



<https://doi.org/10.70728/c.series.ped.v08.i08.078>

USING ARTIFICIAL INTELLIGENCE TOOLS TO IMPROVE STUDENTS' INDEPENDENT LEARNING SKILLS

Akramova Kumushxom Akram qizi

*Teacher of Academic Lyceum of
Westminster International University*

Annotation. This article analyzes the issue of developing students' independent learning skills through the use of artificial intelligence (AI) tools in the educational process. The study highlights the potential of artificial intelligence technologies in developing students' independent thinking, learning motivation, information search, time management, self-control, and critical thinking skills. Along with the advantages of using AI tools, it also examines problems such as excessive reliance on ready-made answers, academic dishonesty, and unreliable information. The results of the study show that the pedagogical and responsible use of artificial intelligence can improve the effectiveness of students' independent learning.

Keywords: artificial intelligence, AI tools, independent learning, independent learning, students, digital education, learning motivation, critical thinking, self-control, individual learning.

Annotatsiya. Mazkur maqolada sun'iy intellekt (AI) vositalaridan ta'lim jarayonida foydalanish orqali talabalarning mustaqil ta'lim olish ko'nikmalarini rivojlantirish masalasi tahlil qilinadi. Tadqiqotda sun'iy intellekt texnologiyalarining talabalarning mustaqil fikrlashi, o'quv motivatsiyasi, axborot izlash, vaqtni boshqarish, o'z-o'zini nazorat qilish va tanqidiy fikrlash ko'nikmalarini shakllantirishdagi imkoniyatlari yoritilgan. Shuningdek, AI vositalaridan foydalanishning afzalliklari bilan bir qatorda, tayyor javoblarga haddan tashqari tayanish, akademik halollik va ishonchsiz axborot kabi muammolar ham ko'rib chiqilgan. Tadqiqot natijalari sun'iy intellektdan pedagogik va mas'uliyatli foydalanish talabalarning mustaqil ta'lim samaradorligini oshirishga xizmat qilishini oko'rsatadi.

Kalit so'zlar: sun'iy intellekt, AI vositalari, mustaqil ta'lim, mustaqil o'rganish, talabalar, raqamli ta'lim, o'quv motivatsiyasi, tanqidiy fikrlash, o'z-o'zini nazorat qilish, individual ta'lim.

Аннотация. В данной статье анализируется проблема развития у студентов навыков самостоятельного обучения с помощью инструментов искусственного интеллекта (ИИ) в образовательном процессе. Исследование подчеркивает потенциал технологий искусственного интеллекта в развитии у студентов навыков самостоятельного мышления, мотивации к обучению, поиска информации, управления

временем, самоконтроля и критического мышления. Наряду с преимуществами использования инструментов ИИ, рассматриваются также такие проблемы, как чрезмерная зависимость от готовых ответов, академическая нечестность и недостоверная информация. Результаты исследования показывают, что педагогическое и ответственное использование искусственного интеллекта может повысить эффективность самостоятельного обучения студентов.

Ключевые слова: искусственный интеллект, инструменты ИИ, самостоятельное обучение, самостоятельная работа, студенты, цифровое образование, мотивация к обучению, критическое мышление, самоконтроль, индивидуальное обучение.

INTRODUCTION. The rapid development of artificial intelligence (AI) has significantly transformed the educational landscape, creating new opportunities for improving teaching and learning processes. In recent years, AI-powered tools have become increasingly accessible to students, providing personalized learning experiences, instant feedback, adaptive learning materials, and opportunities for independent study. These technologies can support students not only in acquiring academic knowledge but also in developing essential skills for autonomous and lifelong learning. Independent learning is an important component of modern education because it encourages students to take responsibility for their own learning process. It involves such skills as setting learning goals, planning and organizing study activities, searching for and evaluating information, monitoring progress, solving problems independently, and reflecting on learning outcomes. However, many students experience difficulties in developing these skills due to limited motivation, insufficient time-management abilities, lack of appropriate learning strategies, and dependence on teacher guidance. The integration of artificial intelligence tools into education can help address some of these challenges. AI-based applications such as intelligent tutoring systems, AI chatbots, automated feedback platforms, adaptive learning environments, and personalized educational applications can provide students with immediate assistance and learning resources according to their individual needs. For example, AI tools can explain complex concepts, generate practice exercises, identify learning gaps, provide feedback on written work, and recommend additional resources. As a result, students can have greater control over the pace, content, and organization of their learning.

Literature review. At the same time, the use of AI in education requires a balanced and responsible approach. Excessive dependence on AI-generated information may reduce students' critical thinking, creativity, and ability to solve problems independently. Therefore, AI tools should not replace students' own intellectual efforts but should function as supportive instruments that encourage active participation and self-regulated learning. Developing students' ability to critically evaluate AI-generated content is also essential in the contemporary educational environment. The relevance of this study is determined by the growing importance of independent learning skills and the increasing use of artificial intelligence in education. Understanding how AI tools can effectively support students' autonomy, motivation, self-regulation, and academic development is particularly important

for improving the quality of modern education. Therefore, this study focuses on the use of artificial intelligence tools to improve students' independent learning skills. It examines the potential of AI technologies to support self-directed learning, enhance students' motivation and engagement, facilitate personalized learning, and develop their ability to manage and evaluate their own educational activities.

Research methodology. The rapid introduction of artificial intelligence (AI) technologies into the educational process is significantly expanding the opportunities for students to organize and develop independent learning activities. In the traditional education model, students often rely on materials, textbooks, and classroom exercises provided by the teacher. Artificial intelligence tools, on the other hand, allow for further individualization of the educational process, adaptation to the needs of the student, and strengthening independent activity. Independent learning refers to the process of a student independently forming his or her knowledge and skills, setting learning goals, searching for and analyzing the necessary information, planning his or her activities, and evaluating the results. In this process, the student's activity, responsibility, motivation, and ability to self-control are of great importance. From this point of view, artificial intelligence tools can be considered as a modern pedagogical tool that increases the effectiveness of independent learning. One of the main advantages of AI tools is the ability to provide an individual approach. Each student has a different level of knowledge, learning speed, and needs. In a traditional classroom setting, it is not always possible for a teacher to provide an individual approach to each student. AI-based platforms can create an individual learning environment by providing appropriate answers to student questions, simplifying the topic, providing additional examples, and offering exercises. Artificial intelligence can also develop students' information search skills. The student will be able to formulate a question on a specific topic, search for the necessary information, compare it with different sources, and form their own conclusions. In this case, using an AI tool alone is not enough. The student must check the reliability of the information received, compare it with scientific sources, and critically evaluate the available information. Another important aspect of AI technologies is the ability to provide instant feedback. In the process of independent learning, it is important for the student to immediately know whether the task he completed is correct or incorrect. AI tools can provide quick recommendations on text, grammar, logical structure, problem solving, or other types of tasks. Such feedback helps to identify student errors, understand their causes, and improve their further performance.

Analysis of the results. Artificial intelligence (AI) tools have significant potential for improving the process of learning foreign languages and supporting students' independent learning. The rapid development of AI technologies has created new opportunities for students to practice language skills, receive immediate feedback, access personalized learning materials, and communicate in realistic situations. Unlike traditional learning methods, which often depend heavily on the teacher, classroom time, and available learning resources, AI-based tools allow students to continue their learning activities independently at any convenient time and place. Therefore, the integration of artificial intelligence into foreign language education can contribute to the development of communicative

competence, motivation, self-confidence, and autonomous learning skills. One of the most important advantages of artificial intelligence in foreign language learning is the opportunity to communicate with AI systems. Students can use AI-powered applications to practice conversations in English or another foreign language without requiring a teacher or a language partner. For example, an AI tool can simulate conversations in everyday situations such as introducing oneself, ordering food at a restaurant, asking for directions, participating in a job interview, communicating with colleagues, or discussing academic topics. Such simulations provide students with opportunities to practice vocabulary, grammar, pronunciation, and communication strategies in a relatively comfortable environment. Students can repeat the same activity several times until they feel confident enough to communicate independently.

AI tools are also particularly useful for vocabulary development. When students encounter unfamiliar words in texts, conversations, or learning materials, they can ask an AI system to explain their meanings, provide synonyms and antonyms, give examples, and translate them into their native language. More importantly, AI can explain the use of a word according to the context in which it appears. This is valuable because learning vocabulary only through direct translation may not always enable students to understand how a particular word is naturally used. AI can provide contextual examples and create short exercises that help students consolidate newly learned vocabulary. As a result, students can develop their vocabulary more systematically and independently. Another important function of AI is its ability to explain grammatical rules. Foreign language grammar can be difficult for many students because it involves numerous rules, exceptions, and contextual differences. Students can ask AI to explain a particular grammatical structure in simple language, compare two similar structures, or provide additional examples. For instance, learners studying English can request explanations of tense differences, modal verbs, conditional sentences, passive voice, articles, prepositions, and other grammatical topics. AI can adapt its explanation according to the learner's level of proficiency. A beginner may receive a simple explanation with basic examples, while an advanced learner can receive a more detailed linguistic analysis. This personalization makes grammar learning more accessible and effective. Artificial intelligence can also support students in developing writing skills. Students can submit essays, paragraphs, emails, reports, or other written assignments to an AI tool and request feedback on grammar, vocabulary, sentence structure, coherence, and organization. AI can identify errors and explain why they are incorrect. It can also suggest alternative expressions and help students improve the academic quality of their writing. However, students should not simply copy AI-generated corrections. Instead, they should carefully examine the feedback, understand the reasons for their mistakes, and apply the acquired knowledge to future writing tasks. In this way, AI can function as a learning assistant rather than a replacement for the learner's own thinking. The use of AI can have a particularly positive influence on communicative competence. Communicative competence involves not only knowledge of grammar and vocabulary but also the ability to use language appropriately in different social and professional contexts. AI tools can create various communicative scenarios that reflect real-life situations. Students can practice formal and informal

communication, academic discussions, presentations, interviews, negotiations, and everyday conversations. Through repeated practice, learners can become more comfortable using the foreign language and gradually overcome fear of making mistakes. This is especially important for students who are reluctant to speak in front of their classmates. Another major advantage of AI-supported learning is immediate feedback. In traditional classroom environments, students may have to wait until the teacher checks their work before they know whether their answers are correct. AI tools can provide responses almost immediately. This allows students to identify mistakes and correct them while the learning material is still fresh in their memory. Immediate feedback can increase learning efficiency because students can understand their weaknesses and focus on areas that require additional practice. Artificial intelligence can also positively affect student motivation. Motivation is one of the key factors determining the success of foreign language learning. If students find learning activities repetitive or excessively difficult, their interest may decrease. AI-based tools can make learning more interactive by providing personalized exercises, quizzes, conversations, games, examples, and recommendations. Students can select topics that correspond to their interests and learning goals. For example, a student interested in business can practice business English, while another student interested in tourism can learn vocabulary and expressions related to travelling. Such personalization can make the learning process more meaningful and engaging. Individualized learning is another important contribution of AI technologies. Students in the same classroom may have significantly different levels of language proficiency. Some learners may have strong grammatical knowledge but weak speaking skills, while others may communicate effectively but have limited vocabulary. A traditional lesson may not always provide sufficient time to address each student's individual needs. AI systems, however, can generate tasks according to a learner's level, identify areas of difficulty, and recommend appropriate learning activities. Consequently, students can follow a more personalized learning pathway.

The use of artificial intelligence can also increase students' self-confidence. When learners practice independently with AI, they can make mistakes without feeling embarrassed in front of classmates. They can repeat an exercise, ask the same question several times, and request simpler explanations whenever necessary. This creates a low-pressure learning environment. As students gradually improve their performance, they may become more confident in their ability to use the foreign language. Increased self-confidence can subsequently encourage them to participate more actively in classroom discussions and real-life communication. AI technologies are also closely connected with the development of learner autonomy. Learner autonomy refers to the ability of students to take responsibility for their own learning process. An autonomous learner can identify personal learning needs, establish goals, select appropriate resources, monitor progress, and evaluate learning outcomes. AI tools can support each of these stages. Students can ask AI to help them identify their weaknesses, recommend learning materials, create practice activities, and evaluate their progress. Therefore, AI can encourage learners to become more responsible and active participants in their education. Another significant area in which artificial intelligence can assist students is time management. Effective time management is essential

for successful independent learning because students often have to combine academic studies with other responsibilities. AI can help learners divide large learning tasks into smaller and more manageable stages. For example, a student preparing for a foreign language examination can ask an AI tool to create a weekly learning schedule that includes vocabulary practice, grammar revision, reading, listening, speaking, and writing activities. This approach allows students to distribute their workload and avoid completing all tasks immediately before an examination. AI can also help students create daily study plans. A learner may specify the amount of time available each day and the topics that need to be studied. Based on this information, AI can suggest an appropriate sequence of activities. For example, a 60-minute study session can be divided into vocabulary revision, grammar practice, listening exercises, and speaking practice. Such structured planning can help students use their available time more efficiently. Furthermore, AI can assist learners in developing revision schedules for specific topics and returning to previously studied material at appropriate intervals.

The development of systematic learning habits is particularly important for independent learners. Without a clear plan, students may study irregularly and focus only on topics they find interesting or easy. AI-generated learning schedules can encourage students to maintain consistency and balance different language skills. Regular practice is essential for long-term language development because foreign language proficiency cannot usually be achieved through occasional study. Therefore, AI can serve as a digital learning assistant that helps students maintain regularity and discipline. In addition to planning, AI can support self-assessment. Students can ask AI to create tests, quizzes, vocabulary exercises, grammar questions, or speaking prompts based on their current level. After completing these activities, learners can review their mistakes and determine which areas require additional attention. This process develops students' ability to monitor their own progress. Self-assessment is an important component of autonomous learning because students become more aware of their strengths and weaknesses.

AI can also facilitate differentiated learning. Students with different proficiency levels can receive different tasks related to the same topic. For example, a beginner learner may receive simple vocabulary exercises and short sentences, whereas an intermediate learner may work with longer texts and more complex grammatical structures. Advanced learners can be given analytical tasks, debates, academic writing activities, or professional communication scenarios. This flexibility makes AI especially useful in diverse educational environments. Despite its numerous advantages, the use of artificial intelligence in foreign language education should be approached responsibly. AI should not completely replace teachers or students' independent intellectual work. Teachers remain essential for providing pedagogical guidance, emotional support, assessment, and professional expertise. AI should instead be viewed as an additional educational resource that complements traditional teaching methods. Students should also learn to evaluate AI-generated information critically because AI systems may sometimes provide inaccurate, incomplete, or contextually inappropriate answers.

Another important issue is academic integrity. Students may be tempted to use AI to complete assignments without making their own intellectual contribution. Such practices can reduce the development of critical thinking, creativity, writing ability, and independent learning skills. Therefore, AI should be used primarily as a support mechanism for brainstorming, practicing, receiving feedback, and improving existing knowledge. Students should remain responsible for the final content of their academic work. Artificial intelligence tools offer substantial opportunities for improving foreign language learning and developing students' independent learning skills. AI enables learners to communicate with virtual partners, expand vocabulary, understand grammatical rules, improve writing, practice real-life communication, receive immediate feedback, and access personalized learning materials. At the same time, AI can strengthen motivation, self-confidence, learner autonomy, time management, self-assessment, and systematic study habits. By helping students create daily and weekly plans, divide complex tasks into manageable stages, and organize revision schedules, AI contributes to more structured and effective independent learning. However, its successful implementation requires responsible use, critical thinking, academic integrity, and appropriate teacher guidance. When used strategically, artificial intelligence can become a powerful educational assistant that supports students in becoming more confident, motivated, autonomous, and effective foreign language learners.

Discussion. One of the important components of independent learning is self-assessment. Through AI tools, students can check their knowledge using tests, questions and answers, and practical tasks. By analyzing the results, the student determines which topics he has mastered well and in which areas he needs to work on further. This serves the development of metacognitive skills. However, along with the possibilities of AI technologies in education, there are also certain limitations and risks. One of the most important problems is that the student becomes too attached to ready-made answers. If a student fully accepts the answer given by AI instead of completing the task independently, his independent thinking and problem-solving skills may not be sufficiently developed. In addition, the information provided by AI tools may in some cases be incorrect, outdated, or insufficiently substantiated. Therefore, it is important to form AI literacy in students. The student should accept the information received from artificial intelligence not as the final truth, but as an additional source of information and verify it based on reliable scientific sources. Another important issue is academic integrity. Creating an independent work, essay, article, or assignment completely with the help of AI may not reflect the student's real knowledge and skills. Therefore, the rules for using AI tools in the educational process should be clearly defined. Students should also demonstrate their independent analysis, opinions, and conclusions while using AI. The role of the teacher also changes in this process. The teacher acts not only as a provider of knowledge, but also as a mentor who organizes, directs and controls the educational process. He should teach students how to effectively use AI tools, ask the right questions, verify the information received and use them for academic purposes. In general, the purposeful and pedagogically based use of artificial intelligence tools creates a great opportunity for the development of students' independent learning competencies. AI can support the development of skills such as individual learning,

rapid feedback, information search, self-assessment, time management and problem solving. At the same time, its effectiveness depends not on the technology itself, but on how and for what purpose it is used. Therefore, in the modern higher education system, it is advisable to use artificial intelligence not as a substitute for independent learning, but as a technological tool that supports the student's intellectual activity, stimulates his independent thinking and self-development. This approach serves to improve the quality of education, enhance the academic engagement of students, and provide them with competencies that meet the requirements of the modern labor market.

Conclusion. The effective use of artificial intelligence tools in the educational process creates broad opportunities for the development of students' independent learning skills. AI technologies provide practical assistance to students in independently mastering educational materials, searching for the necessary information, understanding complex topics, completing assignments, identifying errors, and assessing their own knowledge. The analysis shows that the use of artificial intelligence can have a positive impact on the development of students' independent thinking, learning motivation, self-control, time management, problem-solving, and critical thinking skills. In particular, individual learning opportunities help organize learning activities in accordance with the student's level of knowledge and needs. At the same time, the use of AI tools also creates some problems. Excessive reliance on ready-made answers by students can lead to a decrease in independent thinking and creative approaches. In addition, it is important to verify the information provided by artificial intelligence, ensure academic integrity, and form a personal opinion.

Therefore, in the process of using AI tools, the active participation of the student and independent intellectual activity should be a priority. The teacher should participate as a subject providing methodological guidance and supervising the correct use of AI technologies. In general, artificial intelligence should not be considered as a replacement for the educational process, but as a tool that improves and supports it. The pedagogically correct and responsible use of AI technologies serves to develop students' independent learning competencies, increase educational efficiency, and prepare competitive specialists with modern knowledge and skills.

References:

1. Luckin R., Holmes W., Griffiths M., Forcier L. B. *Intelligence Unleashed: An Argument for AI in Education*. — London : Pearson, 2016.
2. Zawacki-Richter O., Marín V. I., Bond M., Gouverneur F. Systematic review of research on artificial intelligence applications in higher education – where are the educators? // *International Journal of Educational Technology in Higher Education*. — 2019. — Vol. 16. — Article 39.
3. Kasneci E., Sessler K., Küchemann S. et al. ChatGPT for good? On opportunities and challenges of large language models for education // *Learning and Individual Differences*. — 2023. — Vol. 103. — Article 102274.

4. Tlili A., Shehata B., Adarkwah M. A. et al. What if the devil is my guardian angel: ChatGPT as a case study of using chatbots in education // Smart Learning Environments. — 2023. — Vol. 10. — Article 15.
5. Cotton D. R. E., Cotton P. A., Shipway J. R. Chatting and cheating? Ensuring academic integrity in the era of ChatGPT // Innovations in Education and Teaching International. — 2024. — Vol. 61, No. 2. — P. 228–239.
6. Zimmerman B. J. Becoming a self-regulated learner: An overview // Theory Into Practice. — 2002. — Vol. 41, No. 2. — P. 64–70.
7. Pintrich P. R. The role of goal orientation in self-regulated learning // In: Boekaerts M., Pintrich P. R., Zeidner M. (eds.). Handbook of Self-Regulation. — San Diego : Academic Press, 2000. — P. 451–502.
8. Bandura A. Self-Efficacy: The Exercise of Control. — New York : W. H. Freeman and Company, 1997. — 604 p.
9. Siemens G. Connectivism: A learning theory for the digital age // International Journal of Instructional Technology and Distance Learning. — 2005. — Vol. 2, No. 1. — P. 3–10.
10. Selwyn N. Should Robots Replace Teachers? AI and the Future of Education. — Cambridge : Polity Press, 2019. — 192 p.
11. Williamson B., Eynon R. Historical threads, missing links, and future directions in AI in education // Learning, Media and Technology. — 2020. — Vol. 45, No. 3. — P. 223–235.
12. World Economic Forum. The Future of Jobs Report 2023. — Geneva : World Economic Forum, 2023. — 296 p..