article also identifies the necessary conditions for training future officers to counteract effectively the negative information and psychological influence of the aggressor in the context of the information war. The need to improve the system of ensuring the national security of Ukraine in view of the particularities of modern war is grounded. The analysis of the worldview understanding of training future officers to counteract the negative information and psychological influence of the aggressor, as well as the features of hybrid warfare was carried out, the problematic issues of protecting national interests during a full-scale invasion were analyzed.

Key words: *training, counteraction, negative information and psychological influence, future officers, aggressor, personnel, readiness.*

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CONCEPTUAL FOUNDATIONS FOR INTEGRATING ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN DEVELOPING PERSONALIZED LEARNING PATHWAYS FOR STUDENTS WITH SPECIAL EDUCATIONAL NEEDS

Стаття присвячена дослідженню потенціалу інтеграції технологій штучного інтелекту у процес формування та реалізації індивідуальної освітньої траєкторії (ІОТ) для дітей з особливими освітніми потребами (ООП). У фокусі наукової розвідки – аналіз теоретичних підходів до персоналізації навчання, огляд актуальних міжнародних і вітчизняних досліджень у сфері інклюзивної освіти та штучного інтелекту, а також розроблення концептуальної моделі, що передбачає залучення цифрових аналітичних інструментів до всіх етапів ІОТ: від збору й інтерпретації освітніх даних до моніторингу та корекції навчального процесу. Методологічну основу становлять загальнонаукові методи аналізу, синтезу, індукції, дедукції, інтерпретаційно-аналітичний та структурно-функціональний підходи, які забезпечили всебічне вивчення наукових джерел і системне узагальнення результатів.

У результаті дослідження виявлено, що штучний інтелект може бути ефективним інструментом на кожному з етапів формування ІОТ, зокрема у виявленні освітніх потреб дитини, формулюванні цілей навчання, доборі оптимальних педагогічних стратегій та інструментів оцінювання. Розроблено узагальнену модель інтеграції ШІ у шість ключових етапів ІОТ, що дозволяє забезпечити адаптивність навчального процесу, підвищити точність прийняття педагогічних рішень та оперативність зворотного зв'язку. Окремо акцентовано увагу на ризиках та обмеженнях, пов'язаних із використанням ШІ, зокрема – на питаннях етики, інтерпретованості алгоритмів та необхідності збереження педагогічного супроводу як ключового компонента освітнього процесу.

Практичне значення статті полягає у формуванні підґрунтя для впровадження інноваційних технологій у процеси індивідуалізованого навчання в межах інклюзивної школи. У висновках наголошується на необхідності етичного регулювання використання ШІ, міждисциплінарної співпраці фахівців та подальшого емпіричного дослідження ефективності запропонованих підходів у реальному освітньому середовищі.

***Ключові слова**: індивідуальна освітня траєкторія, інклюзивна освіта, особливі освітні потреби, штучний інтелект, освітня аналітика, персоналізація навчання, адаптивні цифрові системи, етичні аспекти ШІ, освітні технології, педагогічна підтримка.*

Introduction. The contemporary educational landscape is undergoing profound transformations under the influence of technological progress, among which artificial intelligence (AI) stands out as a particularly influential factor. The increasing complexity and diversity of learners' needs, especially among children with special educational needs (SEN), calls for adaptive, individualized educational strategies that go beyond traditional didactic approaches. In this context, AI appears to offer promising tools for identifying student-specific needs, predicting learning trajectories, and supporting inclusive pedagogical environments.

Despite the optimism surrounding AI's capabilities, the implementation of such technologies in educational settings – particularly those involving vulnerable populations such as SEN learners – raises essential questions about ethical responsibility, pedagogical alignment, and systemic readiness. Effective personalization in this domain requires the careful integration of AI-driven data analysis with human-centred educational design. Consequently, it becomes crucial to examine both the potential and the risks of AI integration into the structure and process of individualized development programs (IDP) for SEN students.

Analysis of relevant research. The legislative and academic foundations for integrating AI in inclusive education are gradually expanding. The Law of Ukraine «On Education» (2025) and the Procedure for Organizing Inclusive Education (2022) emphasize the necessity of personalized support systems for students with SEN. Researchers such as L. V. Kutsak (2024) and S. A. Sichkar & I. A. Denysiuk (2024) highlight both the opportunities and challenges of AI implementation in educational environments. On one hand, AI offers potential for enhanced accessibility and individualized learning support; on the other, it raises concerns related to data privacy, pedagogical effectiveness, and ethical boundaries. The work of V. H. Motorina, Yu. H. Zaverukha, and N. M. Kushevska (2025) investigates the collaborative dynamics between educators and AI technologies, emphasizing the significance of maintaining pedagogical autonomy. Ethical implications are the focus of O. M. Tynkov and S. V. Kuzminova (2024), who call for robust regulatory and psychological frameworks for AI use in classrooms. International scholarship, such as that of R. S. Baker & G. Siemens (2014), L. Chen, P. Chen, & Z. Lin (2020),

and S. K. D'Mello & A. C. Graesser (2015), confirms AI's potential to support learner modeling, emotion recognition, and adaptive feedback. However, authors like N. Selwyn (2019), B. Williamson & R. Eynon (2020), and Z. C. Lipton (2018) caution against the risks of algorithmic opacity and misinterpretation, particularly in contexts demanding ethical sensitivity and personalized decision-making. The integration of AI into inclusive education also relies on established pedagogical frameworks, including inclusive pedagogy (L. Florian & K. Black-Hawkins, 2011), universal design for learning (A. Meyer, D. H. Rose, & D. Gordon, 2014), and differentiated instruction (C. A. Tomlinson, 2014), along with international legal commitments such as the UN Convention on the Rights of Persons with Disabilities (2006). These sources collectively reinforce the imperative for a balanced, critically reflective, and context-aware approach to the adoption of AI technologies in SEN education.

Aim of the study. The purpose of this study is to investigate the potential of artificial intelligence technologies in the development and implementation of personalized educational trajectories for children with SEN.

Research methods. This study utilizes a variety of general scientific methods, including interpretive-analytical, inductive and deductive reasoning, and synthesis and analysis, to examine the conceptual foundations of personalized education for SEN students in the context of AI integration. Structural-functional and comparative methods are used to analyse the organizational components of the IDP and evaluate the extent to which AI technologies can support or enhance each stage of its implementation. The study also involves methods of generalization and systematization to identify common patterns, challenges, and opportunities in aligning AI tools with the pedagogical and psychological needs of SEN learners. Sources include academic literature from both Ukrainian and international researchers, legal documents, and official educational guidelines. Expert interviews with Ukrainian educators, inclusive education coordinators, and psychologists complement the theoretical analysis, providing practical insights into the current state of AI use and perceptions of its future role in inclusive learning environments.

Results. Inclusive education constitutes a paradigmatic shift in the organization and delivery of educational services, to ensure equitable access, active participation, and optimal developmental outcomes for all learners, irrespective of their physical, cognitive, emotional, or socio-

behavioural characteristics. Anchored in the principles of non-discrimination, respect for diversity, and the assurance of full educational engagement, this model recognizes and upholds the right of each individual to quality education within a shared learning environment. Pursuant to Article 24 of the United Nations Convention on the Rights of Persons with Disabilities (2006), ratified by Ukraine in 2009, inclusive education is understood not simply as an alternative teaching approach but as a normative obligation grounded in human rights. The Convention mandates that state parties ensure access to inclusive, high-quality, and cost-free primary and secondary education on an equal basis with others, which presupposes not only the physical presence of students with SEN in mainstream institutions but also the establishment of comprehensive conditions conducive to their effective academic and social inclusion.

The core of inclusive education lies in the recognition of the unique value of every learner. In the Ukrainian context, the term *student with SEN* refers to any individual who, either temporarily or on a sustained basis, require additional pedagogical, psychological, or medical support to fully realize their right to education. These needs may stem from a variety of factors, including but not limited to developmental disabilities, sensory impairments, speech and language disorders, learning difficulties, emotional or behavioural disorders, or chronic illnesses. The inclusive educational environment is thus defined as a comprehensive set of conditions, tools, and strategies designed to facilitate joint learning, upbringing, and development in accordance with students' individual capabilities and needs (On approval of the Procedure for organizing inclusive education in secondary education institutions, 2022).

The empirical and theoretical literature underscores the multifaceted advantages of inclusive educational practices. Such practices serve as instruments for dismantling systemic inequities that have historically marginalized learners with SEN, thereby contributing to broader educational equity and social cohesion. Furthermore, inclusive settings promote the development of a collaborative and empathetic school ethos, underpinned by constructive intergroup interactions and mutual respect among diverse student populations. Evidence also suggests that inclusive models foster greater parental involvement, which is positively correlated with enhanced learning outcomes and psychosocial well-being among children (Florian & Black-Hawkins, 2011, p. 817). For students with SEN, inclusive education affords expanded opportunities for social integration, peer interaction, and

exposure to differentiated instructional stimuli—factors that collectively support holistic development and facilitate long-term educational and professional inclusion.

From a legislative standpoint, Ukraine has made significant strides in institutionalizing inclusive education. Following the ratification of international commitments, the Ukrainian Parliament enacted key legislative reforms. The Law of Ukraine «On Education», adopted on September 5, 2017, established a legal framework ensuring that students with SEN have the right to education in all educational institutions – public and private – without the prerequisite of formal disability status. This includes access to distance learning, individualized educational formats, psychological-pedagogical and corrective-developmental support, inclusive and special classrooms, barrier-free infrastructure, and specialized educational personnel, including tutors, psychologists, and correctional educators (Law of Ukraine «On Education», 2025).

Notwithstanding recent advancements, the implementation of inclusive education must be grounded in an individualized, learner-cantered pedagogical framework. The notion of personalized learning pathways serves as a crucial instrument for ensuring that inclusion extends beyond formal compliance to meaningfully address the distinct needs of each student. Rooted in the principle of child-centeredness, personalized learning emphasizes the necessity of tailoring educational experiences to foster the holistic development of each learner, with due consideration for their cognitive, emotional, social, and physical attributes (Tomlinson, 2014, p. 10).

In the Ukrainian educational system, this approach is operationalized through the development of an IDP. Within the first two weeks of the academic year, a multidisciplinary support team formulates an IDP for every student with SEN. This team typically includes educators, school administrators, special education professionals, and the child's parents or guardians. The IDP functions as a comprehensive educational roadmap, providing information about the student's developmental profile, specifying learning objectives, and outlining the methods, materials, and resources necessary to achieve them.

The IDP serves several critical functions. First, it identifies the subjects and content areas that require adaptation or modification. Adaptation refers to adjustments in teaching methods or assessment strategies without altering learning objectives, while modification entails

changing the content or expectations to better suit the learner's abilities. Second, the IDP includes a tailored plan of psychological, pedagogical, and corrective-developmental interventions, ensuring that the student receives targeted support in communication, behaviour regulation, motor skills, and other relevant domains. These interventions are typically delivered in both individual and small-group settings, fostering personalized attention and the development of functional competencies. Third, the IDP fosters communication among all stakeholders involved in the student's education, aligning efforts across disciplines and maintaining consistency in support strategies.

The implementation of personalized learning pathways within inclusive education is consistent with contemporary theories of differentiated instruction and universal design for learning. These approaches advocate for flexible curricula that accommodate learners' variability by offering multiple means of engagement, representation, and expression. As such, the IDP not only aligns with international best practices but also reflects a paradigm shift in pedagogy – from a deficit-oriented model toward a strengths-based, participatory framework.

The development of an IDP for students with SEN is a multifaceted and highly individualized process. As previously discussed, such a plan must incorporate a broad spectrum of information – including the child's general background, developmental characteristics, SEN, and the recommendations of a multidisciplinary support team. The plan is carefully structured into multiple sections to capture these dimensions and ensure the delivery of adequate pedagogical, psychological, and developmental support. However, despite this structured format, the actual implementation of personalized educational pathways remains a complex and challenging task due to the highly dynamic, heterogeneous, and evolving nature of the learners' needs.

This complexity arises from several interrelated factors. Firstly, the need to consider both typological and individual characteristics of students with SEN imposes substantial demands on educators, specialists, and families alike (Kozleski et al., 2021, p. 234). These characteristics include the structure and severity of the cognitive impairment, comorbidities, behavioural profiles, social-emotional functioning, and linguistic and motor development. Secondly, each component of the IDP – be it curricular adaptation, therapeutic intervention planning, or ongoing monitoring and assessment – requires continuous recalibration in

response to the child's development and changes in contextual or environmental conditions (Rix et al., 2020, p. 23).

Moreover, the collaborative nature of IDP development, which mandates the participation of teachers, special educators, psychologists, speech-language pathologists, families, and in many cases, medical professionals, necessitates precise coordination, timely communication, and integrated data management. The manual synthesis of the vast and often heterogeneous data generated by different stakeholders significantly limits efficiency and scalability. These challenges underscore the urgent need for innovative tools that can support and optimize the IDP development process.

Within the framework of inclusive and personalized education, AI technologies demonstrate significant transformative potential. These technologies can be leveraged to enhance various dimensions of individualized educational trajectory development due to their advanced functionalities in data analytics, pattern detection, predictive modelling, and decision-making support (Holmes et al., 2019, p. 11). In particular, machine learning algorithms are capable of processing extensive and heterogeneous datasets encompassing developmental, behavioural, and educational indicators, thereby enabling the identification of latent patterns that may elude human analysis. The integration of such analytical capabilities into educational planning processes facilitates more precise assessment of students' needs and supports the formulation of pedagogical decisions grounded in empirical evidence—ranging from the selection of instructional methods and intervention modalities to the calibration of support frequency and intensity (Luckin et al., 2016, p. 27).

Furthermore, natural language processing tools can automate the extraction and classification of information from diagnostic reports, observation logs, and academic records, thereby reducing the time required for initial assessments and periodic reviews. AI systems can also support predictive modelling to anticipate future learning needs or behavioural changes based on the child's developmental trajectory, thus facilitating proactive rather than reactive educational planning (Chen et al., 2020, p. 75270). Additionally, recommender systems can be employed to propose individualized content, learning formats, and digital resources tailored to the learner's cognitive profile and current progress.

Importantly, AI-driven platforms can enhance collaboration among team members involved in IDP development by enabling real-time data

sharing, centralized access to progress reports, and automated notifications about critical updates or required actions. This level of coordination is particularly beneficial when working with children with complex developmental needs, where consistency and continuity across different educational and therapeutic environments are essential.

A more detailed examination of the potential contribution of AI technologies to the design and implementation of IDPs for students with SEN reveals a promising area of innovation. The IDP, typically structured around a six-part framework, can benefit substantially from the strategic integration of AI tools. These technologies offer enhanced data precision, facilitate the development of personalized learning pathways, and enable continuous, dynamic monitoring of student progress. By aligning AI-driven solutions with each component of the IDP, educators and specialists can optimize the planning, implementation, and adjustment of educational trajectories tailored to the unique needs and abilities of each learner.

The first component of the IDP comprises general background information, including the period for which the document is valid, the child's full name, date of birth, information on guardians, contact details, and previous corrective or developmental interventions. Although seemingly administrative, this component is foundational, as it consolidates the institutional memory of the child's educational trajectory. AI can be utilized here through the development of secure digital platforms that automate the collection, verification, and updating of personal data. These platforms may employ natural language processing algorithms capable of parsing unstructured textual documents – such as prior reports or diagnoses – to extract and organize relevant information into structured fields (Holmes et al., 2019, 13). Moreover, machine learning systems may flag inconsistencies or incomplete entries, thus reducing human error and ensuring a comprehensive data corpus for decision-making.

The second component addresses the developmental characteristics of the child, including physical health, cognitive and emotional functioning, speech and language development, and peculiarities of academic behaviour. The initial diagnostic assessment is a complex, multifaceted process that integrates input from medical, psychological, and pedagogical domains. In this context, AI-enabled diagnostic systems offer significant benefits. Adaptive assessment tools, powered by machine learning, can adjust task difficulty in real time to more precisely measure students' developmental levels (Luckin et al., 2016, p. 24). These tools may be complemented by

multimodal analytics systems capable of integrating data from various sources, including behavioural observations, sensor-derived physiological signals, and audio-visual recordings. Such integration enhances the ecological validity of assessments and supports more nuanced interpretations of the child's abilities and needs (Sichkar et al., 2024, p. 354). Additionally, AI may aid in the triangulation of data from Inclusive Resource Centres, educational institutions, and medical professionals, thus ensuring that the diagnostic picture is both comprehensive and coherent.

Based on diagnostic insights, the third component of the IDP outlines the specific forms of psychological and pedagogical assistance that the student requires. Here, AI-driven scheduling systems can facilitate the coordination of multidisciplinary support teams by accounting for variables such as specialist availability, recommended session frequency, and therapeutic goals. Importantly, AI algorithms trained on large datasets of successful intervention cases can suggest individualized strategies based on comparative analysis of similar profiles (D'Mello & Graesser, 2015, 423). Such decision-support systems can augment human expertise, enabling more targeted, evidence-based assistance while preserving professional autonomy.

The fourth section of the IDP entails a holistic characterization of the student's development across five domains: emotional-volitional, cognitive, physical, linguistic, and social. This assessment serves as the basis for deciding whether standard educational programs require adaptation or modification. AI contributes here by providing integrated platforms for multidimensional data analysis. Through learning analytics tools, educators can visualize developmental patterns, identify latent correlations, and formulate hypotheses regarding the interaction of various developmental factors (Baker & Siemens, 2014, p. 260). These tools not only enhance the precision of student profiling but also facilitate collaborative interpretation by all members of the educational support team.

Subsequently, the fifth section focuses on constructing the student's individual educational trajectory through the development of an Individual Learning Plan and an Individual Educational Program. These documents require the careful alignment of national educational standards, institutional curricula, and individualized learning goals. Generative AI systems, trained on annotated curricular datasets and typified educational templates, can semi-automate the drafting of these plans. Such systems are capable of generating personalized recommendations for subject content, instructional strategies,

and assessment techniques tailored to the student's needs and the recommendations of the support team (Kutsak, 2024, p. 31). Moreover, AI can assist in modelling the likely outcomes of various pedagogical pathways, enabling teams to select the most appropriate course of action through predictive analytics.

The final component of the IDP concerns the implementation and continuous monitoring of the educational trajectory. AI technologies excel in this domain, particularly through their capacity to enable real-time formative assessment and progress tracking. For instance, AI-powered learning environments can detect variations in student engagement, emotional state, and task performance, and generate individualized feedback for both learners and instructors (Ifenthaler & Yau, 2020, p. 11). These systems support timely pedagogical adjustments and contribute to the ongoing refinement of educational strategies, ensuring that the IDP remains a dynamic, responsive instrument.

Taken together, the integration of AI into the IDP framework for students with SEN offers transformative potential. It enables the automation of routine tasks, enhances diagnostic precision, facilitates individualized planning, and supports continuous pedagogical adaptation. However, despite the substantial potential of AI to enhance the personalization, efficiency, and adaptability of educational processes, its integration into the creation and management of IDP is not without significant limitations and risks. A critical, evidence-based perspective is essential to ensure that these technologies are used ethically and effectively in the context of special education.

A key area of concern involves the challenges associated with data privacy and security. AI systems depend on extensive volumes of personal and sensitive information – such as medical records, psychological assessments, behavioural logs, and learning analytics – to produce informed analyses and generate recommendations (Williamson & Eynon, 2020, p. 228). When handling data related to children with SEN, the stakes are even higher due to their vulnerability and legal protections. If improperly managed, AI systems may become vectors for data breaches or unauthorized access, potentially violating national regulations such as the General Data Protection Regulation or child protection laws. Moreover, the long-term storage of sensitive data in centralized databases raises ethical questions about consent, control, and surveillance.

A second major limitation concerns algorithmic bias and fairness. AI systems are only as objective as the data on which they are trained. If training datasets reflect societal inequalities, cultural prejudices, or diagnostic inaccuracies, the AI models may reinforce these biases in their predictions and decisions (Tynkov & Kuzminova, 2024, p. 13). In the context of IDPs, biased AI could result in inappropriate classifications of children's abilities, leading to overgeneralization, stigmatization, or exclusion from appropriate interventions. For example, a system trained primarily on data from neurotypical learners may inadequately capture the diverse trajectories of students with autism spectrum disorder or ADHD, thereby limiting the effectiveness of individualized planning.

Moreover, significant issue lies in the reliability and interpretability of AI systems. Contemporary machine learning models – particularly deep neural networks – often function as black boxes, offering limited insight into their decision-making processes (Lipton, 2018, p. 41). This opacity can compromise trust in AI-generated outputs and obstruct effective collaboration among educational support professionals. In high-stakes environments, such as the development of individualized education plans, where legal and ethical responsibility is paramount, the need for explainability and human interpretability is not merely preferable but indispensable.

Another disadvantage is the potential overreliance on technological systems, which can inadvertently reduce the agency of teachers, specialists, and parents in shaping the educational trajectory of the child. While AI tools are designed to assist professionals, there is a risk that their recommendations might be perceived as definitive or superior to human judgment, particularly in under-resourced educational settings where staff may lack confidence or training in interpreting algorithmic outputs (Motorina et al., 2025, p. 730). This dynamic can erode the holistic, human-centred nature of inclusive education, in which empathy, dialogue, and contextual understanding are central to meaningful support.

Moreover, inequities in access to AI infrastructure and expertise represent a significant barrier to the equitable implementation of such technologies. Schools in rural areas, low-income communities, or developing regions may lack the technological infrastructure, internet connectivity, or trained personnel required to deploy and maintain AI-based systems effectively (Luckin et al., 2016, p. 43). As a result, the integration of AI into IDPs may inadvertently widen the digital divide,

benefitting only those institutions with sufficient resources and marginalizing already disadvantaged learners.

In addition to infrastructural constraints, the lack of standardized protocols and interdisciplinary collaboration poses challenges for the responsible implementation of AI in special education. While numerous AI tools claim to support inclusive education, few are subject to rigorous peer-reviewed evaluation or co-development with educators, psychologists, and families (Holmes et al., 2019, p. 31). Without standardized frameworks for ethical design, testing, and deployment, the risk of inappropriate or harmful application remains high.

Finally, it is important to consider the emotional and relational dimensions of education, particularly for students with SEN, who often rely on consistent interpersonal relationships for motivation, trust, and emotional regulation. AI systems, however sophisticated, cannot replicate the affective responsiveness, moral intuition, and contextual sensitivity of human educators. A reliance on AI for monitoring or interaction may lead to reduced human contact, which is detrimental to the emotional development and well-being of the child.

In general, while AI holds considerable promise for supporting the development and management of IDPs, its limitations must not be overlooked. Issues of privacy, bias, interpretability, professional autonomy, infrastructural inequality, and ethical design must be critically addressed. Effective implementation requires not only robust technological solutions but also sustained investment in teacher training, interdisciplinary dialogue, regulatory frameworks, and participatory design processes that centre the needs and voices of children and their support networks.

Conclusions. The integration of AI technologies into the design and monitoring of individualized educational trajectories offers a promising avenue for addressing the inherent complexity of IDPs for children with intellectual disabilities. Through intelligent data processing, predictive modelling, and decision support, AI can contribute to the creation of more responsive, adaptive, and personalized learning environments. However, its successful application depends on interdisciplinary collaboration, ethical system design, and the continuous involvement of human experts in interpreting and contextualizing AI-generated insights. Prospects for further research in this area include the empirical testing of AI-assisted individualized educational trajectories in diverse inclusive school settings, the development of interdisciplinary frameworks that combine educational science, data

analytics, and ethics, and the exploration of human–AI collaboration models to ensure pedagogically sound and ethically responsible integration of intelligent systems into everyday teaching and learning practices.

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SUMMARY

Hereha Bohdan. Conceptual foundations for integrating artificial intelligence technologies in developing personalized learning pathways for students with special educational needs.

The article explores the potential of integrating artificial intelligence (AI) technologies into the design and implementation of individualized educational trajectories (IETs) for children with special educational needs (SEN). The research focuses on the analysis of theoretical approaches to personalized learning, a review of current international and national studies in the fields of inclusive education and AI, and the development of a conceptual model that incorporates digital analytical tools across all stages of the IET – from data collection and interpretation to the monitoring and adjustment of the educational process. The methodological framework is grounded in general scientific methods of analysis, synthesis, induction, deduction, interpretive-analytical and structural-functional approaches, which enabled a comprehensive study of academic sources and a systematic generalization of research outcomes.

The results indicate that AI can serve as an effective tool at every stage of IET development, particularly in identifying learners' needs, setting educational goals, selecting appropriate pedagogical strategies, and designing assessment instruments. A generalized model has been developed for AI integration into the six core stages of the

IET, enhancing the adaptability of instruction, increasing the accuracy of pedagogical decisions, and improving the responsiveness of feedback mechanisms. Special attention is given to the risks and limitations associated with AI use, including ethical considerations, algorithm interpretability, and the need to maintain human pedagogical support as a central component of the educational process.

The practical significance of the study lies in establishing a foundation for the implementation of innovative technologies within the framework of personalized learning in inclusive educational settings. The conclusions emphasize the importance of ethical regulation, interdisciplinary collaboration among specialists, and the need for further empirical research on the effectiveness of the proposed approaches in real-world educational environments.

***Key words**: individualized educational trajectory, inclusive education, special educational needs, artificial intelligence, educational analytics, personalized learning, adaptive digital systems, AI ethics, educational technology, pedagogical support.*

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КОНЦЕРТМЕЙСТЕР ЯК МЕДІАТОР МІЖ МУЗИКОЮ І ТІЛОМ У ПРОЦЕСІ НАВЧАННЯ ХОРЕОГРАФІЇ

У статті здійснено комплексний аналіз ролі концертмейстера як медіатора між музикою і тілом у процесі навчання хореографії. На основі застосування широкого спектру методів наукового дослідження деталізовано основні аспекти діяльності концертмейстера в контексті навчання хореографії, а також охарактеризовано взаємодію концертмейстера з педагогом. Доведено, що ключовою функцією концертмейстера в хореографічному навчанні є медіація, або посередництво, яке охоплює не лише музичний супровід, а й тісну взаємодію з викладачем і здобувачами. Завдяки цьому створюються оптимальні умови для гармонійного розвитку професійних компетенцій майбутніх хореографів.

***Ключові слова:** музика, концертмейстер, хореографія, комунікація, медіація, освітній процес.*

Постановка проблеми. У сучасній системі мистецької освіти концертмейстер відіграє ключову роль як медіатор між музикою і тілом танцівника. Його діяльність не обмежується лише музичним супроводом занять – він стає активним учасником освітнього процесу, забезпечуючи гармонійну взаємодію ритму, мелодії та руху. Завдяки