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INTEGRATING ARTIFICIAL INTELLIGENCE AS AN ADVANCED LEARNING TOOL INTO UKRAINIAN INCLUSIVE EDUCATIONAL ENVIRONMENT

Artificial intelligence (AI) is increasingly recognised as an advanced educational tool, supported by substantial evidence demonstrating its effectiveness in addressing educational challenges of varying complexity — from generating lesson plans with a single click to facilitating virtual excursions within classroom settings. Despite the current monopolistic tendencies among companies producing artificial assistive technologies, the digital market is anticipated to soon become saturated with a diverse array of generative agents of any needs and wallets. In the context of general pedagogy, positive trends in AI integration are evident. However, inclusive education remains largely anchored in traditional pedagogical approaches, primarily due to the challenges associated with making significant advancements in this low-mobility sector. Before any innovative steps can be undertaken, fundamental material needs must be addressed. A comparative analysis of the Ukrainian inclusive education experience against international benchmarks reveals a notable regression since the onset of the full-scale invasion. While leading international initiatives are focused on the potential of AI to address global educational challenges, Ukraine appears to depend largely on the initiatives of individual educators. To explore the contentious issue of whether it is acceptable to disregard certain recommendations from prominent state and international institutions regarding the safe integration of AI into educational practices — especially in the absence of alternative validated methodologies for teaching children with special educational needs — a survey was conducted involving 43 respondents engaged in inclusive education. The findings affirm that the negative perceptions surrounding AI in inclusive contexts are justified: Ukraine's educational landscape is still evolving to reach the technological standards observed in the early 2000s in other countries. This article also highlights the risks associated with the uncritical introduction of "radically new technologies" from the era of the first computers into educational settings without first ensuring compliance with four critical criteria: content accuracy, age appropriateness, relevance of pedagogical methods, and cultural and social suitability. While the article predominantly conveys a skeptical perspective on the feasibility of effectively integrating AI into the inclusive educational process, the authors do not intend to diminish national accomplishments. Instead, they advocate for a research trajectory that is genuinely pertinent: Ukraine's journey with AI should be collaborative, aiming to refine tools that empower, rather than replace, ensuring that "artificial inclusion" becomes a lived reality rather than a tick-box culture.
Keywords: *Artificial Intelligence (AI), artificial technology, inclusive education, psychophysiological disorders, special educational needs (SEN).*

Introduction

A decade ago, raising the topic of using Artificial intelligence (AI) in an inclusive classroom was considered something faraway and almost impossible. However, presented on November 30, 2022, the virtual assistant ChatGPT, DALL-E 3 and related to them neuro-services with a combination of supervised learning and reinforcement learning (Alec et al, 2018, p. 1), became a revolution in the technological world and quickly found application in the pedagogical field. The model of generative pre-trained transformers (GPT), which once replaced the model of supervised learning from large amounts of manually-labeled data, has been relatively actively used since the beginning

of 2018 in general pedagogy, only occasionally penetrating into inclusion. These preliminary methods, so-called intelligent tutoring systems, were focused on 1:1 interactions, which allowed, for example, to diagnose gaps in the learning of one specific student. And since a significant part of children with special educational needs (SEN) follow Individual Education Plans (IEPs) into homeschooling, such software ensured personalized, timely feedback and contextual prompts to address specific learning situations. However, modern pedagogy emphasizes the free interaction of a person with the environment regardless of their psychophysical limitations, and meeting the needs of individuals becomes a matter for entire social groups. This is where the contradictions arise. On the one hand, we call into question the ability of AI to support different pedagogical models, and on the other hand, the adequate readiness of the Ukrainian inclusive education to integrate these advanced technologies. It is no secret that a significant part of general pedagogy educators is skeptical about the effectiveness of using artificial teaching aids in a regular lesson of a general educational institution (Rudnik, 2024, p. 16), and inclusion is an even more specific field of science that requires clear coordinated actions of psychological, pedagogical, medical and social assistance; flexible, but proven, methods of correction of psychophysical disorders. Most of the developments in the field of intelligent agents belong to foreign institutions, but this pattern is not universal: despite the fact that the foundation of the technology was laid in the middle of the 20th century, real attempts at the intersection of AI and Special Education began in 1985 (Drigas, Ioannidou, 2012, p. 1366). Nevertheless, Hong Kong (Bridge AI) (Lenovo Story Hub, 2024), Whitehaven (RAICo1 Robotics Collaboration Hub) (SENse, 2024), USA&Japan (Holtz, 2024) and the experience of other countries are a vector of development of "neuro-independence" of Ukraine. Thus, further analysis of the implementation of the Strategy for the Development of Artificial Intelligence in Ukraine for 2022–2030 (commissioned by the IAIP MESU&NASU of Ukraine) (2022) in an inclusive educational environment based on its own achievements in fundamental science is an urgent issue.

This study aims to investigate the real state, challenges and prospects of introducing AI technologies into the Ukrainian inclusive educational environment, to assess the readiness of the national pedagogical system to use these advanced tools, to analyze the difference between the modern achievements of domestic and world science in a comparative analysis.

Methodology

An interdisciplinary approach was adopted to meet the research objectives, integrating both qualitative and quantitative methods for data collection and analysis. This included reviewing national government documents, programs, and scientific publications, as well as widely recognized international reports and resources aimed at supporting education for children with special educational needs (SEN). To evaluate the readiness of Ukrainian educators for integrating AI in inclusive settings, a survey was conducted among 43 respondents. The results were organized and analyzed to uncover prevalent trends, pinpointing major challenges and potential strategies for overcoming them.

Research results

It would seem that the issue of artificial intelligence has become an actively debated topic since around the beginning of 2010 (some consider ChatGPT to be the starting point of the "boom" of neurotechnology), but in fact it has existed for decades: the first program (a computer that could play chess) was presented in 1951 at the Paris conference on behalf of the developer A. Turing (Bruderer, 2017, p. 195). Obviously, there was no "revolution" (Springer, 2015) of building a stored-program computer at that time, and the impact of his doubts about the ability of machine thinking, although not significant, is now considered the basis for the first central concepts of AI. The prospects of this field were limited by several factors: the high cost of the computer; the variability of real learning scenarios relative to the basic algorithms of the model of guided learning from large volumes of data (early NLP research), which required a sufficient amount of manually entered data (Mohammad AL-Smadi, 2023, p. 3). And finally in the early 1960s, the first attempts to integrate artificial intelligence into education took place, including the creation of the intelligent learning system (ITS) PLATO, automatic evaluators of learning results, TICCIT (Time-shared, Interactive Computer-Controlled Instructional Television) and others. However, by the 1990s, artificial learning could only develop into the automation of a few bulk actions, and despite all the advances in ITS, individual "computer → learner" interactions began to give way to WWW. The 21st century is marked by the appearance of the deep learning Transformer architecture, generative pre-trained transformers (GPT), the development of hardware capabilities (Mohammad AL-Smadi, 2023, p. 4).

The steady progress of digitization of education has transferred computing power to various aspects of inclusion. However, unlike the chronology of the interaction of AI and general pedagogy, it is almost impossible to trace where and how the tendency of the intersection of artificial assistive technologies and children with SEN appeared. Most studies review this interconnection superficially, paying little attention to existing developments, but focusing on the prospects of the direction in general. The most

complete is the work of Athanasios Drigas and Eleni Ioannidou (2012), which describes the achievements of AI in the field of sensory and physical disabilities, autism spectrum disorders, dyslexia, Attention Deficit Hyperactivity Disorder (ADHD) and others (see *Table 1*).

Table 1

AI PROGRAMS FOR THE CORRECTION OF PSYCHOPHYSICAL DISORDERS OF CHILDREN WITH SEN (DRIGAS, IOANNIDOU, 2012)

2003 a fuzzy cognitive map approach for differential diagnosis of specific language impairment (SLI)	2008 "Dedalos" project (teaching ESL to hearing impaired people)	2009 a diagnostic tool "Expert System for Learning Difficulties" (SEDA)
2003 Computer Based Speech Therapy (CBST) called LOGOMON (Logopedics Monitor)	2008 model with Artificial Neural Networks (ANN) (helps in the diagnosis of autism)	2009 artificial neural network model Perceptron based Learning Disability Detector (PLEDDOR)
2006 an emotion recognition computerized tool based on joint visual and audio cues	2008 computational method of automatic scoring of short handwritten essays in reading comprehension tests	2010 a systematic approach for identification of dyslexia at an early stage by using artificial neural networks (ANN)
2007 a social scenario game (learners with HFASD role-play and complete tasks involving social situations)	2008 Genetic Programming Neural Network (GPNN) methodology	2010 a rule based classifier for the diagnosis of dyslexia with low quality data with genetic fuzzy systems in early childhood

From here, it is possible to trace the early research initiatives of the use of AI agents in special education (numerous models of simple speech recognition, surface processing of images, sound signals, etc.), the main function of which was to imitate the behavior of a person, decision-making, rules of specific scenarios. AI algorithms have grown exponentially over the past decade, fueled by the COVID-19 pandemic and the ChatGPT breakthrough. Today, intelligent tools can recognize patterns, analyze data, and identify trends faster than humans (Marino, Vasquez, Dieker, Basham, Blackorby, 2023 p. 405).

More than 50 countries of the world, as well as the North Atlantic Treaty Organization (NATO), have created and approved their own strategies for the development of AI in order to fix tasks and priorities in this area, to accelerate the pace of their scientific, technical and socio-economic development. Historically, "Ukraine — especially via its Glushkov Institute — has been one of the most important centers for AI-related research, contributing many innovative cutting-edge ideas and developments" (*Strategy for Artificial Intelligence Development in Ukraine*, 2023, p. 10) (in visual image recognition (V. A. Kovalevsky), speech (V. M. Glushkov), portable devices with voice control (T. K. Vintsyuk)) (Podgayetsky, 2012, p. 52) leading Ukrainian scientists decided to develop the governmental "Strategy for Artificial Intelligence Development in Ukraine (2023–2030)" (2023) with the aim of attracting global artificial technologies in the interests of security and defense, economic and social development of Ukraine. In addition, since the beginning of a full-scale invasion, artificial capabilities have been used to identify the likely location of the enemy's weapons system or troops, potentially treasonable people, weak supply points, analyzes reports on the activities of Russian volunteer groups (*The Economist*, 2024). With regard to scientific activity, special attention is planned to be paid to the development of basic digital skills of the population, training of highly qualified personnel, creation of transdisciplinary clusters, partly to optimize interdisciplinary research at the intersection of AI and other fields of education. For obvious reasons, inclusion was not included in the list of priority areas of development as a separate block (even within one paragraph), because no relevant governmental normative document directly establishes the integration of AI as a separate strategic or operational goal. The main focus of regulators is currently focused on the broader digital transformation and principles of accessibility of primary educational resources. Policy guidelines on the use of generative AI in education and research, adopted by UNESCO in 2023, are also not verbose about inclusive education, but point 4.1 states the need to "establish sustainable funding mechanisms for the development and provision of AI-enabled tools for learners who have disabilities or special needs" (UNESCO, 2023, p. 24). The premise of creating the document was the results of a global survey by UNESCO, where out of 450 schools and

universities, only less than 10 % followed at least some ethics of using AI. This is not surprising, because COVID-19 quickly caught the whole world in a "technically disarmed" form, institutions had to look for an alternative to traditional education and sometimes deliberately skip the steps of authorizing generative utilities before real use in the classroom. There is substantial evidence that the pandemic has had a particularly strong impact on youth with SENDs, because "both the delivery method and the environment for schooling experiences, disproportionate learning loss due to reductions in critical learning opportunities, diminished learning support have changed significantly systems, and limited access to services outside of schools" (Dvorsky, M. R., et al, 2023, p. 1). For example, despite the advanced logistical support (regardless of the use of AI) of public schools in the United States, students with SENDs experienced great difficulties in fully working with digital course materials; it was difficult to virtually recreate individual and group learning, especially with students who has problems with self-regulation, attention, or technological limitations. The most effective facilitation of online learning was the extension of time to complete tasks and the reduction of their number.

Responding to the relevant challenges, representatives of the Ministry of Education and Science of Ukraine, local education authorities, non-governmental organizations, teachers, in order to identify obstacles that made it difficult to get an education in quarantine conditions, developed a number of measures for strategic documents, in particular "Plan of measures to support persons with disabilities during the period of quarantine established by the Cabinet of Ministers of Ukraine and strengthened anti-epidemic measures in connection with the spread of the acute respiratory disease COVID-19 caused by the SARS-CoV-2 coronavirus, minimizing its consequences" (2021) and "National Action Plan for the Implementation of the Convention on the Rights of Persons with Disabilities for the Period until 2025" (2021). However, their effectiveness remained mostly formal and local. While the American inclusive education system experienced a temporary regression, a new wave of unstable realities awaited Ukraine. Understanding humanitarian trends during emergency situations, on the territory where hostilities are taking place, in occupied or liberated settlements, the biggest problems are at the elementary level. For example, there is no access to purchase batteries for the hearing aids of children with hearing impairments, broken wheelchairs and broken glasses that cannot be repaired or replaced, etc. (Markovska, 2024). Educational expert Natalya Baitemirova notes: "I haven't encountered cases where an individual educational trajectory is fully realized during distance learning. Children do not receive correctional and developmental services in the necessary volume. For example, a rehabilitation specialist can work effectively only in person. Moreover, we do not have the opportunity to properly address war trauma in children with special educational needs, so parents are forced to cope with these challenges on their own (Markovska, 2024). Only daily work gives results, and when it is not, the acquired educational and developmental skills sink, because the child has critically limited access to support services (Markovska, 2024). It would seem that the issue of integrating generative utilities into the already unstable inclusive educational process is perhaps the least relevant and promising direction at the national, social and pedagogical level at the moment. In contrast to foreign projects, the specified area is developed mainly at the initiative of domestic figures of culture, education and science; local public and regional organizations; private customers; international projects. As for the latter, foreign investors currently do not consider the possibility of creating advanced AI inclusive technologies in Ukraine, even in the post-war perspective. For example, Lenovo launched its first-ever AI center in Hong Kong in partnership with the Bridge Foundation, a charity that has been helping low-income families since 2015. "In Hong Kong specifically, one in every 20 children is diagnosed with autism and other disorders that fall under Special Education Needs (SEN), and the number of SEN students increased by 106 % in 10 years" (Lenovo Story Hub, 2024). The project aims to launch an AI-enabled learning center with positive experimental results. "Parents are already seeing benefits. 'In two weeks, my son developed the ability to express himself, both verbally and with body language,' said one. 'Bridge has also helped my son focus a lot better, empowered him with socialization and enabled him to discover the joy of playing.' " (Lenovo Story Hub, 2024). The main services include: capturing the learning process along with the psychological and environmental data; tracking the training performances of the students and recommending customized IEPs (individualized education plans); recognizing human gestures and voices, objects; training the AI, which will help the therapist as an ABAS domain-specific language model, including features from the body movements tracked through the classroom cameras to eye-tracking technologies for attention and for monitoring the focus of students. Ukrainian partner programs are mostly implemented at the theoretical level: update of inclusive policies, current algorithms; strategic planning; campaigns; assessment and analysis of existing documents, personnel potential and qualifications; intersectoral coordination system; coordination of job instructions/guidelines; budgeting planning, etc. A successful project is considered to attract one-time

preferential payments, not to mention long-term financial investments. For example, at the beginning of 2024, thanks to the cooperation of the Ministry of Social Policy of Ukraine and the UN World Food Programme, it was possible to attract approximately 21 million US dollars (800 million hryvnias) for 310 thousand Ukrainian persons and children with congenital disabilities (an additional 889 hryvnias to state social assistance) (Ministry of Social Policy of Ukraine, 2024).

Despite the fact that the Ukrainian inclusive educational process does not have many alternatives for the integration of AI, and the market would be happy with any available innovations, "the fact that machines are now crossing so many thresholds and so quickly should make us think and reflect" (Giannini, 2023, p. 2). As Stefania Gianini, Assistant Director-General for Education of UNESCO, notes, ideologically neutral technology does not exist, it is programmed according to a certain worldview, reflects the corresponding ways of thinking and knowledge. The answers generated by such services do not correspond to the human mind, but come from a labyrinth of calculations so complex that they are not even completely understandable to developers. Some platforms already have almost monopoly power, and their lack of checks, rules and regulations is astounding. Stefania adds that "they have been «dropped» into the public sphere without discussion or review" (Giannini, 2023, p. 5), and the criteria for approving the new textbook significantly exceed the criteria for implementing "a radically unfamiliar technology" (Giannini, 2023, p. 5). She also notes that educational resources intended for use in schools are usually tested against at least four main criteria: accuracy of content, age appropriateness, relevance of pedagogical methods, and cultural and social appropriateness. Generative assistants that claim educational benefits should be tested against similar metrics. The education sector cannot rely on the promises of corporate policies, but must accept proposals on its own terms, preferably in coordination with other regulatory branches of government. Based on current international practices, the Ministry of Digital Transformation and the Ministry of Education and Culture of Ukraine together with the Working Group have developed recommendations that will determine the approach to the responsible, ethical and effective use of AI systems in education (Ministry of Education and Science of Ukraine & inistry of Digital Transformation of Ukraine, 2024). According to the document, an educational institution within its own autonomy has the opportunity to choose specific digital educational platforms, online services and tools based on AI systems, but with the condition of checking them for compliance with the requirements of current legislation regarding the protection of personal data of participants in the educational process in a digital educational environment. This document applies to any generative systems, in particular those directly involved in the organization of a safe and healthy educational environment; supporting inclusiveness and individual student needs, including: speech recognition systems to assist students with hearing and speech impairments; tools for non-verbal communication with students with autism spectrum disorder (ASD); adaptive and assistive technologies to create an inclusive environment, regardless of student needs; creation of individual chatbots to advise students with SEN; art therapy practices with the help of AI systems (creation of relaxation therapeutic musical compositions, coloring pages, artistic compositions); self-learning tools that allow students to learn independently at their own pace (instruction cards); game-based learning to develop critical thinking, creativity and problem-solving skills. Such assistants do not carry the goal of "curing", but they can help the student perceive himself as a full member of society. And, just as importantly, these technologies don't have to be high-tech (Potapiuk, Dymarchuk, 2021, p. 169).

A problematic research question arises: is it acceptable to neglect individual recommendations of leading state and international institutions regarding the safe integration of AI into the educational process in conditions of partial or complete absence of alternatives proven for teaching children with SEN?

A survey was designed to facilitate the research, allowing for the collection of essential data needed for analysis. It contains 10 items related to the above problematic issue. 16 university students, 6 inclusive school teachers and 4 assistants, 4 employees of the Inclusive resource center (IRC), 11 university teachers, 1 person from an educational administration and 1 correctional teacher (psychologist, speech therapist, etc) participated. As a result of the analysis of the responses, the following percentage ratios were established (see *Table 2*).

The analysis of the obtained results gives reason to assert that the "Instructional and Methodological Guidelines on the Implementation and Use of Artificial Intelligence Technologies in Secondary Schools" (Ministry of Education and Science of Ukraine & Ministry of Digital Transformation of Ukraine, 2024) "sag" in matters of confidentiality, personal data, age restrictions and the policy of the educational institution itself. A positive trend is observed regarding the individualization of the use of AI technologies, their careful implementation and the willingness to give up in order to preserve the already existing achievements and the integrity of education.

Table 2

RESULTS OF THE SURVEY OF SCIENTIFIC AND TEACHING EMPLOYEES AND STUDENTS REGARDING THE ISSUE OF INTEGRATION OF ARTIFICIAL INTELLIGENCE IN THE INCLUSIVE EDUCATIONAL PROCESS

Yes	No	Hard to answer	Other
Are you ready to use educational technology with elements of AI to teach children with SEND, if it is developed by a Russian company?			
27,9 %	6,9 %	65,1 %	0 %
Would you use an AI technology if its terms or privacy policy were unclear or questionable?			
36,3 %	9,4 %	54,3 %	0 %
Would you consider using technology that implements AI for interpreting the surrounding environment sounds or reading text aloud, despite the fact that the machine-generated voice in Ukrainian may sound somewhat imperfect? (the primary language is English)?			
72 %	4,5 %	23,5 %	0 %
Would you sometimes overlook the use of ChatGPT for essay writing by a child with dysgraphia?			
65,1 %	16,3 %	18,6 %	0 %
The administration of the institution has tasked you with modernizing the educational process through the use of AI. However, you understand that this may be entirely ineffective for the students with SEND in your class. Would you consider using AI technology "for the sake of appearance", even if they occasionally hinder or confuse the students?			
44,1 %	34,9 %	18,6 %	2,4 % "I would contact the administration regarding the review of this norm"
Imagine that a widely popular app has emerged for the automatic facial recognition of students during testing. For the majority of the class, this does not cause discomfort; however, it may induce anxiety and stress in some children. Would you consider using the program, taking its effectiveness into account?			
6,9 %	83, 7 %	7 %	2,4 % "I would use it when such children are absent"
Would you consider purchasing an AI software at your own expense if you deemed it effective in supporting the educational development of children with SEND?			
9,4 %	67,4 %	23,2 %	0 %
Would you use an app that requires you to create an account but doesn't apply age restrictions?			
69,7 %	11,6 %	18,7 %	0 %
Would you recommend an AI technology for counseling students with SEND, even though the technical support communicates in English?			
32,7 %	13,9 %	53,4 %	0 %
Would you use a program that doesn't apply ad filtering?			
48,8 %	9,3 %	41,9 %	0 %

Discussion

This article analyses studies aimed at comparing the foreign and Ukrainian experience of integrating AI into inclusion processes, the material and technical base, state policy, ethical norms, and legislative documents. Respondents, scientific and pedagogical workers and future Master's students show cautious optimism, but the expanded institutional support and a focus on localized solutions are likely to improve outcomes in the near future. The scepticism expressed by a considerable number of general pedagogy teachers regarding the efficacy of generative assistants is not without foundation. Ukraine is merely beginning to approach the international level of the early 2000s, striving to meet fundamental needs with the assistance of advanced technology.

Conclusions

AI will never replace the teacher-student relationship, but educational generative utilities were created by educators just like us, and that is why they must be tested against internationally recognized criteria to avoid prejudice or discrimination. Thus,

people with SEN must have a seat in this matter, because otherwise, 3 % of the population being locked out of the most revolutionary technology since the advent of the personal computer. Although Ukraine has an ambitious goal of leadership among the top 50 flagship countries in the field of neural spectrum, a powerful legacy in the form of technical education, in many cases, "artificial inclusion" exists only on paper, and the opportunity to receive quality education mostly depends on traditional teaching methods. However, we do not claim that this direction is unattainable: based on our survey, average positive dynamics are better than decreasing ones. The closure of local, point cases can already be considered a success, because the result is the solution of an active problem, especially in such a sensitive area as inclusive education.

Prospects for further research involves analysing all types of difficulties in the education of students with SEN, with the identification of potential categories of disorders, the correction of which can really be affected by AI. The limited sample determines the distribution of utilities into publicly available ones and those that require additional financial costs. If their effectiveness is justified, perhaps educational institutions will include their cost when ordering the state budget.

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ІНТЕГРАЦІЯ ШТУЧНОГО ІНТЕЛЕКТУ ЯК ПЕРЕДОВОГО ЗАСОБУ НАВЧАННЯ В УКРАЇНСЬКЕ ІНКЛЮЗИВНЕ ОСВІТНЄ СЕРЕДОВИЩЕ

Штучний інтелект (ШІ) наразі є передовим освітнім інструментом, що підтверджується суттєвими доказами його ефективності у вирішенні освітніх завдань різної складності — від створення планів уроків одним натисканням миші до відтворення віртуальних екскурсій не виходячи із класу. Незважаючи на переважно монополістичні тенденції серед виробників таких асистивних технологій, очікується, що цифровий ринок незабаром насититься різноманітним набором генеративних агентів на будь-яку потребу та гаманець. Звичайно, у контексті загальної педагогіки ефективність таких змін — очевидна, однак інклюзивна освіта залишається значною мірою залежною від традиційних педагогічних підходів,

насамперед через маломобільність самої сфери. Порівняльний аналіз українського досвіду інклюзивної освіти з міжнародними стандартами показує помітний регрес з початку повномасштабного вторгнення: тим часом як провідні міжнародні ініціативи зосереджені на потенціалі штучного інтелекту для вирішення глобальних освітніх викликів, Україна, схоже, значною мірою залежить від ідейності окремих освітян. Щоб відповісти на контроверсійне питання, чи є прийнятним нехтування певними рекомендаціями провідних міжнародних установ щодо безпечної інтеграції ШІ в освітню практику — особливо за відсутності альтернативних перевірених методологій для навчання дітей з особливими освітніми потребами (ООП) — було проведено опитування за участю 43 респондентів, які залучені в інклюзивну освітню сферу. Отримані результати підтверджують, що негативне сприйняття ШІ в інклюзивному контексті є частково виправданим: освітній ландшафт України все ще розвивається хоча б до рівня міжнародних інституцій початку 2000-х років. У цій статті також висвітлюються ризики, пов'язані з необдуманим впровадженням «радикально нових технологій» у навчальні заклади без попередньої перевірки відповідності чотирьом критеріям: точності змісту програми, її вікової відповідності, використання педагогічних методів з урахуванням культурної та соціальної придатності. Незважаючи на те, що стаття переважно висловлює скептичну точку зору щодо можливості ефективної інтеграції ШІ в інклюзивний освітній процес, автори не мають наміру применшувати національні досягнення. Натомість вони виступають за знаходження нових актуальних напрямків досліджень у даній області, адже шлях України до успішної інтеграції ШІ лежить через співпрацю, вдосконалення інструментів, які розширюють можливості, а не перекривають, гарантуючи, що «штучна інклюзія» стане реальністю, а не галочкою на папері.

Ключові слова: *штучний інтелект (ШІ), штучна технологія, інклюзивна освіта, психофізіологічні порушення, особливі освітні потреби (ООП).*

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