges. Guided imagery as an academic discipline has a significant impact not only on the cognitive, but also on the personal characteristics of students. However, it is important to consider these data in the context of contemporary scientific literature, compare such studies, and determine what makes this research unique.

The study by B. Eyüp (2023) demonstrated that dramatic practices can have a positive impact on participants' self-esteem, performance, and personal confidence. In particular, it was found that regular participation in dramatic projects contributes to the growth of students' confidence in their own abilities, increasing their emotional balance and self-acceptance. These results are consistent with the data of the current study, which recorded an increase in the level of personal maturity and subjective control, which indicates an expansion of students' self-awareness and the establishment of a more responsible life position. A report by S.E. Sayar & P. Yildiz (2025) also highlighted the role of creative drama in developing flexibility and originality of thinking. It was noted that participation in creative dramatic exercises stimulates non-standard thinking, increases tolerance to uncertainty, and promotes the development of metacognitive skills. Although a different methodology is used – in particular, role-playing and improvisation exercises – the results show a similar trend: students who participated in creative dramatic activities had statistically higher scores in terms of flexibility and originality. These conclusions reinforce the rationale for the results of the study, which recorded a positive dynamic of TTCT indicators. O.O. Iliuk (2021) investigated the influence of creative drama on the development of pedagogical identity and creative thinking of future teachers. The results showed that drama classes help students to develop the tools of a creative approach to learning, form the ability to reflect and promote professional self-determination. Compared to the results obtained in the study, the influence of dramatic techniques on the development of creativity, self-understanding and hardiness is similar, although the methods of implementation vary. If here the main emphasis was placed on pedagogical activity, then the guided imagery used in the study was primarily aimed at deep self-reflection and integration of internal experience. J.L. Smith & J.D. Herring (1993) has shown that including dramatic elements in the learning process improves students' social and emotional development, especially in aspects of empathy, emotional regulation, and social interaction. This conclusion is fully consistent with the results of the study, where there was an increase in emotional competence, in particular, due to changes in life-meaning orientations and subjective control. However, the guided imagery, unlike the conventional psychological techniques, focuses not only on interpersonal interactions, but also on internal symbolism and working with the image. This approach provides a deeper psychological transformation, since the image becomes a channel for understanding unconscious processes, emotions and internal conflicts.

Research by M.-P. Celume *et al.* (2020) showed that dramatic pedagogy promotes the development of Theory of Mind and cooperative behaviour in children. Although the context of this study was different – a different age category and pedagogical goal – the conclusions about the positive impact of dramatic methods on the development of emotional competence are consistent with the results of

the study. Guided imagery, as a form of dramatic approach, expands this effect by involving the symbolic level – that is, the ability to work not only with external manifestations of emotions, but also with their internal content. The study also revealed a number of aspects that are not always considered in other papers. In particular, correlations were established between indicators of creativity, personal maturity, subjective control, and hardiness. This allows speaking about the systemic nature of the influence of guided imagery, which combines cognitive, emotional and semantic aspects of personal development. Such integration effects are rarely described in creative drama studies, which often focus only on the development of individual components, such as creativity or communication skills. For example, in the paper by J. Rae (2022), dedicated to the development of creativity in higher education, offers a model where the development of creativity depends on interaction, liminal space, and leadership. While this approach emphasises the importance of social context and partnerships, it does not cover the deep symbolic dimension that is central to the guided imagery. It is working with the image in the inner space of the individual that allows integrating experiences, forming new meanings, and expanding internal freedom – both cognitive and emotional. Separately, it should be noted that the effectiveness of guided imagery is also confirmed by the results of contemporary empirical studies in related fields. In particular, the study by H.H. Tok & M.T. Kesgin (2024) on the impact of creative drama training on nursing students has proven that this form of training increases mental health, self-knowledge, and empathy compared to conventional methods. These results confirm the expediency of using dramatic methods for personal development of students, although the approach of guided imagery is characterised by a greater depth of psychological study of experience.

Thus, the study not only confirmed the trends described in the international literature, but also expanded them, offering a new perspective on understanding the educational potential of guided imagery. Its effectiveness consists in combining three levels of influence: cognitive (development of creativity, thinking, ability to comprehend), emotional (increasing empathy, emotional flexibility, self-acceptance) and semantic (deepening self-reflection, forming value orientations). It is this integration that allows speaking of the guided imagery as a universal tool for developing personal maturity. It is important to emphasise that the use of guided imagery in the educational process has not only pedagogical, but also psychotherapeutic significance. Students develop the ability to introspect, internal dialogue, awareness of their own emotional states and life scenarios. This creates conditions for the development of emotional regulation, increases tolerance to stress and promotes the development of internal integrity (Ishchuk, 2023). Given the current challenges – social uncertainty, high levels of anxiety and professional burnout among young people – such results are of practical value. The conducted research demonstrates the potential of guided imagery as an educational tool that combines elements

of psychotherapy, creative self-expression, and the development of personal competencies. The introduction of guided imagery in the higher education system can contribute to a more holistic development of future specialists – not only as professionals, but also as mature, self-reflective, emotionally stable individuals. Guided imagery can become not just a part of a course on creative drama, but a separate educational module that combines psychotherapeutic, pedagogical, and personal development elements. Further studies involving different samples, cultural contexts, and a long follow-up period are needed to confirm the effectiveness and scalability of such interventions. Promising areas of further research can be the analysis of the dynamics of changes in students' professional self-determination, the study of the influence of guided imagery on the development of emotional intelligence, and the long-term effects of personal growth.

CONCLUSIONS

The conducted research confirmed the effectiveness of guided imagery as an innovative educational technology that contributes to the development of personal maturity and creative thinking of students of psychological specialties. The results obtained show positive dynamics in all key indicators, which indicates a harmonious combination of emotional, cognitive, and motivational components of personal development. After completing the course, there was a statistically significant increase in the indicators of originality, flexibility and overall creativity index (by 15-30%). This indicates an activation of divergent thinking, an expansion of the cognitive repertoire, and an increase in students' ability to generate new ideas and find non-standard solutions. According to the method of studying the level of personal maturity, an increase in reflexivity and value awareness has been established, which indicates the development of self-regulation, integration of the motivational and semantic sphere, and the ability to make responsible life choices.

Also significant is the growth of indicators using the "life-meaning orientations" method, which indicates a deeper awareness of own life goals, an increase in internal motivation, and readiness for self-realisation. By working with mental images, the guided imagery contributes to the actualisation of existential meanings and the development

of a holistic vision of life. The increase in the level of internality (by 29.5%) indicates the strengthening of the internal position of students, their ability to take responsibility for their own actions and overcome dependence on external circumstances, which is an important indicator of personal autonomy and psychological maturity of future specialists. An additional confirmation of the effectiveness of the method was the increase in hardiness indicators according to the test by C. Maddi (by 13.3%). This demonstrates the development of adaptive coping strategies and the ability to perceive difficulties as an opportunity for personal growth. The most noticeable changes were found in the "control" and "challenge acceptance" components, which indicates an increase in the active life position of students.

Correlation analysis showed positive interdependencies between creativity and personal maturity ($r = 0.48$; $p < 0.05$), and between internality and hardiness ($r = 0.52$; $p < 0.01$). This confirms the mutual reinforcement of cognitive, emotional and semantic aspects of personal development in the conditions of using guided imagery. The use of guided imagery in the educational process creates a safe space for self-knowledge, empathy development, reflection and integration of emotional experience. It has proven its effectiveness not only as a psychotherapeutic method, but also as an effective didactic tool in the training of future psychologists. Thus, the guided imagery acts as an effective means of developing personal maturity, creativity, and emotional competence of students. Its integration into the curricula of psychological specialties can become a promising area for the modernisation of professional education focused on the holistic development of the individual. Further research should be aimed at determining the long-term effects of using guided imagery and analysing its impact on other components of professional competence.

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Символдрама як навчальна дисципліна: освітні технології у формуванні особистісної зрілості та творчого мислення студентів

Анотація. Актуальність дослідження зумовлена зростаючим інтересом педагогіки та психології до використання символдрами як освітньої технології, здатної сприяти розвитку особистісної зрілості та творчого мислення студентів. У контексті підготовки майбутніх психологів особливого значення набуває пошук інноваційних підходів до формування їх креативності та емоційної компетентності. Метою статті було виявити вплив символдрами як навчальної дисципліни на розвиток особистісної зрілості та творчого мислення студентів психологічних спеціальностей. Методологічною основою стало застосування методу символдрами (кататимно-імагінативної психотерапії), що передбачало роботу з керованими уявними образами та подальшою рефлексією. У дослідженні взяли участь 30 студентів спеціальності «Психологія» Київського університету інтелектуальної власності та права, які протягом семестру проходили курс із використанням базових мотивів («Будинок», «Квітка», «Хмари», «Скарб», «Скеля», «Дорога»). Для оцінки динаміки особистісних характеристик застосовано комплекс психодіагностичних методик: тест креативного мислення Торренса, методику визначення рівня особистісної зрілості, смисложиттєві орієнтації, тест суб'єктивного контролю та тест життєстійкості. Встановлено, що після проходження курсу символдрами у студентів статистично значуще зросли показники оригінальності й гнучкості мислення, рівня рефлексії, відповідальності, усвідомленості життєвих цілей та інтернальності. Проаналізовано зміни у розвитку емоційної компетентності та психологічної стійкості, що підтверджує ефективність методу у формуванні особистісної зрілості. Розроблено практичні рекомендації щодо інтеграції символдрами у навчальні плани підготовки психологів. Практична цінність дослідження полягає у можливості використання його результатів викладачами психологічних дисциплін та фахівцями освітньої сфери для підвищення якості професійної підготовки студентів

Ключові слова: терапевтична взаємодія; педагогічна інновація; креативність; особистісне зростання; рефлексія; психологічна підготовка

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