1.5. Штучний інтелект: сутність, застосування, перспективи розвитку

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REVITALIZING MEDICAL EDUCATION IN 2ARTIME UKRAINE: AI-DRIVEN SOLUTIONS FOR KROK EXAM CHALLENGES AND QUALITY ENHANCEMENT

Abstract. The quality of higher education, particularly medical education, is a critical factor in the nation's development. In Ukraine, a declining trend in KROK exam pass rates has raised concerns regarding the effectiveness of traditional teaching and assessment methods, specially during wartime when the need of qualified physicians increases. This paper explores the potential of Artificial Intelligence (AI) powered learning platforms in diagnosing and improving the quality of medical education in Ukraine. By integrating AI-based adaptive learning systems, educational institutions can enhance assessment accuracy, provide personalized learning experiences, and ensure high-quality medical training. Additionally, global best practices in AI-driven medical education are examined to highlight potential implementations in Ukraine. The study further discusses the role of digital transformation, challenges in AI integration, and recommendations for policymakers to optimize AI adoption in higher education.

Introduction. Higher education institutions play a fundamental role in preparing professionals capable of addressing national and global challenges. In medical education, maintaining high standards is particularly important due to its direct impact on public health. In Ukraine, recent studies indicate a concerning decline in KROK exam pass rates, which are critical standardized tests assessing medical students' competencies [1, 3]. Moreover, a pattern of increased numbers of students scoring just above the passing threshold suggests possible grade inflation and inadequate knowledge retention among graduates [3]. To address these issues, it is necessary to integrate innovative diagnostic and assessment methods to improve educational outcomes and ensure the preparedness of future healthcare professionals.

Main part. The effectiveness of the KROK exams as a measure of medical students' proficiency has been questioned due to the gradual decrease in scores over the years. The traditional assessment methods heavily rely on standardized exams, which may not accurately reflect students' practical skills, especially during the during the edge situations. The COVID-19 pandemic and the ongoing war in Ukraine have disrupted educational processes, leading to irregularities in assessments and learning continuity. The lack of real-time feedback mechanisms further exacerbates the problem, as students do not receive timely interventions to address their weaknesses. AI-powered learning platforms may be a way out [2]. They offer a transformative approach to diagnosing and improving students' learning processes. Analyzing students' responses to provide immediate feedback, recommend customized learning pathways, and optimize study schedules. For instance, the Chinese application «丁香医考» (Dingxiang Medical Exam) exemplifies how AI can be utilized in medical education. This platform offers daily quizzes and personalized feedback, enabling students to monitor their progress and focus on areas requiring improvement. Such applications have demonstrated effectiveness in enhancing knowledge retention and reviewing the individual weak points before the ongoing medical licence exam. Similar systems, if implemented in Ukraine, could provide more effective assessments and interventions to ensure a stronger foundation in medical education.

The use of AI powered programs is not a groundbreaking reform in education. Using of different applications in medical education has gained traction worldwide after the COVID-19 pandemic, when education on all levels was transferred into the distant form [4]. Some of the popular models are: «DiagnosUs» (combines utilizing real patient cases with gamification techniques to improve diagnostic skills by engaging students in competitive learning environments), «Touch Surgery» (provides virtual simulations of surgical procedures, allowing medical students to practice in a risk-free environment) , «3DiTeams» (is a platform designed for medical team training that uses AI-driven simulations to enhance coordination and decision-making in clinical settings). These AI-powered educational tools have demonstrated significant improvements in knowledge retention, problem-solving skills, and overall student

performance. Their implementation in Ukraine could help mitigate the negative impact of the ongoing crisis on medical education by providing accessible, remote learning opportunities.

The process of implementing of AI-driven educational platforms in Ukraine would face several challenges, for example technological infrastructure, faculty training, models training, financial considerations, data privacy etc. While issues connected with the technological preparation and servicing of the product can be easily solved, financial and human resources issues solving may be troublesome, especially during wartime.

Despite these challenges, the potential benefits of AI in improving medical education quality are substantial. AI can facilitate continuous assessment, identify areas of weakness, and offer data-driven recommendations for both students and educators. Moreover, such learning platforms not only enable remote education, ensuring continuity in learning despite any emergency situations, but can also be used as a supportive tool during the traditional lessons.

Conclusion Ensuring the high quality of medical education in Ukraine requires the adoption of innovative assessment and learning methods. AI-powered educational platforms provide a promising solution by offering personalized learning experiences, real-time progress tracking, and targeted knowledge reinforcement. Drawing from global best practices, Ukraine can enhance its medical education system by integrating AI into the assessment and learning processes. While challenges exist, strategic investments in education reforms will lead to producing well-trained medical professionals, ultimately contributing the country's healthcare system. Addressing infrastructural gaps, faculty training, and ethical concerns will be critical to ensuring the successful implementation of AI in higher education.

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ARTIFICIAL INTELLIGENCE IN THE EDUCATIONAL PROCESS: NEW OPPORTUNITIES AND RISKS

Today, artificial intelligence is actively asserting itself in the new digital educational reality, in which the teacher faces not just changes, but many professional risks related not only to the role, but also to the essence of the learning process. The teacher's mission, which for centuries was built on the transfer of knowledge, social skills, inspiration and motivation to his students, is collapsing under the onslaught of a machine algorithm. Adepts of digital education promise comfort, individual approach, versatility of information, and even mental and psychological comfort. The traditional duties of a teacher: to explain, guide, inspire - are already being transferred to AI [7]. The teacher in this digital world remains aloof, in this case he is transformed into the role of a tutor as a digital observer of the world of machines. From the main conductor