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The impact of postgraduate education on career advancement in healthcare

Abstract. The study aimed to describe the mechanisms through which postgraduate education influences career advancement. The findings were synthesised to systematise the research outcomes and formulate conclusions, encompassing the components of postgraduate education, career advancement factors, and their interrelationships. The results underscored the role of postgraduate education in fostering the career development of healthcare professionals. Both formal educational programmes and informal learning opportunities that contribute to professional growth were analysed. The study identified the following conceptual models: human capital, social learning theory, signalling theory, and social capital theory. These models were examined in the context of existing theories explaining the impact of education on career progression. The advantages and disadvantages of each model were assessed, along with their applicability to the healthcare sector and potential limitations. A comparison of the models was conducted to identify common elements and integrate them into a unified conceptual framework. The results indicated that postgraduate education significantly enhances competence, job satisfaction, and opens additional opportunities for career advancement. It was found that specialists who have gained additional education in related fields are more effective when working in interdisciplinary teams to address complex medical issues. This makes them valuable team members and fosters career advancement. It was also identified that investments in education and professional development correlate with improvements in the quality of medical services. These findings emphasised the importance of supporting continuous education to maintain high standards in healthcare. The results of the study can be used by organisations responsible for licensing healthcare institutions to establish requirements and standards for continuous professional education

Keywords: continuous professional education; specialist opportunities; skills; healthcare sector; quality of medical services

INTRODUCTION

Postgraduate education plays a pivotal role in the career advancement of healthcare professionals. In an environment characterised by constant change and new challenges arising from technological innovations and increasing patient demands, medical workers must continuously develop their skills. Without successful postgraduate education, professional stagnation, a decline in the quality of healthcare services, and a loss of competitiveness in the job market may ensue. Conversely, continuous learning

fosters professional development, enhances qualifications, and improves career prospects. Therefore, it is crucial to investigate how postgraduate education influences career advancement in the healthcare sector.

Ukraine is implementing comprehensive and high-quality reforms focused on patient-centred care, aiming to provide medical services to all Ukrainian citizens at a level comparable to that of developed European countries. This primarily involves ensuring the sector is staffed

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with highly qualified leaders and implementing effective training for managerial personnel. The education system plays a vital role, in advocating for the principles of lifelong learning. A high level of competence among senior healthcare professionals is achieved through a combination of various forms of postgraduate study, as well as systematic self-education and ongoing practical experience for leaders who must operate in an innovative economy requiring new knowledge. There is a pressing need in Ukraine to train a new generation of managers and competent specialists capable of making effective decisions in new social conditions.

Several researchers have examined the significance of postgraduate education, particularly in healthcare. For instance, R. Akparibo *et al.* (2021) investigated the benefits and challenges of learning in postgraduate medical education. Students and faculty reported that flipped learning enhanced student engagement but required significant preparation from both lecturers and learners. O. Biliuk *et al.* (2023) focused on the organisation of the educational process under wartime conditions in Ukraine. The researchers analysed ways of adapting education, including distance learning and psychological and emotional support for students. O. Fast *et al.* (2022) proposed a structural model of an integrated knowledge and education system for managing the quality of higher and postgraduate education, emphasising the importance of a systemic approach to ensuring quality. They extensively analysed the challenges and practices of distance learning for postgraduate students during the pandemic, noting that technical difficulties and a lack of student motivation were the main issues.

Researchers N. Gavkalova *et al.* (2023) explored the role of education in a circular economy amid the global crisis. The researchers highlighted the importance of implementing educational programs that promote sustainable development and environmental awareness. They analysed models of using educational technologies in postgraduate education in Ukraine, emphasising the need for innovative approaches to improve the effectiveness of the educational process. S. Koshova *et al.* (2018) studied the psychological characteristics of motivation in the training of doctors in postgraduate education. The researchers noted that motivation is a crucial factor in successful learning and professional development. The studies revealed the level of stress resilience and adaptive skills of doctors during postgraduate education. The researchers emphasised the importance of developing stress-coping skills to enhance learning effectiveness.

The research of T.V. Lopukhina & O.O. Stiahunova (2021) focused on the professional development of educational institution leaders within the postgraduate education system. The researchers noted that effective management requires continuous professional development and upskilling. O. Loskutov & Y. Markov (2023), based on sociological data, analysed the formation of professional competence among anaesthesiology interns. The scientists emphasised the importance of practical training and mentorship for developing professional competence. K. Mahr-lamova *et al.* (2021) examined the need for reforming

higher medical education in Ukraine. The researchers noted that this reform would contribute to improving the quality of education and training of medical professionals. The implementation of educational technologies in the healthcare sector within the context of continuing education in Ukraine remains a crucial element. Researchers highlighted the need to use modern technologies to improve the effectiveness of educational management.

Despite the extensive research on the impact of postgraduate education, further investigation is still required. Therefore, this study aimed to systematise and generalise existing knowledge, identifying the main factors influencing the career development of healthcare professionals. The research objectives were:

- to conduct a systematic review of scientific publications exploring postgraduate education in the healthcare sector;
- to examine and critically analyse existing models explaining the relationship between education and career advancement;
- to integrate the findings and develop a unified conceptual model that explains the mechanisms through which postgraduate education influences the career advancement of healthcare workers.

MATERIALS AND METHODS

This research was grounded in a review of current scholarly literature, an analysis of conceptual models, and the application of theoretical frameworks to investigate the impact of postgraduate education on the career advancement of future professionals. This approach allows for a deep understanding of existing knowledge, the identification of gaps, and the formulation of recommendations for further empirical research. The analysis of conceptual models involved examining existing theoretical models that explain the influence of education on career advancement, such as human capital theory and social learning theory. The strengths and weaknesses of each model, their applicability to the healthcare sector, and potential limitations were assessed. Models were compared to identify common elements and integrate them into a unified conceptual framework.

Conceptual models influencing the improvement of postgraduate education in healthcare in Ukraine were analysed. Several strategies were identified for further analysis, including: expanding specialisation programs, continuous education, integrating modern technologies, international cooperation, academic research, financial support, standardisation of education, partnerships with the private sector, and quality assurance of education. Based on the literature review and analysis of conceptual models, a foundation was established: the integration of the knowledge gained, which allows for the systematisation of research results and the drawing of conclusions. This includes:

1. Components of postgraduate education: a description of the types of postgraduate education, such as continuing professional development courses, certification programs, and master's and doctoral programs.

2. Factors influencing career advancement: the identification of key factors affecting the career advancement of healthcare professionals, such as professional skills, certifications, networks, and work experience. The interaction of these factors with the components of postgraduate education, such as deepening knowledge and implementing new technologies, is critical for the successful professional development of healthcare professionals.

3. The relationship between components, which includes a description of the mechanisms by which postgraduate education influences career advancement, such as enhancing qualifications, expanding professional networks, and improving opportunities for promotion.

The comparison and integration of conceptual models into a unified theoretical framework was a key step in formulating research conclusions. This allowed for the systematisation of the results obtained and the development of a more comprehensive understanding of the mechanisms by which postgraduate education contributes to the career advancement of healthcare professionals. An analysis was conducted of various key aspects that should be considered when developing and implementing programs, namely: assessing training needs, developing flexible curricula, utilising modern teaching technologies, engaging experienced faculty and experts, supporting an interdisciplinary approach, supporting continuous learning, implementing a motivation system, evaluating program effectiveness, collaborating with educational institutions and organisations, and ensuring access to modern learning materials.

RESULTS

With the introduction of high-tech diagnostic and treatment methods into medical practice, doctors are constantly finding themselves in a situation where they need to urgently and continuously upgrade their qualifications. Higher medical education, coupled with continuous professional development (participation in professional development programs, courses, and training), is the foundation for career advancement and a mandatory requirement for many positions. An existing postgraduate education system offers various forms of professional development, such as pre-exam cycles, subject improvement cycles, scientific-practical conferences, training seminars, and lecture courses. This situation necessitates the improvement of existing and the search for new forms of systematic knowledge enhancement for doctors.

Postgraduate education is a system designed to train and develop highly qualified professionals, aligning their expertise with European standards, contemporary needs, and the demands of scientific, technological, social, and economic progress, as well as personal and sectoral requirements (Honcharuk *et al.*, 2021). It also encompasses the enhancement of an individual's scientific and cultural capabilities, occurring within educational institutions and through self-directed learning. Postgraduate education in healthcare encompasses all forms of learning that medical professionals undertake after acquiring their initial

qualifications to enhance their knowledge, skills, and competencies. It is critical for maintaining high levels of professionalism and quality in healthcare delivery. Key forms of postgraduate education include residency and internship programs, which medical graduates undertake to specialise in a particular field. These programs provide practical experience under the supervision of experienced physicians and can last several years to a decade, depending on the chosen speciality. Certification and accreditation programs enable healthcare professionals to obtain certifications or accreditation in specific areas (e.g., cardiology, oncology, surgery), often involving both theoretical learning and practical experience. Short-term courses and training programs, covering new medical technologies, treatments, and diagnostic methods, constitute another form. These can be online courses, in-person seminars, or workshops. Professional conferences and symposia play a significant role in postgraduate education, providing platforms for healthcare professionals to discuss the latest achievements in their fields, and share experiences with colleagues from other institutions and countries, while mentorship and mentoring programs offer guidance and support to young medical professionals from experienced specialists.

The career advancement of healthcare professionals is influenced by a multitude of interconnected factors that contribute to overall professional development. A high level of professional skills is a key factor in career advancement for healthcare professionals. This encompasses clinical skills (the ability to accurately diagnose and treat patients), technical skills (knowledge and ability to operate medical equipment), interpersonal skills (the ability to effectively communicate with patients, colleagues, and other professionals), and leadership skills (the ability to organise teams, make decisions, and take responsibility). Certifications and licenses are also significant factors as they demonstrate a high level of qualification and adherence to professional standards. These may include continuing professional development certifications, which attest to ongoing knowledge and skill updates, and specialised certifications reflecting additional training in specific medical fields (cardiology, surgery, etc.). Professional networks also influence career growth, providing opportunities for growth and advancement. For example, participation in conferences, seminars, and other events facilitates the exchange of experiences and knowledge; support and advice from more experienced professionals, colleagues, and mentors can assist in resolving complex situations and making career choices. Building relationships with colleagues from other healthcare institutions or organisations can lead to new career opportunities.

Work experience is a crucial factor in professional development. This includes the duration of employment (the number of years in a particular position, indicating stability and reliability), diversity of experience (working in various healthcare settings or roles, contributing to a wellrounded skill set), and practical achievements (successful completion of complex tasks or involvement in significant projects

enhancing professional reputation). Equally important are the individual qualities and intrinsic motivation of the professional. High work capacity, enabling one to function in stressful environments and solve complex problems, is essential. Goal-orientedness, ensuring a clear vision of career goals and plans, and a willingness to adapt, including openness to new knowledge and methods, are also crucial. Understanding and developing these factors can significantly contribute to a successful career in healthcare.

Based on the aforementioned information, postgraduate education in healthcare aims to:

- ➔ support and update knowledge, as continuous education allows healthcare professionals to stay informed about the latest research, technologies, and treatment methods, which is critically important in the rapidly changing healthcare field;

- ➔ enhance professional qualifications, as educational programmes foster the development of specialised skills, enabling healthcare professionals to provide more effective and higher-quality care.

- ➔ promote career progression and professional development, offering opportunities to assume leadership positions, engage in scientific research, and teach at medical educational institutions;

- ➔ ensure compliance with standards, as postgraduate education helps healthcare professionals meet the requirements of professional standards and regulations that govern medical practice.

The impact of postgraduate education on career advancement in healthcare is multifaceted and significant. It equips healthcare professionals with the new knowledge and skills necessary to provide high-quality medical care. This includes learning about the latest medical technologies, diagnostic methods, and treatments. Healthcare professionals can also choose to specialise in a specific area, becoming experts in that field. For instance, doctors might pursue additional specialisation in cardiology, oncology, or surgery. Education offers professional prospects, opening up new career opportunities such as promotions, leadership roles, or starting one's own practice. Healthcare professionals with higher levels of education are more likely to secure better positions. Furthermore, increased qualifications and specialisation often correlate with higher salaries. Employers are willing to pay more for highly skilled professionals who can provide better quality care. Another aspect influencing career advancement is the support for continuous professional development. Such learning enables healthcare professionals to stay updated on the latest scientific achievements and innovations in medicine. This is crucial for maintaining a high level of competence throughout one's professional life. Healthcare professionals also have opportunities to exchange experiences with colleagues, discuss complex clinical cases, and acquire new ideas to improve medical practice.

It is also important to consider participation in postgraduate educational programs, which fosters professional connections and networks. This can include colleagues,

lecturers, experts, and other specialists with whom one can collaborate or consult. Postgraduate education often involves mentorship programs where experienced professionals guide junior healthcare workers. This promotes the development of professional skills and supports career advancement. Such education also helps healthcare professionals maintain high standards of medical practice, which directly impacts the quality of patient care. Thanks to postgraduate education, healthcare professionals can implement new treatment methods and technologies, improving treatment outcomes and increasing patient satisfaction.

According to the aforementioned information, postgraduate education plays a pivotal role in the professional development of healthcare workers. It enhances qualifications, opens up new career opportunities, supports continuous professional development, fosters social capital, and improves the quality of healthcare services. Investing in postgraduate education is a crucial element of a healthcare system development strategy, contributing to an overall improvement in the level of medical care and public health. Several key principles should be adhered to in the postgraduate training of healthcare professionals to ensure the effectiveness of the learning process and high-quality medical services. These include continuity of education, practical orientation, individual approach, relevance of material, interactive learning methods, multimodality, interdisciplinary approach, assessment and feedback, ethics and professionalism, and motivation for self-development.

Postgraduate training should be an ongoing process, enabling healthcare professionals to continually update their knowledge and skills in line with the latest medical advances. Training should focus on practical skills that directly impact the quality of patient care. Practical sessions, simulations, and clinical placements are essential components. Postgraduate programs should consider the individual needs and interests of healthcare professionals, offering opportunities to choose specialisations and areas of study. Training programs should incorporate the most recent scientific research and recommendations from international medical organisations. It is crucial to continually update teaching materials. The use of interactive methods such as group discussions, case studies, and simulations promotes better learning and the development of critical thinking. Combining various forms of learning (online courses, lectures, seminars, practical sessions) allows for a comprehensive approach to training and provides flexibility in the learning process. Interaction with experts from various medical and scientific fields promotes a holistic approach to treatment and enhances the quality of healthcare services. Regular assessment of knowledge and skills, as well as receiving feedback from tutors and colleagues, allows for timely identification and correction of any training deficiencies.

Particular attention should be paid to the ethical aspects of medical practice and the development of professional qualities such as responsibility, communication skills, and empathy. It is important to encourage

healthcare professionals to engage in self-directed learning and professional development, providing them with access to resources and opportunities for upskilling. Adherence to these principles will help ensure high-quality postgraduate training and contribute to the professional advancement

of healthcare workers. The application of conceptual models of the impact of education on career advancement in healthcare has its specific characteristics. Table 1 below presents their application in this context, along with their strengths and weaknesses.

Table 1. Characteristics of conceptual models of education's impact on career advancement

Model name	Application	Strengths	Weaknesses
Human capital model	In healthcare, investments in the education of medical professionals (physicians, nurses, pharmacists) lead to enhanced qualifications, which directly impact the quality of medical services. Education includes not only basic medical education but also continuous professional development and specialisation	<ul style="list-style-type: none"> → improved quality of medical services (higher qualifications lead to better diagnosis and treatment); → increased earnings (more educated professionals typically receive higher salaries and better working conditions); → empirical support (investments in education improve treatment outcomes) 	<ul style="list-style-type: none"> → high costs (medical education is expensive, which may act as a barrier for some individuals); → unequal access (different countries and regions have unequal access to quality medical education); → determinism (the model does not account for all individual and systemic factors influencing healthcare careers)
Social learning theory	In healthcare, social learning occurs through mentoring, workplace learning, participation in professional associations, and conferences. Medical professionals learn by observing colleagues, exchanging experiences, and discussing clinical cases	<ul style="list-style-type: none"> → enhanced practical skills (social learning helps healthcare professionals adapt quickly to realworld working conditions); → development of professional networks (interaction with colleagues helps form professional connections that can support career advancement); → adaptability (on-the-job learning allows quick adaptation to changes in medical practice and technology) 	<ul style="list-style-type: none"> → heterogeneity (the quality of social learning can vary significantly depending on the environment); → difficulty in measurement (it is challenging to quantitatively assess the impact of social learning on professional advancement); → context-dependence (the effectiveness of social learning depends on the culture and structure of healthcare institutions)
Signalling theory	Educational diplomas and certificates in healthcare act as signals to employers and patients about the qualifications of healthcare professionals. This is particularly important in systems with high competition for positions	<ul style="list-style-type: none"> → ensuring quality (certifications and diplomas act as signals to maintain high standards in medical practice); → ease of selection (employers can quickly assess candidates based on their educational achievements); → recognition of professional achievements (diplomas and certificates help acknowledge and reward the professional achievements of healthcare workers) 	<ul style="list-style-type: none"> → risk of falsification (certificates and diplomas may be forged or obtained dishonestly); → irrelevance of real skills (educational achievements may not always reflect actual professional skills and knowledge); → inequality of opportunity (the signalling system may exacerbate inequality due to limited access to quality education)
Social capital theory	In healthcare, social networks and professional connections are vital for career advancement. Interaction with colleagues, participation in professional associations, and conferences help medical professionals gain new knowledge, exchange experiences and discover new opportunities for career advancement	<ul style="list-style-type: none"> → support for career advancement (social networks foster professional development and career advancement); → knowledge exchange (social capital helps healthcare workers stay up-to-date with new developments in medical science and practice); → mutual support (social ties promote mutual assistance and collaboration among healthcare professionals) 	<ul style="list-style-type: none"> → context-dependence (the effectiveness of social capital is highly dependent on the specific social and professional environment); → difficulty in measurement (it is hard to quantitatively assess the impact of social capital on career advancement); → risk of isolation (excessive reliance on specific social groups can lead to professional isolation)

Source: compiled by the author based on research by M. Banerjee *et al.* (2021) and S. Yekimov *et al.* (2023)

The application of conceptual models of education's impact on career advancement in healthcare helps to understand and improve the professional development of medical practitioners. A combination of these theories can provide a more comprehensive understanding of how education, social interactions, and professional connections

influence healthcare careers, ultimately contributing to the improvement of medical services and the overall health of the population. Conceptual models directly impact the development of postgraduate education in healthcare in Ukraine, which can be enhanced through several strategies, including:

1. Expansion of specialisation programmes. It is important to introduce more specialised programmes for healthcare workers, allowing them to gain in-depth knowledge in specific areas of medicine;

2. Continuous education. Ensuring access to ongoing educational courses and seminars so that healthcare professionals can regularly update their knowledge and skills;

3. Integration of modern technologies. Utilising telemedicine, online courses, and simulation training to enhance the learning process;

4. International collaboration. Introducing exchange programmes with foreign medical institutions to facilitate the exchange of experiences and knowledge;

5. Academic research. Encouraging healthcare workers to engage in scientific research and academic conferences to foster critical thinking and innovation;

6. Financial support. Providing government support for healthcare professionals who wish to enhance their qualifications;

7. Standardisation of education. Developing and implementing unified standards for postgraduate medical education to ensure high-quality training for medical professionals;

8. Partnership with the private sector. Collaborating with private healthcare institutions and pharmaceutical companies to organise training programmes and internships;

9. Evaluation of education quality. Regularly assessing the quality of postgraduate medical education to ensure continuous improvement of programmes.

Enhancing postgraduate medical education will contribute to improving the professional level of healthcare workers and the quality of medical services in Ukraine. To effectively understand and utilise the aforementioned models that explain the impact of education on career advancement, it is necessary to compare their common elements and attempt to integrate them into a unified conceptual framework (Table 2).

Table 2. Comparison and definition of common elements of conceptual models

Analysis elements	Conceptual models			
	Human capital	Social learning	Signal	Social capital
Role of education	Education as an investment in productivity	Education as a process of acquiring knowledge through observation and interaction	Education as a signal to employers about an employee's abilities	Education as a means of forming social connections
Increase in productivity	Direct improvement of qualifications and skills	Skill enhancement through practical training and mentoring	Education as an indicator of potential productivity	Improvement in efficiency through access to resources and support
Career advancement	Greater opportunities for higher salaries and career progression	Opportunities for career advancement through professional contacts and knowledge exchange	Competitive advantage in the job market due to educational achievements	Career opportunities through support from the professional community
Information asymmetry	Reduction of asymmetry through improved knowledge and skills	Reduction of asymmetry through information exchange in social networks	Reduction of asymmetry by providing employers with information on qualifications	Reduction of asymmetry through access to informational resources

Source: compiled by the author based on research by H. Romanova *et al.* (2022), Z. Sharlovych *et al.* (2023) and A. Biloshchytskyi *et al.* (2024)

It is essential to integrate these theories into a unified conceptual model, taking into account the following aspects:

1. Education as an investment and signal – education should be viewed as an investment in human capital, enhancing productivity and employee qualifications. At the same time, educational achievements serve as a signal to employers, facilitating the recruitment process;

2. Social learning and social capital – these concepts are interconnected, as it is important to incorporate mechanisms of social learning, such as mentoring, knowledge exchange, and professional contacts, which complement formal education. The formation of social capital through professional networks and associations also contributes to career advancement;

3. Information transparency – providing access to information regarding qualifications and skills helps reduce

information asymmetry in the labour market. It is crucial to support certification and accreditation systems that ensure the reliability of educational signals;

4. Comprehensive approach to learning – education should encompass both formal educational programmes and informal workplace learning. This includes professional training, seminars, conferences, and other forms of continuous learning.

Based on the information gathered, an integrated conceptual model of the impact of education on career advancement in healthcare has been developed:

➤ education as a comprehensive investment and tool for social learning – education is considered as the integration of formal learning that enhances human capital and informal social learning through professional networks;

➤ information transparency and signal – educational achievements act as signals for employers, but it is

important to ensure the transparency and authenticity of these signals through certification and accreditation;

→ social capital as support for career advancement – social connections and networks provide assistance, knowledge exchange, and access to resources, which foster career advancement and increased productivity.

Therefore, integrating various models of the impact of education on career advancement in healthcare allows for the creation of a comprehensive conceptual framework. This framework considers the role of education as an investment in human capital, its significance as a signal to employers, and the importance of social learning and the formation of social capital.

Postgraduate training significantly impacts future career success. Acquiring necessary additional knowledge in specialised medical fields enhances a specialist's qualifications and makes them more competitive in the job market. Furthermore, possessing a postgraduate education opens up opportunities for higher-level positions, such as leadership roles, administrative positions, or specialised medical roles. Postgraduate courses in medical management and administration prepare specialists for executive functions, contributing to their career advancement. Developing research skills allows healthcare professionals to participate in scientific research, enhancing their reputation and opening up new career prospects. Obtaining additional education in related fields enables specialists to work more effectively in interdisciplinary teams, making them valuable members of healthcare institutions. Additional education, including participation in conferences, seminars, and training, allows specialists to stay up-to-date with the latest medical advances, thereby improving the quality of healthcare services provided. It is crucial to highlight recommendations for healthcare institutions regarding the implementation of effective postgraduate education programs, which are essential for ensuring high-quality medical services and career advancement for healthcare professionals. Here are some key aspects to consider when developing and implementing such programs:

Assessment of training needs. Before implementing a postgraduate education programme, it is necessary to conduct a thorough assessment of training needs. This can be done through surveys of healthcare professionals, analysing their work performance, and reviewing recent trends in the medical field. Identifying specific knowledge and skills that need improvement will help create a targeted training programme.

Development of flexible curricula. The curricula should be flexible and tailored to the different levels of expertise of healthcare professionals. It is important to consider the specific requirements of various medical specialities and provide opportunities for individualised learning. For instance, courses on the latest diagnostic methods could be designed for general practitioners, while training on new surgical instruments could be developed for surgeons.

Use of modern learning technologies. The incorporation of modern technologies, such as online courses, webinars,

simulation-based training, and mobile apps, can make learning more accessible and effective. Online learning is particularly important for healthcare professionals who often have limited time for traditional classes.

Involvement of experienced lecturers and experts. Lecturers and experts with significant practical experience in their field can greatly enhance the quality of postgraduate education. They can share their knowledge, practical advice, and the latest achievements in medical science. Inviting international experts can also be beneficial for exchanging global expertise.

Support for an interdisciplinary approach. Interdisciplinary courses and training that bring together various medical specialities promote effective teamwork and a comprehensive approach to patient care. For instance, courses that cover both medical and administrative aspects of healthcare can improve the overall effectiveness of healthcare institutions.

Support for continuous learning. Postgraduate education should be an ongoing process rather than a one-time event. Healthcare institutions should encourage their staff to engage in continuous learning and self-development by providing opportunities for regular professional development courses, as well as participation in conferences and seminars.

Implementation of a motivation system. Healthcare institutions should create motivational incentives for employees participating in postgraduate education programmes. These may include financial bonuses, career advancement opportunities, salary increases, or additional vacation days. Employees must recognise tangible benefits from their involvement in training programmes.

Evaluation of programme effectiveness. Regular assessment of the effectiveness of postgraduate education programmes is essential for their continuous improvement. This can be achieved by gathering feedback from programme participants, analysing their career achievements post-course, and evaluating the changes in the quality of healthcare services.

Collaboration with educational institutions and organisations. Collaboration with universities, medical colleges, and professional associations can assist in developing high-quality training programmes. Such partnerships allow for the use of academic expertise and resources, enhancing the overall quality of education.

Ensuring access to modern learning materials. Healthcare institutions should provide their staff with access to up-to-date learning resources, such as academic journals, books, video lectures, and other materials. This ensures that medical professionals can continually refresh their knowledge and stay informed about the latest developments in their field.

Effective postgraduate education programs are an essential tool for enhancing the qualifications of healthcare professionals and their career advancement. Healthcare institutions that invest in such programs acquire qualified and motivated staff, which contributes to improving the quality of healthcare services and the overall development of the healthcare system. It is important that postgraduate

education programs are flexible, modern, and focused on the needs of healthcare professionals, providing them with opportunities for continuous professional development.

DISCUSSION

The research has determined that postgraduate education significantly impacts career advancement in healthcare. Continuous learning helps professionals to deepen their knowledge and skills, making them more competent in their professional activities. Thanks to additional education, healthcare professionals can aspire to higher positions, take on more responsibilities, and have more opportunities for professional development. Specifically, I.L. Kuchyn *et al.* (2024) argue that professionals with postgraduate education often receive higher salaries, as they possess a broader range of knowledge and skills. Postgraduate education promotes continuous professional development, which is essential in the rapidly changing medical environment, where new technologies and treatment methods are constantly emerging. During their studies, professionals have the opportunity to build professional networks, which can be beneficial for their future careers. Postgraduate education is a crucial factor that contributes to career advancement and the improvement of healthcare professionals' professional level.

Researchers express various opinions regarding the significant impact of postgraduate education on career advancement in healthcare, but they generally agree that this impact is substantial and positive, as proven by the authors in their research. Primarily, research and opinions show that postgraduate education contributes to a significant increase in the knowledge and skills of healthcare professionals. This allows them to perform their duties more effectively and implement the latest treatment methods and patient care.

According to research by V. Yekhalov *et al.* (2023) and V. Rudichenko *et al.* (2023), healthcare professionals with postgraduate qualifications are more likely to receive promotions, hold leadership positions, and have greater opportunities for professional development. This is a reasonable assertion, as it aligns with the fact that employers value highly skilled individuals. Studies indicate that postgraduate education often leads to higher salaries. Professionals with additional qualifications can apply for higher-paying positions and receive additional financial bonuses. This position is highlighted in the scientific research of T.S. Lasytsia *et al.* (2022), who indicate that postgraduate education provides an opportunity to establish new professional contacts and expand cooperation networks. This facilitates the exchange of experiences and knowledge, which is essential for professional development. Researchers add that postgraduate education contributes to the personal development of healthcare professionals, increasing their self-confidence and job satisfaction. Scientists L. Makarenko *et al.* (2021) agree that postgraduate education has a significant positive impact on career advancement and professional development in healthcare. This study examined the impact of postgraduate education on career advancement

in public health. The research showed that graduates who had completed postgraduate studies had more opportunities for career advancement, including higher positions and greater responsibility in the workplace. The authors emphasise that postgraduate education contributes to the development of key competencies necessary for a successful career in medicine, such as clinical skills, managerial abilities, and research. At the same time, this study focuses on how postgraduate education affects employment and career success in various fields, including healthcare. The authors conclude that postgraduate education significantly increases the chances of a successful career, particularly in the medical field.

On the one hand, most authors, such as S. Yagelo *et al.* (2022), have determined that postgraduate education influences the career advancement of nurses. Results have shown that nurses with postgraduate qualifications had a higher likelihood of promotions, obtaining leadership positions, and receiving salary increases. On the other hand, this work examines global changes in healthcare education and their impact on career advancement. They emphasise the importance of innovative approaches to postgraduate education to ensure effective career development in the healthcare sector. These studies underscore the significance of postgraduate education for professional advancement in healthcare and demonstrate that it is a key component of achieving career success.

Discussions have revealed that healthcare is becoming increasingly complex and specialised in the modern world. The introduction of new technologies, treatment methods, and research demands that healthcare professionals continually update their qualifications. Postgraduate education allows them to remain current and competent in their professional activities. Postgraduate education contributes to improving the quality of healthcare delivery. Highly qualified healthcare professionals are able to more effectively diagnose and treat patients, applying the latest techniques and technologies, which directly impact public health. Healthcare professionals with postgraduate qualifications have a higher chance of successful employment and career advancement. Employers prefer specialists with additional knowledge and skills, as they can take on more responsibility and perform more complex tasks. S.H. Ubohov *et al.* (2021) highlight that postgraduate education opens up new opportunities for career development. Healthcare professionals can obtain higher positions, participate in research, teach at higher education institutions, and become leaders in their field.

However, research highlights the increasing globalisation, which demands that healthcare professionals meet international standards and requirements. Postgraduate education enables them to acquire the knowledge and skills necessary to work in international healthcare institutions and projects, as well as to participate in global scientific research. I. Pinchuk *et al.* (2021) found that the healthcare sector is constantly changing, and healthcare professionals must be prepared for new challenges such

as pandemics, new diseases, and changes in legislation. Postgraduate education helps them adapt quickly to these changes and respond effectively. The importance and ongoing discussions about the impact of postgraduate education on career advancement in healthcare are driven by the need for continuous professional development of healthcare professionals, the improvement of healthcare quality, increasing labour market demands, and globalisation. It is a key element in ensuring the effective functioning of the healthcare system and improving population health.

It is important to highlight that postgraduate education is an integral part of a healthcare professional's career, ensuring the continuous updating of their knowledge and skills. This not only contributes to their professional development but also improves the quality of care provided to patients. Investment in postgraduate education is a key element in maintaining high standards in healthcare and ensuring population health. L. Teheux *et al.* (2021) and M. Poplavskiy (2021) have identified that postgraduate education for healthcare professionals provides continuous updates to the knowledge and skills required for high-quality healthcare delivery. It encompasses continuous learning, practical orientation, individualised approaches, and up-to-date materials. Interactive learning methods, interdisciplinary approaches, and regular assessments contribute to professional advancement. Ethics, professionalism, and motivation for self-development are essential and enhance the quality of medical care.

Overall, these challenges and limitations must be considered when implementing new technologies in postgraduate healthcare education. This requires concerted efforts from institutions, government, and other stakeholders to ensure the accessibility, support, and development of postgraduate education. This issue needs further research and development to identify clear strategies for the positive impact of postgraduate education on career advancement in healthcare.

CONCLUSIONS

Therefore, postgraduate education plays a crucial role in the career advancement of healthcare professionals. In an environment of constant change and development in medical knowledge, technologies, and standards, healthcare

professionals must continually update their knowledge and skills. Postgraduate education provides this opportunity, equipping healthcare workers with new knowledge, competencies, and qualifications that enhance their professional competitiveness and contribute to career advancement.

Research findings indicate that postgraduate education promotes an interdisciplinary approach in healthcare. Professionals who have received additional education in related fields, such as bioinformatics, medical ethics, or public health, can work more effectively in interdisciplinary teams, addressing complex medical problems. This makes them valuable team members and contributes to career growth. Additionally, postgraduate education allows healthcare professionals to stay abreast of the latest medical advancements and technologies. Participation in conferences, seminars, and training sessions enables them to familiarise themselves with the newest treatment and diagnostic methods, improving the quality of healthcare services and making them more competitive in the job market. Postgraduate education is a significant factor in career advancement in healthcare, providing professionals with opportunities for professional development, specialisation, qualification enhancement, and the acquisition of new competencies.

This research confirms the information that postgraduate education enhances qualifications, develops leadership skills, promotes specialisation, opens up research opportunities, and ensures the competitiveness of healthcare professionals, thereby contributing to their career advancement. Limitations of the study include potential subjectivity in the presented research and the lack of long-term observations of the career advancement of healthcare professionals in the context of modern challenges, including global ones. Future research could focus on comparing different postgraduate education programs, their impact on various specialities, and the long-term career outcomes of healthcare professionals.

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CONFLICT OF INTEREST

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Вплив післядипломної освіти на кар'єрне зростання у сфері охорони здоров'я

Анотація. Метою дослідження був опис механізмів, через які післядипломна освіта впливає на кар'єрне зростання. Здійснено інтеграцію отриманих знань, що дозволило систематизувати результати дослідження та зробити висновки, що включало компоненти післядипломної освіти, фактори кар'єрного зростання та взаємозв'язок між компонентами. Отримані результати визначили роль післядипломної освіти у розвитку кар'єри професіоналів сфери охорони здоров'я. В рамках дослідження проаналізовано як формальні навчальні програми, так і неформальні можливості навчання, що впливають на професійний ріст. Визначено наступні концептуальні моделі: людського капіталу, теорія соціального навчання, теорія сигналу та теорія соціального капіталу. Здійснено їх аналіз, що включав розгляд існуючих теорій, які пояснюють вплив освіти на кар'єрний ріст. Оцінено переваги та недоліки кожної моделі, їх застосовність до сфери охорони здоров'я та можливі обмеження. Здійснено порівняння моделей з метою визначення спільних елементів та об'єднання їх у єдину концептуальну основу. Результати свідчили про те, що післядипломна освіта значно підвищує компетентність, рівень задоволеності роботою та відкриває додаткові можливості для кар'єрного зростання. Визначено, що спеціалісти, які отримали додаткову освіту в суміжних галузях, мають можливість ефективніше працювати в міждисциплінарних командах, вирішуючи складні медичні проблеми. Це робить їх цінними членами команди та сприяє кар'єрному зростанню. Виявлено, що інвестиції в навчання та професійний розвиток корелюють з покращенням якості медичних послуг. Ці висновки підкреслюють важливість підтримки безперервної освіти для забезпечення високих стандартів у сфері охорони здоров'я. Результати дослідження можуть бути використані організаціями, які займаються ліцензуванням медичних закладів для встановлення вимог та стандартів щодо безперервної професійної освіти

Ключові слова: безперервна професійна освіта; можливості фахівця; навички; медична сфера; якість медичних послуг

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Methodological approaches to the formation of information literacy of future primary school teachers using computer-based learning technologies

Abstract. In modern digital world, the importance of information literacy comes to the fore, especially in the field of education. Providing future primary school teachers with the necessary skills in this area is of strategic importance for the effectiveness of their work and successful adaptation to the requirements of the modern educational space. This article was devoted to the study of methodological approaches to the formation of information literacy of future primary school teachers using computer-based learning technologies. Theoretical analysis, comparison, synthesis, modelling and generalisation methods were used to study the formation of information literacy in future primary school teachers using computer-based learning technologies. The article deals with methodological approaches to the formation of information literacy of future primary school teachers using computer-based learning technologies. The authors of the study analysed in detail the current state of the issue and identified the basic principles and methods that should be used for the successful implementation of this process. The study has identified key aspects that need to be taken into account in the formation of information literacy in future teachers, as well as recommendations for the use of computer technologies to achieve this goal. It was emphasised that the choice of methodological approach depends on the learning objectives, age and level of training of students, as well as on the material and technical support of the educational institution. The article emphasised the importance of using computer-based learning technologies to develop information literacy, as they allow creating interactive and dynamic learning environments, providing access to information resources, developing skills in searching for and evaluating information, and teaching how to use information to solve real-world problems. The authors of the article concluded that the formation of information literacy of future primary school teachers is a complex task that requires the use of various methodological approaches and computer-based learning technologies. The results of the study may be useful for researchers in the field of education, as well as teachers interested in the integration of computer technologies into the educational process

Keywords: innovative approaches; information literacy; competencies; teaching methods; digital society

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INTRODUCTION

In modern world, information literacy (IL) is becoming a key competency required for successful professional activity. This is especially true for future primary school teachers, who must not only possess these skills but also teach them to their students. In this context, it is important to consider methodological approaches to the formation of information literacy using computer-based learning technologies (CBLT). Computer technologies play a crucial role in the process of forming IL. They provide access to a large amount of information, promote the development of critical thinking and independent learning skills, and provide an opportunity to integrate various information resources and tools into the educational process.

With the development of information and communication technologies and the global integration of digital resources, information literacy is becoming a prerequisite for successful functioning in society. It forms the basis for lifelong learning, promotes critical thinking, and allows for informed decision-making. Information literate people can effectively use information resources to solve complex problems they face in their daily lives and professional activities. Educational institutions play an important role in fostering information literacy by providing students with the necessary knowledge and skills to successfully navigate the complex information environment. The use of technology in education, such as computers, the Internet, and multimedia resources, contributes to improving the quality of education and training competent professionals. Information literacy is becoming an integral part of the educational process, forming critical thinkers and adaptive individuals capable of self-education and innovation.

It is also important to take into account the individual characteristics of future primary school teachers when forming their information literacy with the help of computer technologies. Such an approach will effectively prepare teachers for the challenges of our time and ensure their readiness for the development of children in the context of the digital transformation of education. Since the original concept of information literacy was developed and evolved from library search technology, it itself contains a comprehensive quality of searching and acquiring, analysing, and using information. Scholars have different understandings of the content included in information literacy.

O. Ishutina & Yu. Chernikova (2023) believe that information literacy should be promoted in the media, educational institutions, libraries, archives and museums. Particular attention should be paid to the training of employees working in these fields, because information literacy is not only a skill, but a constant process of perceiving information, the dynamics of cognition and the accumulation of practical experience. According to the authors' generalised opinions, infomediate literacy of primary education participants can be defined as a set of cross-cutting knowledge, skills and abilities necessary for active and conscious interaction with media and information in society. This knowledge is based on the ability to think critically

and work with different types of information, as well as the ability to use and create various media products both in the learning process and for their own communication needs. In the media education manual V. Baidyk & O. Pronina (2021) consider information literacy as a set of competencies and it is worth noting that information literate people have key skills such as critical thinking, the ability to analyse information and use it for self-expression, the ability to learn independently, create information, and the desire to be an informed and competent citizen and professional. It is noted that for high information literacy it is important to use a variety of sources of information, to be able to critically evaluate it and to apply the information received to meet one's own information needs using critical thinking skills.

According to A. Gedzik & E. Kilderov (2021), teacher information literacy refers to the ability of a teacher to consciously collect, analyse, filter, and process network resources based on the possession of certain knowledge about information technology. They have the ability to integrate knowledge and develop new knowledge based on the characteristics of their own discipline. Information literacy is a necessary stage in the formation of information competence, as the latter begins to develop at the moment of a person's first acquaintance with information and communication technologies and their use in everyday life. Information literacy is the basis for a continuous and long-term learning process in any discipline, educational environment and at all levels of education. T. Panychok (2023) believes that information literacy enables citizens to be critical of information, form their own vision of events, and respond adequately to them. Therefore, it is important to support projects that promote the development of information awareness in Ukraine and ensure public access to reliable and high-quality information. The author notes that this approach is the only way to increase the level of civic awareness and the readiness of society to meet modern challenges. Integrating artificial intelligence into education from an information literacy perspective offers numerous benefits, including personalised learning experiences, data-driven insights, and improved critical thinking skills. However, to ensure equal opportunities for access and use of AI tools, it is important to address issues such as ethical aspects, algorithmic bias, and the digital divide, according to Ya. Shchogolev (2024).

H. Onkovich (2020) defines media and information literacy as a set of institutions, knowledge, skills and abilities that allow a person to understand when and what information is needed, as well as where and how it can be found. This concept, according to the scientist, goes beyond communication and information technologies, encompassing the skills of critical thinking, analysis, and interpretation of information in various professional and educational fields. Media and information literacy includes mastery of all types of information resources and serves as the basis for a continuous learning process that applies to any discipline, educational environment and level of education. The

purpose of the article was to study modern methodological approaches to the formation of information literacy of future primary school teachers and to determine the prospects for the development of information literacy.

MATERIALS AND METHODS

To study methodological approaches to the formation of information literacy of future primary school teachers using computer-based learning technologies, several methods were chosen that provided a comprehensive analysis and allowed to obtain reliable results. The method of comparison allowed comparing different methodological approaches and technologies used to develop information literacy. This study conducted a comparative analysis of traditional and modern teaching methods, the effectiveness of various methods and tools for achieving educational goals. The advantages and disadvantages of using computer technologies in the training of future primary school teachers are revealed.

Using the synthesis method, the relationship between different methodological approaches and their practical application was found. The influence of computer technologies on the development of information literacy is determined, which helped to systematise knowledge, identify key components of the process and develop recommendations for practical implementation. Based on the analysis of scientific literature, the main theoretical approaches to the definition and understanding of information literacy were summarised. The key principles and characteristics of information literacy that are common to different research approaches are identified. On the basis of the generalised data, practical recommendations for future primary school teachers on the effective use of computer technology were formulated. Generalised conclusions about the best practises of information literacy formation are made.

The use of the above research methods provided an integrated approach to the study of the problem of forming information literacy of future primary school teachers using computer technologies. This allowed not only a deep understanding of theoretical aspects, but also practical recommendations for improving the educational process. A variety of materials were also used to comprehensively study the topic and obtain reliable results. The scientific literature provided access to the latest research and empirical data, which allowed us to get acquainted with current achievements and problems in the field of information literacy and the use of computer technologies in education. This made it possible to critically assess the current state of the issue and identify gaps in knowledge. Among the scientific literature reviewed for this study are: A. Blozva & N. Tverezovska (2011) and O. Mostipan (2015).

The curricula, in particular, helped to define the requirements for the training of future primary school teachers and the inclusion of information literacy in the educational process. They provided a normative framework for the study and helped to adapt it to the specific conditions of the educational system. Electronic resources and online

platforms served as an important source of information about modern technologies, tools and teaching methods. They allowed us to get acquainted with the practical aspects of using computer technologies in the educational process and to get access to real examples of their implementation. These platforms included Coursera, edX, Khan Academy, and Prometheus. The use of various research materials provides a comprehensive approach to the study of the problem of forming the information literacy of future primary school teachers using computer technologies.

RESULTS AND DISCUSSION

Information literacy has become an important skill in today's society, where information plays a key role in everyday life, education, and professional activities. In modern work environment, an information literate specialist will have a number of advantages: they will know how to work with information technology, be able to find the best information and constantly strive to update their knowledge in their chosen field. Educators should interest young people in using scientific electronic resources that allow them to model situations of educational choice and create conditions for students' intellectual and creative expression (Blozva & Tverezovska, 2011). In the digital era, when access to information has become much easier, but its quality is not always reliable, information literacy has become essential for successful functioning in society.

Many libraries now have high-tech equipment and Internet access, which helps students acquire the skills to search, analyse, and use information for learning, and teachers to quickly find the right materials online (Koroban & Kobyljanska, 2020). The concept of "information literacy" began to be used in the 1990s as a result of combining approaches to the study of information culture. On the one hand, it took into account the position of library science and scientific information activities, and on the other hand, it emphasised the importance of computer skills. The process of studying information literacy, its importance in the development of technologies, the formation of the information society and the formation of skills for careful handling of information was mentioned in the UNESCO "Alexandria Declaration on Information Literacy and Lifelong Learning" adopted in 2005 (Alexandria Declaration, 2005).

Information literacy includes the ability to locate, evaluate, use, and communicate information effectively and ethically. It is an essential skill for teachers as they are expected to manage the learning process using a variety of information resources and technologies. For primary school teachers, these skills are critical, as they allow them to be effective in their professional activities, adapt the learning process to modern requirements, and help students develop the competencies necessary for life in the information society. The CILIP Information Literacy Group has developed the CILIP 2018 definition of information literacy and emphasises the relevance of information literacy in the current era: "Information literacy is the ability to think critically and make informed judgements about the

information we encounter and use. It empowers us as citizens to form well-informed views and engage fully with society” (CILIP, 2018).

Information literacy is the ability to think critically and make informed judgements about any information we find and use. It enables citizens to form informed opinions and fully interact with society (own translation). Information literacy is an integral part of a modern person’s competence. It provides the ability to work effectively with information, make informed decisions, and protect oneself from misinformation. Building information literacy requires a comprehensive approach that includes both formal and non-formal education, the use of modern technologies, and active participation in practical projects. With the development of information and communication technologies, the ability to master network, digital, Internet, technological, and media literacy has become especially important. Computer literacy and media literacy have gained an advantage over other types of literacy (Vashchenko, 2020). The development of these skills contributes to professional and personal growth, ensuring success in the modern information society.

S. Sysoieva (2005) notes that it is important for a modern teacher to have an idea of the directions of development of the rapidly changing world, to constantly improve their skills and abilities, to develop information literacy and creativity of the individual throughout life. Thus, the training of a future primary school teacher includes not only knowledge of subjects but also mastery of modern computer technologies. The introduction of computer technologies into the educational process is an integral part of modern education. The teacher must adapt to new information technologies, meet the modern requirements of higher education, effectively choose and apply those technologies that contribute to the achievement of educational goals, thereby constantly improving their professional competence (Kravchenko, 2020). Students used computers and the Internet to search for and access a large amount of information, electronic resources, scientific articles, and textbooks, which they used to learn new material and prepare for classes (Platonova, 2023). Computer-assisted learning technologies offer a wide range of tools and methods that can greatly help in the development of

information literacy of future primary school teachers. These are some of the key advantages of using CBLT for the development of IL:

Improved access to information. CBLTs provide learners with access to limitless sources of information, including online libraries, databases, encyclopedias, and learning resources. This allows them to independently research topics of interest and find reliable sources of information. CBLT offer a wide range of interactive and engaging learning methods that can make the IL training process more interesting and effective. These methods include:

- educational games and simulations: can help students learn complex concepts and skills related to il in a fun way;

- web quests: allow students to explore topics through prompts and interactive tasks;

- social media and online communities: can help students interact with peers and experts, exchange ideas, and receive feedback on their research;

cbLT can help learners develop the skills needed to work effectively with information, such as:

- information search: cbLts provide access to powerful search tools that help learners find relevant information quickly and easily;

- evaluation of information: students can learn how to critically evaluate the accuracy and reliability of information from different sources;

- information processing: cbLts offer tools for organising, analysing, and synthesising information;

- information creation: students can use cbLts to create their own presentations, reports, websites, and other multimedia projects.

Preparing for life in the information society. In today’s world, people are constantly faced with huge amounts of information. The ability to effectively search for, evaluate, and use information is a vital skill for success in school, work, and personal life. CBLT can help students develop these skills and prepare for life in the information society. The choice of teaching methods for information literacy is an important task that should be solved taking into account all the factors that influence this process. The main methods of teaching information literacy are presented and their comparative analysis is carried out (Table 1).

Table 1. Comparative analysis of methods of information literacy formation

	Advantages	Disadvantages
Traditional methods	<ul style="list-style-type: none"> ➤ Familiar and understandable forms of education. ➤ Possibility of direct interaction with the teacher. 	<ul style="list-style-type: none"> ➤ Limited access to modern information resources. ➤ There is little interactivity and practical training.
Modern methods	<ul style="list-style-type: none"> ➤ Access to a large number of information resources. ➤ Interactive and practical classes. ➤ Flexibility in learning. 	<ul style="list-style-type: none"> ➤ High demands on technical support. ➤ The need for additional skills to work with computer technology.

Source: compiled by the authors

Basic theoretical knowledge is imparted through traditional forms of education, such as lectures and seminars. These methods are effective for imparting basic knowledge,

but may be insufficient for developing practical skills. Practical classes, such as labs and workshops, help students apply theoretical knowledge in practice. However, in the case

of information literacy, it is important to provide access to modern information resources and technologies. Modern approaches using computer technology include the use of e-courses, which allow access to learning materials at any time and from any place. Such courses can include interactive elements that promote active student engagement. Virtual labs and simulations allow students to gain practical skills in working with information resources in a safe and controlled environment. Massive open online courses provide teachers with the opportunity to learn from leading experts from different countries, allowing them to gain the most up-to-date knowledge and skills. Mobile applications allow teachers to learn on the go using their smartphones or tablets. This is especially useful for teachers who have limited time for training. As O. Mostipan (2015) rightly notes, the process of forming students' information literacy requires an individualised approach, including various types, forms, methods and training programs, taking into account their professional specialization, level of information needs and level of information training, as well as the availability of computer knowledge. As for the methodological approaches to the formation of information literacy of future primary school teachers using computer-based learning technologies, they may include:

Constructivist approach. The constructivist approach is based on the principle that knowledge is acquired through active interaction of the learner with the environment. In the context of information literacy, this means creating conditions for independent research, information analysis, and problem solving. Teachers can use computer technology to create situations where students are actively involved in the learning process. Examples of the constructivist approach include: using virtual laboratories for research; organising web quests where students search for information on the Internet to solve certain problems; creating projects that require the use of various information sources and tools for their analysis.

Project-based learning. This approach involves students in real-world projects that require the use of computer technology to search for and analyse information. This method promotes the development of critical thinking, teamwork, and practical skills necessary for the modern information environment. Examples of project-based learning include: creating multimedia presentations using the information collected; developing educational websites or blogs where students share their research and knowledge; completing group projects that require coordination and sharing of information resources.

Modular approach. The modular approach allows for a structured approach to information literacy by dividing the learning material into separate modules. Each module can include a theoretical part, practical tasks, and assessment of achievements, which ensures systematic and consistent learning. Examples of the modular approach include: developing training courses consisting of separate modules, each of which focuses on a specific aspect of information literacy; including tasks using various computer

programmes for processing and analysing information; conducting module tests to assess the level of learning.

Integration of computer technologies into the educational process. This may include the use of specialised training programmes, websites, video tutorials, etc. to improve students' information literacy. Examples of the integration of computer technologies include the use of software programmes for modelling physical processes; the use of interactive maps; and the use of online libraries and databases for research.

The use of specialised training programmes, websites, video tutorials, and other digital tools can significantly improve students' information literacy. The main advantages of using computer technology are the ability to individualise learning, increase time for self-education and individual assignments in disciplines, rapid growth of information flows on the Internet, and increased independent work of students, increasing motivation and cognitive independent work through appropriate forms of activity, effective organisation of cognitive activity with the help of modern modelling tools, the use of typical professional situations with the introduction of multimedia, as well as automated knowledge quality control (Mehed & Mehed, 2022). S. Honcharenko (2008) notes that one of the tasks of pedagogical science and higher education is to prepare teachers to perceive new trends in the development of science, culture and society, as well as to develop methods for their implementation in the pedagogical process, for example, through innovative teacher activities and the development of new competencies. One of the advantages of integrating computer technology into education is the availability of a large amount of information and resources on the Internet. Students can easily access a variety of knowledge sources, allowing them to expand their skills and broaden their knowledge in a short time. In addition, the use of interactive training programmes and video tutorials can make the learning process more interesting and engaging for students. They can learn the material in a playful way or through visuals, which helps to keep their attention and increase their interest in learning.

Computer technology plays a key role in the education of students in any field. Organising practical classes using computer technologies is an effective teaching method that allows students to gain practical experience in using various software tools, web services and other information resources. The use of computers, multimedia and information technologies as didactic tools helps to increase motivation, individualise learning, develop students' creative abilities and create a positive emotional state. This increases the speed of information transfer to students and the level of its assimilation, and helps to develop such processes as attention, memory, thinking, imagination, language, sense of colour and composition. In addition, these technologies contribute to the intellectual, emotional, and moral development of children (Pavlenko & Kovalenko, 2019).

One of the main advantages of this approach is that students can learn by doing, not just theoretically. They

have the opportunity to immediately apply the knowledge they have acquired to real-world problems. This contributes not only to the assimilation of the material, but also to the development of practical skills and the ability to work with various software products. In addition, this approach allows students to learn new software tools and web services, which is important for preparing for the modern labour market. Through hands-on activities using computer technology, students can feel more confident and prepared for the challenges ahead. The wealth of computer technology, such as multimedia presentations and training programmes, offers a wide range of opportunities to stimulate visual and imaginative thinking in children. The animated graphics used in these programmes help to form complete and clear ideas about the topics studied. As a result, children develop cognitive activity, stimulate search activities, and increase self-confidence (Trykoz, 2019).

Effective formation of information literacy competencies of future preservice teachers is facilitated by methodological approaches focused on interactive and engaging computer tasks. These tasks can stimulate active participation of participants, develop their skills of working with information and solving practical problems using computer technologies. As a result of this process, teachers can become more confident in their knowledge and skills in the field of information literacy. One of the most effective ways to raise the level of information literacy in society is to hold trainings and seminars on this topic. Teachers can participate in seminars and trainings organised by higher education institutions, research institutions, or general secondary education institutions, including scientific lyciums (Lytvynova, 2023). These activities may include presentations by open science experts, practical exercises, and group work. During such events, participants gain knowledge on how to properly search for and verify information, how to distinguish fake news from reliable sources, how to think critically and analyse the information received.

In addition to raising the level of information literacy among participants, such trainings and seminars help to develop critical thinking and analytical skills. This, in turn, will contribute to the creation of a conscious and responsible society that is able to distinguish truth from lies and make informed decisions based on the information received. In general, the integration of computer technologies with methodological approaches can significantly contribute to the development of information literacy in future primary school teachers. The use of computer technologies in various spheres of life is becoming increasingly necessary, opening up new opportunities for optimizing processes, improving the quality of work, enhancing communication and access to information. In the educational process, the use of computer technology involves a harmonious combination of mental and learning activities, providing flexible task changes, which makes learning more meaningful and interesting. It is important that such technologies complement rather than replace or exclude other forms of learning (Sheiko, 2019). However, in addition to

the obvious advantages, there are a number of practical aspects that should be taken into account when implementing computer technologies, which are outlined below.

1. Teacher training.

One of the key conditions for successful implementation of computer technologies is teacher training. They must have the necessary knowledge and skills to effectively use these technologies in the educational process. This can be achieved through: conducting special trainings and seminars; organising refresher courses; supporting teachers' self-education through access to educational resources and materials.

2. Technical support.

Effective use of computer technology is impossible without proper technical support. Schools should be equipped with modern computers, software, Internet access and other necessary resources. This includes: equipping computer labs; providing high-speed Internet access; and maintaining and updating software.

3. Methodological support.

For the effective use of computer technologies in teaching, it is also necessary to ensure the availability of methodological materials. These may include manuals, curricula, and recommendations on the use of various technologies and tools. An important aspect is also the exchange of experience between teachers, which can be organised through: holding methodological conferences; creating professional communities of teachers; publishing articles and research in pedagogical publications. Information literacy is becoming one of the most important human competencies. It enables people to effectively search for, evaluate, use, and create information from various sources. The authors N. Kukharska & A. Lagun (2015) point out that the problem of information security in education is becoming especially important due to informatization, which forces universities to take comprehensive measures to protect information. However, the formation of ILs faces a number of problems and challenges that need to be addressed and resolved. Technical problems: insufficient technical support: many educational institutions lack modern computer technology, which complicates the process of teaching information literacy; problems with access to the Internet: the lack of a stable Internet connection can limit access to online resources and educational materials.

Methodological problems: lack of common standards: different approaches to teaching information literacy can create difficulties in assessing and comparing information literacy levels; insufficient teacher training: many teachers lack the skills to effectively teach information literacy using computer technology. Social and cultural barriers: various social and cultural factors: social and cultural characteristics can influence the perception and development of information literacy; limited access to information: in some countries, access to information may be limited or regulated, which creates additional challenges for IL education. In the digital age, when information is available 24/7 from anywhere, information literacy becomes even more

important. People are faced with huge amounts of information from various sources, and they need to be able to critically evaluate it, distinguish between facts and opinions, and use information to solve problems and make informed decisions. There are many prospects for the development of IL in the future. Here are some of the most important ones:

Artificial intelligence. The use of artificial intelligence to create adaptive curricula that take into account the individual needs and level of training of students. Artificial intelligence is a branch of science that deals with the creation of programmes and systems that have the ability to perform tasks that usually require human intelligence (Yemchyk, 2024). To understand the possibility of using AI in the educational process, it is necessary to consider the legislation on its use. But there is no law in Ukraine that regulates the use of artificial intelligence algorithms not only in education but in general. Since our country is on the way to joining the EU, the rules defined for the member states of this organisation can be considered relevant (Krymska *et al.*, 2024).

Virtual and augmented reality. The use of VR and AR to create interactive learning environments that allow students to immerse themselves in practical tasks. The use of VR and AR technologies to create interactive learning environments that allow students to immerse themselves in practical tasks and situations related to the search, evaluation and use of information. This contributes to more efficient learning and development of practical skills. *Blockchain.* The use of blockchain technologies to ensure transparency and security of educational processes, in particular in knowledge assessment and certification systems. This helps to build trust in the education system and ensure objectivity and transparency in assessing information literacy. *Internet of Things (IoT).* Integration of IoT into learning environments allows for the creation of smart classrooms where students can interact with various devices and systems to collect and analyse data. This contributes to the development of skills in working with large amounts of data and information systems.

International programmes and projects.

1. Partnerships between educational institutions. Cooperation between universities and schools from different countries allows for the exchange of experience and best practises in information literacy. This helps to spread successful methods and innovative approaches.

2. International conferences and seminars. Participation in international conferences and seminars on information literacy allows teachers and students to keep abreast of the latest trends and innovations in this field.

3. Grants and funding. Receiving grants and funding from international organisations such as UNESCO allows for the development and implementation of new information literacy methods and programmes.

To summarise, methodological approaches to the formation of information literacy of future primary school teachers using computer technologies include the integration of information technologies into the educational

process, the use of specialised programmes and online resources to improve information skills, as well as training in digital literacy and critical thinking when using Internet resources. These approaches contribute to the development of future teachers' competencies necessary for successful work in the modern information society.

CONCLUSIONS

Developing information literacy in future primary school teachers is a key task of modern education. This is due to the rapid development of information technology and its growing role in society. Primary school teachers should have not only knowledge and skills in the subjects they teach, but also be competent users of information technologies and be able to form IL in their students. This paper considers different methodological approaches to the formation of future primary school teachers' IL using computer-based learning technologies. The choice of a methodological approach to the formation of IL depends on the learning objectives, age and level of students' training, as well as on the material and technical support of the educational institution. It is important to note that none of these approaches is universal. In addition to the above, it is also important to use a variety of methods and forms of teaching, as well as to create conditions for active participation of students in the process of IL formation. Information literacy is a continuous process that requires constant attention and efforts on the part of teachers.

The use of computer-based learning technologies can significantly contribute to the formation of future primary school teachers' IL. Computer technologies allow to: create interactive and dynamic learning environments that make the learning process more interesting and exciting for students, which can stimulate their active participation; provide students with access to huge amounts of information, which allows students to explore different topics and form their own opinions; develop information retrieval and evaluation skills: computer technologies allow students to quickly and easily find information and critically evaluate it; teach students to use information to solve real-world problems: computer technologies allow students to create presentations, projects, websites, and other products that they can use to solve various problems. It is important that computer technologies are used not only to transfer knowledge and skills, but also to develop critical thinking, creativity and other important qualities of future primary school teachers. Further research on this issue is seen in the consideration of ways to form the information literacy of future primary school teachers using computer-based learning technologies.

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CONFLICT OF INTEREST

The authors have no potential conflict of interest that may affect the decision to publish this article.

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Методологічні підходи до формування інформаційної грамотності майбутніх учителів початкової школи за допомогою комп'ютерних технологій навчання

Анотація. В умовах сучасного цифрового світу, важливість інформаційної грамотності постає на перший план, особливо у сфері освіти. Забезпечення майбутніх вчителів початкової школи необхідними навичками у цій сфері має стратегічне значення для ефективності їхньої роботи та успішної адаптації до вимог сучасного освітнього простору. Дана стаття присвячена дослідженню методологічних підходів до формування інформаційної грамотності майбутніх учителів початкової школи з використанням комп'ютерних технологій навчання. Для дослідження формування інформаційної грамотності в майбутніх учителів початкової школи за допомогою комп'ютерних технологій навчання у статті використовувалися теоретичний аналіз, метод порівняння, синтез, метод моделювання та метод узагальнення. У статті розглянуто методологічні підходи до формування інформаційної грамотності майбутніх учителів початкової школи за допомогою комп'ютерних технологій навчання. Автори дослідження детально проаналізували сучасний стан питання і визначили основні принципи та методи, які мають бути використані для успішної реалізації даного процесу. В результаті дослідження були виявлені ключові аспекти, які необхідно враховувати при формуванні інформаційної грамотності у майбутніх педагогів, а також рекомендації щодо використання комп'ютерних технологій для досягнення цієї мети. Наголошується, що вибір методологічного підходу залежить від цілей навчання, віку та рівня підготовки студентів, а також від матеріально-технічного забезпечення навчального закладу. Підкреслюється важливість використання комп'ютерних технологій навчання для формування інформаційної грамотності, адже вони дозволяють створювати інтерактивні та динамічні навчальні середовища, надавати доступ до інформаційних ресурсів, розвивати навички пошуку та оцінювання інформації, а також навчати використовувати інформацію для вирішення реальних проблем. Автори статті роблять висновок, що формування інформаційної грамотності майбутніх учителів початкової школи – це комплексне завдання, яке потребує використання різноманітних методологічних підходів та комп'ютерних технологій навчання. Результати дослідження можуть бути корисними для науковців у галузі освіти, а також педагогів, які цікавляться питаннями інтеграції комп'ютерних технологій у навчальний процес.

Ключові слова: інноваційні підходи; інформаційна грамотність; компетенції; методи навчання; цифрове суспільство

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Innovation approaches to the organisation of the educational process in professional training of future teachers of foreign languages under the conditions war state

Abstract. The relevance of researching innovative approaches to organising the educational process in the professional training of future foreign language teachers under martial law is driven by the need to adapt education to new challenges. The implementation of cutting-edge methodologies and technologies is crucial for ensuring effective training of specialists, preserving the psychological and emotional well-being of students and teachers, and maintaining the continuity of the educational process under extreme conditions. The article aimed to explore innovative methods for structuring the educational process in the professional training of future foreign language teachers and assess their applicability in higher education institutions during martial law. The use of methods of theoretical level (analysis of information sources, systematisation, modeling and generalisation) helped the authors to solve a number of tasks. The study found that innovative interactive teaching methods are more effective compared to traditional methods, contributing not only to the transformation of educational goals but also to rethinking the roles of teachers and students. The article substantiated the need to update approaches to the innovative training of future foreign language teachers, allowing the construction of a new teaching model in higher education institutions. The research emphasised the necessity of using an innovative teaching model in the training of future foreign language teachers in higher education institutions, considering the ongoing changes in society under martial law conditions. The practical significance of the work lies in highlighting effective innovative foreign language teaching methods that can be used in the practice of training future foreign language teachers. The results can also be useful for teacher-methodologists working on improving their work to enhance the educational process and professional development of students, as well as for universities and higher education institutions aiming to improve the quality of training specialists-philologists in the field of foreign language teaching

Keywords: communicative competences; professional competences; creative competences; self-education; effectiveness of training; interactive methods; multimedia technologies

INTRODUCTION

Given the global COVID-19 pandemic and the challenging situation in Ukraine due to Russian aggression, the use of innovative distance learning technologies has become especially important. This ensures the provision of quality

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education to future foreign language teachers under unpredictable conditions, while also safeguarding their health and safety. Interactive learning, as a new methodological approach, facilitates the resolution of communicative tasks through foreign language interaction, involving continuous dialogue and adaptation of content. This approach engages nearly all students in the learning process, fostering a collaborative environment where everyone actively participates.

According to the study by V. Lugovyi *et al.* (2023), armed conflict presents severe challenges for the education system, compelling it to explore innovative methods for organising the learning process, particularly in training future foreign language teachers. This issue is especially pressing under the conditions of martial law in Ukraine, where the ongoing war has disrupted the normal operations of schools and universities, making it necessary to find new, effective teaching and organisational strategies. Preparing future foreign language teachers also entails cultivating resilience to stress, encouraging creative thinking, and equipping them to handle complex situations, extending beyond the mere imparting of knowledge and skills (Basiuk *et al.*, 2018).

A. Heiman *et al.* (2022) emphasise that a crucial aspect of this process is incorporating innovative approaches into the educational system, as these can help embed principles of flexibility and adaptability into educational programs. Modifications to educational content and teaching methods can be implemented quickly and effectively to address the immediate needs of students and teachers during times of conflict. Additionally, addressing the psychological support for future teachers working under wartime conditions is essential. The stress from armed conflict can greatly impact their effectiveness and well-being. Hence, it is important to include this consideration in teacher preparation, providing the necessary resources and support to help them manage these challenges (Vovk *et al.*, 2023). Given this context, exploring innovative methods for organising the educational process for future foreign language teachers during wartime is crucial. This approach will help respond effectively to current challenges and ensure high-quality training for future foreign language teachers who can thrive in the difficult conditions of armed conflict (Grynyuk *et al.*, 2023).

Modern teaching methodologies in universities increasingly incorporate advanced technologies, with interactive learning emerging as a notable approach. This method enables future foreign language teachers to address communication and cognitive challenges through interaction in a foreign language. It involves a dialogue-based interaction between the teacher and students, with the teaching process continuously adjusted based on the analysis of the teachers' activities (Ibrahim, 2021). The core idea is to fully engage all future foreign language teachers in the learning process, encouraging interaction among them and leading to a more effective understanding of the material. Interactive learning fosters active student

participation, facilitating not only the acquisition of new knowledge but also the development of communication skills and problem-solving abilities. A distinctive feature of this approach is the ongoing interaction between the teacher and students, allowing the educational process to be tailored to the group's needs. This method encourages the involvement of all future foreign language teachers, including those who may be less participative in traditional educational settings. Consequently, it creates a supportive environment for learning foreign languages and enhances the overall quality of education (Pankiv *et al.*, 2023).

The article aimed to explore innovative methods for structuring the educational process in the professional training of future foreign language teachers and assess their applicability within higher education institutions during martial law. The objectives of the research included investigating the advantages and effectiveness of innovative methods in teaching foreign languages, analysing how they influence the transformation of educational objectives and roles, and offering practical insights and recommendations for their implementation in the education of future philologists at higher education institutions.

MATERIALS AND METHODS

This research is theoretical and employs a variety of methods to explore the topic comprehensively. Specifically, methods of analysis, synthesis, generalisation, and systematisation are used, each serving a specific role in achieving the research objectives. Analysis was critically important for reviewing diverse sociological, pedagogical, and methodological literature. This method allowed for a detailed examination of existing research on interactive teaching methods in foreign language education. The study of scholarly works helped identify the theoretical and methodological foundations of the problem. The analysis was based on established frameworks by authors such as O. Budnyk *et al.* (2022), who investigated educational innovations and wartime experiences of Ukrainian universities, and Yu. Boichuk & A. Boiarska-Khomenko (2022), who examined innovations in general pedagogical training. The choice of this method was justified by the need to create a reliable theoretical base for the research, ensuring its grounding in existing knowledge. Synthesis was used to integrate findings from various studies, creating a comprehensive view of the impact of innovative methods on the development of professional communicative competence in future foreign language teachers. This method allowed the research to combine diverse perspectives, leading to the formulation of a unified theory of interactive methods in foreign language education. Synthesis was chosen to bridge individual studies and provide a broader understanding of the topic. Generalisation enabled the research to identify the key advantages and benefits of innovative teaching methods in the preparation of future foreign language teachers. This method helped uncover broader trends and patterns applicable across different educational contexts. Generalisation expanded the applicability of the research findings,

making them relevant to a wider audience within the educational community. Systematisation helped organise and structure the information from the literature, providing a clear framework for understanding how interactive methods contribute to the transformation of educational objectives and roles. This method was essential for presenting the research findings logically and understandably. Systematisation of the data provided a structured overview of current trends and innovations in foreign language teacher training, facilitating meaningful conclusions.

The study focused on the effectiveness of innovative teaching methods in developing professional competence

in future foreign language teachers, their impact on the educational process during martial law, and broader implications for higher education institutions. Special attention was given to integrating interactive methods into teacher training programs and their contribution to the overall transformation of educational practices. Table 1 presents examples of the literature reviewed, which provided valuable insights and informed the methodologies employed in this study. This table illustrates the range of sources that contributed to the research's theoretical framework and supported the investigation into innovative teaching methods and their application in the context of martial law.

Table 1. Examples of literature reviewed

Author(s)	Title	Publication Year
T. Hritchenko <i>et al.</i>	The role of the European educational area in ensuring the quality of higher education	2023
N.G. Ivanova <i>et al.</i>	Use of modern pedagogical technologies in the educational process of the university	2020
I.M. Zvarych <i>et al.</i>	Potential of the use of social networks in teaching a foreign language in higher educational institutions	2020
E. Vorstman <i>et al.</i>	The future of language education in Europe: Case studies of innovative practices	2020
O. Ihnatova <i>et al.</i>	The effectiveness of blended learning in English teacher training	2022

Source: compiled by the authors

In conducting this research, methodologies developed by other authors were utilised, particularly in the analysis and synthesis of existing literature. Methodologies by P. Ashwin (2022), L. Basiuk & I. Dobroskok (2018), and M. Grynova *et al.* (2024) were analysed and adapted to fit the specific context of this study. These methodologies ensured the reliability and depth of the research, allowing it to make a significant contribution to the field of educational innovation.

RESULTS AND DISCUSSION

The ongoing democratic and humanistic reforms in Ukraine necessitate a reevaluation of foreign language education. This reevaluation should encompass educational goals, tasks, content, and the adoption of new educational technologies to effectively develop foreign communication competence. The Ukrainian Innovation Development Strategy for 2010-2020 years underscores the significance of preparing individuals in higher education for professional life in an information and innovation-driven society. It aims to foster a culture of innovative thinking and the ability to engage in innovative activities (Derevianko, 2021). As Ukraine integrates into global and European communities, there is an increasing recognition of the importance of quality education for societal development, which in turn requires substantial reforms (Hritchenko *et al.*, 2023).

Ukraine is aiming to align its higher education system with European standards by adopting the principles of the Bologna Declaration. However, certain challenges related to the objectives of the Bologna Process are still being addressed. Enhancing learners' professional language skills presents a significant challenge, and one approach to

address this is through interactive training, which involves organising and conducting dialogues between teachers and students to focus on linguistic, communicative, and operational tasks. This method aims to foster mutual understanding and interaction while resolving contemporary and relevant tasks for all participants in the educational process (Ashwin, 2022).

In interactive training, collaborative learning hinges on positive interdependence, individual responsibility, equal participation, and simultaneous interaction among students. Dialogue training, on the other hand, focuses on equipping students with the skills to analyse situations, consider diverse perspectives, make thoughtful decisions, engage in discussions, and build connections with a variety of individuals. Interactive training, with its focus on dialogue and collaboration, aligns well with the goals of the Bologna Process. By engaging students in meaningful interactions and tasks, it helps develop their professional language skills in a practical and effective manner. This approach not only enhances language proficiency but also fosters critical thinking, decision-making, and communication skills, which are essential for success in today's globalised world (Scott, 2020). Moreover, by promoting equal participation and mutual understanding, interactive training creates a supportive learning environment that encourages students to take ownership of their learning and actively engage in the educational process. This approach is particularly relevant in the context of the current challenges facing Ukraine, as it can help ensure the continuity and quality of education despite external disruptions. By embracing interactive training, Ukraine can not only

enhance the professional language skills of its learners but also strengthen its higher education system as a whole, making it more responsive to the needs of the modern world (Budnyk *et al.*, 2022).

Scientists Y. Bahno *et al.* (2021) in their study consider enhancing the learning experience in a foreign language group, it is essential to organise various types of activities that promote teamwork and collaboration. Some of the most effective techniques include inside (outside) circles, brainstorming, lines, reading different parts of a puzzle, sharing thoughts in pairs, debates, pair interviews, and more. Assign different sections of a text or topic to individual learners, encouraging them to communicate with each other to uncover the complete message or diverse perspectives on the subject. Another valuable method is the “gallery walk” where each student examines a picture or document, records their thoughts, and then shares them with a partner. This fosters active participation and develops communication and analytical skills. Role-playing games or simulations can also be beneficial, as students assume different roles and discuss real-life situations, helping them immerse themselves in a virtual reality and feel more confident in communicating in a foreign language. Furthermore, incorporating project-based learning activities can significantly enhance language acquisition and critical thinking skills. Assigning tasks that require students to work together to solve a problem, create a presentation, or conduct research not only improves their language proficiency but also encourages collaboration and creativity (Banyoi *et al.*, 2022).

Another effective approach is incorporating technology into group activities, such as online discussions, virtual collaborations, or multimedia projects. These tools enhance the learning process by making it more engaging and interactive, allowing students to communicate in a more natural and authentic manner. The integration of computer technologies in education fosters a personalised development of various changes that directly impact cognitive and emotional-motivational processes. This approach not only influences personal character but also enhances students' cognitive motivation when working with computers. The use of Information and Communication Technologies (ICT) in education promotes increased independent learning activities and inspires students, shaping their personalities by nurturing their capacity for education, self-education, self-improvement, and self-realisation. ICT contributes to the development of students' theoretical, creative, and reflective intelligence (Boichuk *et al.*, 2022). Visualisation of educational information through computers plays a significant role in forming ideas and is central to creative thinking. The imagery representation of phenomena in the future foreign language teachers' memory enriches their perception of educational material, enhancing their scientific understanding (Ivanova *et al.*, 2020). Moreover, integrating computer technologies into education plays a crucial role in developing students' critical thinking abilities. When students interact with digital tools and resources,

they are encouraged to scrutinise information, assess the reliability of sources, and make well-informed decisions. This not only boosts their academic skills but also equips them to navigate the complexities of today's world. Additionally, computer technologies enhance collaboration and communication between students and teachers. Digital platforms and tools allow students to collaborate on projects, exchange ideas, and receive immediate feedback. This fosters a cooperative learning environment, encouraging teamwork and interpersonal skills that are vital for success in both academic and professional realms. Moreover, the integration of computer technologies in education opens up new possibilities for personalised learning (Zvorych *et al.*, 2020). Adaptive learning software can tailor educational materials to suit individual learning styles and pace, allowing students to progress at their own rate. This customized approach boosts student involvement and can result in improved academic performance. In essence, incorporating computer technologies into education has the ability to revolutionize the learning experience, making it more interactive, engaging, and efficient. By harnessing the capabilities of technology, educators can develop vibrant learning environments that better equip students for success in the digital era. The demand for specific personal qualities in modern teachers is enshrined in Ukrainian educational legislation, notably in documents like the Standard of Higher Education of Ukraine, the Strategy for the development of higher education in Ukraine for 2022-2032. These documents include provisions aimed at fostering leadership in education and enhancing the role of teachers in shaping an innovative society (Vorstman *et al.*, 2020). Overall, by incorporating a variety of activities that promote interaction and collaboration, language educators can create a dynamic learning environment that caters to different learning styles and helps students develop both their language skills and their ability to work effectively in a team. It is important to note that the effectiveness of the aforementioned types of interactive training hinges on discussing a problem in its entirety, drawing on students' prior experiences and ideas acquired in previous classes or their personal lives (Ihnatova, 2022).

Interactive collaborative learning provides numerous advantages. It fosters a friendly atmosphere and relationships among learners, promotes greater independence and self-confidence by reducing the fear of making mistakes, and helps overcome confidence issues and language barriers. It also increases the speaking time for learners, which is beneficial for communication. Additionally, this approach ensures that the teacher does not dominate the conversation, provides an opportunity for each student to participate, is conducive to individual work, and allows learners to draw on their background knowledge. Incorporating a variety of interactive and collaborative learning activities in a foreign language group can create a rich and engaging learning environment that caters to different learning styles and enhances students' language skills. Techniques such as inside (outside) circles, brainstorming,

and pair interviews promote active participation and encourage students to express their opinions and ideas freely (Bond *et al.*, 2021). These activities not only improve the future teachers of foreign languages proficiency but also foster critical thinking and problem-solving skills. The use of project-based learning further deepens students' understanding of the language and its practical application. By working together on projects that require them to research, analyse, and present information, students develop important skills such as teamwork, communication, and creativity. This approach also helps students see the real-world relevance of the language they are learning, making the learning process more meaningful and motivating. Integrating technology into group activities can also enhance the learning experience. Online discussions, virtual collaborations, and multimedia projects allow students to use technology as a tool for learning and communication, while also providing opportunities for them to engage with authentic language materials (Goloborodko *et al.*, 2020). Overall, interactive and collaborative learning activities not only improve students' language skills but also help them develop important life skills such as teamwork, communication, and critical thinking. By creating a dynamic and engaging learning environment, language educators can empower students to become confident and effective communicators in a foreign language.

Additionally, interactive and collaborative learning activities create a positive and inclusive classroom atmosphere where students feel comfortable expressing themselves and sharing their thoughts. This environment helps build strong relationships among learners, fostering a sense of community and mutual respect. Furthermore, these activities promote learner autonomy and self-confidence. By actively participating in group discussions, debates, and projects, students become more independent in their learning process and more confident in their language skills (Khomenko *et al.*, 2021). They are encouraged to take risks and experiment with the language, which helps them overcome the fear of making mistakes and improves their overall language fluency. Moreover, interactive and collaborative learning encourages students to think critically and consider different perspectives. Through activities such as debates and pair interviews, future teachers of foreign languages are exposed to a variety of opinions and viewpoints, which helps broaden their understanding of the world and enhance their critical thinking skills. Incorporating interactive and collaborative learning activities in a foreign language classroom is essential for creating a dynamic and effective learning environment. These activities not only improve students' language skills but also promote important life skills such as teamwork, communication, and critical thinking, ultimately empowering students to become confident and proficient language learners (Grynova *et al.*, 2024).

Language is a dynamic product of human intellectual activity that evolves through individual and societal life-cycles. An essential principle in language pedagogy is the

study of language within its cultural context. Learning a foreign language involves immersing oneself in the associated culture to gain insight into its worldview and perception of the world. Language development is influenced by the theoretical and practical activities of individuals and societies, illustrating an intrinsic link between culture, social conditions, and language (Shchur *et al.*, 2022). This interconnectedness highlights the importance of teaching and learning languages with a deep understanding of their cultural contexts. Language is more than just a means of communication; it reflects the values, beliefs, and social norms of a community. Exploring the cultural aspects of language allows learners to develop a profound appreciation for the language and its speakers. Learning a language within its cultural context offers a more authentic and meaningful experience. It transcends merely acquiring vocabulary and grammar rules, enabling learners to understand the nuances of communication within a specific cultural framework. This approach fosters cultural sensitivity and empathy, which are essential qualities in today's interconnected and diverse world (Kylyvnyk *et al.*, 2022).

Moreover, innovative teaching methods such as project-based learning, flipped classrooms, and digital learning tools are essential in modern education. These methods not only enhance students' engagement but also develop critical thinking and problem-solving skills. For instance, project-based learning encourages students to apply their knowledge to real-world problems, fostering deeper understanding and retention of information. Flipped classrooms, where students learn new content at home and apply it during class activities, promote active learning and allow for more personalised instruction. According to the research of O.B. Khomyshak *et al.* (2022) digital learning tools, including educational apps and online resources, provide diverse and interactive ways for students to engage with the material, catering to different learning styles and needs. By incorporating these innovative teaching methods, educators can create a more dynamic and effective learning environment. This not only improves language proficiency and cultural understanding but also prepares students to thrive in a rapidly changing, technology-driven world. In summary, the integration of cultural context in language learning and the adoption of innovative teaching methods are essential for providing a holistic and effective education (Plakhotnik *et al.*, 2022). These approaches ensure that students are not only proficient in the language but also culturally competent and well-equipped to navigate the complexities of the modern world.

The success of innovative teaching methods depends significantly on the thoughtful choice and application of contemporary educational technologies. Traditionally, pedagogical technologies are viewed as "organisational forms and methods of teaching" (Absatova *et al.*, 2021). In this context, the teacher's role involves a sequence of tasks including planning, monitoring, and adjusting students' activities. At the Philological Department of Hryhorii Skovoroda University in Pereiaslav, there is a strong emphasis on

integrating modern information technologies to improve the educational process. These technologies provide access to high-quality databases, allowing students to master complex information. This is achieved through the development of educational programs with individual modules of varying complexity tailored to specific needs, the use of interactive methods, the provision of distance education, and the creation of electronic textbooks (Ihnatova, 2022).

According to the research of O. Stepanenko *et al.* (2023) in the context of modern education, the implementation of interactive methods such as group work, discussions, role-playing, and project-based learning contributes to the development of critical thinking and communication skills in future teachers of foreign languages. Distance learning and electronic textbooks ensure flexibility and accessibility of educational materials, which is especially important in the context of the pandemic and war (Kachmarchyk *et al.*, 2019). Information technologies open new opportunities for personalised learning. For example, using adaptive learning software allows for the customisation of learning tasks according to the individual needs of students, increasing the efficiency of material absorption. Students can use online resources for self-study, participate in webinars, engage in forum discussions, and complete interactive tasks. Thus, the integration of modern pedagogical technologies is a key factor in improving the quality of education. It enables the creation of a dynamic and interactive learning environment that promotes a deeper understanding of the material and the development of necessary skills for successful adaptation in the modern world. The implementation of such technologies not only improves students' academic achievements but also their personal and professional development, preparing them for future challenges and opportunities (Hnatyk, 2021).

Interactive language learning methods not only enhance communication skills but also foster emotional connections with students, making the learning process more engaging and effective. These methods aim to achieve educational goals by teaching students to collaborate in teams and consider diverse opinions. By incorporating interactive techniques, educators can create a more dynamic and inclusive learning environment. Moreover, the use of such methods has been shown to reduce students' nervous tension, as they provide a variety of activities that cater to different learning styles. This approach also helps to shift the focus to the main question or objective of the lesson, ensuring that students grasp key concepts effectively. In summary, the implementation of interactive language learning methods benefits both educators and students by promoting collaboration, enhancing communication skills, and creating a more stimulating learning experience (Ye *et al.*, 2023).

Interactive teaching methods in foreign language education provide teachers with the tools to engage students in meaningful communication, fostering language acquisition through risk-taking and conversational interaction. By mastering these methods, teachers can create dynamic learning environments that cater to diverse learning styles

and encourage active participation. It is hoped that by embracing interactive teaching methods, language teachers will be inspired to explore new approaches to language education, leading to improved student outcomes (Bahno *et al.*, 2021). Interactive methods in foreign language teaching should focus on several key objectives: enhancing language abilities, refining linguistic proficiency, developing analytical skills, acquiring professional competencies, and fostering creativity in students. As educators progressively refine and innovate their teaching strategies, a deeper grasp of interactive methods will inevitably boost the overall effectiveness of language instruction.

CONCLUSIONS

Modern Ukrainian higher education needs to reevaluate its approaches to incorporating innovative teaching forms and methods. A crucial part of this reevaluation is to increase the number of hours dedicated to pedagogical disciplines within the curricula of Ukrainian institutions. Therefore, university educators must adapt to an innovative teaching model that accounts for the continuous changes in society and enhances students' creative abilities through the mastery of socio-didactic design technologies. The application of innovative teaching methods in the education of future philology teachers is also examined. The interactive methods are of great importance to the development of students' communicative, professional, and creative competencies, as well as support their need for self-education. The research results showed that innovative interactive teaching methods are more effective than traditional ones, leading to a rethinking of the roles of teachers and students in the educational process.

The article highlights the need to implement a modern teaching model in higher education that aligns with current societal changes. This model focuses on improving students' creative skills and their proficiency with socio-didactic technologies. For further research in this area, several key aspects could be explored: investigating the impact of innovative teaching methods on students' academic performance and their motivation to learn foreign languages; assessing the effectiveness of interactive methods in teaching various subjects, with a focus on comparing their impact on foreign language acquisition; developing new innovative approaches to language instruction that align with contemporary educational trends and advancements in information technology; and examining the role of cultural factors in the effectiveness of interactive teaching methods for foreign languages within an international educational context. Exploring these research avenues could contribute to refining foreign language teaching strategies and advancing the quality of education in this field.

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CONFLICT OF INTEREST

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Інноваційні підходи організації освітнього процесу у професійній підготовці майбутніх учителів іноземних мов в умовах воєнного стану

Анотація. Актуальність дослідження інноваційних підходів до організації освітнього процесу у професійній підготовці майбутніх учителів іноземних мов в умовах воєнного стану зумовлена необхідністю адаптації освіти до нових викликів. Впровадження новітніх методик та технологій є ключовим для забезпечення ефективної підготовки фахівців, збереження психоемоційного здоров'я студентів та викладачів, а також підтримки безперервності навчального процесу в екстремальних умовах. Мета статті полягала у дослідженні інноваційних підходів організації освітнього процесу навчання в професійній підготовці майбутніх учителів іноземних мов та їх можливості використання в освітньому процесі закладів вищої освіти в умовах воєнного стану. Використання методів теоретичного рівня (аналіз інформаційних джерел, систематизування, моделювання та узагальнення) допомогли авторам вирішити низку поставлених завдань. У результаті дослідження виявлено, що інноваційні інтерактивні методи навчання є найбільш ефективними порівняно з традиційними методами, що сприяли не лише трансформації цілей навчання, а й переосмисленню ролі викладача та студентів. У статті обґрунтовано потребу в оновленні підходів до інноваційної підготовки майбутніх учителів іноземних мов, що дозволяло побудувати нову модель навчання у закладах вищої освіти. Дослідження акцентувало увагу на необхідності використання моделі інноваційного навчання при підготовці майбутніх учителів іноземних мов у закладах вищої освіти, враховуючи постійні зміни в суспільстві в умовах воєнного стану. Висвітлені ефективні методи інноваційного навчання іноземних мов, можуть бути використані в практиці підготовки майбутніх учителів іноземних мов та будуть корисними і для вчителів-методистів, які працюють над вдосконаленням своєї практичної роботи з метою покращення освітнього процесу та професійного розвитку, а також для університетів та закладів вищої освіти, що прагнуть покращити якість підготовки фахівців-філологів у галузі викладання іноземних мов

Ключові слова: комунікативні компетенції; професійні компетенції; креативні компетенції; самоосвіта; ефективність навчання; інтерактивні методи; мультимедійні технології

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Features of organising inclusive education in general secondary education institutions

Abstract. This research aimed to analyse educational institutions' specific challenges and opportunities in implementing inclusive education within the context of armed conflict. The research methodology included an anonymous survey conducted with respondents and experts in the fields of inclusion and psychology, who have experience teaching individuals with special educational needs. A qualitative study was carried out with 100 participants. The focus was primarily on issues of educational accessibility for children with special educational needs, the provision of psychological support for both pupils and teachers and the role of governmental administration in enhancing the quality of inclusive education. Based on the responses received, it was recommended that an educational programme for the development of emotional intelligence be developed within public institutions. This would contribute to improving pupil success and the overall quality of the educational process. In particular, it was recommended that educational programmes be established to develop the emotional intelligence of administrators, which would enhance the quality of the educational process and pupil outcomes. The use of remote learning formats and the adaptation of curricula would partially mitigate the lack of traditional educational resources. The significant role of volunteer organisations and community initiatives in providing essential support to children with special educational needs was also noted. The findings of the research underscore the urgent need for the development and implementation of long-term strategies to support inclusive education in crisis situations. These strategies encompass specialised teacher training, the provision of necessary resources to educational institutions, and psychological support for both pupils and teachers. The strategic approaches identified in the study can be employed to further advance inclusive education in crisis contexts by effectively engaging all pupils in the educational process, irrespective of external factors

Keywords: psychological resilience; wartime; distance learning; volunteering; educational resources; inclusive education

INTRODUCTION

In the context of war and post-conflict reconstruction, the education system faces new challenges, particularly in the organisation of inclusive education within general secondary education institutions. Conflict situations not only

affect the physical and psychological resilience of pupils but also pose a threat to the implementation of inclusive principles that ensure equal access to education for all children, including those with special educational needs.

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Inclusive education is a cornerstone of contemporary educational systems, aiming to ensure that all learners have equal access to education, regardless of their physical, mental, or social characteristics. It is a concept focused on integrating pupils with special educational needs into mainstream schools and providing them with the support necessary to succeed. The diversity of pupils' needs requires flexible approaches to teaching and effective collaboration with parents, teachers, and the community. Therefore, implementing inclusive practices is not only an educational but also a social necessity, aimed at ensuring social inclusion and equal opportunities for all learners. However, the implementation of inclusive education faces many challenges, especially in crisis situations such as war or natural disasters. Wars and conflicts further complicate education systems, particularly when it comes to implementing and supporting inclusive practices. In these circumstances, education becomes not only a means of transmitting knowledge but also a crucial element of socio-emotional support for children experiencing traumatic events.

C. Hillenbrand & S. Thies (2024) discuss the challenges of implementing inclusive education in post-conflict countries in the Middle East, such as Syria, Yemen, and Iraq. In their article, they emphasise the critical importance of teacher qualifications and the difficulties educators face when introducing inclusive education. Specifically, in Iraq, where a special education programme is being implemented at the University of Duhok, they explore the challenges these countries encounter in integrating inclusive initiatives.

In Ukraine, as noted by O. Otych & O. Orzhel (2023), there are numerous significant strategies for inclusion in higher education. However, challenges persist due to a lack of effective collaboration between the government, universities, and non-governmental organisations, as well as insufficient infrastructure and skills among academics. To address these issues, the authors emphasise the need for a new national strategy for inclusive education up to 2030. O. Hurenko *et al.* (2024), in turn, examine the implementation of inclusive education during wartime using the example of Berdyansk State Pedagogical University. Their findings underscore the importance of digitalisation, alignment with European standards and the concept of the "Universities without Walls", and the need for a global approach to ensure equal access for individuals with special educational needs. Ü. Şimşek & B. Kılcan (2019) investigate the experiences of Turkish secondary school teachers and find that teachers generally understand inclusive education and consider it important. However, their assessments vary depending on how social inclusion is implemented. The researchers emphasise the need for professional development of teachers and improved physical conditions in schools to facilitate the effective implementation of inclusive practices.

In her research, S.A. Abdullajonova (2022) explores the concept of inclusive education, its historical development, and its foundations in international law. The essence and characteristics of inclusive education are presented, along

with the results of practical work in this field, which help to better understand current trends and challenges in this area. The importance of inclusive education for ensuring equality in education for children with special educational needs is emphasised. The article analyses the process of integrating such children into inclusive education systems, as well as the obstacles and difficulties encountered during its implementation. The author highlights the challenges and successes in providing equal access to education for children with disabilities.

C. Petrescu (2013) views inclusive education as an ongoing process of improving educational institutions to ensure the participation of all pupils, including those with disabilities. He highlights the ideological, ecological, and interactive aspects of inclusive education and emphasises the importance of organisational changes in schools to improve the quality of education and create opportunities for all children, including marginalised and isolated groups. Authors R.K. Sadikovna & O.X. Azimjon (2023) explore the importance of inclusive education for ensuring equality in education for children with special educational needs. Their article examines the process of integrating such children into inclusive education systems and analyses the barriers and challenges encountered during its implementation. The authors focus on the challenges and successes in providing equal access to education for children with disabilities.

A meta-analysis of practices and innovations in inclusive education, conducted by authors such as L.V. Kozibroda *et al.* (2020), identify two main approaches to inclusive integration: integrated and differentiated. The integrated approach involves innovations in the concept, model, external requirements, and phases of inclusion, while the differentiated approach employs a comprehensive approach to identify internal drivers of inclusion, such as teachers' values, beliefs, and competencies. Overall, inclusive education in the context of war and post-war reconstruction requires a comprehensive approach that considers international experience and adapts to new realities. This includes ensuring equal access to education for all children, regardless of their special needs, and the ongoing improvement of educational practices and policies.

This research aimed to analyse the current situation and challenges faced by inclusive education systems in the context of war and post-war reconstruction. The research objectives were to: assess the impact of war on the accessibility and quality of inclusive education in Ukraine; develop an analysis of international experience in implementing inclusive education in post-conflict settings; examine key programmatic challenges in implementing inclusive education during wartime; and develop recommendations for improving Ukraine's inclusive education system, taking into account new realities and international standards.

LITERATURE REVIEW

Inclusive education is a cornerstone of contemporary educational policy, aimed at ensuring equality and fairness in learning. Despite global recognition of the importance of

inclusive education, countries adopt diverse approaches to its implementation and development. L.J. Graham (2020) views inclusion as a process, focusing on the social model of disability and analysing the varying perspectives of countries such as the United States, the United Kingdom, and Australia, which have been grappling with its foundational concepts since the 1970s. C. Ydesen *et al.* (2023) explore the perspectives of policymakers and practitioners on the interplay between assessment and inclusion programs, intersecting across five countries on four continents: Argentina, China, Denmark, England, and Israel. This research spans five diverse case studies across the Global North, South, East, and West. Conversely, A.M. Abdullahi (2023) sheds light on the challenges of accessing higher education in Somalia, particularly for people with disabilities. J. Ravet & P. Mtika (2021) analyse inclusive education in rural Cambodian schools, identifying barriers and proposing solutions.

T. Buchner & M. Proyer (2019) analyse the development of inclusive education policies in Austria, focusing on their impact on teacher training. They examine three main phases of inclusion: from the creation of special schools to integration and, finally, to current efforts aimed at expanding inclusion in education. Their research shows that while recent reforms promote inclusive education, challenges related to older teacher training models still persist. They analyse the impact of the United Nations (UN) on inclusive education in Europe, highlighting progress but also challenges faced by pupils with intellectual disabilities. E.K. Materechera (2018) draws attention to the practical challenges faced by teachers in implementing inclusive education, such as large class sizes and inadequate preparation. W. Kinsella (2018) considers the organisational aspects of inclusion and suggests using organisational psychology to overcome ideological tensions. D. DeMatthews *et al.* (2020) emphasise the role of leaders in creating inclusive schools and highlight the common principles of inclusive leadership. G. Szumski *et al.* (2020) investigate the impact of inclusive education on pupils' attitudes towards people with disabilities and find that it positively influences moral identity and reduces negative attitudes.

M. Lemeshchuk *et al.* (2022) examine the implementation of inclusive education in Ukraine through the lens of European practices. They conclude that the goal of inclusive education in Ukraine is to overcome discrimination against pupils with physical and intellectual disabilities through the active use of various teaching methods and support. Their research shows that adapting European practices, such as individualised tasks and the role of teaching assistants, is crucial for the successful implementation of inclusive education in Ukraine. K.A. Cologon (2020) explores inclusive education for children with "severe and multiple" disabilities through the stories of parents in Australia. Her research challenges the notion that inclusive education can be organised for everyone, questioning whether the concept of inclusion is realistic and desirable for children with the most complex disabilities. The perspectives of parents of children with severe

disabilities provide a deeper understanding of the real needs and challenges faced by families.

R. Sam (2024) analyses the development of inclusive education in Cambodia since 1953, examining the impact of political regimes on the country's education system. Their research evaluates the successes and failures of different policy phases in implementing inclusive education and highlights the importance of reforms to ensure equal opportunities for pupils with disabilities. The conclusions of this narrative literature review provide valuable insights for developing educational policies and practices. H. Lopatina *et al.* (2024) emphasise that Ukrainian teachers are ready to implement inclusive education, but their knowledge of the legal framework and core principles of inclusion is uneven. O. Kachmar *et al.* (2024) focus on developing inclusion policies in schools but acknowledge the need for further research in higher education. J. Graham *et al.* (2024) underline the importance of a systemic approach to inclusion and point to the need for changes in legislation and educational structures. M. Yoshitoshi *et al.* (2022) analyse court cases in Japan that reveal challenges in implementing inclusion due to outdated legal concepts. V. Banyoi *et al.* (2023) investigate distance learning in Ukraine during wartime and highlight the advantages and disadvantages of online education.

This research examines issues of access to education and identity formation within the context of social injustice and inclusion. H.L. Barrett (2024) explores how refugee children with communication difficulties encounter barriers to inclusive education in Rwanda, highlighting the need for a systemic approach to ensure equal opportunities. The research by A. Rauf *et al.* (2024) investigates the impact of history textbooks in elite Pakistani schools on shaping perceptions of civil rights, revealing selective narratives that hinder the development of critical thinking. T. Komatsu (2024) emphasises the importance of integrating the principles of equality and inclusion into school policies to build societal trust, especially in countries with high levels of corruption. All these studies underscore the need for reforming educational practices to create a fair and inclusive society.

MATERIALS AND METHODS

This research was conducted between early June and August 2024. The study took place in three regions of Ukraine: two located in active war zones (Donetsk and Kharkiv regions), and one region hosting internally displaced persons (Lviv Region). Within each region, general secondary schools for pupils with special educational needs were studied individually, including Secondary School No. 95 in Lviv, Kharkiv Lyceum No. 38, and Donetsk Lyceum No. 2. To collect comprehensive data, the following staff members participated: teachers and administrative staff.

Inclusion criteria for the sample were as follows: firstly, experience working with pupils with special educational needs in a mainstream school, which is crucial for understanding inclusive education. Secondly, a significant

criterion was teaching experience of more than two years, ensuring that respondents had sufficient professional experience. Each participant was required to provide informed consent and sign a research participation agreement, following ethical research guidelines. Exclusion criteria were: the absence of pupils with special educational needs in the classroom or school, meaning that the participant did not have experience working in an inclusive environment.

This research was conducted entirely through an online survey using Google Forms. A total of 100 individuals participated, comprising 70 females and 30 males. All

participants had extensive experience working with pupils with special educational needs (SEN) in mainstream schools. Teaching experience ranged from 2 to 25 years: 30% of respondents had 2-5 years of experience, 40% had 6-10 years, 20% had 11-15 years, and 10% had over 15 years of experience. A gender analysis was also conducted to determine any specific influence of respondent gender on the organisation and content of inclusive education. Table 1 provides a detailed breakdown of participant information, offering a clear understanding of the demographic characteristics and experience of the respondents.

Table 1. Demographic profile and professional experience

Category of respondents	Total number	Females	Males	Average age	Average experience (years)
Survey Participants	100	70	30	35	8
Respondents with experience working with SEN pupils	80	50	30	34	9
Respondents without experience working with SEN pupils	20	20	0	40	3

Source: compiled by the author

The survey comprised 15 closed questions with a single-choice format, aimed at exploring the experiences, attitudes, and challenges faced by educators while working with pupils with special educational needs during the war. Participants were asked about their experience working with pupils with special educational needs, including the duration of this experience, changes in teaching methods since the war began, support from school leaders, difficulties working in a war zone, and effective resources and methods for supporting such pupils. Closed questions were rated on a scale from 1 to 5, where 1 represented “unsatisfactory” and 5 represented “very satisfactory”, while responses to open-ended questions were analysed using content analysis. All study participants signed consent forms to partake in the research. All ethical standards of the Declaration of Helsinki (2013) were observed during the study. Their confidentiality was fully protected by using pseudonyms during the processing and analysis of data.

RESULTS

As noted by N.M. Kvitko *et al.* (2024), education is essentially a learning process through which children acquire the necessary skills and knowledge, thus the quality of education must be high to enable pupils to build their future. Since the beginning of the war, education has undergone some changes but has retained its essence. A detailed study of the structure and content of inclusive education in educational institutions during wartime has yielded significant data, demonstrating the specific challenges and opportunities for implementing inclusion in the context of armed conflict in various regions, such as Donetsk and Kharkiv. The key findings of the study, which will be discussed in this section, reflect the impact of war on the education system and certain changes in inclusive education practices.

Among the respondents who worked with pupils with special educational needs, 50 females and 30 males highlighted that effective teaching methods, psychological

support, and educational processes for children with special educational needs provide valuable insights into adaptation. This information is now available to researchers and school administrators who are analysing inclusive education practices to improve learning conditions and develop solutions. It provides a deep understanding of the challenges and opportunities faced by educators working in difficult circumstances. The research found that the war has had a significant impact on the availability and quality of inclusive education in Ukraine, particularly in regions that have suffered the most damage, such as Donetsk and Kharkiv. Damaged infrastructure, threats to life, and limited resources have made it difficult for pupils with special educational needs to attend school. Most respondents in these regions reported that physical barriers, such as damaged school buildings and a lack of public transportation, have significantly hindered access to education. The war has forced teachers to switch to remote learning using online platforms like Zoom, Google Meet, and Microsoft Teams to partially compensate for the loss of in-person education. However, online learning does not solve all problems, and children with special educational needs require additional resources and specialised approaches that are difficult to implement in such circumstances. The situation is particularly critical in Donetsk, where the war has destroyed a significant portion of the infrastructure. Approximately 90% of surveyed teachers reported that pupils with special educational needs are unable to attend school due to unsafe conditions or disruptions. Furthermore, there has been a severe shortage of qualified personnel, with psychologists, speech therapists, and other specialists leaving the conflict zone, exacerbating the challenges faced by these pupils.

A study conducted in Kharkiv Region has provided valuable insights into the state of inclusive education amidst active hostilities. Fourteen females and six males actively involved in inclusive education by working with pupils with special educational needs participated in the study.

The average duration of their work with pupils with special educational needs was eight years. Kharkiv Region faces significant challenges in the field of inclusive education. Pupils are struggling to access educational institutions due to damaged infrastructure in the war zone. One of the major problems is the lack of technical equipment, such as computers and specialised equipment for working with children with special educational needs. Seventy per cent of respondents noted a shortage of qualified professionals who could provide specialised support to pupils.

Lviv, a primary focus of this study, is a region hosting a large number of internally displaced persons. This unique context makes it a particularly interesting case for studying inclusive education, as it accommodates pupils displaced from wartorn areas. The overall situation in the region presents specific challenges and complexities in organising education for pupils with special educational needs. Lviv Region has faced difficulties in accessing inclusive resources due to overcrowded classrooms and a shortage of teachers experienced in working with children with disabilities. According to the survey, 80% of respondents indicated that there have been significant changes in teaching methods during the war. A crucial approach to supporting pupils with special educational needs has been the use of remote learning formats, such as online classes. However, approximately 60% of respondents noted that not all pupils with special educational needs have access to the internet or adequate home support for effective learning, suggesting that online learning cannot fully replace in-person instruction.

Lviv Region is facing significant challenges in providing inclusive education. However, material and psychological support from local authorities and community organisations is positively impacting the education of pupils with special educational needs. Psychological programs such as “I Can Do It” and the remedial developmental program “Overcoming Children’s Fears and Developing Emotional Stability in Children of Military Personnel”, designed to support pupils, are crucial in helping them cope with stress and adapt to new situations (Author’s programs..., 2020). The research findings confirm that while the Lviv Region faces certain challenges, there are also positive developments and initiatives contributing to the improvement of inclusive education.

Despite the extremely challenging situation in Donetsk and Kharkiv, respondents noted that various volunteer and official initiatives have made significant contributions to organising inclusive education. According to the survey, 70% of respondents reported receiving material support in the form of educational materials such as textbooks, handouts, and specialised learning materials for children with disabilities. The importance of psychological support for both pupils and teachers was also highlighted. Similarly, in Lviv Region, 60% of respondents indicated that local authorities, in collaboration with community organisations, have developed special psychological support programs for pupils with disabilities. However, only 30% of respondents in Donetsk and Kharkiv regions reported that such programs are available in their regions. A summary of the challenges and resources is presented in Table 2.

Table 1. Challenges and resources in inclusive education during wartime

Region	Primary challenges and issues	Teaching methods	Access to technology and resources	Support from volunteers and organisations	Psychological support for pupils with disabilities
Donetsk and Kharkiv regions	Damaged infrastructure, safety risks, lack of resources, shortage of qualified specialists (psychologists, speech therapists, etc.)	80% of respondents reported changes in teaching methods; use of remote formats	Lack of adequate technological equipment (computers, interactive whiteboards, etc.); not all pupils have internet access	70% of respondents received material assistance (textbooks, special learning materials)	Only 30% of respondents noted the availability of psychological programs
Lviv Region	Overcrowded classrooms, lack of experienced teachers for working with children with disabilities	Use of remote formats, but effectiveness is limited due to insufficient home support	Significant impact on inclusive education due to a lack of qualified specialists; need for additional resources	60% of respondents reported the development of psychological support programs for pupils with disabilities by local authorities	60% of respondents reported the development of psychological support programs for pupils with disabilities by local authorities

Source: compiled by the author

This study, conducted in war-torn Ukraine, also paid particular attention to gender analysis among participants. Gender dimensions are crucial for understanding the roles of males and females in inclusive education, especially in

crisis situations such as armed conflict. Gender analysis revealed notable differences in perceptions and approaches to working with children during the war. Female respondents were more likely to express concern about pupils’ mental

health and highlight the need for additional psychological support programs. Male respondents, on the other hand, emphasised technical and material aspects, such as restoring school infrastructure and ensuring classroom safety. It was also found that females were more inclined to adapt their teaching methods to remote learning. The survey showed that 75% of females used interactive platforms to engage pupils in the learning process, while only 50% of males reported using such an approach. In Donetsk Region, the gender distribution of respondents was 20 females and 10 males. This ratio aligns with the broader trend in the education sector, where females are predominantly represented. The analysis reveals that females in Donetsk Region have more experience working with pupils with special educational needs than males. The average experience of females in this category is eight years compared to seven years for males. This may indicate that females are more involved in working with pupils with special educational needs. Therefore, in Donetsk Region, the vast majority of respondents are females who work with pupils with special educational needs. This could be attributed to traditional gender roles in education.

In Kharkiv Region, the respondents were evenly split between 15 females and 15 males, further highlighting the significant presence of females in the education sector. Females reported slightly more experience teaching pupils with special educational needs compared to males. The average experience for females was nine years, compared to eight years for males. This underscores the importance of females' involvement in inclusive practices, especially in conflict-affected areas. Males in Kharkiv Region reported facing greater difficulties in accessing resources and support compared to females. This could be attributed to differences in the roles and responsibilities of males and females within the education system. The gender analysis of the Lviv Region revealed that the majority of respondents were females, which is typical for the education sector. Among the survey participants, there were 35 females and 5 males, reflecting the overall trend in education. Females had slightly more experience working with pupils with special educational needs, which could be attributed to their greater involvement in implementing inclusive practices and supporting vulnerable pupils. Table 3 presents the details of gender analysis for each region.

Table 3. Gender analysis of respondents and distribution of experience working with pupils with special educational needs by region

Region	Total participants	Females	Males	Average age (years)	Average experience (years)	Distribution of experience with SEN pupils
Donetsk	30	20	10	34	8	- 2-5 years: 30% - 6-10 years: 40% - 11-15 years: 20% - >15 years: 10%
Kharkiv	30	15	15	36	9	- 2-5 years: 25% - 6-10 years: 45% - 11-15 years: 20% - >15 years: 10%
Lviv	40	35	5	37	8	- 2-5 years: 20% - 6-10 years: 30% - 11-15 years: 25% - >15 years: 25%
Total	100	70	30	35	8	- 2-5 years: 25% - 6-10 years: 35% - 11-15 years: 22% - >15 years: 18%

Source: compiled by the author

Females have slightly more experience in the field of inclusive education than males, but this could be due to the general trend of more females working in education. The average experience of females who worked with pupils with special educational needs was 9 years, compared to 8 years for males. This may suggest that females are more frequently involved in inclusive education and have more experience in the field. It was also found that most respondents, regardless of gender, noted changes in teaching methods during the war. However, females more often mentioned the need for adaptation and changes in the learning process due to their greater involvement in the day-to-day

organisation of education. Both groups of respondents, males and females, face similar challenges during the war, such as a lack of resources and qualified specialists.

However, females more frequently mentioned the need for greater psychological support. This could be attributed to their more frequent responsibilities for supporting pupils and adapting the learning process. It was noted that females were more likely to participate in volunteer activities and secure financial support for their educational institutions. This may suggest that they play a more active role in supporting inclusive education during crisis situations. Based on the conducted research examining the

organisation and content of inclusive education in war-torn Ukraine, several key recommendations can be identified to improve the situation and provide more effective support for pupils with special educational needs.

Firstly, a clear focus is required on improving the infrastructure and resource provision of educational institutions. The war has significantly impacted the physical infrastructure, particularly in Donetsk and Kharkiv regions, where damaged school buildings create unsafe learning conditions. Therefore, a priority task is the restoration and modernisation of educational premises. Infrastructure recovery programs should be developed and implemented, including the repair and reconstruction of buildings, as well as the provision of necessary technological tools such as computers, interactive whiteboards, and specialised learning materials. This will create a safe and relatively comfortable learning environment, which is critically important for pupils with special educational needs. First and foremost, remote learning formats have become a vital tool during the war, however, not all pupils have access to the internet or adequate support at home. It is recommended to develop strategies to ensure equal access to online resources for all pupils, including providing technical support and internet access to those who need it. At the same time, it is necessary to improve online platforms and resources to make them more adaptable to the needs of pupils with special educational needs. It is also advisable to implement hybrid learning models, which combine remote and in-person formats, allowing for a more flexible approach to learning and pupil support.

Thirdly, as a shortage of qualified professionals is one of the primary issues, it is important to invest in professional development for educators working with pupils with special educational needs. It is recommended to organise professional development courses, training sessions, and seminars specialising in inclusive education, as well as providing psychological support for educators working in challenging conditions. In particular, training should be provided for teachers to enhance their skills in working with pupils with special educational needs, and specialists such as psychologists, speech therapists, and others should be trained to provide specialised support.

Given that the research findings indicate that volunteer and community organisations play a crucial role in supporting inclusive education, it is recommended to develop and foster partnerships between educational institutions and these organisations to provide both material and psychological support. High-quality platforms need to be created to coordinate the efforts of various organisations, enabling the smooth and efficient provision of assistance and resources for learning. It is also essential to ensure transparency and effectiveness in the use of the provided support to maximise its impact. Implementing these recommendations will contribute to improving the organisation and content of inclusive education during wartime, enhance the effectiveness of the educational process and support for pupils with special educational needs, and

create a more conducive learning and development environment in times of crisis.

In the context of the ongoing military conflict in Ukraine, effective inclusive education has become a pressing issue that requires not only adaptation to new realities but also the implementation of long-term strategies to ensure the stability and development of the education system. This research identifies the main challenges facing inclusive education during wartime, such as damaged infrastructure, a shortage of qualified professionals, limited access to technology and resources, and a lack of psychological support for pupils with special educational needs. One of the key areas to focus on is the repair and modernisation of educational facilities. It is essential to ensure that schools have access to the latest learning materials and resources, which help create a safe and stimulating learning environment for children with special educational needs. While remote learning has become an accessible tool during the war, it is not necessarily a suitable alternative to traditional learning, especially for pupils with special educational needs. Solutions can be found to improve internet access and technology for all pupils. Remote learning platforms must adapt to the needs of pupils with special educational needs and provide the support they require for effective learning. A blended learning model helps to provide a more flexible approach to both remote and in-person learning. The shortage of qualified professionals such as psychologists, speech therapists, and other specialists is also a significant issue. It is recommended to organise training programs for teachers and other professionals working with children with special educational needs. Such programs should include training and workshops focused on comprehensive learning and psychological support. Investing in the training of new specialists and upskilling existing ones will contribute to improving the quality of education and support for pupils. Attention should also be paid to strengthening cooperation between educational institutions, government agencies, and local authorities. Partnerships with community organisations help provide material and psychological support to educational institutions and pupils. Developing a platform that coordinates the efforts of various organisations allows for a more efficient use of resources and support.

Other aspects, such as investment in innovative technologies, have also been neglected in the further development of inclusive education during the war. Technology plays a crucial role in the learning process and helps adapt teaching methods to the needs of pupils with special educational needs. Modern technologies, such as educational software, mobile apps, and online resources, can significantly improve access to education. For example, functional programs that support the visualisation of materials and interactive elements can help pupils better understand information. Creating a safe and supportive classroom environment is equally important. Teachers must be prepared to deal with traumatised children, as pupils may experience additional stress during wartime. Psychosocial

support should become an integral part of the educational process. Teachers need to have the skills to recognise the emotional needs of their pupils and provide the necessary support. Joint initiatives, such as training sessions, seminars, and workshops, can help create a collective responsibility among teachers, parents, and the community to support inclusive education. Interaction between parents and educational institutions should be proactive, as it leads to a deeper understanding of the needs of children with special educational needs. Parents should have the opportunity to participate in the learning process, share experiences, and receive expert advice. The importance of developing an inclusive culture in schools is also significant. This means that schools should be places where diversity and equality are valued. Implementing programs that promote tolerance and respect for all pupils can positively impact the school climate. Creating a positive environment can help reduce stigma towards pupils with special needs and ensure their integration into the community. At the national level, it is important to develop educational policies to create a more flexible system adapted to new circumstances. While adhering to the law on inclusive education, the needs of pupils during wartime should be considered. There are opportunities to obtain funding for the implementation of support programs, the provision of resources, and staff training. International cooperation is also a component of developing inclusive education. The experience of other countries can be a valuable resource for improving existing practices. The exchange of experiences, involvement of international experts, and the organisation of joint projects can contribute to a more effective implementation of a comprehensive approach in Ukraine. Continuous monitoring and evaluation of the effectiveness of the implementation of programs and strategies also contribute to success. To improve inclusive education, it is recommended to create feedback mechanisms that allow participants in the educational process to express their thoughts and suggestions. This not only improves practice but also strengthens trust among all those involved in the process. Therefore, the development of inclusive education in wartime requires a comprehensive approach that involves all participants in the educational process, the implementation of modern technologies, the professional development of staff, and support from the state and civil society institutions. Efforts aimed at creating a supportive learning environment can significantly improve the quality of education for all pupils, especially those with special educational needs.

Research indicates that effective inclusive education during wartime requires the implementation of long-term support strategies. This includes developing professional development programs for teachers, particularly in the areas of psychological support and working with pupils with disabilities. There is also a need to increase the number of specialists who can work with such children and to equip educational institutions with the necessary equipment and resources. One of the key findings is the need for close cooperation between local authorities, community

organisations, and educational institutions to ensure adequate support for inclusive education. This is especially important in areas devastated by war, where more specialised support is needed to restore educational infrastructure and provide psychological support to pupils and teachers.

DISCUSSION

War poses significant challenges to education systems, particularly in ensuring access to inclusive education for children with special needs. Inclusion involves providing equal opportunities for all pupils by giving them access to quality education in mainstream schools, regardless of their specific learning needs. In times of war, this task becomes even more complex due to population displacement, infrastructure damage, and resource shortages. It is essential to adapt teaching strategies to support pupils with special needs. In wartime, this task is complicated by many factors, including population displacement, infrastructure destruction, and a shortage of material and human resources. Adapting educational strategies is of great importance as it requires not only modifying programs but also developing individualised approaches for each educational institution with specific needs.

Research conducted by various authors has provided deeper insights into the specific characteristics of inclusive education during wartime. O.V. Krychivska *et al.* (2022) highlight that the organisation of inclusive education in Ukraine is regulated by several Cabinet of Ministers' decrees, particularly the "Procedure for the Organisation of Inclusive Education in General Education Institutions". They also note that the hostilities have led to the displacement of a significant number of people with special educational needs to other regions of Ukraine. This aligns with the findings that population displacement and changes in the educational environment have a significant impact on the provision of inclusive education services. Additionally, important aspects of their research include psychological support and emergency planning. The analysis of specific video lessons for pupils, presented in their study, demonstrates new methods of the educational process during wartime.

The research by I. Yesikova (2024) focuses on analysing the nature of the inclusive environment and its implementation in secondary education in Ukraine, identifying key principles for creating a quality inclusive environment that meets the individual needs of children. This approach aligns closely with the study's findings, which underscore the necessity of creating personalised learning programs for pupils with special educational needs, including internally displaced persons, during wartime. The study also highlights the crucial role of normative and methodological literature, demonstrating the significance of a robust regulatory framework for effectively organising inclusive education. This conclusion is further supported by the research, which emphasises the importance of a strong normative basis for the successful implementation of inclusive practices.

In contrast, L.I. Prokhorenko *et al.* (2023) emphasise accessibility and child-centeredness as key approaches to

inclusive education, including equitable access to learning and a safe environment. Their research also corroborates the ongoing experiences of inclusive resource centres during wartime. This aligns with the findings of other studies that highlight the need to adapt comprehensive resources to wartime situations and the role of inclusive resource centres in providing individualised support. Additional attention should be given to supporting teachers working with such pupils. Notably, this research examines the use of digital technologies as a pivotal component for fostering inclusion, a focus not central to I. Yesikova (2024) research. The research revealed that the activities of inclusive resource centres require strengthening with additional resources, a point also emphasised in other studies. Their conclusions regarding the need to update the legal framework and approaches to psychological and pedagogical support reinforce previous recommendations for a systemic approach to supporting children with special educational needs.

Researchers N.A. Yarmola *et al.* (2023) examine the provision of corrective and developmental services for children with special educational needs during wartime, with a particular focus on the role of information and communication technologies. Their findings align with the broader understanding of the importance of integrating digital tools into distance learning. The researchers also emphasise the need for psychological and educational support for both children and their parents. They argue that digital tools not only facilitate the organisation of learning but also enable interactive and adaptive educational approaches. The implementation of distance learning platforms allows for the individualisation of educational programs to meet the specific needs of each pupil, especially those with special needs. This fosters active participation in the learning process and promotes the development of skills and abilities.

Accordingly, researchers V.D. Melash *et al.* (2023) analyse the preparation of future teachers for working in an inclusive environment, which is a key aspect of the successful integration of inclusive education. They emphasise the importance of professional collaboration among different types of teams, including specialists in psychological and educational support. This study highlights this issue and recognises that teacher preparation is a crucial element in ensuring high-quality and inclusive education in wartime conditions. Researchers T.M. Sobchenko & N.M. Smolianiuk (2019) note that the primary issue is the insufficient preparation of teachers working in inclusive settings, which acts as an obstacle to the effective implementation of inclusive education. They propose a new approach to teacher training and retraining, specifically the introduction of training that psychologically prepares teachers to work with children who have special needs. This aligns with the conclusions about the need to modernise teacher training programmes, particularly during wartime. Finally, S. Shkarlet (2022) emphasises the importance of international support and initiatives to ensure the continuity of the educational process during wartime. The study also

highlights the significance of international collaboration and support for maintaining inclusive education in the context of armed conflict. This aspect is also addressed in the current research, although more attention is given to local resources and the adaptation of the Ukrainian educational system to the crisis conditions.

Consistent with other researchers, the findings of the current study align with those of European scholars who have demonstrated the need for particular attention to inclusive education during crises. Notably, the research of A.M. Abdullahi (2023) and H.L. Barrett (2024), conducted within the context of the migration crisis, indicate that bolstering psychological support for pupils and providing individualised approaches are essential for maintaining inclusivity. This converges with the results of studies showing that it is crucial to adapt psychological support to new situations, just as education itself must adapt. A study of the structure and content of inclusive education in general secondary schools during wartime has revealed numerous challenges and new opportunities for providing quality education to pupils with special educational needs. The findings suggest that armed conflicts not only pose significant obstacles to the implementation of inclusive practices but also stimulate the development of new approaches and innovative solutions. The research indicates that adapting curricula and teaching methods, considering the specific needs of pupils, and fostering flexible learning styles are crucial for effective inclusive education during wartime. This result suggests that war in educational institutions necessitates not only the adaptation of existing systems but also the development of new approaches to supporting pupils with special educational needs, as highlighted by N.A. Yarmola *et al.* (2023). These approaches enable the maintenance of contact with pupils and provide them with the necessary support, regardless of their physical limitations. However, the study also identifies challenges such as a lack of resources and teaching materials, as well as the need for ongoing teacher training and professional development. Thus, this research demonstrates that the successful implementation of inclusive education in wartime requires further refinement of the legal framework, the development of new methodological guidelines, and support for educators. It is also essential to continuously adapt the educational process to changing circumstances and pupil needs to ensure their successful development and integration into society.

CONCLUSIONS

The primary findings of this study underscore the importance of adapting education systems to effectively accommodate pupils with special educational needs during wartime, providing valuable insights for future improvements. Distance learning and the integration of information and communication technologies have proven crucial in ensuring educational continuity, particularly for pupils with special educational needs who may struggle to access traditional education in conflict zones. Key quality indicators

identified in the study include increased accessibility of educational services for pupils with special educational needs. It was found that the effective use of information and communication technologies facilitates better adaptation of learning materials to individual pupil needs, reducing stress levels and improving pupils' psychological well-being. Adaptive learning demonstrated that a systematic approach to developing speaking skills in Ukrainian language lessons enhances both overall communicative competence and grammatical understanding. A key finding is that pupils who receive adapted instruction gradually master the correct use of adjectives and other grammatical categories, which in turn leads to the development of communicative competence. To achieve better results, teaching methods that focus on individualised approaches and interactive learning formats have proven to be more effective.

A qualitative data analysis revealed that the implementation of distance learning can cater to the educational needs of approximately 70% of pupils with special educational needs who have been forced to leave their hometowns. This demonstrates the effectiveness of modern technologies in ensuring inclusivity during wartime. On a practical level, this research underscores the importance of improving the legal framework governing inclusive education. Another significant practical outcome is the development of recommendations for teachers on the use of information and communication technologies in the learning process. Psychological and educational support has also been identified as a crucial factor in the successful integration of pupils with special educational needs. The results of the study confirm that the comprehensive use of

methods such as language games, interactive practice, and differentiated learning with the use of visual and audiovisual materials positively impacts the development of speech and the structural components in pupils with intellectual disabilities. Specifically, this led to more accurate use of sounds and syllables, improved pronunciation, and better logical expression skills.

The findings highlight the need for further development and implementation of individualised approaches in the education of children with intellectual disabilities. This experience demonstrates that integrating these methods into the standard curriculum can enhance the effectiveness of teaching pupils with diverse needs. An important aspect is providing support to teachers working with such pupils, as they will require additional resources and training to effectively utilise these methods. Several key avenues for future research exist in this field. It is necessary to investigate the long-term effects of inclusive education during wartime to assess its effectiveness in the future. Further investigation into new technologies and innovative approaches to distance learning is required to provide more personalised solutions for pupils with special educational needs. It is essential to develop a universal model for organising general education, adaptable to various emergencies, including wartime conditions.

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CONFLICT OF INTEREST

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Особливості організації інклюзивного навчання в закладах загальної середньої освіти

Анотація. Метою дослідження був аналіз специфічних викликів та можливостей, з якими стикаються навчальні заклади при впровадженні інклюзивної освіти в умовах збройного конфлікту. Методологія дослідження включала анонімне опитування з респондентами та експертами в галузі інклюзії та психології, що мають досвід викладання для осіб з особливими освітніми потребами. Було проведено якісне дослідження, в якому взяли участь 100 респондентів. Основну увагу було зосереджено на питаннях доступності освіти для дітей з особливими освітніми потребами, забезпеченні психологічного супроводу та вчителів учнів, ролі державного управління у підвищенні якості інклюзивної освіти. На основі отриманих відповідей було рекомендовано розробити освітню програму з розвитку емоційного інтелекту в державних установах. Це сприятиме підвищенню успішності учнів та якості всього навчального процесу. Зокрема, було рекомендовано створити освітні програми для розвитку емоційного інтелекту адміністраторів, що сприяло б покращенню якості освітнього процесу та результатів учнів. Використання дистанційних форматів навчання та адаптація навчальних програм частково компенсували брак традиційних освітніх ресурсів. Також було відзначено важливу роль волонтерських організацій та громадських ініціатив у наданні необхідної підтримки дітям з особливими освітніми потребами. Результати дослідження підкреслюють нагальну потребу в розробці та впровадженні довгострокових стратегій підтримки інклюзивної освіти в кризових ситуаціях. Ці стратегії включають спеціалізовану підготовку вчителів, забезпечення навчальних закладів потрібних ресурсів та психологічну підтримку учнів і вчителів. Визначені в дослідженні стратегічні підходи можуть бути використані для подальшого розвитку інклюзивної освіти в кризових ситуаціях шляхом ефективного залучення всіх учнів до освітнього процесу, незалежно від зовнішніх факторів

Ключові слова: психологічна стійкість; воєнний час; дистанційне навчання; волонтерство; навчальні ресурси; інклюзивна освіта

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Pedagogical practice in the system of professional training for higher education students: Through the lens of contemporary realities

Abstract. The reform of higher pedagogical education in Ukraine requires teachers to attain a high level of professional competencies. In the modern period, it is essential to study pedagogical practice as it contributes to developing the necessary skills and competencies that are key to the successful professional formation of future specialists. This article aimed to explore the role and place of pedagogical practice in the professional training system for higher education students through the lens of contemporary realities. The research employed methods of analysis of scientific and pedagogical literature, comparison, systematisation, and generalisation of scientific approaches to the study of the problem. The study identified the goals of pedagogical practice, which include consolidating the theoretical knowledge acquired during studies, familiarising students with all aspects of their future profession, developing the ability to make independent, well-considered decisions in specific professional conditions, fostering the capacity for self-development and self-improvement, systematically deepening and applying one's knowledge, and mastering modern traditional and innovative methods by higher education students. Additionally, the article outlined the tasks of pedagogical practice within the system of higher education training, and substantiates its impact on the formation of professional competence, as pedagogical practice is instrumental in self-realisation, mobilising personal potential, and revealing the abilities of future teachers. The practical value of the research lies in its potential use by practice supervisors, faculty managers, methodologists, administrators, and teachers of general secondary education institutions, as well as higher education students in the system of practical training

Keywords: professional competence; future teacher; practical training; pedagogical activity; professional formation

INTRODUCTION

In the system of professional training for higher education students, the issue of organising pedagogical practice is of utmost importance, as it encompasses a combination of knowledge from professionally oriented disciplines, the ability to apply this knowledge in practice, and aims to

consolidate theoretical knowledge, familiarise students with all the nuances of their future profession, gain experience in independent work under conditions as close to professional as possible, develop critical and conscious thinking, and the ability to systematically deepen knowledge

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and skills, as well as implement them in practical activities. Pedagogical practice in general secondary education institutions is a crucial component between theoretical education and the future profession, as it allows for the assessment of a higher education student's readiness for independent pedagogical work and creates conditions for the development of the future teacher's creative potential.

Pedagogical practice is interpreted by scientists as a form of professional training in higher education institutions, aimed at the practical mastery of future specialists in the principles and laws of labor activities, and the development of key professional skills and abilities. Proper organisation of pedagogical practice and its connection with theory is one of the key pathways to forming the professional competence of future teachers. It is during practice that higher education students can ultimately affirm the correctness of their career choice. A critical stage in this process is professional formation when the student becomes an active participant in a new activity and practically masters the functional aspects of pedagogical work.

A. Protsenko (2020) notes that pedagogical practice is a significant stage in the professional training of higher education students, as it allows them to demonstrate their capabilities in real professional settings. Pedagogical practice causes the development of professional competencies in future teachers by integrating its motivational, personal, content, and activity elements. A detailed study of scientific and methodological literature and professional journals indicates that the issue of pedagogical practice is discussed by both Ukrainian and foreign scholars. For instance, R.V. Sathasivam *et al.* (2024) in their scientific publication, state that well-organised practice ensures the connection between the pedagogical knowledge acquired at university and practical experience. At present, there is a significant gap between theory and practice, which, according to scholars, threatens the desire of higher education students to remain in the profession. S.B.V. Bustamante (2020) in the context of this research notes that the use of innovative technologies during practice, along with consideration of interdisciplinary connections, is crucial as it enables students to rethink the role of knowledge from professionally oriented disciplines and the ability to apply them practically in professional activities. E. Zangani *et al.* (2021) highlight that the professional development of a higher education student is based on acquiring solid knowledge, skills, and abilities.

Scientific-theoretical knowledge and pedagogical practice significantly contribute to the professional formation of future teachers. The authors' scientific publication aimed to explore the connections between the theoretical knowledge acquired in higher education institutions and educational practice, as there are certain gaps in the scientific literature regarding this issue. The research revealed that professional competence directly depends not only on the preparation of the future teacher in higher education institutions but also on their access during pedagogical practice to modern technologies and the availability

of educational materials in basic education, as schools do not always meet the demands of the 21st century. In turn, L. Vakhovskyi (2023) offers a new perspective on the relationship between educational philosophy and educational practice, emphasising the crucial role of pedagogical practice in the training of future specialists.

Scientists like O. Dolska & N. Godz (2021) focus on education and the use of online learning in modern conditions. Online education allows for a broader view of its transformations and highlights the urgent need for changes in classical educational theory and practice, and even significant changes within it. This led to the choice of the research topic. Pedagogical practice in educational institutions lacks a systematic and comprehensive approach. Specifically, aspects of a teacher's work, such as communication with parents, handling documentation, and conducting extracurricular activities, are often overlooked by both higher education students and practice supervisors. The purpose of this article was to explore the role and place of pedagogical practice in the system of professional training for future teachers.

MATERIALS AND METHODS

The article is based on the scientific perspectives of scholars regarding the role of pedagogical practice in the system of professional training for higher education students. To achieve the aim of the publication, theoretical research methods were employed, including analysis, synthesis, classification, comparison, generalisation, and systematisation. Theoretical analysis and synthesis enabled the review of the latest literature from 2019 to 2024, encompassing general and specialised works in pedagogy, methodology, periodicals, reference materials, documents, monographs, and methodological recommendations necessary for determining the role of pedagogical practice in contemporary contexts.

The analysis of scientific and pedagogical literature facilitated the study of key aspects: the primary goals and tasks of pedagogical practice (Yevtukh, 2019), which involve higher education students mastering modern methods and forms of organising the educational process, consolidating theoretical knowledge, and developing professional skills essential for independent decision-making in real professional conditions; the functions related to the formation of pedagogical competencies (Vorovka & Protsenko, 2020); the requirements for base institutions that must provide proper conditions for higher education students to fulfill the specific practice program, ensuring close interaction between the leadership of higher education institutions and general secondary education institutions, as well as maintaining safe and healthy conditions that meet sanitary and hygienic standards and occupational safety requirements during the practice, providing students access to library resources and various documentation necessary for the practice program, and the organisation of pedagogical practice in a remote format, including the use of online services (Microsoft Teams, Zoom, Skype, Google

Meet, and others) through which practice is conducted in modern conditions. The article also addresses aspects and issues that have been thoroughly researched by scholars, as well as topics that are still under scientific debate and require resolution and implementation in the system of professional training for future teachers.

In this scientific publication, the methods of synthesis and classification were applied, focusing on the analysis of the structural components of organising practice in general secondary education institutions, examining them in their entirety and interrelation, which inevitably leads to results. The comparison method was used to contrast the organisation of practice in the past with its current state, allowing for the identification of both positive and negative changes, thus observing the dynamics of the process in the system of professional training for higher education students. Different approaches to solving the research problem were also compared, enabling the drawing of parallels and identification of effective aspects of organising pedagogical practice through the lens of contemporary realities that require detailed consideration in the context of the professional training system for higher education students. The method of systematisation contributed to organising and compiling the main substantiated and verified scientific findings on the organisation of pedagogical practice in the system of professional training for higher education students, and their interpretation in this scientific publication. Through the method of generalisation, the most essential information was distilled from a large amount of data, leading to the formulation of clear conclusions for the research.

RESULTS AND DISCUSSION

An important stage in the professional development of higher education students is undergoing pedagogical practice, which qualitatively differs from academic activities in terms of its goals, content, and methods. During this practice, the process of professional self-identification of future specialists intensifies, involving their identification with a new social role. There is intensive learning of all aspects of the future profession, development of essential professional competencies, and recognition of the need for professional self-development. The distinctive features of pedagogical practice are that it aims to enhance self-realisation prospects, enrich personal potential, reveal hidden talents of higher education students, form skills and abilities to solve pedagogical problems arising in the work process and understand the significance and role of the future profession. The effective formation of professional competence in higher education students is directly dependent on well-organised practical training and its connection with theory, as it is through practice that future specialists have the opportunity to become closely acquainted with all aspects of their chosen profession.

M. Yevtukh (2019) notes that general secondary education institutions expect a modern specialist of the new generation who possesses the attributes of general professional

culture, and pedagogical thinking, and is independent of past stereotypes and political and ideological pressures. In preparing such a specialist, the role of pedagogical practice is exceptional, characterised by the independent execution of full-fledged professional activities by higher education students. According to scholars, pedagogical practice is the most effective form of preparing future teachers for work in schools, serving as a leading link in the system of acquiring professional skills and abilities, during which they develop personal qualities, gain a clear understanding of the age and cognitive abilities of secondary school students, learn to build mutual relationships with them and their parents, set goals, develop organisational skills, etc.

Research indicates that at the present stage, there is a low level of readiness among higher education students to address educational tasks during pedagogical practice in general secondary education institutions. Difficulties for students arise with tasks related to calendar-thematic planning, formulating the triadic goal of a lesson, preparing lesson plans, selecting content and scope of educational material according to the lesson topic, forms and methods of organising educational activities, as well as the age and cognitive development of secondary education students, among other aspects. This is primarily due to the insufficient number of hours allocated to studying individual educational components of professional activity, the complexity of organising practice, and the inadequate interaction between higher education institutions and pedagogical practice bases. There is a certain mismatch between the demands of the labor market and the level of professional preparation of higher education students, which causes difficulties in their adaptation to the educational process in modern general secondary education institutions, applying the acquired knowledge in explaining new material to students, and so on. Thus, in the context of updating the modern educational system, it is necessary to focus on and address these issues, improve the process of pedagogical practice to ensure high-quality preparation of future teachers, mastery of professional subjects and teaching methods, a high level of culture and professional competence, and the ability for lifelong self-education and self-improvement.

O. Barna & G. Genseruk (2020) note that the goal of practice is to master modern methods and forms of organising educational activities in the future field of expertise; to develop professional skills and abilities, decision-making capabilities in real conditions; to apply acquired professional competencies in the educational process; and to cultivate a need to continuously update knowledge and apply it in practice, among other aspects. G. Genseruk & M. Boyko (2022) believe that in the current stage of societal development, a teacher must possess a high level of professional competence. During their education, higher education students should develop the appropriate professional pedagogical abilities, including theoretical, methodological, and practical preparation. According to scholars, pedagogical practice is a link between theoretical training

and the future profession, as it is during pedagogical practice that the theoretical and practical preparation of higher education students for independent work is assessed, and opportunities are created to ensure the creative potential of future specialists. O. Kryvonos (2021) points out that the success of addressing educational process tasks in general secondary education institutions directly depends on the level of professional competence of the teacher, their readiness for interpersonal communication, their ability to motivate secondary education students to learn, and self-improvement, and their persistent self-work, among other factors. According to the author, teachers should approach their professional activity creatively, as each student is unique; the circumstances of organising the educational process are also unique, as are the various situations in which teachers must make decisions.

Therefore, constantly new methods of solving professional tasks are required. At the same time, each teacher must maintain their individuality and uniqueness and adapt to modern realities. In the context of the researched issue, V. Kovalchuk (2023) argues that pedagogical practice is a logical and consistent continuation of theoretical training, during which higher education students learn the fundamental content and tasks of the science underlying their future profession. For higher education students, the theory includes social sciences, psychological-pedagogical disciplines, and sciences, the basics of which they will teach in general secondary education institutions depending on their specific specialty. L. Moskovchuk (2023) notes that practice should ensure the continuity and consistency of developing general and special competencies and the professional development of higher education students. According to L. Donchenko *et al.* (2019), pedagogical practice deepens and consolidates theoretical knowledge, skills, and abilities of higher education students in general-professional and specialised disciplines. It also develops their professional and pedagogical skills, and abilities to work in the educational process with secondary education students. The demands placed on contemporary teachers require them to master innovative teaching technologies, and pedagogical skills, and to develop the need to systematically update their knowledge and apply it creatively in practical activities, as well as to cultivate their abilities. All these professional skills and competencies should be developed during the training of future teachers at higher education institutions, with pedagogical practice providing the initial opportunities to implement them (Decree of the President of Ukraine No. 347, 2002; Resolution of the Cabinet of Ministers of Ukraine No. 379, 2002; Order of the Ministry of Education and Science of Ukraine No. 776, 2018).

The organisation and implementation of practice for higher education students are regulated by Ukrainian legislation, including Law of Ukraine No. 2145-VIII (2017), the State national program "Education" Ukraine of the XXI century (1994), and Regulations on conducting internships for students of higher educational institutions of Ukraine (1993). According to Law of Ukraine

No. 1556-VII (2014), practical training for students is one of the main forms of organising educational activities, alongside other forms such as lectures, practical classes, independent work, and tests. Practical training is conducted according to agreements on pedagogical practice in general secondary education institutions. According to the Regulations on conducting internships for students of higher educational institutions of Ukraine (1993), the practice of higher education students should be continuous and consistent at all educational qualification levels, ensuring the acquisition of the necessary practical knowledge and skills. The content, sequence, objectives, forms, and methods of control, reporting, and expected results of pedagogical practice are determined by a program developed by the faculty head according to the curriculum for each educational program at the corresponding level of higher education. A single program is created for different forms of study (full-time and part-time). Practice programs are reviewed at department meetings, approved by the guarantor of the educational program, developed for the duration of the curriculum, and updated annually before the start of the new academic year. The practice program should include the following key information: the name of the practice, the number of credits (hours) and duration; the goal, content, and objectives of the practice; a tentative list of practice bases; the procedure for its implementation; requirements for the practice; individual tasks and tasks for students' independent work; a list of reporting documentation, requirements for the report, criteria for evaluating the results of the practice; recommended sources (Regulations on Conducting Industrial..., 2023). The effectiveness of student practice depends on the successful selection of the practice base, the optimal choice of methods and techniques for specific professional conditions, the methodological level of the teacher who encourages students to complete practice tasks by example, and promotes a conscientious attitude toward work, responsibility, and goal-orientedness. According to N. Yuriychuk (2023), one of the authors of this publication, the following requirements are placed on practice bases: firstly, the ability to ensure the execution of a given practice program; secondly, the availability of non-harmful, safe conditions that meet sanitary, hygienic, and occupational safety standards during the practice; thirdly, the proper level of supervision of higher education students' practice; fourthly, the provision of access to library resources, various documentation necessary for the implementation of the practice program; and fifthly, the possibility of further employment for university graduates, subject to available vacancies, on general terms. The positive outcome of the practice depends on the well-organised work and close interaction between the management of higher and general secondary education institutions, the practice supervisor from the faculty, the methodologist, teachers, class tutors, and, ultimately, the interns themselves. Practice is characterised by gradualness, continuity, consistency, and systematisation. It becomes increasingly complex, starting from familiarisation

with the general secondary education institution, observing the educational process, and analysing the information obtained, progressing to more complex tasks. The effectiveness of the practice and the subsequent adaptation of students to their future profession depends on the content, proper choice of forms, methods, techniques, and technologies for organising educational activities. According to M. Yevtukh (2019), during practical training, important techniques for activating higher education students' creative thinking include a clear system of tasks that facilitate the application of pedagogical theory in practice, such as substantiating the triadic goal and structure of the lesson, determining the lesson type, methods, and forms of organising educational activities, preparing lesson plans, choosing methods for studying and characterising a student or an entire class, etc.

During their practice, higher education students perform tasks related to educational and developmental work, conduct scientific research defined by the departments of pedagogy and psychology, summarise advanced pedagogical experience from leading teachers, conduct surveys of students and their parents, carry out pedagogical experiments, and perform psychological and pedagogical observations of students, among other activities. Students report on the results of their practice at summary conferences on pedagogical practice. The educational program, curriculum, and schedule of the educational process at the higher education institution define the list of all types of practice, their duration, and timing. The main goal of pedagogical practice is for higher education students to master modern methods and forms of organising the educational process, consolidate the theoretical knowledge acquired during their studies, develop professional skills according to the educational program necessary for making independent decisions in real conditions, and to enhance their ability to systematically update their knowledge and apply it creatively in pedagogical activities. Depending on the educational program, the practice may be instructional (didactic, introductory, etc.) or production-oriented (instructional-production, research, pre-diploma, technological, etc.). The tasks of pedagogical practice include: 1) enriching the theoretical knowledge of higher education students in pedagogy, psychology, professional disciplines, and methods of their teaching and practical application; 2) mastering innovative and traditional forms, methods, and technologies of teaching; 3) conducting lessons using various forms of online communication, preparing teaching aids, and organising individual work with students; 4) developing pedagogical skills such as working with current educational programs and textbooks, preparing calendar plans, lesson plans, etc.; 5) acquiring skills as a class teacher, conducting educational work in the classroom, preparing psychological and pedagogical profiles of students; 6) developing creative initiative and personal research potential, undertaking independent actions in the educational process, forming pedagogical mastery and professionally significant personal qualities, developing a need for

pedagogical self-education and systematic self-improvement, continuously updating knowledge and skills, and working on one's professional growth. These tasks are aimed at the comprehensive formation of professional competence and preparing future teachers for effective work in modern educational practice. During pedagogical practice, as noted by M. Vorovka & A. Protsenko (2020), all aspects of the future profession are intensively assimilated, a conscious attitude toward knowledge is formed, professional skills and competencies develop, the need for self-development and self-improvement is manifested, and interest in working in schools increases.

Practical training is a crucial component in the system of developing professional competence for future teachers. Educators and higher education students must work closely together in the preparation for professional activities. Pedagogical practice allows students to definitively determine the correctness of their career choice. A true teacher integrates psychological, pedagogical, and specialised knowledge with pedagogical skills. However, during the preparation of higher education students, there is often an insufficient emphasis on the need for each lesson and educational session to be engaging, original, and tailored to the student's characteristics, including their preparation for lessons and attitudes toward educational activities. Practice should not be limited to merely replicating the work of other teachers; it should focus on reinforcing and developing the ability to independently find solutions to pedagogical problems, using the knowledge and skills acquired during the study of psychological, pedagogical, and professional disciplines at the higher education institution.

The effectiveness of pedagogical practice for higher education students depends on several factors: first, the quality of the educational and methodological support provided by the higher education institution; second, the level of skills and competencies developed by future teachers, and their use of teaching methods for professionally oriented disciplines; third, the encouragement of students to engage in psychological and pedagogical research; fourth, the motivation and assistance provided by faculty supervisors and teachers in helping students adapt to professional activities; and fifth, the systematic analysis and control, and objective evaluation of the practice outcomes. Summarising the scientific approaches to the issue of pedagogical practice, we agree with the view of M. Vorovka & A. Protsenko (2020) that it is a critically important component of the professional training of higher education students and serves several functions in developing pedagogical competence: adaptation: familiarising students with various types of educational institutions and working within them; adapting to the educational environment of a specific institution; adjusting to school conditions; getting to know the students in the class; understanding the challenges that arise and the opportunities for self-realisation in pedagogical activities; educational: strengthening the knowledge acquired at the higher education institution; developing basic practical skills and abilities; developmental:

engaging in self-education and self-improvement; understanding the significance of the teaching profession and its role in the development of future generations; striving to understand students of all ages; supporting their development and self-realisation, and nurturing universal moral qualities; research: developing research and inquiry skills; learning to find necessary scientific information from a large volume of sources and working with it; professional: enhancing motivation for pedagogical activities and professional skills in real professional situations; projective: developing skills in planning personal activities to implement the pedagogical practice program; selecting innovative technologies; preparing calendar plans, lesson plans, and educational activities; communicative: creating a favorable psychological climate in interactions with students and their parents; diagnostic: assessing one's own professional skills and their alignment with the needs of pedagogical activities; studying the cognitive characteristics of students; choosing directions for educational and developmental work; reflective: self-analysis of the practice program execution process, personal pedagogical skills; understanding oneself as a future specialist; integrative: systematic use of theoretical knowledge and skills; applying them to solve professional tasks and achieve set goals.

As a result of a detailed study of scientific and pedagogical literature, authors agree with the views of scholars (Velykdan, 2019; Koloskova & Nazarenko, 2021; Yuriychuk, 2024) that one of the main tasks of pedagogical practice in modern realities is the development of future teachers' skills in using digital technologies in their professional activities. This development contributes to the advancement of productive learning systems and the enhancement of educational service quality. The organisation of pedagogical practice in a remote format is facilitated by online services such as Microsoft Teams, Zoom, Skype, Google Meet, etc. (Vasylchenko & Shatska, 2022). Students are provided with methodological guidelines, participate in video conferences, and receive individual consultations online. Mixed and remote forms of practice require certain changes in the content of tasks and reporting formats for students (Yershova, 2023).

Thus, a characteristic feature of pedagogical practice is the use of the latest achievements in pedagogy, psychology, and other sciences, as well as modern digital learning technologies. During practice, students develop research and inquiry skills, which include lesson analysis, studying class dynamics and individual students, preparing reports and essays, and gathering materials for research work. Throughout the practice, students learn under the careful guidance of faculty supervisors and methodologists. They perform all types of teacher duties, conduct trial and evaluation lessons, carry out educational activities, fulfill

the responsibilities of a class tutor, and interact with the school staff and students' parents. Pedagogical practice is a powerful factor in the preparation of higher education students and a decisive means of self-improvement and development of individual capabilities in professional activities.

CONCLUSIONS

The synthesis of a broad range of theoretical and methodological sources, combined with personal pedagogical experience in the context of the studied problem, leads to the conclusion that the preparation of highly qualified specialists is a crucial task for higher education institutions. The primary goal of pedagogical practice is for higher education students to master modern methods, forms, and technologies for organising the educational process, consolidate theoretical knowledge, and develop the professional skills necessary for making independent decisions, also it aims to foster the ability to systematically update their knowledge and creatively implement it in pedagogical activities. Pedagogical practice directly impacts the professional preparation of future teachers who are capable of self-education and self-improvement; teachers who quickly adapt to changes in any area of public life, especially in education; teachers who possess a broad scientific worldview, a high level of culture, and developed professional competence. At the modern stage, the preparation of higher education students does not fully ensure their competitiveness, as there is a certain mismatch between labor market demands and the quality of the practical training system for future teachers, of which pedagogical practice is a crucial component.

The main aspects of organising and conducting pedagogical practice include: strengthening the relationship between higher and general secondary education institutions; combining theoretical and practical training; increasing attention to the methodological and professional development of future specialists, etc. Prospects for further research are to develop a comprehensive system for organising pedagogical practice for higher education students, as well as to determine the criteria for evaluating all components of practice based on a rating system that meets European requirements.

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CONFLICT OF INTEREST

None.

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Педагогічна практика в системі фахової підготовки здобувачів вищої освіти: крізь призму сучасних реалій

Анотація. Реформування вищої педагогічної освіти в Україні вимагає від учителів високого рівня професійних компетентностей. У сучасний період особливо важливо досліджувати педагогічну практику, оскільки вона сприяє формуванню необхідних навичок та компетенцій, що є ключовими для успішного професійного становлення майбутніх фахівців. Мета статті полягала у дослідженні ролі та місця педагогічної практики в системі фахової підготовки здобувачів вищої освіти крізь призму сучасних реалій. У науковій розвідці використано методи аналізу науково-педагогічної літератури, порівняння, систематизації та узагальнення наукових підходів до вивчення досліджуваної проблеми. У процесі дослідження було визначено мету педагогічної практики, що полягала в закріпленні теоретичних знань, здобутих протягом навчання, ознайомленні з усіма деталями майбутнього фаху, розвитку вмінь приймати самостійні, виважені рішення в певних професійних умовах, формуванні здатності саморозвиватися та самовдосконалюватися, систематично поглиблювати та застосовувати власні знання, оволодінні здобувачами вищої освіти сучасними традиційними та інноваційними методами тощо. Крім цього, у статті були виокремлені завдання педагогічної практики у системі підготовки здобувача вищої освіти, обґрунтовано її вплив на формування професійної компетентності, оскільки саме завдяки педагогічній практиці здійснюється самореалізація, мобілізується особистісний потенціал та проявляються здібності майбутнього вчителя. Практична цінність наукової розвідки полягала у тому, що її результатами можуть послуговуватися керівники практики, факультетські керівники, методисти, адміністрація та вчителі закладів загальної середньої освіти, а також здобувачі вищої освіти у системі практичної підготовки

Ключові слова: професійна компетентність; майбутній учитель; практична підготовка; педагогічна діяльність; професійне становлення

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Structure and assessment of emotional leadership in human resource management of higher education institutions

Abstract. This article was dedicated to the study of the impact of emotional leadership on management practices and the overall environment in higher education institutions. The aim of the study was to analyse the influence of the emotional intelligence of managers and staff on the effectiveness of management processes. Emotional intelligence is becoming an increasingly important aspect of effective management, especially in the context of higher education, where professional relationships and interactions have a significant impact on the quality of educational processes. In view of this, the study focused on analysing how the emotional intelligence of managers and employees affects various aspects of leadership, including decision-making, teamwork, conflict resolution, and the effectiveness of important organisational processes. A comprehensive study was conducted, which included a survey of 300 respondents (heads of departments, faculty, and administrative staff) and semi-structured interviews with 30 participants. Survey results indicated that heads of departments exhibited the highest levels of emotional intelligence, leading to more effective management practices compared to their colleagues with lower emotional intelligence. The findings highlighted a significant impact of emotional leadership on improving managerial efficiency, teamwork, and employee morale. Importantly, high levels of empathy among managers were linked to increased team productivity and staff morale. Analysis revealed that emotional leadership is often overlooked in human resource policies. The research underscores the importance of integrating emotional intelligence development into leadership training programs for university managers to enhance leadership practices and foster a positive work environment

Keywords: organisational culture; communication skills; effective leadership; conflict resolution; psychological support; professional environment

INTRODUCTION

The need to study emotional leadership in human resource management within higher education institutions has arisen due to rapid changes in the educational landscape and increasing demands for effective human resource management. Today, higher education institutions face numerous challenges such as heightened competition, rising student

expectations, and the need for innovation. Traditional management methods are not always effective, and emotional leadership can create a supportive work environment and boost staff motivation.

Leadership is the key to change and development, ensuring that future generations are well-prepared. Leadership

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in education differs from other fields as it shapes value systems and provides a foundation for the dreams and aspirations of young people. The successful development of a nation requires leadership that emphasises cooperation, empathy, and compassion, making emotionally intelligent leadership indispensable for educational change (Deshmukh & Chhanwal, 2020). Researchers R. Hadchiti *et al.* (2024) investigated the emotional and social development needs of school principals in Quebec. They found that despite the support they receive, these professionals require mentoring, emotional capacity development, and incentives. The researchers propose the implementation of mentorship programs to enhance leadership effectiveness and foster positive leadership.

In another study, F. Boily Legris (2023) explored the risk factors for burnout among school leaders. A review of the literature revealed that both personal and situational factors can contribute to burnout, similar to those affecting teachers and medical professionals, but new aspects specific to school leaders have emerged. Both studies highlight the importance of developing emotional skills and providing support to prevent burnout and enhance school leadership.

Researchers F. Zurita-Ortega *et al.* (2020) investigated the relationship between teaching leadership and emotional intelligence in educational institutions. The study involved 954 teachers, and results indicated that transformational leadership, including intellectual stimulation, was more prevalent among university professors. A. Abós *et al.* (2019) explored the causes of stress in physical education teachers and found that administrative uncertainty, student misbehaviour, and workload were linked to burnout. These two studies highlight the importance of developing strategies to improve teachers' psychological well-being and enhance management effectiveness in educational institutions. The quality assurance system for higher education in Italy involves the work of the Italian National Agency for the Evaluation of the University and Research Systems (ANVUR), which conducts external evaluations and supports internal evaluation systems for continuous improvement. The accreditation of study programs and the active involvement of students in evaluation processes contribute to maintaining high standards of education. In this context, emotional leadership is crucial for creating a supportive learning environment and boosting staff motivation (Quality assurance in higher education..., 2023).

The research by I.F. Ahmad (2022) highlights the importance of visionary and unifying leadership in educational management, demonstrating the significant impact of these factors on the effectiveness of administrative practices. Conversely, other variables, such as empowerment and control, did not exhibit statistically significant effects. J. Parinussa *et al.* (2023) explored how lecturers can actively contribute to the development of students' emotional intelligence by using advice, examples, and simple parables to illustrate important life lessons. On the other hand, Z. Linan *et al.* (2023) conducted a bibliometric analysis that revealed a significant increase in research

on emotional intelligence in the context of leadership. The study by M.T. Sánchez Núñez *et al.* (2023) confirmed that emotional intelligence training positively impacts the development of educational leadership, showing significant positive changes in leadership competencies after the first semester of the graduate programme. The sample comprised 45 novice leaders from an urban university in New York, assessed using a leadership practices questionnaire and an emotional and social competence questionnaire. Preliminary results, analysed through paired sample t-tests, indicated statistically significant positive changes across all variables of emotional and social competence.

The importance of studying emotional leadership in human resource management within higher education institutions is driven by the need to enhance management curricula through the integration of emotional leadership. In an era of globalisation and rapid changes in the educational landscape, higher education institutions require new management approaches that consider the emotional aspects of interactions. Emotional leadership can be a key factor in creating a positive work environment, boosting employee motivation and performance, and ultimately improving the overall quality of educational services. This research will provide novel insights and practical recommendations for the application of affective leadership, contributing to effective management and development of educational institutions.

The study aimed to conduct a detailed examination of the role of emotional intelligence, exploring the structure and assessing emotional leadership in the management of higher education institutions. This research focuses on determining the impact of emotional leadership on the effectiveness of leadership practices and the creation of a positive working environment within educational institutions. The objective of the study includes developing a comprehensive understanding and integration of emotional leadership in higher education. This involves analysing employee performance standards in the context of global changes, identifying the influence of emotional leadership on management processes and motivation, as well as evaluating its role in enhancing organisational culture and the quality of teaching.

LITERATURE REVIEW

Effective leadership is a key element in the success of any organisation, particularly in the realm of higher education. Over time, the definition of effective leadership has evolved to focus on skills related to interaction and relationships. Contemporary shifts in society and business have led to a transformation of leadership concepts from an individualistic model towards a collective approach that emphasises the importance of emotional intelligence and collaboration in organisational management.

An example of such changes is the Ukraine Higher Education Leadership Development Programme, which has become an innovative project aimed at building a culture of leadership in Ukrainian higher education. It combines a

series of training modules delivered by leading trainers from the Leadership Foundation for Higher Education (UK), offers the opportunity for a study visit to a partner British university, and provides leadership practice in the form of working on an institutional change project (Development of leadership..., 2023). Leadership is the subject of numerous studies analysing the competencies, factors, principles, attributes, traits, behaviours, and characteristics that contribute to an effective leader (Parrish, 2012). S. Wang *et al.* (2024) researched the impact of teachers' emotional leadership on student engagement in learning. A survey of 1,034 Chinese students revealed that teachers' emotional leadership positively affects student engagement in their studies. The COVID-19 pandemic introduced new challenges in the educational sector, particularly regarding leadership. I. Semenets-Orlova *et al.* (2021) noted that the crisis prompted a shift towards collective leadership as the most effective model of management in uncertain conditions. Conversely, the study by J.L. Floman *et al.* (2024) examined the influence of emotional leadership on teachers' well-being before and during the COVID-19 pandemic. The findings indicated that emotional regulation and support from managers positively impact teachers' well-being. Research by Y. Tian & Y. Guo (2024) discovered that transformational leadership reduces teacher burnout. Data from 539 educators showed that the development of transformational leadership and emotional intelligence could help mitigate burnout in the educational environment.

Emotional intelligence also plays a crucial role in collaborative learning. D. Johnson & R. Johnson (2015) highlight that collaborative learning fosters increased student effort, better relationships with peers and instructors, and improved mental health and well-being. However, not all leadership qualities are positive. B. Klahn (2022) draws attention to the concept of toxic leadership, which negatively impacts productivity and organisational climate. He argues that toxic leadership can exist in HEIs where it can be difficult to detect due to the hierarchical structure.

Other studies, such as those by S. Nevesk & I.G. Garrity-Rokos (2021), focus on developing frameworks for assessing and enhancing management processes in higher education institutions. This is particularly important as universities face new challenges and need to ensure sustainable development. Distributed leadership models are also becoming increasingly relevant. S. Jones *et al.* (2012) explored such models in the higher education sector, focusing on collective collaboration rather than traditional hierarchical leadership. Their research highlights the importance of a cross-functional, multi-level approach to leadership, which fosters more effective management and collaboration. As noted by S. Jones *et al.* (2012), universities hold a unique position in the world as they play a central role in creating and disseminating knowledge.

A.G. Kasalak *et al.* (2022) conducted a meta-analysis to examine the relationship between leadership in higher education institutions and faculty job satisfaction. However, they did not find significant differences in the impact

of leadership based on region, culture, or the Human Development Index of a country. Researchers Z. Shafait & C. Huang (2023) investigated the influence of knowledge-based leadership on the development of emotional intelligence among faculty members in Chinese universities. They found that this type of leadership promotes the development of emotional intelligence, which in turn positively impacts faculty creativity. Research such as that by S.S. Nivesque & I.G. Garrity-Rokos (2021) has focused on harmonising administrative processes in US universities, which is crucial for ensuring consistency in management. The COVID-19 pandemic necessitated adjustments to the management of higher education institutions, as highlighted by S.D. Kruse *et al.* (2020). They emphasise that academic leaders have adapted their leadership approaches during the crisis, focusing on social justice and access to education.

Recent research underscores the significance of leadership style and emotional intelligence (EI) in enhancing leadership effectiveness within higher education institutions. The meta-analysis conducted by A.G. Kasalak *et al.* (2022) revealed a positive impact of leadership style on faculty job satisfaction, demonstrated that organisational culture has a mediating effect on university productivity. G. Manoharan & S. Ashtikar (2024) emphasised the importance of emotional intelligence for academic leaders, and D.D. Venter *et al.* (2024) identified a connection between emotional intelligence and faculty leadership. Additionally, studies by M. Adeoye *et al.* (2023), as well as S. Khavaja *et al.* (2022), highlight the significance of innovation, ethical leadership, and soft skills for success in higher education.

In conclusion, it was important to note that academic leadership is a dynamic field of research that is constantly evolving to address new challenges and the need for adaptation. Research into the impact of emotional intelligence on leadership in academic settings demonstrated significant potential benefits for effective management and development of higher education institutions.

MATERIALS AND METHODS

The study was conducted between June 2023 and May 2024. Participants were employees of Ukrainian universities, specifically the Taras Shevchenko National University of Kyiv and Kyiv National Economic University named after Vadym Hetman. The study involved three main categories of employees: managers, lecturers, and administrative staff. Inclusion criteria: a minimum of two years of experience in an educational institution and consent to participate in the study. Exclusion criteria: individuals who do not have direct influence on management decision-making or who did not provide consent to participate in the study. Two primary methods were employed to collect information for this research: surveys and interviews.

The survey was conducted as part of a quantitative study and was designed and distributed using the online platforms SurveyMonkey and Google Forms. A total of 300 respondents participated in the survey, of which 120 were men and 180 were female. Among the heads of

departments, there were 40 males and 20 women; among the lecturers, there were 50 men and 60 women; and among the administrative staff, there were 30 men and 100 women. This breakdown allows for a detailed gender analysis, which

deviates somewhat from the traditional approach, to understand different aspects of emotional management. Table 1 presents a detailed distribution of respondents by survey category, including managers, lecturers, and administrators.

Table 1. Distribution of respondents by category

Category of participants	Number	Percentage (%)
Heads of departments	100	33.3
Lecturers	100	33.3
Administrative staff	100	33.3
Total	300	100.0

Source: created by the authors

Each participant rated the questions on a five-point scale, where 1 indicated “strongly disagree” and 5 indicated “strongly agree”. Additionally, open-ended questions were included to gather more detailed responses and comments from the respondents. Furthermore, interviews were conducted with 30 participants, specifically representatives

from various management levels and lecturers. This included 10 department heads, 10 lecturers, and 10 administrative staff members. These interviews enabled the collection of qualitative data and helped identify several key themes that complemented the survey results. Table 2, in contrast, presents the distribution of interview participants by category.

Table 2. Distribution of interview participants by category

Category of participants	Number	Percentage (%)
Heads of departments	10	33.3
Lecturers	10	33.3
Administrative staff	10	33.3
Total	30	100.0

Source: created by the authors

Each interview included questions about the practical aspects of emotional leadership, teamwork, conflict management, and employee motivation. All interviews were transcribed and recorded for further analysis. The evaluation was based on respondents’ agreement or disagreement with statements about emotional leadership and their satisfaction with leadership processes. During the interviews, respondents were asked to answer several key questions. These included assessing the impact of emotional leadership on the effectiveness of managerial processes within the university and expressing their views on whether emotional leadership is a critical factor in employee motivation and satisfaction. Additionally, respondents were asked to evaluate the role of emotional intelligence in conflict resolution and to identify the organisational cultures best suited for implementing emotional leadership.

Among the primary research methods were an emotional intelligence questionnaire (Chernis *et al.*, 2006), which assessed the effectiveness of self-regulation, empathy, and leadership practices, and semi-structured interviews, which provided in-depth qualitative data on emotional perceptions of leadership. All participants were informed about the purpose of the study, the data collection process, and their rights, including the right to withdraw from the study at any time without negative consequences, adhering to the ethical standards set out in the Declaration of Helsinki (2013). All information was anonymised, and the research findings were used solely for academic purposes.

Informed consent was a mandatory requirement for participation in the study, and all necessary measures were taken to ensure the confidentiality of respondents’ personal data.

RESULTS

Emotional leadership is becoming increasingly important for the effective management of higher education institutions as it has become a key factor in organisational success in the modern world. Managers worldwide are facing a crisis: there is a severe shortage of individuals willing to take on this responsibility, and they are experiencing increasing emotional strain, both personally and from those around them. The emotionally demanding work of school managers has direct consequences for their health, well-being, and personal relationships (McKay *et al.*, 2024). This issue is particularly relevant for educational institutions where interpersonal interactions play a crucial role. A survey of 300 respondents provided quantitative data allowing for a deeper understanding of the impact of emotional leadership on management practices in higher education institutions. Analysis of the respondents’ answers showed that emotional intelligence plays a significant role in the effectiveness of management processes, particularly in the context of teamwork and conflict resolution. Specifically, the results indicated that department heads with high emotional intelligence have significantly better leadership performance compared to their colleagues with lower emotional intelligence.

Each category of respondents – namely, managers, lecturers, and administrators – expressed their views on various aspects of emotional leadership. Overall, 85% of department heads reported that emotional intelligence helps them better understand the needs of their colleagues and students, thereby facilitating more effective decision-making. At the same time, 78% of lecturers stated that leaders with a high level of empathy create a

more conducive atmosphere, positively impacting their motivation and productivity. Administrators highlighted the importance of emotional intelligence in dealing with stressful situations. Specifically, 72% of administrators acknowledged that leaders who demonstrate a high level of self-control provide stability and effectiveness during stressful periods. The key findings of the survey are presented in Table 3.

Table 3. Level of emotional intelligence by respondent category

Category	Self-regulation (mean)	Empathy (mean)	Effectiveness of management practices (mean value)
Heads of departments	4.2	4.5	4.4
Lecturers	4.0	4.3	4.1
Administrative staff	3.8	4.1	3.9
Total	4.0	4.3	4.1

Source: created by the authors

The survey results presented in Table 3 indicate that there are differences in the levels of emotional intelligence among the various categories of respondents, confirming the importance of emotional intelligence for effective management practices in universities. Firstly, the data indicate that department heads achieve the highest average scores across all three categories: self-regulation (4.2), empathy (4.5), and management effectiveness (4.4). This suggests that department heads have likely developed strong emotional intelligence skills. Such skills should enable them to manage emotions more effectively, demonstrate a high level of empathy, and achieve greater efficiency in management practices. The higher levels of self-regulation and empathy among managers may contribute to their ability to create a positive working environment and ensure the effectiveness of management processes. In comparison, lecturers received slightly lower average scores: 4.0 for self-regulation, 4.3 for empathy, and 4.1 for management effectiveness. This indicates that while lecturers possess good emotional intelligence skills, their levels of self-regulation and empathy are somewhat lower than those of department heads. As a result, the effectiveness of their management practices is also somewhat diminished.

Administrative staff obtained the lowest average scores: 3.8 for self-regulation, 4.1 for empathy, and 3.9 for effective management practices. These results suggest that administrative staff may struggle with managing their emotions, which could impact their overall productivity and morale. Although administrative staff have a relatively high level of empathy, the effectiveness of their management practices and overall self-regulation requires improvement. These results highlight the importance of developing emotional intelligence for individuals in any academic career. The high level of emotional intelligence among department heads may be linked to their ability to effectively manage their teams, implement positive changes, and resolve conflicts. High scores in self-regulation and empathy indicate that these leaders possess the skills to better manage their emotions, actively listen and understand their subordinates, and create an environment conducive to collaboration and productive work. A detailed analysis of the data by gender was conducted. The distribution of respondents by gender reveals significant differences in the levels of emotional intelligence between men and women. Table 4 provides a deeper insight into emotional intelligence levels across respondent categories by gender.

Table 4. Emotional intelligence level by respondent categories by gender

Category	Self-regulation (mean)	Empathy (mean)	Effectiveness of management practices (mean value)
Heads of departments	4.3 (M) / 4.1 (F)	4.5 (M) / 4.6 (F)	4.4 (M) / 4.3 (F)
Lecturers	4.1 (M) / 3.9 (F)	4.2 (M) / 4.4 (F)	4.1 (M) / 4.0 (F)
Administrative staff	3.7 (M) / 3.9 (F)	4.0 (M) / 4.3 (F)	3.9 (M) / 4.0 (F)
Total	4.0 (M) / 4.0 (F)	4.2 (M) / 4.4 (F)	4.1 (M) / 4.1 (F)

Source: created by the authors

A gender analysis also revealed significant differences in empathy levels between women and men, which has a substantial impact on teamwork and the overall atmosphere within a team. The analysis of gender aspects suggests that female leaders more frequently demonstrate high levels of emotional intelligence, particularly in the areas of empathy and communication. This may be linked to tradi-

tionally higher societal expectations of women's emotional competence. Female managers demonstrated a higher level of empathy compared to their male counterparts (average score of 4.5 versus 4.2 for men, $p < 0.05$). This indicates that women are more likely to have developed emotional competence, which fosters a harmonious and supportive work environment. A high level of empathy enables female

managers to better understand the emotional needs of their subordinates, helping to prevent conflicts and improve team communication. This also contributes to creating an atmosphere of trust and collaboration, which positively influences the overall productivity of the team and its ability to achieve set goals. The data analysis also revealed that male leaders demonstrate a higher level of self-regulation, which is a key factor in reducing team conflict. Male leaders show a better ability to control their emotions in stressful situations than their female counterparts (average score of 4.3 compared to 4.1 for women, $p < 0.05$). This allows them to remain calm in conflict situations and make more considered decisions, which helps reduce workplace tension. Self-regulation also enables male leaders to create a stable and predictable work environment, essential for maintaining high team productivity and achieving organisational goals.

Therefore, the results indicated that women demonstrated a higher level of empathy, attributable to a stronger emotional dimension in understanding and supporting the emotional needs of others. This may be linked to traditional leadership roles where the ability to manage emotions is considered crucial. Overall, both groups demonstrated similar levels of effectiveness in management techniques, suggesting that emotional intelligence is not critically dependent on gender identity. Alongside the survey, semi-structured interviews were conducted with respondents to gather more precise data. The interviews provided a deeper understanding of how emotional leadership influences management processes. The interviews corroborated the quantitative data and provided additional insights into how emotional leadership contributes to improved communication and productivity, while also identifying challenges arising from insufficient self-regulation among certain employee groups.

Interviews with 30 participants provided a deeper understanding of how emotional leadership impacts management practices in higher education. Respondents, including department heads, lecturers, and administrators, shared their views on the importance of emotional intelligence in their work. One of the key themes that emerged during the interviews was the significance of empathy in leadership. Many respondents highlighted that the ability of managers to understand and consider the emotions of others is crucial for creating a positive work environment. Department heads noted that they often face situations where they need to respond promptly to the problems of lecturers or students, and in such cases, empathy helps to find effective solutions. Lecturers also indicated that the empathy of their managers helped them feel supported and secure in their work.

The research, utilising both survey and interview methodologies, demonstrated that emotional intelligence significantly influences various aspects of leadership and employee satisfaction within higher education institutions. Correlational analysis revealed a strong, positive, and statistically significant relationship between emotional intelligence and job satisfaction ($r = 0.62$, $p < 0.01$).

This indicates that employees with higher emotional intelligence are more likely to be satisfied with their jobs. Individuals with high emotional intelligence not only communicate more effectively with colleagues but also foster a more positive work environment. They are better equipped to resolve conflicts that commonly arise in the workplace, positively influencing their job attitudes. Furthermore, employees with high emotional intelligence are more receptive to feedback, contributing to both their professional development and overall job satisfaction. Thus, emotional intelligence emerges as a key factor contributing to job satisfaction among employees in academic institutions.

Moreover, emotional intelligence has a significant impact on the effectiveness of leadership practices. Data analysis revealed that managers with high levels of emotional intelligence perform their leadership tasks more efficiently than their counterparts with lower emotional intelligence. The results, based on the Student's *t*-test ($t(150) = 3.75$, $p < 0.01$), emphasise that managers with higher emotional intelligence create a positive work environment, which in turn enhances team productivity and employee motivation. Such leaders better understand and respond to the emotional needs of their subordinates, leading to higher professional engagement. Additionally, emotionally intelligent leaders are more adaptable to change, manage conflicts effectively, and make decisions that consider the interests of all stakeholders. This fosters a conducive environment for team development, allowing educational institutions to achieve organisational goals. Overall, the findings confirm that emotional leadership plays a vital role in shaping effective management practices and creating a positive work environment in academic institutions. A high level of emotional intelligence among managers correlates with greater managerial effectiveness, improved teamwork, and higher staff morale. This suggests that the development of emotional intelligence is crucial for successful management and the sustainable growth of academic institutions, ensuring the achievement of high standards in education and research.

Thus, the findings clearly demonstrate that emotional leadership has a significant impact on management practices in higher education. The level of emotional intelligence exhibited by leaders plays a pivotal role in fostering effective work environments and enhancing teamwork and morale. The relationship is direct and positive: higher emotional intelligence among managers is concurrently correlated with greater efficiency in performing administrative tasks, which in turn contributes to a more harmonious and productive work environment. The initial study revealed a significant correlation between employees' emotional intelligence and job satisfaction. The analysis showed that employees with higher levels of emotional intelligence expressed greater satisfaction with their work conditions and the outcomes of their work. This can be attributed to the fact that emotional intelligence enables employees to better understand their own emotions and those of their colleagues, which in turn facilitates the

building of healthy working relationships and enhances overall efficiency.

Managers with higher levels of emotional intelligence emphasised that the ability to understand the emotions of their subordinates helps them make management decisions that take into account employees' needs and expectations. Rather than simply emphasising empathy, respondents highlighted the importance of motivating the team by providing support when needed. It was also stressed that self-regulation helps maintain a constructive approach to problem-solving, even in stressful situations. During the survey, respondents noted that the ability to manage their own emotions and understand the emotions of others helps them avoid conflict and maintain harmony within the team. Self-regulation skills are particularly valuable in crisis situations, positively impacting the team atmosphere. A high level of empathy also fosters a sense of support among employees, boosting motivation and job satisfaction. Additionally, high levels of empathy contribute to a sense of self-worth, enabling each employee to feel valued. Results obtained through surveys and semi-structured interviews revealed a significant correlation between emotional intelligence and management practices in higher education institutions. Data analysis using the Student's t-test demonstrated a significant difference in the effectiveness of management practices between managers with high and low levels of emotional intelligence.

Specifically, the results revealed that managers with higher levels of emotional intelligence were significantly more effective in resolving conflicts, creating positive work environments, and increasing team productivity. They also demonstrated a better understanding of their subordinates and fostered more effective teamwork. This confirms the hypothesis that emotional intelligence has a direct impact on the quality of leadership practices. This research underscores the importance of developing emotional intelligence for both managers and other employees in higher education institutions. High levels of emotional intelligence not only improve the work environment but also contribute to reducing conflict and increasing overall productivity. The research findings highlight the need for implementing emotional intelligence development programs to enhance management effectiveness and employee satisfaction. Thus, all the results from this study indicate that emotional intelligence is a crucial factor influencing the performance and job satisfaction of managers in higher education institutions. The implementation of emotional intelligence development programmes can significantly enhance leadership effectiveness and boost staff morale. This, in turn, contributes to the overall success and development of the institution, fostering an effective organisational culture and achieving strategic goals.

Cultural factors also play a significant role in the adoption and implementation of emotional leadership. A review of the literature on leadership development models in the education sector highlights the importance of a transformational approach to leadership in universities.

Individualistic cultures, which emphasise personal achievements and independence, may be more resistant to such programmes. Institutions in these cultures might prefer traditional management approaches that focus on productivity and autonomy, which do not always align with the philosophy of emotional intelligence. However, a systematic review of the literature demonstrates that, regardless of cultural context, the shift from traditional leadership roles to emotionally intelligent leadership approaches is essential. Emotional and interactive leadership fosters a more harmonious and effective educational environment, which is particularly important in the context of contemporary global changes and challenges (Andrin *et al.*, 2023).

It is important to note, firstly, that managerial emotional intelligence encompasses the ability to recognise and regulate one's own emotions, understand the emotions of others, and effectively utilise this knowledge to manage interpersonal relationships in the workplace. When leaders possess emotional self-regulation, they are better equipped to make calm and confident decisions, which reduces conflict levels and maintains team stability. Secondly, the data collected indicate that managers with higher emotional intelligence perform their administrative tasks more effectively. This is reflected in their ability to respond quickly and accurately to organisational changes, address issues at early stages, and sustain high motivation among their subordinates. Such leaders have a deep understanding of both the needs of the organisation and the requirements of individual team members. A high level of emotional intelligence enables leaders to be more flexible and adaptable, which is particularly vital in the dynamic environment of higher education.

From a team-working perspective, leaders with high levels of emotional intelligence can create and maintain a positive psychological climate within their teams, thereby enhancing teamwork. They also have a better understanding of team dynamics and can therefore allocate roles and tasks among team members more effectively. As they are able to demonstrate empathy, they are more sensitive to the emotional state of their subordinates, which improves communication and reduces stress within the team. All of this fosters a more cohesive working environment and increases team productivity. High levels of emotional intelligence also have a positive impact on employee morale. Staff members feel supported and understood by their superiors, which increases job satisfaction and engagement. Open and honest communication between managers and employees creates an atmosphere of trust and mutual respect, which is key to maintaining high morale. This approach reduces staff turnover, increases employee loyalty to the organisation, and decreases staff attrition.

However, a completely different trend can be observed when it comes to managers with low emotional intelligence. Management effectiveness can decline, and conflicts and misunderstandings within the team can increase. Low emotional intelligence often results in leaders being unable to respond appropriately to the emotional signals

of their subordinates, leading to a loss of trust and deterioration of working relationships. Such managers are unable to understand the needs of their subordinates, which complicates the decision-making process and reduces work efficiency. Furthermore, low emotional intelligence has a detrimental impact on teamwork. A lack of empathy and communication skills often leads to conflicts, complicates work processes, and reduces productivity. Employees feel misunderstood or undervalued, resulting in demotivation and decreased engagement. In such an atmosphere, it is difficult to maintain teamwork, which in turn negatively impacts the overall productivity of the organisation. The morale of employees is also significantly impacted by the low emotional intelligence of managers. The inability of leaders to recognise the emotional state of their employees and respond appropriately can lead to increased stress, burnout, and even conflicts within the team. Employees who cannot rely on the support of their management are less engaged in their work and may eventually leave the company. This creates additional problems for the organisation, as high turnover leads to a loss of knowledge and decreased efficiency.

Feedback enables managers to receive regular evaluations of their performance from subordinates, colleagues, and senior leadership. This helps to identify strengths and areas for improvement. Coaching, on the other hand, provides individual support to managers, assisting them in developing specific skills, including self-regulation and empathy, as well as enhancing their leadership style. It is also essential to focus on fostering a feedback culture throughout the organisation. An open and supportive environment is crucial, allowing employees to freely express their thoughts and suggestions. This not only facilitates the personal growth of managers but also contributes to the overall development of the organisation. To achieve the effective integration of emotional intelligence into the operations of higher education institutions, comprehensive recommendations need to be developed that will promote the growth of emotional intelligence among both administrative and faculty staff.

Additional recommendations to help integrate emotional intelligence into higher education include several important considerations. Firstly, developing a curriculum on emotional intelligence for managers and faculty is a step towards creating a more harmonious and productive work environment. This program should include a variety of methods, such as training, workshops, practical exercises, and interactive modules aimed at developing self-awareness, self-regulation, empathy, and social skills. In this way, staff and faculty will be better able to understand their own emotions, the emotions of colleagues and students, which will help to reduce conflicts, improve communication, and create a supportive environment for all participants in the educational process.

Emotional leadership among lecturers can significantly enhance the quality of interactions with students, thereby improving their academic performance and motivation to

learn. Lecturers with a high level of emotional intelligence are better equipped to respond to students' needs, provide support in challenging situations, and foster a learning environment that promotes not only academic achievement but also personal development. A positive group climate can be achieved by cultivating traits such as empathy, social sensitivity, and effective communication to develop practical strategies for enhancing the quality of education. Research can offer valuable insights into how educators' emotional intelligence impacts students' academic success, motivation to learn, and overall satisfaction with their educational experience. The findings can be utilised to design targeted training programmes focused on developing educators' emotional intelligence, as well as to adapt existing curricula to meet the identified needs of students.

Integrating emotional intelligence into the university's human resource policy is a crucial step towards creating a harmonious and effective working environment. A human resource policy that acknowledges the importance of emotional intelligence may encompass measures such as regular training sessions aimed at developing employees' emotional skills, incorporating emotional intelligence metrics into performance evaluation criteria, and establishing competency development programmes to support and enhance employees' emotional well-being. These initiatives can help to improve overall productivity, reduce stress and conflict levels, and foster a positive image of the university as an employer. Regular assessments of employees' emotional intelligence serve as a tool for identifying and addressing communication and interaction issues in the workplace. Such evaluations can be conducted through surveys, testing, or expert interviews, which assist in highlighting employees' strengths and weaknesses concerning their understanding of emotional intelligence.

A significant area for future research is the impact of emotional leadership on student learning outcomes. While this study focused on leadership practices and the work environment, it is equally important to note that the development of emotional intelligence among administrative and academic staff can influence students' academic achievement, motivation, and overall learning experience. This aspect undoubtedly has the potential for in-depth research that could uncover new avenues for improving the quality of the educational process. Future research could focus on analysing how the emotional intelligence of lecturers impacts students' academic achievement, self-organisation, and emotional resilience during the learning process. This research could involve evaluating the impact of an emotional intelligence development program on academic achievement, as well as analysing the influence of emotional leadership on students' ability to cope with stress and maintain motivation during their studies.

Such research directions can significantly improve our understanding of how emotional intelligence not only contributes to effective leadership in higher education institutions but also impacts student success and well-being. Therefore, a key recommendation is to continue research

in this area to develop comprehensive approaches to the development of emotional intelligence that encompass all aspects of activities in educational institutions, from leadership practices to the teaching and learning process. A significant factor in the successful implementation of emotional leadership is the support of senior management. Senior managers should lead by example and actively promote the development of emotional intelligence at all levels of management. This includes not only participating in training but also demonstrating behavioural models that emphasise the importance of emotional leadership in daily activities.

A high level of emotional intelligence among leaders is associated with greater leadership effectiveness, better teamwork, and higher staff morale. The effectiveness of leadership practices is a critical factor in the success of any organisation, including higher education institutions. Research shows that a high level of emotional intelligence in leaders positively impacts collaboration. Leaders with high levels of self-regulation and empathy are better able to manage their own emotions and better understand the emotions of their subordinates, which contributes to creating a positive work environment. Emotional intelligence, particularly self-regulation and empathy, enables leaders to remain calm and rational in stressful situations, reducing the likelihood of conflict and increasing the effectiveness of decision-making. A manager with high emotional intelligence can recognise early signs of stress in employees and take steps to reduce it, improving overall team morale and reducing turnover. Research results indicate that emotional leadership has a significant impact on management practices and the overall environment of higher education institutions. This section discusses the significance of the findings, their alignment with previous research, and the prospects for further research in this field.

One of the most significant aspects identified in the study is that departmental leaders exhibit higher average scores in emotional intelligence compared to other categories of respondents. This may indicate that departmental leaders have greater opportunities to develop their emotional skills, as well as reflecting the importance of emotional intelligence at the senior management level. The issues identified, particularly the inadequate self-regulation among administrative staff, underscore the necessity of implementing emotional intelligence development programmes at all management levels. This is crucial for fostering a positive working environment and ensuring the effectiveness of management processes. A key topic of discussion was the importance of empathy in effective conflict resolution. Managers who are capable of understanding and considering the feelings of their employees are better positioned to resolve conflicts effectively, thereby creating a more harmonious working environment. Empathy enables managers to view situations from various perspectives, allowing them to find fair and balanced solutions. One respondent noted that her manager always strives to understand both sides of a conflict, which helps to swiftly identify solutions and maintain good relationships within

the team. This highlights the significance of empathy in leadership, as it fosters trust and mutual understanding among employees.

Another significant finding from the research is the impact of emotional leadership on employee motivation and productivity. Managers with high emotional intelligence are able to influence their subordinates as they can identify the needs and desires of their employees. This allows them to create individualised motivational strategies that take into account the unique characteristics of each employee. A manager who understands that one of their employees is seeking professional development can provide them with more opportunities for learning and growth, thus increasing their motivation and productivity. Such an approach will help increase employee satisfaction and reduce turnover.

DISCUSSION

This article examines the impact of emotional intelligence on management practices in higher education institutions. Similar conclusions were reached by K. Chernis *et al.* (2006), who emphasises the importance of emotional intelligence for effective management in his studies. Confirmation of this fact can be found in the research conducted by Y. Huang & H. Yin (2024), which revealed that paternalistic leadership and the exchange of ideas between leaders and team members significantly influence the emotional working strategies and teaching practices of lecturers, highlighting the importance of emotional intelligence in shaping effective leadership practices. However, this study provides new data on the specific effects of emotional leadership within the context of higher education institutions, including a detailed analysis of its impact on various categories of staff and key aspects of management practices.

Similar conclusions were drawn in a study by T. Kilag *et al.* (2023), who demonstrated that stress and anger management programs significantly improve the emotional well-being and leadership skills of school leaders. They emphasise the need for similar interventions in higher education institutions to promote the emotional well-being of leaders. This once again emphasises the importance of emotional intelligence in educational leadership, which was explored in this article.

J. Walls (2023) also drew attention to the impact of emotional intelligence on the effectiveness of leaders in academic circles. His research demonstrated that leaders with high levels of emotional competence are better at managing conflicts and increasing employee motivation. These findings align with existing data that supports the importance of emotional intelligence in management. The results of the study are also consistent with the research of other scientists who have examined the impact of emotional intelligence on leadership practices in various contexts. Research by S. Jones (2012) showed that high levels of emotional intelligence in managers positively impact teamwork and overall organisational effectiveness. This corroborates the findings regarding the importance of

emotional intelligence for improving teamwork and the effectiveness of management practices.

At the same time, the results of the study introduce new elements to the understanding of emotional leadership within academic institutions. For instance, the issues of self-regulation identified among administrative staff represent a novel aspect that warrants further investigation. This underscores the need to adapt general findings regarding emotional intelligence to the specific management conditions in higher education institutions. The results obtained open several avenues for future research. Firstly, it would be beneficial to explore how different aspects of emotional intelligence (such as self-regulation and empathy) influence specific management practices across various academic contexts. This could aid in the development of tailored training programmes for enhancing emotional intelligence in universities. Secondly, it is worth investigating the impact of emotional leadership on students and their interactions with university staff. Such research could provide insights into how emotional leadership affects the overall learning environment and the academic success of students. Thirdly, comparative studies between different types of higher education institutions (for example, public and private universities) should be conducted to determine how the characteristics of the institution influence the significance of emotional leadership.

While the research highlights the significance of emotional intelligence for effective leadership, some participants noted that developing emotional intelligence is challenging due to a lack of time and resources. This is a serious concern, as without adequate support and resources, leaders may not be able to develop their emotional skills. One respondent mentioned that they do not always have the opportunity to attend emotional intelligence training, even though it is crucial. This underscores the need to invest in training and development programs for managers to enhance their emotional intelligence. These programs could include workshops, seminars, coaching, and mentoring to help managers develop their emotional skills and apply them in the workplace.

Thus, the results confirm that emotional leadership is a significant factor influencing the effectiveness of leadership practices, teamwork, and staff morale in universities. The data indicate that a high level of emotional intelligence is associated with enhanced leadership effectiveness and improved overall morale. This is crucial, as it demonstrates that leaders with high emotional intelligence engage more effectively with their subordinates, resolve conflicts, and maintain team productivity. The discussion of the survey results reinforces the notion that emotional leadership is an essential aspect of management practices in higher education institutions. The findings suggest that a high level of emotional intelligence positively impacts the effectiveness of management practices, teamwork, and staff morale. These conclusions align with previous research while also providing new insights into the specific aspects of emotional leadership within the academic environment.

CONCLUSIONS

Research has demonstrated that emotional leadership has a significant impact on management practices, the work environment, and productivity in higher education institutions. Data analysis revealed that high levels of emotional intelligence among managers and faculty members contribute to better teamwork, more effective management processes, and higher staff morale. Significant correlations between emotional intelligence and leadership effectiveness were found in both the survey and semi-structured interview results. Specifically, it was discovered that managers with high levels of emotional intelligence were better able to regulate their emotions through self-regulation skills, leading to lower levels of conflict within their teams. Lecturers with high levels of empathy interacted better with their students and adapted teaching methods to meet individual student needs, positively impacting student achievement. The collected data also confirmed significant differences in levels of emotional intelligence among different categories of staff. For instance, department heads demonstrated a considerably higher level of self-regulation and empathy compared to administrative staff. This disparity is reflected in the overall productivity of administrative tasks, as managers with higher emotional intelligence are better equipped to handle administrative duties and foster a positive working atmosphere. To further develop the emotional intelligence of university staff, it is recommended to implement regular training and development programmes focused on emotional intelligence. This not only enhances the execution of administrative tasks but also improves the quality of lecturing and students' learning outcomes. It is particularly important to focus on developing emotional leadership among educators, as those with high emotional intelligence are capable of devising more effective teaching and student motivation strategies.

Overall, the research findings confirm the significance of emotional intelligence in the context of management and the work environment within universities, providing valuable insights for developing leadership strategies and fostering a harmonious workplace. Thus, the conducted research underscores the importance of emotional intelligence in the context of management practices and the work environment in universities, offering recommendations for further development in this area and outlining prospects for future research. The obtained results provide valuable information for developing leadership strategies in higher education institutions and can serve as a foundation for further research and practical application in the field of emotional leadership. The collected data can be utilised to develop individualised development plans aimed at enhancing communication skills, boosting self-confidence, and managing emotions. This will contribute to the creation of a more cohesive team that can work effectively together and achieve shared goals. The implementation of these recommendations can be instrumental in successfully integrating emotional intelligence into university operations, fostering a conducive learning environment and increasing the overall effectiveness of the institution. Future research

should focus on the impact of emotional leadership on students' academic achievement and motivation. Additionally, an analysis of the influence of emotional intelligence on various aspects of the learning process and interactions between lecturers and students could be conducted.

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CONFLICT OF INTEREST

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Структура та оцінювання емоційного лідерства в управлінні персоналом закладів вищої освіти

Анотація. Стаття присвячена вивченню впливу емоційного лідерства на управлінські практики та загальне середовище у вищих навчальних закладах. Метою дослідження було проаналізувати вплив емоційного інтелекту керівників та персоналу на ефективність управлінських процесів. Емоційний інтелект стає все більш важливим аспектом ефективного управління, особливо в контексті вищої освіти, де професійні відносини та взаємодії мають значний вплив на якість освітніх процесів. З огляду на це, дослідження було зосереджене на аналізі того, як емоційний інтелект керівників та працівників впливає на різні аспекти лідерства, включаючи прийняття важливих рішень, командну роботу, вирішення певних конфліктів та ефективність вагомих організаційних процесів. Було проведено комплексне дослідження, яке включало опитування 300 респондентів (завідувачів кафедр, викладачів та адміністративного персоналу) та напівструктуровані інтерв'ю з 30 учасниками. Опитування показало, що завідувачі кафедр мають найвищий рівень емоційного інтелекту, що позитивно впливає на управлінські практики, ніж їхні колеги з низьким рівнем емоційного інтелекту. Результати дослідження свідчать про значний вплив емоційного лідерства на підвищення ефективності управлінських практик, покращення командної роботи та морального духу працівників. Важливо те, що висока емпатія з боку керівників покращує продуктивність команди та моральний дух персоналу. Аналіз результатів показав, що емоційне лідерство часто не враховується в кадровій політиці. Дослідження підкреслює важливість інтеграційного розвитку емоційного інтелекту в програми підготовки управлінських кадрів для керівників університетів з метою покращення практики лідерства та створення позитивного робочого середовища

Ключові слова: організаційна культура; комунікативні навички; ефективне керівництво; конфліктологія; психологічна підтримка; професійне середовище

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Didactic principles of implementation of mixed forms of education in the educational environment of educational institutions

Abstract. Blended learning under martial law makes it possible to create an educational process that takes into account the individual needs of students, develops their critical thinking and helps to ensure a high level of learning outcomes, thanks to the creative approach of the teaching staff. The success of blended learning implementation depends on the creativity and pedagogical skills of the teacher. The purpose of the article was to study the experience of implementing blended learning, to study its didactic principles of implementation in educational institutions and to study its characteristics. The study involved an analysis of scientific literature, including articles, dissertation research, books and conference proceedings. The didactic foundations for the implementation of blended learning at the present stage are the achievement of learning outcomes by defining clear educational objectives; organisation of the educational process in the interests of the intellectual development of students on the way to implementing a personal educational trajectory; introduction of innovative teaching methods for the development of professional competence and relevant professional qualities of future specialists. At the same time, it was stated that the educational and methodological framework for the implementation of the educational process is not sufficiently developed, which creates the following problems: a significant burden on teachers due to the careful planning of each stage of the lesson, selection and systematisation of educational and methodological materials, methods and forms of work, which contributes to increased anxiety of both teachers and students. The results of this study can be used by educational institutions to optimise the process of implementing blended learning, especially in martial law

Keywords: general secondary education institutions; vocational education institutions; higher education institutions; blended learning; students; educational technologies; educational process

INTRODUCTION

In modern rapidly evolving world, educational institutions need to implement new approaches to learning. One such approach is blended learning, which combines traditional methods with the use of information technology. This approach allows educational institutions and teachers to take advantage of both traditional and virtual learning, creating

more dynamic and interactive forms of education. Taking into account the needs of modern society and the development of educational technologies, the introduction of blended learning is an important step towards modernising education and preparing students for the challenges of the modern world.

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The problem statement is the need to consider and analyse the effectiveness of the introduction of blended learning in the educational and information environment of educational institutions in modern conditions. After all, Ukraine, as a country that is in a difficult geopolitical situation due to military actions and the threat from the Russian Federation, must worry about the next generations that will build and develop it in the post-war period. That is why, in such a difficult time and complex military operations in Ukraine, blended learning is becoming the most common form of secondary, vocational and higher education. Of course, this is made possible by qualitative research that forms the theoretical basis of blended learning and its implementation in educational practise.

The study by O. Spirin *et al.* (2019) considers blended learning as an effective methodology for stimulating student collaboration in solving practical problems and developing their basic professional skills. The authors focus on pedagogical approaches and methods of blended learning, in particular: a combination of face-to-face and distance learning, cooperation of group members, development of teamwork skills, heterogeneous grouping, a combination of individual and peer assessment, monitoring of students' work by the teacher, task orientation, the ability of each student to be a leader, and the importance of feedback. The researchers recommend using private and public cloud technologies through an integrated academic cloud to support the implementation of group methods in the educational process.

Researcher T. Bykova (2021) has developed a methodology for implementing pedagogical conditions, which includes: updating and improving students' basic knowledge of the functionality of digital technologies; involving students in the training "Blended Learning: Towards Success"; directing teachers to professional development activities and self-education to master the basics of blended learning; training future masters of industrial training using blended learning models; and applying the didactic

capabilities of the learning management system. T. Sobchenko (2021b) considers blended learning as a comprehensive teaching system that includes a variety of models, methods, combinations of teaching methods and strategies, different forms of teaching, curricula, and other aspects. The authors of O. Stupak *et al.* (2023) see blended learning as an integral approach to creating an open educational and scientific space in higher education institutions aimed at developing the professional competencies of future professionals. A. Alammery (2024) identified and evaluated five types of delivery methods: face-to-face instructor-led, online instructor-led, face-to-face collaborative, online collaborative, and online independent work. Therefore, from a didactic point of view, blended learning is considered as a system, as a process and as an integral approach to organising the educational process.

The purpose of the article was to substantiate the didactic principles of introducing blended learning into the practise of different types of educational institutions; to identify the factors that facilitate or hinder its successful implementation and to outline ways to overcome possible obstacles. At the same time, it was important to find out how students are motivated to learn, how this affects their learning and, accordingly, their learning outcomes.

MATERIALS AND METHODS

The study was based on a theoretical and review approach and does not contain empirical results of an experimental nature. In the course of the study, the methods of studying scientific literature, its analysis, synthesis, comparison, and generalisation were used to study the state of theoretical development of the research problem and to compare the positions of scientists on the essence of the didactic foundations of blended learning; to study the practise of its implementation in educational institutions. In particular, based on the study and analysis of modern scientific sources, the directions of studying the theoretical foundations of blended learning are determined (Table 1).

Table 1. Theoretical foundations of blended learning

Areas of study of blended learning (BL)	Scientists
Theoretical substantiation of the didactic foundations of the key definitions of the LN	K. Osadcha <i>et al.</i> (2022); V. Rudnytskyi (2022); A. Solodchuk (2023).
Experience of introducing SL into the educational process of educational institutions	O. Efremova (2023); M. Ivashchenko & T. Bykova (2019); D. Koroviy & N. Lazarenko (2022).
Vocational training with the use of LMS	T. Bykova (2021); O. Dubinina <i>et al.</i> (2021); M. Kulinich & A. Safarova (2021).
Using innovative technologies in blended learning	V.L. Dudar <i>et al.</i> (2021); M. Kademiia <i>et al.</i> (2021); M. Marienko & A. Sukhikh (2021).
EI as a form of organisation of the educational process	R.S. Gurevich <i>et al.</i> (2023).

Source: developed by the authors

The study, based on the analysis of modern research by Ukrainian and foreign scholars, identifies some didactic aspects of the introduction of blended learning in the educational process of educational institutions. The research was aimed at studying the experience of solving educational tasks in a blended learning format and ways to achieve learning outcomes during lectures, practical and seminar classes for the intellectual development of students. Of particular importance for the study were the works that reveal the use of innovative methods, techniques, teaching aids and ways to intensify the learning activities of students and their development in a blended learning environment.

RESULTS AND DISCUSSION

An analysis of recent research and publications shows a growing interest in the problem of blended learning and improving its effectiveness. In particular, scholars are actively researching this aspect of the introduction of blended learning in various contexts, from general secondary education to higher and vocational education. Their works concern both theoretical analysis of concepts and pedagogical approaches and practical aspects of blended learning implementation in different educational institutions. For example, L. Virginia *et al.* (2019) used discussion exercises in a blended format, including “Try My Transformations!”, which were performed individually by students, respectively, and are based on providing feedback and assessing the correctness of tasks.

In general, recent studies and publications confirm the importance and relevance of the problem of blended learning. However, it is necessary to conduct a more detailed study on the issues of theoretical didactic substantiation of the content of blended learning. Therefore, it is necessary to carefully analyse the experience of introducing blended learning into the educational and information environment of educational institutions, which will allow us to get a more complete picture of the state of research on this problem and identify prospects for further research, since this approach combines traditional teaching methods with the use of information technology, creating a more effective and flexible learning environment. Based on the analysis of scientific sources, it is found that at the present stage of development of pedagogical science, the statements that constitute the didactic basis of blended learning are formulated:

1) *Creating an educational environment that includes online and offline formats.* Implementation of online learning with the help of high-quality digital technologies involves: continuous development and modernisation of the material and technical base (computers, projectors, software); use of technologies such as augmented (AR) and virtual (VR) reality; online meetings of participants in the educational process should provide interesting communication, full of modern innovative achievements in the field of education and become a powerful information resource that will be available to the user at any time, if necessary; the content offered should be understandable, accessible, interactive, easily and vividly presented through open learning

management systems (e.g. MOODLE), additional web resources (e.g. YouTube), online communication programmes (Zoom, Skype, Google Meet), sites and platforms (e.g. Canva), social networks and messengers (Kademiiia *et al.*, 2021). The introduction of digital technologies into the educational process is aimed at optimally solving fundamental didactic tasks (Marynchenko & Tsyhanok, 2020).

2) *Use of various forms of blended learning.* Three forms of blended learning implementation have been identified: individual (each student performs individual tasks); individual-group (some tasks are individual, the rest are performed by the group); group (tasks are performed by the whole group). The experience of individualised learning is outlined, which has the following features: the requirement of complete mastery of the necessary material and the possibility of moving on to new material only after mastering the previous one; the use of lectures as a guiding form of learning, rather than as the main source of information; summarising the work of students, managing the process of their knowledge acquisition (Romanko, 2020).

3) *Integration of traditional and e-learning.* The didactic capabilities of each type of learning allow for an optimal combination of their advantages, including a significant increase in opportunities for personalisation and individualisation of the educational process; dominance of individual student work in the structure of the educational process, which contributes to the development of learning independence and the formation of skills that provide the possibility of self-education in the next stages of life; use of various interactive learning activities (Rudinsky, 2022).

4) Identification of certain aspects of SL as components of the didactic system (Fig. 1) (Sobchenko, 2021a).

5) *Modelling of blended learning.* The main models of blended learning are the Rotation model – work in small groups or as a whole group, group projects, individual work with the teacher and written assignments (rotation by stations, rotation by laboratories, flipped classroom, individual work); the A La Carte model – involves studying an educational course online and, if necessary, listening to it at home or in an educational institution to consolidate the main course material; enriched Virtual is a model where students independently divide courses into online and offline parts using web surfing and coaching methods; Flex is a flexible model where students receive personalised instruction mainly via the Internet in online mode to receive consultations if necessary) (Dubinina, *et al.*, 2021; Sobchenko, 2021a).

The modern educational environment of educational institutions is a complex system that includes a variety of educational and information resources, infrastructure and technologies that contribute to the effective acquisition of knowledge and development of students' skills. The essence of the educational and information environment is to create a favourable and dynamic space for learning, where information becomes accessible and the educational process is as effective as possible. This environment contains a wide range of components, such as curricula,

electronic textbooks, multimedia materials, websites, on-line learning platforms, computer laboratories, libraries, video and audio materials, interactive exercises and tasks for interaction with each other and with the teacher. These components are the basis for creating an educational environment that promotes the active involvement of students in the educational process, stimulates their motivation and facilitates the assimilation of knowledge. Under such conditions, the educational environment is a key condition for developing students' competencies in various fields of knowledge, forming their critical thinking, creativity and skills of independent work with information and

educational materials. On the other hand, such organisation of the educational environment contributes to the development of digital literacy, adaptation to modern educational and digital technologies, and preparation for the challenges of the modern information society. Accordingly, thanks to the development of information and communication technologies and the continuous improvement of teaching and learning methods, the educational process is also being updated. This opens up new opportunities for effective and high-quality education, simplifies the interaction between teachers and students through new methods and innovative teaching technologies.

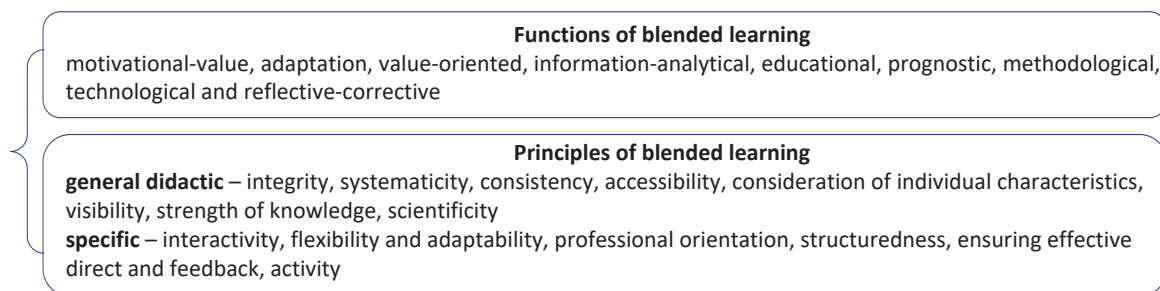


Figure 1. Components of the didactic system

Source: developed by the authors

Researchers have concluded that blended learning is a combination of traditional teaching methods and modern information technology tools that allow for learning at any convenient place and time, such as at home, while traveling or on vacation. This approach involves not only the provision of materials in electronic format, but also mandatory feedback from students to the teacher, which can be carried out both in virtual and face-to-face form. Studies show that when blended learning was implemented, students lacked real-time personal communication with the teacher and classmates (Virginia *et al.*, 2019). Based on the analysis of the responses, students concluded that blended courses should be improved by organising more synchronized meetings that would allow students to receive immediate feedback from the teacher and student to solve the problems that students face in completing assignments and eliminate difficulties.

The basis of learning motivation is the need that stimulates the cognitive activity of the student, his or her readiness to learn (Khomenko, 2022). Studying students' opinions on the motives for choosing blended learning, the following conclusions were made: 1) flexibility and optimisation of the educational process, which makes it possible to combine classroom and distance learning in the virtual space; 2) convenience, which covers several aspects, in particular, the ability to combine learning with other activities without losing live contact, it is convenient to combine with work, but you want to have live contact with teachers and other students; 3) time saving and balance between financial costs of education; an attractive aspect of blended learning for students is time management, as it is easier to

organise free time, which is motivated by the opportunity not to lose live, direct, classroom contact (Živilė, 2022). Blended learning allows for the development of individual learning trajectories, as well as the development of live communication (Romanko, 2020). At the same time, “with the introduction of a blended learning model, a number of organisational tasks arise, the solution of which requires special theoretical research and practical developments to create a system for managing the educational process (availability of a workplace: a teacher’s workplace with Internet access, the possibility of free access to learning servers via WI-FI) in a blended learning environment (taking into account the time spent by teachers on preparing and conducting online classes, working with students in a chat, forum or Skype mode)”.

The most important features of blended learning for higher education institutions are: formal training within the activities of higher education institutions and a targeted process of acquiring competencies within certain educational components, some of which are implemented remotely; use of the educational process by means of information and communication technologies (ICT), which are also technical means of education (TME) – personal computers, mobile phones, tablets, projectors, software, operating and search engines, etc., depending on the teacher’s ability, ICTs are used to organise the educational process and learning interaction (consultations, discussions), to store and deliver educational material, and to implement control measures taking into account the time, place and pace of the student’s learning and his/her ability to self-control (Efremova, 2023). The research concerns the theoretical sub-

stantiation of the definitions that form the basis of blended learning and reveals several terminological variants of the concept of “blended learning”, namely: “blended learning”, which is also called hybrid learning, combined learning, mixed-mode learning, or webenhanced learning (Gurevich *et al.*, 2023). Despite the different terms, the essence of blended learning is a rational synergistic combination of traditional and e-learning with the ability for students to choose the time, place and pace of learning, allowing them to use their strengths and minimise their weaknesses.

After analysing the opinions of scholars on the definition of blended learning, the author offers her own understanding of this concept: blended learning is an ordered didactic system that includes elements of traditional and online learning for students using innovative educational technologies and ensures the creation of an interactive educational environment that contributes to the achievement of high learning outcomes. The use of a variety of methods and resources, such as video lectures, webinars, interactive exercises, and independent work with the material, allows for more effective learning, and also stimulates students' independence and active participation in their own learning. Blended learning helps to increase the accessibility of education, individualise the process, and prepare students for the requirements of the modern world.

Current trends indicate that the use of technology in the educational process is growing. Blended learning opens up new opportunities for students and teachers, facilitating individualised learning and providing access to learning material from anywhere and at any time. Therefore, blended learning is an educational technology that allows to improve the educational environment through the effective combination of online resources with traditional classroom learning (Solodchuk, 2023). In general, secondary education institutions (GSEIs), blended learning is used to enrich traditional lessons and engage students in active participation in the learning process. For example, teachers can create online courses with additional materials, assignments, and video lessons to help students better absorb the material. In addition, blended learning allows teachers to track student progress and provide individualised support. In GCSEs, blended learning is used to extend the capabilities of traditional lessons and to engage students in a more active role in the educational process, for example:

1. Online courses and supplementary materials. Teachers can create online courses or use learning platforms with additional materials, assignments, and video lessons. This allows students to learn the material more deeply, as they can study it independently at their own convenience;

2. Individualised support. Blended learning allows teachers to track student progress through special platforms or tools, such as electronic notebooks or learning management systems. This allows teachers to provide individualised support to each student, paying attention to their needs and level of learning;

3. Active participation of students. Blended learning creates an opportunity for students to be more actively

involved in the learning process. For example, they can participate in discussions, solve problems in groups, or create their own projects using information technology.

Blended learning, as noted by Y. Bahno (2024), helps to make the educational process more interesting, accessible to students, and also allows teachers to interact more effectively with them and support them in their learning in conditions where offline learning has certain obstacles (the practice of teaching during the COVID-19 pandemic and the military conflict in Ukraine). Blended learning, which combines traditional methods with the use of information and communication technologies, is proving to be extremely useful in creating an engaging, accessible, and effective learning environment. First of all, it expands access to learning resources, allowing learners to study material at home, at any time convenient for them. This is especially important for students with different schedules and individual needs.

In addition, blended learning creates opportunities for more effective interaction between teachers and students. Teachers can provide individualised support through electronic platforms, communicate with students through online forums and chats, and track each student's progress using specialised training programs. In general, blended learning is becoming an important tool for improving the quality of education by drawing more attention to the learning process, making learning more accessible and effective, and promoting more active interaction between teachers and students. Every year, blended learning is becoming a necessary component of the educational process, where students have access to a large number of learning resources, such as lectures, online courses, interactive exercises, and videos. This allows you to flexibly plan your study schedule and study independently, increasing the effectiveness of learning (Vorotnikova, 2022). Students are given the opportunity to access a variety of learning resources, such as lectures, online courses, interactive exercises, and videos, which greatly enhances their learning opportunities and improves the quality of education. Some of the main benefits of blended learning in higher education include:

1. Flexibility in the learning process. Students can use the available online resources to study the material independently at their own pace and time. They can watch video lectures, solve problems, and complete other exercises according to their own schedule;

2. Expanding learning opportunities. Blended learning allows students to access a wide range of learning materials from different sources, which can improve their understanding and mastery of the subject. For example, they can use online resources with modern interactive teaching methods;

3. Increasing the activity of students. The use of interactive exercises and videos can stimulate more active participation of students in the educational process. For example, they can participate in forum discussions, solve problems in groups, and perform other tasks that contribute to their active learning;

4. Individualisation of learning. Blended learning allows learners to engage in learning at their own pace and choose tasks that meet their needs and level of knowledge. They can choose the materials to study and focus on the aspects of the subject that are most interesting or important to them.

Thus, blended learning in higher education institutions allows for the implementation of quality education using modern information technologies, digital tools and innovative teaching methods that contribute to the successful training and development of future professionals for professional activities. Blended learning plays a key role in the training of future professionals in vocational education institutions, as it allows combining theoretical knowledge with practical skills using modern technologies and methods. Some of the main benefits of blended learning in vocational education include online resources for theoretical learning. Learners are given the opportunity to study theoretical material online using a variety of resources such as video tutorials, e-textbooks, and interactive exercises. This allows them to learn the basic concepts and principles of their profession at a time convenient for them and at the pace of practical training to apply knowledge. After studying the theoretical material, students can immediately apply the knowledge gained in practical classes. For example, they can perform practical tasks, solve cases, or work with modern technical tools and equipment. Preparing for the real challenges of the working world. Blended learning helps students to acquire not only theoretical knowledge but also practical skills necessary for successful work in their chosen field. This allows them to prepare for the real challenges of the working world and be ready for professional activities from the moment they graduate (Kovalenko *et al.*, 2021a; 2021b). For example, students of professional technical specialties can study the theoretical aspects of working with various technical systems online and then immediately apply their knowledge in practical classes on servicing and repairing these systems. This approach helps them gain a fully integrated learning experience and prepares them to work effectively in their chosen field.

Blended learning is becoming increasingly common in modern education, especially in the context of different types of educational institutions. In the context of general education schools, blended learning allows teachers and

student teachers to use modern technologies to improve the educational process in GSEIs. For example, students can study theoretical material at home through video lessons or interactive exercises, and then use classroom lessons to apply this knowledge in practice. In HEIs, blended learning allows students to access a wide range of learning resources, such as video lectures, e-textbooks, and online courses. This helps them to plan their study schedule flexibly and study independently, increasing learning efficiency. In addition, blended learning in higher education allows teachers to create interactive assignments and interact with students in a virtual environment, which promotes more active learning and student engagement. In vocational schools, blended learning helps prepare professionals for the real challenges and needs of the world. Students can learn theoretical knowledge online and then immediately apply it in practical classes. It helps them acquire the necessary skills and prepares them for real-world challenges. All of these examples show that blended learning is becoming not only an important but also a necessary component of the educational process in various types of educational institutions, as it allows for the effective use of modern technologies and methods to improve the quality of learning.

Blended learning is an approach that combines traditional classroom instruction with interactive online resources. This method allows students and teachers to enjoy the benefits of both face-to-face and virtual learning. Blended learning is becoming increasingly popular in institutions of all levels of education, from general secondary education to higher education and vocational schools. The main didactic features of blended learning include: a combination of didactic opportunities of traditional and e-learning; availability of blended learning at all levels of education and in any field of study; focus of the educational process on each student; development of independence and the ability to self-educate throughout life (Rudnytskyi, 2022). Blended learning, which combines traditional teaching methods with the use of information and communication technologies, has a significant impact on the education process in different types of educational institutions, such as secondary, higher, and vocational education. Table 2 shows how blended learning affects the educational process in each of these types of institutions and analyses the advantages and disadvantages of this approach.

Table 2. The impact of blended learning on the education process in different types of educational institutions

Parameter	Secondary education institutions	Higher education institutions	Vocational education institutions
Flexibility of training	<ul style="list-style-type: none"> ➤ Provides an opportunity to study the material at home using online resources. ➤ Allows you to plan your study schedule flexibly. 	<ul style="list-style-type: none"> ➤ Provides students with the opportunity to study the material at home, which helps them to master the theory more deeply. ➤ Allows students to flexibly choose subjects and courses according to their individual needs. 	<ul style="list-style-type: none"> ➤ Allows students to acquire practical skills under the guidance of teachers. ➤ Provides the opportunity to perform practical exercises and tasks using online resources.

Table 2. Continued

Parameter	Secondary education institutions	Higher education institutions	Vocational education institutions
Personal training	<ul style="list-style-type: none"> ➤ Increases the ability to individualise learning through self-study. ➤ Gives students more control over their own learning. 	<ul style="list-style-type: none"> ☞ Allows students to learn at their own pace and choose learning resources that meet their needs. 	<ul style="list-style-type: none"> ➤ Provides an opportunity to receive individual support from teachers in practical classes. ➤ Allows students to actively apply their knowledge in practice.
Interactivity	<ul style="list-style-type: none"> ➤ Promotes student engagement through the use of interactive tasks and exercises. 	<ul style="list-style-type: none"> ➤ Allows you to interact with students in a virtual environment through forums, chats, etc. ➤ Provides the ability to conduct virtual discussions and collective projects. 	<ul style="list-style-type: none"> ➤ Stimulates active participation of students in practical classes through the use of interactive teaching methods.
Support for students	<ul style="list-style-type: none"> ➤ It allows students to get additional support from teachers through online consultations and open lectures. 	<ul style="list-style-type: none"> ➤ Provides individual support for students through remote access to teachers. ➤ Allows students to communicate with their colleagues and receive mutual support in a virtual environment. 	<ul style="list-style-type: none"> ➤ Provides an opportunity for students to receive practical advice and consultations from teachers during practical classes.

Source: developed by the authors

Blended learning has a significant impact on the education process in all types of educational institutions. It promotes flexibility of learning, personal development of students, increases interactivity and provides effective support for students in their studies.

However, for the successful implementation of blended learning, it is necessary to take into account the individual needs of students and provide appropriate technical support and training for teachers. The introduction of blended learning into the educational process includes a number of key aspects aimed at using information technology, individualising learning, and improving the efficiency of the educational process. Each of them is considered in more detail below:

Use of information technologies. The introduction of blended learning involves the widespread use of modern information technologies in the educational process. This includes the creation of electronic platforms for access to educational materials, the use of video tutorials, webinars, interactive exercises and other multimedia resources. Information technologies allow creating interesting and interactive learning content that keeps students interested and promotes better learning. Therefore, the use of information technology capabilities is necessary in training qualified personnel in the direction required by the enterprise and with the help of advanced innovative tools, including modern simulators (robotics, virtual tools and programs, simulators for modeling production processes). When developing competencies in the training of specialists, an important factor is the requirements of employers, who need employees to properly apply professional knowledge in practice in accordance with modern business conditions. The use of information technology allows teachers to interact more effectively with students, create interactive tasks and exercises, track learning progress, and provide individualised support. This helps to optimise time

and resources, ensuring better learning outcomes. The systematic use of educational technologies and digital tools, in the context of blended learning with video communication systems such as Google Hangouts Meet, Webex and Zoom for organising lectures and Google Classroom for practical classes, allow organising the educational process in accordance with the modern requirements of learning in higher education institutions (Dudar *et al.*, 2021). At the same time, these processes will contribute to the development and maintenance of an appropriate level of competence of both the teaching staff of higher education institutions and future specialists in the context of complex educational processes.

Individualisation of learning. Blended learning provides an opportunity to individualise the educational process according to the needs and capabilities of each student. This means that students can learn at their own pace, select and adapt materials to their individual needs. Individualised learning allows for different levels of training, interests, and learning styles of each student, which contributes to better learning and development. For example, the result of professional training of future specialists is an individual approach to perform professional duties, their style of problem solving, the formation of individual professional skills that ensure efficiency in their future activities, which is why DL is becoming widespread, as it allows students to individually choose the time, place and pace of study, thereby independently drawing up an individual plan that meets their personal needs, as well as combining learning with other activities, using the latest information and telecommunication technologies (Kulinich & Safarova, 2021).

Efficiency of the educational process. Blended learning, provided that the teacher is ready to implement it in educational practice, and that there is a strong educational, methodological, and digital support, contributes to the efficiency of the educational process through a variety of

pedagogical approaches and the possibility of individual work with each student. The overall success of blended learning depends on how effectively the use of information technology can be combined with individualised learning and increased efficiency of the educational process. In addition, careful planning, training, and support for all participants in the educational process are critical aspects to achieving success in this area. In general, the following trends in the organisation of blended learning in educational institutions are outlined:

- personalisation of learning – involves the creation and implementation of the educational process on the basis of Individualisation of learning and building a personal educational trajectory that takes into account the needs, interests and developmental characteristics of each student;

- openness – open resources, adaptive courses and interactive platforms that allow students to focus on the important aspects of learning that are most useful to them;

- interactivity – active participation of students in the learning process on the basis of subject-subject interaction of participants in the educational process in real time: discussion of educational material, organisation of discussions and debates, raising problem situations and their joint solution;

- focus on practical application – studying educational material related to real professional situations, which not only contributes to its better understanding and memorisation, but also lays the foundation for modeling and designing the behavior of future professionals in their professional activities;

- reflection - analysis of one's own practical activities, identification of real problems based on it, identification of tasks to prevent them in the future based on a critical approach to the sources of information used, involvement in discussions, debates, which helps students develop analytical and critical skills and avoid mistakes in future professional activities (Bahno, 2024).

To successfully implement blended learning, it is necessary to take into account the needs and capabilities of both students and teachers. This means designing balanced learning programs that take into account the diverse learning styles and individual characteristics of each student. In addition, it is important to provide adequate support and training for teachers so that they can effectively use information technology and adapt their teaching approaches to meet the needs of the group. Only with cooperation, collaboration, and mutual understanding among all participants in the educational process can the full potential of blended learning be achieved and its successful implementation be ensured.

Activity-based blended learning occurs when educational activities include both classroom and online learning (Shandra *et al.*, 2021). In terms of higher education, the use of technological tools in the classroom makes the classroom more authentic, especially when the use of information and communication technologies allows for the involvement of a subject matter expert to deliver a lecture

or seminar at a distance, creating both face-to-face and online learning. Examples of combining levels of activity include the use of online discussion forums, e-mail, or other means of online communication, such as videoconferencing, during class assignments. Educational practice shows that higher education institutions have faced difficulties in creating an IT structure and providing both parties with instructions on responsibilities and tasks, organising the learning process, creating course plans for online learning, creating and supplementing resources, such as teaching materials that were only in print, creating and updating the assessment system. Researchers insist that the challenge is to overcome the incomplete understanding and perception of online learning, i.e. new opportunities, and to restore traditional offline learning with elements of online learning (Koroviy & Lazarenko, 2022).

In an ideal world, blended learning combines all the benefits of traditional classroom learning with the additional features of the online format, such as constant accessibility, flexibility, interactivity, adaptability, responsiveness, and unlimited space. However, in practice, the implementation of blended learning often does not allow for the full realisation of all its benefits. This leads to problems that are not really related to the shortcomings of the method itself, but to the fact that the capabilities of the educational institution do not meet the requirements of blended learning. Therefore, when assessing the advantages and disadvantages of this approach, it is more appropriate to focus on objective performance indicators, such as student satisfaction with the learning process and outcomes, compliance of the educational process with the needs of the institution, accessibility and efficiency of education (Ivashchenko & Bykova, 2019).

In a blended learning environment, for many teachers, the main means of delivering educational content is the use of video materials (tables, images, diagrams, drawings, pictures, presentations, etc.), as learning management systems, classroom response systems, thanks to modern means of information and communication technologies: adaptive learning platforms, tablets, smartphones, etc. the range of tools and technologies for blended learning is not only huge, but also continues to evolve (Svyrydiuk, 2021). However, the most common technology used in blended learning has been and remains video. Flipped classrooms, for example, require students to view lecture materials before class. This often involves teachers or tutors creating short video lessons. These lessons typically include screen recording, recording via the teacher's webcam, video demonstrations, or a combination of these. Videos are usually made available to students through a learning management system or video content management system. In some blended learning courses, instructors record videos as supplemental materials to help students learn more complex topics or to deepen their knowledge of a subject. In addition, educators can create e-textbooks that incorporate hypermedia and virtual reality elements that provide a high level of visibility, illustration, and high interactivity,

reflecting new forms of structured presentation of large amounts of information and knowledge.

In the context of the organisation of the educational process, there are three main components of blended learning that can be implemented in the information and educational environment of a higher education institution:

- traditional learning (face to face) – traditional classroom classes under the guidance of a teacher;
- self-study learning – independent work of higher education students: practical and laboratory work, search for educational materials; work in cloud environments and with online services);
- online collaborative learning is the joint work of higher education students and teachers in a synchronous online interaction mode, such as webinars, conferences, forums, etc. (Tsiuniak & Rozlutska, 2021).

Analysing the research on the implementation of blended learning as a pedagogical phenomenon, it can be noted that it has become a widespread mass pedagogical experience abroad, while in Ukraine this experience is advanced. It is based on the use of well-known forms, methods and tools in order to improve them in order to achieve efficiency of pedagogical activity. In other words, in most developed countries, the introduction of blended learning has become commonplace. In terms of creative independence, the experience of its implementation in higher education institutions can be considered innovative, since it is based on already known forms and methods, but differs in a new approach to their application, which contributes to improving the quality of the educational process. The achievements of blended learning include: openness of the educational process; formation of self-development and self-education through the acquisition of new knowledge on electronic resources; own pace of mastering the last component and the amount of work; increasing the level of computer literacy of both students and teachers (Kudela, 2020). In view of this, we can note that at the current stage of education development, practical aspects of blended learning have been developed, and its results have been analysed, in particular, the psychological state of students and teachers (Osadcha *et al.*, 2022).

However, the significant positive aspects of blended learning, its validity and systematisation demonstrate some disadvantages: insufficient communication between students and teachers and among themselves; insufficient objectivity in assessing knowledge due to problems with the Internet and short deadlines for completing and solving tasks; lower quality of education (not all students can attend classes on time due to problems with the Internet and military operations); insufficient development of educational and methodological complexes; significant workload on the teacher due to careful planning of each stage of the lesson; selection and systematisation of educational and methodological materials, including methods and forms of work; creation of an educational environment that is the basis for achieving the goal and learning outcomes; increased anxiety of both teachers and students.

The use of the blended learning model creates a number of problems, such as a free and diverse educational environment for students, the passive and uninitiated state of students in learning, which requires improving teaching methods in accordance with changing external conditions, as well as improving the quality of teaching in educational institutions (Kryshtanovych & Kryshtanovych, 2023).

The introduction of blended learning in educational institutions should meet the following criteria: forms of presentation of educational material and multimedia (information is provided in different forms simultaneously, individual peculiarities of students' perception are taken into account, and the visual component of the lesson is increased); structure of the material presentation (compact placement of large amounts of information and establishment of clear logical links between information elements); interaction with the learning content (providing quick and convenient search by content, as well as prompt automatic or semi-automatic assessment of completed tasks); variability of the content of the learning material (implementation of multi-level differentiation of learning, implementation of the principle of variability) (Marienko & Sukhikh, 2021).

The role and features of the introduction of innovative teaching technologies for the optimal rational use of time in the process of presenting educational material in compliance with the guidelines for performing educational tasks (timeliness, creativity, compliance with legal and ethical standards, etc.), which is important for learning in a blended format, are outlined. The study found that the negative factors of blended learning include problems with insufficient development of teaching and methodological complexes; a significant burden on the teacher due to careful planning of each stage of the lesson, selection and systematisation of teaching materials, methods and forms of work; increased anxiety of both teachers and students, as well as the quality of communication and Internet speed. Based on the study of the experience of implementing blended learning, it is noted that this form of work fully satisfies the implementation of the student's individual educational trajectory, which is the basis for the development of his or her professional qualities and competencies. Blended learning provides students with free access to educational material at any time and from any place, which contributes to its independent mastery, and skillful management of individual and group work during the performance of tasks contributes to the achievement of learning outcomes. Thus, blended learning reflects all the components inherent in the educational process: purpose, content, methods, forms of organisation and means of learning, and is aimed at the constant interaction of all participants in the educational process and allows for a personally oriented approach to students.

CONCLUSIONS

Blended learning opens up new perspectives for educational institutions of different levels. The implementation of this approach allows for more efficient use of time and

resources, providing students and teachers with access to modern teaching methods and learning materials. Blended learning has gained the most popularity as it facilitated a safe learning process for students during the long quarantine period. The experience of introducing blended learning into the educational and information environment shows the positive impact of this approach on the quality of education and training of future specialists. The analysis of existing experience and scientific sources allows us to conclude that blended learning has a positive impact on the quality of education and prepares students for the challenges of the modern world. Blended learning is proving to be an effective tool for improving the educational process, as it combines the advantages of traditional methods with the innovative capabilities of information technology. The advantages of blended learning are the creation of a flexible and accessible learning environment that takes into account the individual needs and capabilities of each student. Interactivity and Individualisation of learning contribute to the active involvement of students in the educational process and increase their motivation to study the material independently.

In addition, blended learning enables students to study in accordance with modern requirements and challenges, ensuring their preparation for real-life situations in their professional activities. The use of information technology allows students to obtain up-to-date information, develop digital literacy skills, and adapt to a rapidly changing information environment. The results of the study of experience and research made it possible to identify the didactic foundations for the implementation of blended learning: a clear definition of educational tasks in achieving learning outcomes; focus of lectures, practical and seminar classes on the intellectual development of students; focus of educational compensations on the implementation of the individual educational trajectory of the student, which is the basis for the development of his or her professional qualities and competencies; focus of the tasks of educational

compensators on the implementation of the individual educational trajectory of the student, which is the basis for the development of his/her professional qualities and competencies; widespread use of innovative methods, techniques, means and ways to intensify the educational activities of students and their development; introduction of innovative teaching technologies; formation of national consciousness, mentality, identity through the prism of internationalisation processes; formation of universal professional values based on morality and law; optimal rational use of time for the presentation of educational material (using the necessary equipment and teaching aids) and methods of performing educational tasks (clarity of performance, creativity, compliance with legal and ethical standards, etc.); skillful management of individual and group work during the performance of tasks. Thus, blended learning proves to be an important tool for improving the quality of education and preparing students for the challenges of the modern world. Their implementation contributes to the development of competencies necessary for successful career and personal growth of students. Further research is needed on the issue of studying the practice of implementing innovative teaching methods and controlling the knowledge of students at all levels of education in the process of blended learning.

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CONFLICT OF INTEREST

None.

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Дидактичні засади впровадження змішаних форм навчання в освітнє середовище закладів освіти

Анотація. Змішане навчання в умовах воєнного стану дає можливість створити освітній процес, який враховує індивідуальні потреби здобувачів освіти, розвиває їхнє критичне мислення та допомагає забезпечити високий рівень результатів навчання, завдяки творчому підходу викладацьким складом. Від творчості і педагогічної майстерності викладача залежить успішність впровадження змішаного навчання. Мета статті полягала у вивченні досвіду впровадження змішаного навчання, вивчення його дидактичних засад впровадження в заклади освіти та вивчення його характерних рис. В ході дослідження застосовано аналіз наукової літератури, зокрема статті, дисертаційні дослідження, книги та матеріали конференцій. Дидактичними основами реалізації змішаного навчання на етапі сьогодення визначено досягнення результатів навчання шляхом визначення чітких освітніх завдань; організація освітнього процесу в інтересах інтелектуального розвитку здобувачів освіти на шляху реалізації особистісної освітньої траєкторії; впровадження інноваційних методів навчання для розвитку професійної компетентності та відповідних професійних якостей майбутніх фахівців. Разом з тим констатовано, що є не достатньою розробленою навчально-методична база для реалізації освітнього процесу, що створює такі проблеми: суттєве навантаження на викладачів у зв'язку з ретельним плануванням кожного етапу заняття, підбором та систематизацією навчально-методичних матеріалів, методів та форм роботи, що вплаває на підвищення тривожності як викладачів, так і здобувачів освіти. Результати даного дослідження можуть бути використані освітніми закладами для оптимізації процесу впровадження змішаного навчання, особливо в умовах воєнного стану

Ключові слова: заклади загальної середньої освіти; заклади професійної освіти; заклади вищої освіти; змішане навчання, здобувачі освіти; освітні технології; освітній процес

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Psycholinguistic factors of foreign language acquisition

Abstract. This study is significant as it highlights the importance of teachers effectively utilising psycholinguistic and psychological approaches when teaching foreign languages, with a focus on enhancing students' communicative skills. The primary objective of teaching is to foster the ability to engage with authentic materials and apply acquired knowledge in practical settings, thereby addressing the challenges associated with foreign language learning. This study aimed to provide a detailed analysis of the essence of psycholinguistics and its contributing factors. The article clarified the key psychological characteristics of students learning foreign languages. It was stated that the potential of mental processes, as well as the emotional and volitional spheres of students, is determined by and connected to language. The article defined psycholinguistics and outlines the main stages of its development. It has been demonstrated that psycholinguistics emphasises the communicative activity of individuals and the cognitive processing of information based on mental representations. The role of age-related characteristics in foreign language acquisition was examined. It was emphasised that the necessary development of intellectual functions depends on factors such as aptitude and cultural background. Students were noted to experience effective improvement in moral and volitional qualities, the strengthening of character, and the acquisition of a comprehensive range of adult roles in society, all of which are essential for appropriate communicative activity. It has been established that foreign language learning should occur through the development of language awareness rather than the mechanical repetition of words, phrases, or extended speech. The practical application of the findings can be utilised by teachers, lecturers, postgraduate students, and researchers in educational institutions for preparing lessons, organising educational activities, and producing academic studies

Keywords: bilingual environment; psycholinguistics; communicative approach; language personality; educational process; practical activity; professionally oriented speech

INTRODUCTION

The relevance of this scientific research primarily lies in the necessity for teachers to thoroughly understand the mechanisms underlying the emergence of language, which are the focus of psycholinguistics. Psycholinguistics is the study of the mental processes involved in language perception, encompassing speaking, listening, reading, and even the acquisition of language, whether native or foreign, during the early stages of life. The investigation of language abilities aims to analyse the internal organisation of linguistic processes, model language and communicative activities, and account for physiological mechanisms within the context of communication influenced by the language

environment. The subject of psycholinguistic research is understood to include the processes of language generation and perception, examined concerning the psychophysiological characteristics of participants in communication.

Modern scholars, such as O. Lozova (2010), who examined the psycholinguistic features of developing students' speaking skills, conducted a retrospective analysis of speech development issues as explored by psycholinguists. This research clarifies how speech mechanisms are formed and how children's minds process the acquisition of native and second languages, particularly in contexts involving closely related languages. O. Lozova (2010) asserts that a

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high level of speaking skill development is a foundational characteristic of an individual's personality and that the timely, high-quality development of oral speech is essential for comprehensive speech development in students. D. Parchevska & L. Shkoliar (2023) investigated the psycholinguistic aspects of translation, concluding that studying the psychological processes underlying communication elucidates the psychological essence of language, communication rules, and other facets of language activity – insights not achievable through purely linguistic approaches. Similarly, O. Raniuk (2021) explored the psychological and psycholinguistic factors influencing students' successful acquisition of a foreign language. The author concluded that foreign language instruction should integrate knowledge from general, developmental, pedagogical psychology, and psycholinguistics, particularly through understanding the psychological principles of foreign language learning and effectively modelling this process. O. Khomchuk & K. Velyka (2023) focused their research on the psychological aspects of language competence development. They argue that language competence is a component of communicative competence, encompassing knowledge, abilities, and skills applied to communication, following social norms. Language competence is also viewed in the context of educational activities as mastering a foreign language, with external and internal factors identified as influencing this process. T. Cherniuk (2023), in research on the psychological conditions for successful foreign language acquisition, highlights that motivation, enthusiasm for the subject, practical application of techniques, memorable educational materials, a cognitive-communicative learning model, emotional engagement, understanding of interlanguage transfer, and interaction with like-minded peers are all essential elements.

It is noteworthy that the study of a foreign language as an academic discipline is particularly unique, intersecting with nearly all sciences and fields of human knowledge, given that knowledge itself is inseparable from language. Therefore, language learning significantly impacts the personal, intellectual, and cultural development of individuals, underscoring the crucial roles of psychology and pedagogy in this process. The purpose of this study was to explore the role of psycholinguistics in foreign language learning, identify psycholinguistic factors, and characterise and systematise them. The research tasks included describing the development of psycholinguistics as a science, examining its role in foreign language learning, analysing age-related characteristics of language acquisition, and studying internal and external factors influencing foreign language acquisition. The novelty of this article lied in synthesising previous research findings and determining the psycholinguistic factors contributing to students' effective mastery of foreign languages in higher education institutions.

MATERIALS AND METHODS

According to the purpose of the article, several scientific methods were employed to address the issues raised

during the study. To achieve the goal, theoretical research methods were utilised extensively, including analysis, synthesis, systematisation, and generalisation. The analytical method served as a tool for a detailed examination of the characteristics and specificity of psycholinguistic factors influencing the process of foreign language learning. The synthesis method facilitated the integration of the findings related to psycholinguistic factors. Through systematisation, the theoretical data obtained were organised and presented systematically in the article. Generalisation was applied in formulating the conclusions of the research. Theoretical analysis and synthesis enabled the examination of scientific studies in the fields of vocational pedagogy, psycholinguistic methods in educational activities, modern pedagogical concepts, diverse scholarly perspectives on the problem under investigation, and the identification of research areas. The methods of systematisation and generalisation proved instrumental in focusing on the preparedness of future specialists for professional development. The comparison method was used to juxtapose the author's findings with those of other researchers, allowing the subject under investigation to be considered independently and highlighting the distinguishing features for comparison. The successful combination of these methods facilitated the achievement of the article's objectives. Generalisation was also employed to formulate conclusions and recommendations pertaining to the research topic.

During the investigation, resources such as Google Scholar, ResearchGate, Microsoft Academic Search, and WorldWideScience were utilised. In alignment with the article's purpose, the following keywords were selected: bilingual environment, psycholinguistics, communicative approach, language personality, educational process, practical activity, and professionally oriented speech. These terms were chosen based on criteria such as their frequency of occurrence in the scientific studies, informativeness, relevance to the topic, and accessibility to a broad readership. It is worth noting that the key points derived from the source materials highlight the psychological aspects of language competence development, including various factors affecting the methods, speed, and quality of foreign language acquisition.

RESULTS AND DISCUSSION

Firstly, the concept of psycholinguistics must be defined. This is a relatively young scientific field; however, its role in modern linguistics remains significant. Psycholinguistics is a scientific field that emerged at the intersection of psychology and linguistics, focusing on the study of human foreign language activities, beginning with speech generation and culminating in the ability to perceive speech expressions. There are several definitions of psycholinguistics in the scientific literature. One definition, proposed by psychologist Charles Osgood in 1954, describes psycholinguistics as the study of processes involved in encoding and decoding linguistic messages. Within this framework, language processes are not tied to the language system itself

but rather to an individual's psychological state. According to this perspective, the subject of psycholinguistics encompasses the processes of language creation and perception of the physiological and mental states of communication participants (Lozova, 2010).

Psycholinguistics examines the mental processes underlying language use, including speaking, listening, reading, and the acquisition of native or foreign languages by children (Parchevska & Shkoliar, 2023). This field treats language and speech as motivated actions interconnected with cognitive processes. It studies the mechanisms of language, speech types, speech recipients, intentions, internal language processes, code-switching, the relationship between language and thought, and the development of language skills. As a discipline, psycholinguistics overlaps with both linguistics and psychology. Its object is language as a system of signs, while its subject is the process of generating and perceiving these signs (speech). In speech (speech activity), psycholinguistics identifies elements not directly dictated by psychological or psychophysiological structures. For instance, while all languages feature vowels and consonants, the specific number of these sounds in a given language falls under the scope of linguistic, rather than psycholinguistic, inquiry. Thus, psycholinguistics focuses not on the structural aspects of a sign system but on the processes of generating and perceiving linguistic signs in the minds of speakers (Lozova, 2010).

The fundamental principles of psycholinguistics, its rich conceptual framework, diverse approaches, and novelty of methods enable researchers to conduct high-quality studies and produce reliable results (Zamoshnikova, 2021). Researchers argue that psycholinguistics developed alongside other disciplines to address the need for a holistic approach to explaining phenomena that cannot be fully understood within the confines of related fields (Dillard & Pfau, 2002). Psycholinguistics arose not only as a theoretical discipline but also as a practical one. In the 1940s and 1950s, various problems emerged that could only be addressed through interdisciplinary methods (Lozova, 2010).

However, the foundations of psycholinguistic research were laid as early as the 19th century in the studies of Wilhelm von Humboldt, Ferdinand de Saussure, and Ivan Baudouin de Courtenay, who initiated the psychological trend in linguistics (Zamoshnikova, 2021). Regarding the origins of psycholinguistics, particular attention should be paid to O. Potebnia (1993), who articulated ideas about language as an activity. The scholar proposed that humans perceive the surrounding world through images, and propositions are formed in the mind through comparisons and associations: "We cannot imagine the original proposition otherwise than it is obvious to the speaker, comparing two sensory images that were formed independently of each other from one". These images within a sentence combine into a single whole, forming the sentence's meaning: "(...) considering the language, it is necessary to add that such a decomposition of a sensory image can be achieved only by combining it with another similar means (...); since it

is expressed by the combination of at least two words, one can see not only the decomposition of a unit, but also the emergence of a new unit from a certain duality".

O. Potebnia (1993) drew upon the linguistic philosophy of V. Humboldt and the subjective idealism of I.H. Fichte. He was convinced that language represents the spirit of a nation, reflecting its unique worldview. V. Humboldt introduced the concept of the "linguistic consciousness of nationalities" and emphasised the relationship between understanding a language and comprehending the spirit of a people and their worldview: "Language is connected with the formation spiritual strength of the nation. But understanding the originality of the life of a people and the internal structure of a separate language... completely depends on the ability to see the originality of the national spirit in all its fullness... Language is an organ of the inner being... That is why it grew with all the thinnest threads of its roots by the power of the national spirit, and what... the stronger the influence of the spirit on the language, the more correct and rich the development of the latter". This perspective is significant: as the worldview of a nation is reflected in its language, so too are the traits of an individual's character revealed through their language use. Therefore, thinking depends on language and is shaped by the individuality of each speaker (Lanovyk, 2010). Thus, a person's essence manifests in language, which constantly acts as a medium of mutual understanding, uniting people as a mediator.

The psychologist Charles Osgood, however, was the first to introduce the concept of psycholinguistics into scientific discourse, defining it as a science studying the features of encoding and decoding information communicated through language (Osgood, 1971). Today, O. Selivanova (2008) characterises psycholinguistics as "marginal". This branch of linguistics investigates the ability to speak as a mental phenomenon, exploring its realisation in the mechanisms of speech production and perception, which represent human mental activity in socio-cultural interactions and linguistic coding systems. L. Zasekina & S. Zasekin (2002) describe it as "the science of human speech activity in the psychological and linguistic aspect, in particular, as an experimental study of the mental activity of the subject in the process of learning and using language as an organised and autonomous system, as the meaning of each sign consists primarily in the activation of the cognitive processes of the individual".

Psycholinguistics emphasises the communicative activity of an individual and the cognitive processing of information based on their mental representations (Zasiiekina & Zasiiekin, 2002); therefore, the subject of its research is considered to be the "processes of generation and perception of language in relation to the psychophysiological features of participants in communicative processes" (Zamoshnikova, 2021). As a cognitive science, it examines how speech is planned, perceived, interpreted, understood, and produced; how human knowledge is structured and applied in the cognitive processing of discourse; how children acquire language during their development; and how the

processes of translation and foreign language learning are executed. The primary focuses of psycholinguistics include the functions of language, the generation and reproduction of texts, rhetoric, stylistics, translation, and language acquisition (Zasiekina & Zasekin, 2002). Among its main features, the field highlights the use of existing research

findings in cognitive psychology and the integration of new procedural research aspects, taking into account interlocutors' intentions and communicative goals. In the developmental phase of psycholinguistics, systematising its methods has become a pressing issue. L. Zasekina and S. Zasekin identify the following methods, summarised in Table 1:

Table 1. Psycholinguistic methods and their descriptions

Method	Description
Subjective gradations	Examines the semantic similarity of words within the same thematic group
Associative experiment	Involves selecting associations for the proposed stimulus words
Semantic differential	Combines subjective gradations and associative experiments to construct semantic spaces
Substitution or separable-transformative	Respondents evaluate the feasibility of changing words in specific contexts usually applied to limited vocabulary groups
Classification	Classification forms depend on internal semantic connections of language material, influencing the classification process
Indirect study of semantics	Explores semantic connections indirectly, determined by the nature and features of processing
Psycholinguistic methods of studying phonosemantic and psychographic features	Investigate styles of information presentation by analysing phonosemantic properties of words and psychographic features of written speech

Source: developed by the authors

Foreign language learning methods integrate psychological concepts to optimise the acquisition of theoretical knowledge, develop principles, forms, and methods of speech development, and explore strategies for engaging with listeners. Psychology serves as a fundamental framework for mastering foreign languages (Voloshyna, 2023). The teacher's role involves developing effective language skills, which necessitates an understanding of the formation of thought processes, the mechanisms of language emergence, and its forms and functions (Raniuk, 2021). As O. Lozova (2010) observed, for decades, the methodology of teaching foreign languages primarily centred on linguistic data, with many approaches developed by linguists. Only much later did psychology gain prominence in the methodology of foreign language instruction. Effective foreign language learning requires teachers to consider the intellectual, personal, and developmental characteristics of students. Organising foreign language instruction should take into account students' psychological and age-related traits to identify the most effective techniques, methods, and teaching tools.

One of the requirements for the development of foreign language skills in the future is the presence of specialists who primarily take into account age characteristics. The study of language abilities focuses on analysing the internal organisation of language processes and modelling language and communicative activity. It is shaped by physiological mechanisms in the communicative process under the influence of the linguistic environment (Khomchuk & Velyka, 2023). Conventionally, three aspects are recognised in the structure of language ability: the language mechanism or the ability to master a language (native or foreign); the language peculiarities of a person, or the mental representation of language in

the mind of the bearer of the sign systems of a language; and the norms of its functioning in communication. Additionally, language mechanisms involve the ability to carry out linguistic activity – producing and perceiving linguistic expressions. Sensitive periods of language development, especially in language acquisition, are age stages characterised by the presence of special mental reserves for language learning. These include the age ranges of 2-5, 12-15, and 27-30 years (Khomchuk & Velyka, 2023).

The development of language skills at an early age is connected primarily with phenomena such as the perception and distinction of speech sounds, as well as understanding the meaning of the language being studied (Herasykova & Malyk, 2023). Research conducted by V. Kohonen and co-authors on the duration of babies' listening to sound models imitating the phonetics of their native and non-native languages showed that nine-month-old children prefer the sounds of their native language. Notably, these features were not observed in six-month-old babies (Kohonen, 2020). The difference stemmed from the recognition of phonetic elements and individual sound features. Additionally, it was observed that stress in words is important for recognising sound forms. Data on the ability to distinguish sounds similar to words correlate with studies showing infants' ability to imitate the sounds of others (Campbell & Wales, 1970; Jusczyk, 1993). B. De Boysson-Bardies (1993) also conducted research on the development of speech during the period of language imitation in children of different nationalities. It was found that regardless of culture and nationality, the ability to imitate speech and distinguish between vowel and consonant sounds is well-manifested by around the age of one year.

P. Kuhl's (1994) research showed that between 12 and 20 weeks of life, children demonstrate significantly

developed imitation and well-perceived language. The researcher considers these findings as confirmation of the early development of the ability to perceive and distinguish speech sounds, as well as the emergence of language motor and perceptual activity. These studies indicate that even before children learn the meaning of words and phrases, they learn to pronounce them, master the ability to recognise speech elements by general perceptual signs and imitate pronunciation sounds. Furthermore, it is noted that in childhood, traditional learning mechanisms remain operational. This involves an unformed differentiating ability of a conditional-reflex nature, as there is no reinforcement, and conscious efforts aimed at producing sound images are also impossible. P. Kuhl emphasises that the ability of a newborn to distinguish nearly all phonetic elements occurring in different languages is a remarkable new capacity, reflecting sensitivity to acoustic changes in phonetic categories. However, by around the 12th month, this ability diminishes. The scientist provides an example: Japanese children distinguish the sounds “r” and “l” in early childhood, but as they grow older, they no longer notice these differences. Language development, therefore, progresses from a “general language” orientation to a “specific language” focus. P. Kuhl explains this as a process of self-regulation and adaptation to the native language, accompanied by a loss of flexibility. He proposes the theory of the “perceptual magnet”, which suggests that as linguistic experiences accumulate under the influence of linguistic material, general and typical phonetic regularities emerge and are fixed in the memory of young children. Such a solid prototype gains the ability to “attract” similar sounds.

Phonetic prototypes are specific to different languages; therefore, each speaker of a particular language has a unique perception that determines the classification of phonetic features. This characteristic facilitates the recognition of phonemes in various categories of the native language but is less influential in the perception of a foreign language (Kuhl, 1994). Typically, towards the end of the first year or the beginning of the second year of a child’s life, sound complexes emerge that others perceive as the child’s first words. Their phonetic structure resembles babbling, a universal phenomenon among children worldwide. The fundamental difference between words and gibberish lies in the meaning attributed by adults (Kravets *et al.*, 2021; Kondratiuk & Malyk, 2024). The content of these early words demonstrates originality, as a child can describe an entire situation using a single word. By the age of two, an active vocabulary expands to approximately 25 words, after which it grows rapidly. In six-year-old children, the vocabulary reaches 15,000 words, and by the age of 10-12, it nearly equals the household vocabulary of adults. Between the ages of one and a half and two and a half years, assuming normal developmental progression, a significant change occurs in children’s speech patterns: they begin to use word combinations, and two-word sentences start to appear. These sentences are not yet grammatically structured; their semantic focus provides information about the

location of objects or describes actions and events. Further speech development involves the emergence of grammar. This period is marked by the formation of grammar in children’s speech. Additionally, children spontaneously incorporate words into their vocabulary that mirror the language of those around them, often creating neologisms (Bohush, 1997; Kalmykova, 2003).

During the speech development of children aged 3-4 years, a phenomenon known as egocentric speech becomes evident. This phenomenon reflects the unique communicative characteristics of children’s speech, where the child does not require an interlocutor and does not address anyone but instead verbalises their thoughts (Kravets, 2023). By school age, egocentric speech disappears. In the linguistic organisation of an individual, the following elements of linguistic knowledge are identified: phonetic, lexical, grammatical, and semantic. Proper organisation of a person’s linguistic knowledge is a key condition for language acquisition. Only with a well-structured representation of linguistic knowledge is it possible to efficiently retrieve linguistic units from the “archive” of long-term memory and perform a series of linguistic actions, ultimately leading to automation, as well as enabling the flexible application of alternative strategies for speech communication (Zasieki-na & Zasiekin, 2002). Considering the specifics of this research, the author highlights the nuances of mastering foreign languages by students. University life represents a unique stage of late adolescence and early adulthood, typically between 17 and 25 years of age (Kravets, 2023). The optimal development of intellectual functions depends on two factors: talent (an internal factor) and education (an external factor). As emphasised by L.H. Rusalkina (2015), educators should organise the learning process so that external social factors are transformed into internal drivers, creating an integrated structure of the student’s intellect. Students, as members of a distinct academic community united by the pursuit of professional education, are characterised by traits such as the active development of moral and volitional qualities, stabilisation of character, and mastery of diverse social roles. These qualities are essential for the successful acquisition of communicative competence, which is crucial for functioning as an adult in society.

In the socio-psychological aspect, the student is characterised by a high level of cognitive motivation, social activity, and a relatively harmonious combination of intellectual and social maturity. During this period, cognitive development reaches a level sufficient for an individual to perform almost all types of mental activity associated with adulthood. At this stage, students demonstrate the highest activity in deliberate, logical, and abstract memory; thinking focused on solving mental tasks; the ability to adapt quickly to different types of activities when working on linguistic and logical tasks; and a high level of proficiency in logic and a systematic understanding of the nature and content of their actions. In students, the systematic and purposeful use of rational memory techniques is enhanced. Educators should optimise this potential, as the

age-specific psychological characteristics of students facilitate the highest pedagogical impact, particularly in uncovering the linguistic and rhetorical potential of each student during educational activities. Another psychological condition for the development of language competence is the consideration of the individual psychological characteristics of students, which are based on cognitive processes such as feelings, perception, imagination, memory, thinking, and attention (Raniuk, 2021). The ability to synthesise visual and auditory, kinesthetic, and static impressions contributes to the development of speech skills in a foreign language (Malyk, 2023).

Perception, as a cognitive process, manifests as a holistic representation of objects, situations, and phenomena that arise due to the direct influence of stimuli on the receptive surfaces of the sense organs (Polozenko *et al.*, 2009). Psychologists use the term “perception” to denote this sensory process, one type of which is the perception of people by others – referred to as social perception. Social perception is an important factor in speech activity, particularly in foreign languages, as the internal characteristics of a person are expressed through external signs, such as thoughts, feelings, desires, and emotional experiences. Perception is connected to prior experiences. This dependence of perception on prior experiences is referred to as “apperception”. To facilitate the effective acquisition of new material, the teacher must connect it with the student’s existing knowledge, thereby ensuring comprehension

of subsequent material. This creates causal relationships during foreign language learning. Apperception is closely linked to memory, as actual memorisation occurs only when individuals unconsciously retrieve prior knowledge while analysing past experiences and evaluating their relevance to current and future needs. Learning outcomes are influenced by a variety of factors, which can be grouped into two categories: internal and external. Internal factors are related to an individual’s physiological and psychological characteristics, while external factors are influenced by social conditions. Studies have shown that personal characteristics, particularly emotional and motivational traits, have a greater impact on the development of language skills than external conditions. Affective variables such as attitude and motivation play a critical role in determining language proficiency. Negative factors identified by researchers include anxiety, insufficient cognitive engagement, and a negative self-perception (Samimy & Tabuse, 1992).

H.D. Brown (1981) claims that learning a foreign language causes tension in individuals, which is accompanied by a sense of fear, disappointment, and doubt. Unlike children, adults are especially concerned about how others will evaluate them in public communication, particularly in the presence of native speakers. Anxiety stems from the fear of making mistakes or appearing ridiculous or awkward. Another internal factor is the ability to learn a language independently. Table 2 summarises four key indicators of foreign language learning ability.

Table 2. Key language learning skills and their descriptions

Skill	Description
Phonetic decoding	The skill to distinguish other’s sounds and encode them for later reproduction.
Grammar sensitivity	The ability to recognise the functions that words perform in a sentence.
Inductive study of foreign languages	The ability to draw conclusions, deduce or derive rules, and make generalisations based on regularities.
Memory for language material and learning ability	The capacity to construct phrases and recall associations between native and foreign language words.

Source: developed by the authors based on A.N. Smith (1975)

Two of these factors, phonetic decoding and memory, also correlate with intelligence. Another significant factor is attitude, which reflects how language and thinking are perceived and developed as a result of experiences shaped by the immediate environment, including peers, teachers, and parents (Ameto, 1988; Samimy & Tabuse, 1992). A positive attitude towards language learning enhances learning effectiveness, reduces the time required to master the material, and fosters positive emotions (Ameto, 1988). The central mental process important in foreign language communication is memory. Learning a foreign language should not rely solely on mechanical repetition of words, phrases, sentences, or entire texts. Instead, it should involve an awareness of linguistic peculiarities. Psychologists classify the mental processes mentioned above as cognitive. These processes integrate attention – the dynamic aspect of consciousness, characterised by the degree of focus on an object – and concentration, which ensures its proper reflection

within the time required to perform a specific action or communication process. Voluntary attention is associated with language in relation to socially developed methods of organising behaviour and communication (Ivashchuk, 2023).

The emotional and volitional domains exert a special influence on speech. Emotions are states linked to the assessment of specific factors affecting an individual and are expressed as direct experiences of satisfaction or dissatisfaction with one’s needs. Feelings are among the primary forms of expressing attitudes towards objects and phenomena, as they represent emotional experiences that reflect a stable attitude towards external realities. Emotions and feelings are transmitted during communication and serve as important supplements to the content of speech received by the listener. Thus, mastering a language requires proficiency not only in its verbal components but also in its non-verbal elements, such as emotions, intonation, rhythm, facial expressions, gestures, and body movements.

Effective communication and the achievement of communicative goals depend on the ability to consider the emotional state of the interlocutor and to control and express one's own emotions (Raniuk, 2021).

Of particular importance is nonverbal communication, which is acquired when learning and using a foreign language. M. Kekosh (2017) points out that nonverbal communication plays an even greater role in this process than in learning the native language. An insufficient understanding of lexical or grammatical structures can often be compensated for by nonverbal means, which helps to better interpret various communicative situations. The combination of verbal and nonverbal communication in a foreign language can facilitate the memorisation of new words or grammatical structures. At the same time, the use of nonverbal means is particularly important in communication with people who speak a foreign language. Ignorance of the characteristic rules of nonverbal behaviour in other cultures (speaking another language) leads to misunderstandings and certain conflicts during cross-cultural communication. It is known that in different cultures, gestures, facial expressions, appearance, and even the distance between interlocutors have different meanings. What is permissible in one culture may be incorrectly perceived or interpreted by people from another culture. However, mastering the nonverbal communication techniques characteristic of a given foreign language allows one to avoid certain conflict situations and also provides the opportunity to better navigate different linguistic contexts and regulate one's behaviour during a conversation in a foreign language. M. Kekosh (2017) emphasises that the assimilation of nonverbal phenomena from a foreign culture should not be carried out through mechanical memorisation of the meanings of all gestures, facial expressions, etc. It is necessary to develop a certain sensitivity to the cultural behaviour of people who speak a foreign language and to cultivate the ability and willingness to understand the mentality of those who speak it.

The component of the emotional and volitional sphere is will – the ability of an individual to achieve a set goal while overcoming obstacles, which is expressed in self-determination and self-regulation of actions and various mental processes. The result of the goal-oriented development of will is higher volitional qualities: determination, perseverance, decisiveness, independence, the ability to self-control and self-regulate, the ability to make decisions, adherence to principles, initiative, stability, organisation, discipline, courage, the ability to distinguish social from personal aspects, etc. (Nyshcheta, 2017). Learning a language, especially a foreign one, should be based on these qualities. Such qualities are already well-developed by student age. At the same time, the content of the language material should focus on realising the importance of these qualities for future professional activity, to ensure effective communication in a foreign language.

Psychologists state that language barriers most often hinder students from effectively learning a foreign language. Therefore, they distinguish two main types of

language barriers: external and internal. External barriers are objective obstacles that appear before individuals, regardless of their desires. For example, when a person cannot choose a learning method that meets their goals or cannot find a suitable teacher. Internal barriers are subjective, arise within the individual, and their roots may lie deep in the subconscious. However, they can also be associated with certain physical problems (such as hearing loss), age, or a general deterioration in memory at a certain stage of life. The first and most significant obstacle to overcome when learning a foreign language is the fear of initial attempts at speaking, which usually does not cause further hindrances in language acquisition (Cherniuk, 2023). It is known that learning cannot be successful without knowledge of psychology and pedagogy, because there are key aspects that foreign language teachers should take into account when working with students:

- 1) each individual's action begins with their personal motivation;
- 2) the subject matter should not be too simple; students should not lose the desire to overcome their own barriers to learning;
- 3) new knowledge must have an emotional impact (inclusion in the process);
- 4) it is necessary to draw on the students' general erudition, basic knowledge, interlingual and intercultural connections, and teach an analytical approach to learning something new (Zernetskyi, 2020).

In learning a foreign language, the implementation of the communicative method plays a key role. Communication includes both oral and written forms, with the essence being the exchange of information. The author of the communicative method is R. Langs, who characterised the main features of this method:

- the approach assumes maximum use of the language learned within the group;
- emphasis on active learning models, including partner and group work;
- oral communication is preferred;
- anticipation of the use of software services;
- emphasis on modern spoken language;
- secondary importance is placed on the role of grammar (Bocharova, 2019).

Communicative learning of a foreign language involves not only specific knowledge, skills, and abilities but also communicative competencies that enable effective communication in situations where a foreign language is used. The European Commission interprets it as a continuum of several components or competencies (Halytska, 2019). Communicative skills are not without their drawbacks, especially since they can only be achieved with sufficient language practice. It is difficult to imagine the future of a modern specialist without proficient, professional reading of informational and professionally oriented texts. Readers of authentic, professionally oriented texts require developed reading skills, i.e., practical mastery of this type of linguistic activity. The linguistic-communicative model for

shaping reading and writing skills is based on authenticity (the use of authentic material in the learning process); contextual conditioning (the use of language in a general, social, and cultural context); intensive use of the student's basic knowledge (the formation of expected skills based on the informational content of the text, which appears in their mind even before familiarisation with the educational material); overcoming the cognitive gap (avoiding problematic situations and misunderstandings in the information contained in the text) using teacher-led tasks. The main psychological characteristics of students learning a foreign language are as follows:

1) they will learn only because they believe they need to, and their studies will be effective if they have a strong internal motivation to acquire specific knowledge – today, support and stimulation of motivation largely depend on the higher education teacher;

2) meeting the immediate needs of recipients by applying acquired knowledge, skills, and abilities through simulation (modelling) of situations—this significantly accelerates the practical use of the language;

3) students often study and work at the same time, so the main obstacle to practical interaction is that those who work frequently do not have enough time to attend courses. However, if a person requires a foreign language for professional development, it is easier for them to find time to study;

4) learning largely depends on previous experience – students' perception of knowledge. Therefore, knowledge must be correlated with accumulated life experience; if new knowledge does not correspond to what the student already knows, they subconsciously prepare to reject it;

5) it is important to be able to abandon unsuccessful educational experiences from the past and start anew. One of the factors hindering the learning of a foreign language is fear. Therefore, it is important to create an informal atmosphere for interaction among all participants in the educational process;

6) most students criticise their ability to learn. Therefore, according to psychologists and educators, tasks should not be assessed, but should guide, among others, B. Tasks that are often practised without a single correct solution, with the main goal being the development of language skills based on the personal experiences of the learners;

7) when learning a foreign language, multiple teaching methods should be employed.

Therefore, the potential of mental processes, and the emotional and volitional sphere of students, is determined and connected with language. Among contemporary scholars dealing with the specificity of foreign language teaching methods, there is an ongoing discussion regarding the approach to learning foreign languages based on psychological characteristics. The origin of the discussion lies in the well-known postulate of L. Vygotsky: "We can say that learning a foreign language goes along a path directly opposite to the path of development of the native language. A child never starts by learning the

native language, learning the alphabet, reading and writing, consciously building a sentence, verbally defining the meaning of a word, learning grammar, but usually all this comes at the beginning of learning a foreign language. A child learns the native language unconsciously, and a foreign language consciously and deliberately. Therefore, we can say that the development of the native language occurs from the bottom up, and the development of a foreign language from the top down" (Brown, 1981). However, complete mastery of a foreign language does not differ from mastering the native language: the speaker acquires the ability to think in a foreign language and develops linguistic intuition (Raniuk, 2021).

This leads to the discussion of the most important approach to learning foreign languages. The essence of the issue lies in the dilemma of whether effective foreign language learning can be achieved through a discursive method, where language learning is continuously supported by translations between the native and foreign languages, or through the use of the "direct method". In the direct method, a foreign language is learned in the same way as the native language – primarily through conversational exercises. One variant of the direct method is the "full immersion" method, which involves immersing the learner in a new, unfamiliar linguistic environment. No word in the native language is spoken aloud to avoid the need for translation. The emphasis is on the repetition of idiomatic constructions: the learner practices until they internalise this or that structure (Raniuk, 2021).

O. Lozova (2010) rightly notes that neither the first nor the second method of learning a foreign language can be the only possible one. An alternative must be sought. The foundation of foreign language learning is a constant practice through speaking exercises, during which it is crucial to ensure that the learner focuses not only on the specifics of linguistic means but also on the ideas expressed through the foreign language. This means that language should not be reproductive, but productive. The repetition of language is facilitated by the motivation of the speaker. However, one should not abandon the study of theoretical knowledge. Without the ability to analyse language, it is impossible to effectively master reading and writing or to understand the nuances of a foreign language.

The combination facilitates the active practice of spoken language and the acquisition of the theoretical foundations of a foreign language, thereby promoting the development of productive skills. It is also important to consider the observations of scholars studying the specifics of foreign language learning, who note that the process is accompanied by the development of new psychophysiological mechanisms in learners. These mechanisms enable learners to adapt to real-world goals, reflecting them differently and interpreting them using slightly different linguistic means. After all, a person who knows a foreign language must also understand a different linguistic image of the world. While awareness of the native language typically develops spontaneously, the formation of

linguistic awareness in a foreign language is a complex and prolonged process. However, the native language remains the primary and necessary condition for developing awareness of a foreign language. To make the learning process meaningful, the student must recognise the internal laws of the foreign language and compare them with the corresponding rules of their native language, which should become the focus of reflection.

Thus, in modern psychology and pedagogy, the study of the psychological specificity of foreign languages has emerged as an academic discipline. The characteristics of genuine foreign language learning are highlighted: the connection with the native language, thematic orientation, the inclusion of the foreign language component in communicative activities, fragmentation of learning, and the division of language learning into different types of linguistic activity that shape bilingual awareness. The success of students in learning a foreign language depends largely on the ability to predict and diagnose potential language barriers (Cherniuk, 2023). Overall, the principles of the cognitive-communicative learning model are widely applied in modern language teaching methods. For students at non-linguistic universities, in addition to language development, the ability to read and professionally process specialised texts is crucial. The teacher's task is to help the students integrate the new worldview presented in the foreign language with their individual context. In this way, bilingual awareness is formed.

CONCLUSIONS

In the socio-psychological context, the student is characterised by a high level of cognitive motivation, social activity, and a relatively harmonious combination of intellectual and social maturity. There are four indicators of the ability to learn foreign languages: phonetic decoding, grammar

sensitivity, the capacity for inductive study of foreign languages, memory for language material, and the ability to learn. The purpose of the study has been achieved. Following the topic and objective of the research, the following conclusions have been drawn during the research process: psycholinguistic factors of foreign language acquisition have been characterised, and a review and analysis of general non-scientific and psychological-pedagogical approaches have been conducted. These can improve and systematise the existing psychological conditions for psycholinguistic training of students, as well as overcome difficulties and barriers in the process of learning a foreign language.

The central mental process critical to communicating in a foreign language is memory. Learning a foreign language should not involve mechanically repeating words, phrases, sentences, or entire texts, but rather acquiring the language with an awareness of its linguistic peculiarities. In foreign language learning, the implementation of the communicative method plays a crucial role. Communication encompasses both oral and written communication, with the core purpose being the exchange of information. The main psychological characteristics of students learning a foreign language have been enumerated and characterised. Therefore, the potential of mental processes, emotional and volitional spheres of students is determined and connected with language. The author sees the prospects for further research in examining the components of personal psycholinguistic factors in foreign language acquisition and the practical implementation of these findings.

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CONFLICT OF INTEREST

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<https://orcid.org/0000-0002-3291-4347>**Психолінгвістичні чинники оволодіння іноземною мовою**

Анотація. Тема дослідження є важливою в сучасний період часу, адже викладач, працюючи зі студентами, повинен вміти застосовувати на практиці психолінгвістичні та психологічні знання, знаходити потрібні методичні шляхи вивчення того чи іншого предмета. Зважаючи на особливості вивчення іноземних мов, основним завданням викладача є розвиток і вдосконалення комунікативних мовних навичок студентів, розвиток їх умінь працювати з автентичними матеріалами та застосовувати набуті знання у практичній діяльності, що і обумовлює актуальність аналізу психолінгвістичних факторів оволодіння іноземною мовою. Мета даної наукової роботи полягала у розкритті суті психолінгвістики, її значення при вивченні іноземних мов та детальному аналізі психолінгвістичних факторів. У статті дано визначення психолінгвістики та коротко описано основні етапи її розвитку. Доведено, що психолінгвістика акцентує увагу на комунікативній діяльності індивіда та на когнітивній обробці інформації на основі його ментальних уявлень. Розглянуто вікові особливості оволодіння іноземною мовою. Зазначено, що необхідний розвиток інтелектуальних функцій людини залежить від таких факторів як талант та походження. Студенти, будучи представниками конкретного студентського співтовариства, об'єдналися з метою здобуття вищої освіти, характеризуються такими особливостями, як ефективне вдосконалення морально-вольових якостей, зміцнення характеру, засвоєння всього спектру ролей дорослого в суспільстві та все з цих речей необхідні для відповідного оволодіння комунікативною діяльністю. Було доведено, що вивчення іноземних мов має відбуватися не через механічне повторення слів, фраз чи розширеного мовлення, а за допомогою розвитку мовного усвідомлення. Практичне застосування отриманих результатів може відбуватись при підготовці до проведення пар, навчальних заходів, написання наукових робіт вчителями, викладачами, аспірантами, науковцями освітніх установ

Ключові слова: білінгвальне середовище; психолінгвістика; комунікативний підхід; мовна особистість; освітній процес; практична діяльність; професійно спрямоване мовлення

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