



THE IMPACT OF AI IN EDUCATION

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Annotation: This article discusses the role of Artificial Intelligence in modern life and its impact on education. It explains both the positive and negative sides of AI by using different research studies and academic sources.

The article describes several advantages of AI, such as developing critical thinking skills, supporting self-study and independent learning, and providing fast and accurate translation. AI also helps students learn more effectively by offering personalized materials and saving time in completing tasks.

However, the article also points out some disadvantages. For example, students may become too dependent on AI and use it to complete academic tasks instead of working independently. This can reduce creativity, responsibility, and problem-solving skills.

Key words: fostering critical thinking, academic cheating, integration AI with education, addiction of AI, personal privacy.

Annotatsiya: Ushbu maqola Artificial Intelligence ning zamonaviy hayotdagi o'rni va ta'lim jarayoniga ta'sirini muhokama qiladi. Unda AI ning ijobiy va salbiy tomonlari turli ilmiy tadqiqotlar va akademik manbalarga asoslanib tushuntiriladi.

Maqolada AI ning bir qancha afzalliklari keltiriladi, masalan, tanqidiy fikrlashni rivojlantirish, mustaqil o'rganishni qo'llab-quvvatlash hamda tez va aniq tarjima qilish imkoniyati. Shuningdek, AI o'quvchilarga shaxsiylashtirilgan materiallar taqdim etish va vazifalarni bajarishda vaqtni tejash orqali samarali o'rganishga yordam beradi.

Biroq, maqolada ayrim kamchiliklar ham ko'rsatib o'tiladi. Masalan, o'quvchilar AI ga haddan tashqari bog'lanib qolishi va mustaqil ishlash o'rniga akademik vazifalarni AI orqali bajarishi mumkin. Bu esa ijodkorlik, mas'uliyat va muammolarni hal qilish ko'nikmalarining pasayishiga olib kelishi mumkin.





Kalit so'zlar: tanqidiy fikrlashni rivojlantirish, akademik firibgarlik (yoki akademik aldov), sun'iy intellektni ta'lim bilan integratsiyalash, sun'iy intellektga qaramlik, shaxsiy maxfiylik.

Аннотация: В этой статье рассматривается роль Искусственный интеллект в современной жизни и её влияние на образовательный процесс. Обсуждаются как положительные, так и отрицательные стороны искусственного интеллекта на основе различных исследований и академических источников.

В статье выделяются несколько преимуществ ИИ, таких как развитие критического мышления, поддержка самостоятельного обучения и быстрая и точная переводческая помощь. ИИ также помогает студентам учиться более эффективно, предоставляя персонализированные материалы и экономя время при выполнении заданий.

В то же время обсуждаются некоторые недостатки ИИ. Например, студенты могут стать слишком зависимыми от ИИ и использовать его для выполнения академических заданий вместо самостоятельной работы. Это может снизить креативность, ответственность и навыки решения проблем.

Ключевые слова: развитие критического мышления, академическое мошенничество, интеграция искусственного интеллекта с образованием, зависимость от искусственного интеллекта, личная конфиденциальность.

Introduction

In the 21st century, society has been surrounded by technology from all sides and new tools are emerging. In particular, the most popular technology today is Artificial Intelligence. The younger generation, which quickly adapts and accepts innovations, uses it more. It also has a great impact on their learning process. Nowadays, there are also interconnections between AI and education. This has posed a number of challenges for the education system. [1] There have been opinions about whether to integrate AI with education or to restrict it more. Of course, the use of AI in education may have many benefits, but it also creates a number of problems.

Main part

A study on the impact of AI on education published in Computers and Education[6] surveyed teachers at the University of Adelaide in Australia. According to it, almost all of them use AI for their own purposes. It also found that students do not use AI as much as professors think. There are two main factors





that have led to the widespread popularity of AI: 1) the emergence of chatbots, and 2) the expansion of distance learning due to the Covid-19 pandemic, which has led to the rapid spread of AI. It is in such conditions that universities need to create opportunities for students to effectively use modern technologies. They cannot completely ban them from AI. They only need to widely promote the correct, conscious and useful methods of its use. However, the biggest threat that artificial intelligence poses to the educational process is academic fraud. There are concerns about this. Students and masters who rely on it and copy it directly when performing various academic tasks, essays, articles and scientific works do not contribute to the development of science. On the contrary, it leads to a decrease in the necessary abilities and skills such as creativity, writing, analysis, and reasoning that students have. Of course, in such a situation, using opportunities such as asking for ideas for the work to be done, quickly translating relevant articles and books, and commenting on them will save the student's time and, having familiarized himself with more information, he will be able to give broader, more detailed ideas in his article, scientific research or any task.

Therefore, universities are required to strengthen the anti-plagiarism system and ensure intellectual property rights. This will ensure transparency in education and help students work effectively on themselves. Another worrying aspect is that AI can provide false information to a certain question, create and convince text hallucinations, and give answers that are logically close to the truth. If students and students trust this and do not thoroughly check the information, it weakens their critical thinking skills. However, if a student can look at this information with scepticism, it can also develop critical and logical thinking skills. In this case, the student must logically consider which of the given information is correct and check the information. However, direct trust, indifference, and failure to thoroughly analyze the information also seriously undermine the potential for scientific research.

Secondly, we can see that on the schoolnews website, AI has taken a firm position with confidence that the impact of AI on education will be positive, and it has proven this through several real-life examples. If we take into account the class division between people, the introduction of AI into the education system is considered the most appropriate choice, since the lower classes do not have enough money to send their children to extracurricular activities. AI can be one of the best options for self-study. First of all, it is free for everyone. As a result of using AI, a person will be much more productive than before, because they do not need to spend a lot of resources and time to find information, as before. AI will





instantly extract any information. Also, for example, a person who wants to read a book can give a brief review of how interesting this book is and what information it contains. This will lead to an increase in the quality of the choice. AI also amazes a person by offering high resources for learning and providing strong feedback on the written work. Through this use, learning outcomes can be significantly improved. The reason is that the efficiency coefficient is much higher than before. AI can also be used as an effective assistant in time-consuming tasks in teaching or scientific work. For example, at Stanford University, AI is widely used in developing ideas, preparing presentations, especially on the gamma platform. The important thing is to explain and deliver science by the professor, and the presentation is an auxiliary tool for students to better understand and for the teacher to systematically cover the topic and deliver his thoughts sequentially. When writing a synopsis or plan, AI can also be a good assistant. The results of the study show that students and professors can save 40% of their time. True, there are times when this is not allowed, such as during exams, individual written assignments, and independent thinking. However, with proper use, time can be saved and efficiency can be achieved. It is precisely because of the widespread and harmonious use of artificial intelligence and modern technologies that Stanford University occupies top positions in the world in terms of the quality and prestige of education.

There are also opportunities for independent learning from AI.[5] That is, as a result of communication with the user, AI can provide materials for independent study based on the person's personal characteristics and interests through information collected about him over a certain period of time. It can make difficult-to-understand topics simpler, more fluent, and more understandable. However, there are also strong counter-arguments to this. A person may lose the opportunity to develop his communication skills as a result of studying alone. Also, even if a person is a university student, despite the wide social opportunities available to him, he/she will increasingly rely on AI to learn something or ask for information that he/she does not understand. He/She can even conduct personal conversations. This, in turn, may prevent him from becoming a good specialist in the future and may prevent him from getting a high-paying job. Or it may even make the process of finding a job more difficult. Because in almost all companies, interaction, corporate cooperation, and communication between employees are considered a must. The next negative side is that as a person asks too much information from AI, he may become addicted to AI and sometimes may not be able to make any decisions independently without it. Also, AI cannot always give





an accurate answer and sometimes gives incorrect information. That is, it gives an unrealistic answer that is very close to the given question. This is an AI hallucination. This, in turn, leads to the formation of incorrect knowledge. The study in the Academy AI publication above discussed academic fraud. We can also see other scientific studies in this regard. Because currently the most common problem in education is Academic cheating. In scientific articles and studies published on the websites of MDPI and Eurasian Research Institute, they come to the conclusion that AI is eroding the education system. The reason is that students are copying ready-made writings and presentation information. This shows in practice that it can have a very negative impact on the quality of education.

According to data conducted in Bucharest, in 2023,[2] the use of AI by students reached 27%, but this is only the beginning. Currently, almost 90% of people in the world have used AI at least once. The average usage among students is 50-70% per week, while among professors and teachers it is 30-50%, with professors and teachers using AI mainly for presentations and articles. According to another survey, 78% of teachers believe that professors should be given training in the effective and correct use of artificial intelligence. That is, it is considered important to conduct training with artificial intelligence experts, learn how to ask them questions to get accurate answers, how to get better work samples from artificial intelligence, and learn how to use AI effectively. Actively conducting such training with students provides even better opportunities. Even taking classes on how to use AI will increase knowledge and make it more effective in working with it. At the same time, when working with Artificial Intelligence, we directly work with data. Of course, AI systems also collect a large amount of personal data from students or users: name, age, phone number, academic results, online activities and behaviour. If this data is not stored securely or is transferred to another person without permission, it will lead to a violation of privacy. In particular, the dangerous side is that data leaks cannot be avoided. This risk also exists. It can even be hacked by hackers. Data security cannot be said to be strong.

In a study published in Information Management and Business Review, [4] corresponding author Hairunnisa Ma'amor proposed the use of AI in collaboration with education. The results of the study provided clear information about the role of AI (artificial intelligence) and students in the learning process. When analyzing various hypotheses, the following result was observed: the first hypothesis was accepted as correct and effective (H1), that is, AI increases students' active participation in the learning process. This means that by





introducing AI into the learning process, students will be more active in classes, have a better understanding of the topics and be more involved in the learning process. The third hypothesis was also accepted as a good way (H3), that is, AI helps improve students' academic performance. Students will be able to search for information, strengthen their understanding, and simplify complex topics with the help of AI, which was observed to show higher results in tests, assignments, and other assessments. Low-learning students feel safer and more confident. The results of the study at the same time, it was found that learning efficiency increased significantly compared to traditional methods.

The second hypothesis [4] (H2) put forward during the study was rejected. Hypothesis 2 was that AI can provide a fully personalized curriculum and effective learning through it. AI systems currently used in the educational process are not able to provide students with a fully personalized learning experience. This means that while AI can provide students with learning materials that are tailored to them, current technologies do not sufficiently take into account the unique learning style, level of knowledge, interests, and learning speed of each student. For example, one student may prefer to learn visually, while another understands better through practical exercises; AI systems cannot yet perfectly identify these individual differences. Also, the needs and abilities of some students differ significantly from those of others. AI systems often offer solutions tailored to the general or average student level, which limits the possibility of truly personalized learning. As a result, the observed results of AI on individual learning experiences are not clear or significant, meaning that current systems do not work equally effectively for all students.

Conclusion

In conclusion, it can be said that the integration of AI and education can be effective and beneficial. Universities are recommended to introduce AI into the teaching process, assignments and assessment methods, create additional learning opportunities for students using AI, and develop special strategies and modules that make the learning process more effective. In addition, conducting seminars with experts in this field to work with artificial intelligence qualitatively and correctly will also lead to the development of skills about AI. In addition, it can be used as an assistant in assessing student work. It is advisable to strengthen anti-plagiarism systems in the assessment process. In short, it is necessary to integrate AI with education. It is important to use it effectively and ensure balance. This will certainly lead to an increase in the quality of education and the formation of qualified specialists from universities.





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