JOURNAL OF INNOVATIONS IN SOCIAL SCIENCES
www.sciencebox.uz
Volume: 03 Issue: 05 | May - 2023
ISSN: 2181-2594

APPLICATION OF MODERN TECHNOLOGIES AND ARTIFICIAL INTELLIGENCE IN EDUCATION AND ITS FUTURE

Khatamova Zumrad Nazirjonovna
Fergana Polytechnic Institute, Senior Lecturer of the "Social Sciences and Sports" Department, PhD in History
Abdukadirov Alisher Abduvaxitovich
Fergana Polytechnic Institute, master of degree, M7-22a group

Abstract: The article discusses the application of artificial intelligence in modern education as a teacher, in production, problem-solving that occurs in the process of teaching based on pedagogical skills and new pedagogical technology.

Keywords: Teacher, education, artificial intelligence, process, machinery.

Recently, the use of artificial intelligence (AI) has become more and more widespread in various areas of our lives, including medicine, finance, banking and business, engineering, aviation, and even including education [1.118p.].

With the advent of new technologies such as cloud computing, big data (Big Data), and deep learning (Deep Learning), educational institutions receive unique opportunities for integrating AI into the educational process [2.1.54p.].

The use of artificial intelligence in education can lead to a significant improvement in the quality of education, including more personalized learning, more effective learning processes, and the development of critical thinking and creative expression in students, both students, and schoolboys.

In this article, we will look at various aspects of the use of AI in education, discuss its advantages and disadvantages, and consider possible strategies for integrating AI into the learning process. Our goal is not only to review the current state of the use of AI in education but also to provide recommendations and solutions for the effective use of this technology in the future.

One of the main advantages of using artificial intelligence in education is the ability to personalize the learning process: With the help of artificial intelligence algorithms, it is possible to analyze student data, identify individual needs and teach the material in accordance with the level of knowledge, skills and abilities of each student. This allows students to study more effectively, speeds up their progress and reduces their learning time.

The use of artificial intelligence in education can also help organize the learning process. It can be used to automate administrative tasks such as class scheduling, resource management, and budgeting. This reduces the burden on administrators and faculty, allowing them to focus on their primary task of teaching students.

Another successful example of the use of artificial intelligence in education is the Smart Sparrow system [3.1.7p.]. It is a cloud-based AI-powered adaptive learning platform that personalizes the

Volume: 03 Issue: 05 | May - 2023
ISSN: 2181-2594

learning experience. Smart Sparrow makes learning more efficient by creating interactive learning materials that adapt to the student's level of knowledge.

Another significant benefit of applying AI in education is the customization of learning: AI will evaluate each student's behavior and learning circumstances, determining their abilities and constraints, and then creating personalized learning programs that best suit the needs of each student. This results in more efficient learning and higher academic success.

AI may also be applied to evaluate data and discover educational patterns. He can, for example, evaluate what approaches to teaching are the most successful, which subjects are the most challenging for pupils, and which study programs are in high demand in the labor market. This data may be utilized to improve training programs and the overall quality of education.

Other applications of AI in education include the creation of intelligent teachers and educational robots: Individual students can be worked with by AI-powered tutors, who can assess their learning progress and develop personalised learning materials and tasks. Medical and engineering skills, for example, demand a high degree of accuracy and repeatability, which educational robots may assist educate.

Artificial intelligence based on current midterm and other grades can also be used to automatically grade courses and tests. This can significantly reduce the time teachers spend on proofreading and reduce the chance of errors. In addition, automatic grading can provide students with quick feedback, motivating them to study further and achieve better results. One simple example is the HEMIS system, which was launched at the end of 2021 in universities in Uzbekistan. "HEMIS" is an information system for managing the processes of higher education, which will allow the transfer of administrative, educational, scientific and financial areas into electronic format. It is also an e-education information system that provides its services to automate the main activities of higher educational institutions. which is aimed at improving the quality of education and increasing the efficiency of the work of administrative staff, faculty and students.

Student performance may also be forecast via artificial intelligence. Algorithms based on machine learning can examine student performance data to determine the elements that have the greatest influence on student achievement. Based on this knowledge, solutions for improving academic achievement, such as extracurricular activities or individual tutoring can be established. AI may also assist teachers in tailoring instructional materials to individual pupil need to offer personalized educational opportunities.

However, as in other areas, there are risks and concerns associated with the use of AI in education. For example, automated evaluation of student work may not always be fair, and personalized learning approaches can exacerbate student segregation based on various criteria such as race or status.

There are also concerns about student data privacy when artificial intelligence is used to analyze and store large amounts of personal data. It is important to take appropriate security measures and keep a close eye on the protection of student data.

Overall, the use of AI in education has the potential to significantly improve the quality of education and learning outcomes. However, as in other areas, risks and limitations must be considered. For example, it is important not to forget the importance of interpersonal and social interaction in learning: The use of AI should not replace the teacher and interpersonal communication in the learning process, but rather complement it and make it more effective.

Volume: 03 Issue: 05 | May - 2023
ISSN: 2181-2594

With the development of technology and artificial intelligence (AI), there are more and more questions about how this can affect our lives and the educational system in particular. One of the most interesting and complex issues is the possibility of replacing teachers with robots and the use of AI as educators. In this article, we will explore this topic and analyze all its aspects.

Can a robot (with AI integration) become a teacher?

Let us first consider the possibility of replacing teachers with robots. Robots are already successfully applied in various fields, and education is no exception. The use of robots as educators can lead to a number of benefits.

- Firstly, robots do not get tired and do not lose patience. This can be especially helpful with children who may be rebellious and attention deficit. Robots can repeat the same explanation multiple times without getting tired or losing patience, while a human can get tired and lose concentration.
- Secondly, robots can be more accurate and objective than humans. The robot will not prefer one student to another, and will not have personal prejudices and preferences, which can lead to a more fair and objective assessment of educational achievements.
- Thirdly, robots can access a large amount of knowledge and quickly analyze data. They can look through a large number of materials and select those that are most relevant to a particular student, which can help in individual learning.

However, despite all these advantages, there are some limitations. A robot cannot completely replace a teacher because it lacks empathy and the ability to understand the emotions and feelings of students. These qualities are very important for effective teaching, as they help the teacher to better understand the needs and potential of students.

Can AI replace teachers in education?

With the development of artificial intelligence (AI), more and more people are wondering if AI can replace teachers in education. Some representatives of the educational community see this as an opportunity to solve some problems, such as the lack of qualified teachers, limited educational resources, etc. However, others fear that the use of AI could lead to a loss of humanity and personalization in education.

There are already robotic teachers that are used in some schools and universities to teach students and students. They have the ability to recognize faces, voices and gestures, which allows them to interact with students and adapt to their needs.

One example of such a robot is NAO, developed by the French company Aldebaran Robotics [6.1.3p.]. It can be used both as a learning tool and as a social robot for working with children with autism spectrum disorders. In Japan, there are already robotic teachers who teach children in kindergartens and elementary grades.

Volume: 03 Issue: 05 | May - 2023
ISSN: 2181-2594

NAO Robots, Producer of SoftBank Robotics (formerly Aldebaran Robotics), (France) 2008, Developed for study works, education, and entertainment

Since 2008, many variants of the robot have been released. The academic version of Nao was created for study and teaching at universities and research institutes; it was provided to institutions in 2008 and made public in 2011. Since then, the Nao platform has received various upgrades, including Nao Next Gen 2011 and Nao Evolution 2014.

Nao robots are working in numerous academic institutions around the world for study and teaching; as of 2015, over a thousand Nao devices were in operation in over 50 countries.

The robots are nearly knee-high and move in the similar way of children. They are used by the school to teach phonics and play cards, memory and simulation games to students aged five to ten.

However, there are also arguments against the use of AI in education. Some scientists believe that AI cannot completely replace the teacher in the pedagogical process. This is because AI cannot replace human experience, intuition and emotional intelligence, which is a necessary interaction between teacher and student.

Another problem is the lack of AI adaptability in learning. Teachers generally have the ability to adapt to the individual needs of each student using a variety of teaching methods and materials. AI, in turn, works according to a predetermined program that is not able to adapt to a particular student.

Despite this, there are also positive aspects of using AI in education. It can be useful as an addition to the teacher, facilitating his work and helping students to better absorb the material. AI can provide an individual approach to each student, taking into account his needs and level of knowledge. It can also help students with developmental disabilities such as hearing, visual or attention disabilities by providing additional support and resources.

Thus, it can be concluded that AI cannot completely replace the teacher in education, but it can help teachers become more efficient by freeing them from some routine tasks. The use of AI in education should be seen as a tool to improve learning, not as a substitute for teachers. The use of AI must be tailored to the unique needs of each student and must not lead to educational disparities.

In conclusion, it should be noted that AI has a huge potential to improve education and increase its effectiveness. Its use can lead to more personalized and effective learning, improved quality of education and accessibility for all students. However, to get the most out of the use of AI in education, it is necessary to carefully analyze its potential and limitations, consider ethical and legal aspects, and combine it with interpersonal communication and social interaction in the educational process.

Volume: 03 Issue: 05 | May - 2023
ISSN: 2181-2594

References

1. Goodfellow Y., Bengio I., Courville A. "Deep Learning". — M.: DMK Press, 2017. — 652 p.
2. Nikolenko S., Kadurin A., Arkhangelskaya E. Deep learning. - St. Petersburg: Peter, 2018. - 480 p.
3. Averkin A. N., Gaaze-Rapoport M. G., Pospelov D. A. Explanatory dictionary of artificial intelligence. - M .: Radio and communication, 1992. - 256
4. Peter Menzel and Faith D'Aluisio. Robosapiens. Cambridge: The MIT Press, 2000. Pg. 66
5. Henderson, J. "Smart Sparrow targets Next Generation Learning after securing first Round of Funding"
6. Al-Fahad, F., & Al-Fahad, A. (2019). Artificial intelligence applications in education: A review of the literature. Educational Technology & Society, 22(3), 74-84.
7. Aram, M., & Kwak, D. H. (2019). Artificial intelligence in education: Opportunities, challenges, and applications. Smart Learning Environments, 6(1), 1-16.
8. Хатамова, З. (2021). Expenditure of income from taxes and levies in the kokand khanate: https://doi. org/10.47100/conferences. v1i1. 1230. In research support center conferences (No. 18.05).
9. Nazirjonovna, K. Z. (2022). SH. VOKHIDOV'S CONTRIBUTION TO THE STUDY OF THE HISTORY OF THE KOKAND KHANATE. Innovative Society: Problems, Analysis and Development Prospects, 139-141
10. Xatamova, Z. (2021, June). EXPENDITURE OF INCOME FROM TAXES AND LEVIES IN THE KOKAND KHANATE. In Конференции.
11. Хатамова, З. (2023). Из истории денежной политики в финансовой системе Коканского ханства. Актуальные проблемы истории Узбекистана, 1(1), 327–336. извлечено от https://inlibrary.uz/index.php/history-of-uzbekistan/article/view/16511
12. Nazirjonovna, K. Z. (2022). Political-Financial Analysis of the Issues of Science of the Kokand Khanate in the Work of Khudoyorkhonzade “Anjum At-Tavorikh”. CENTRAL ASIAN JOURNAL OF SOCIAL SCIENCES AND HISTORY, 3(10), 102-111. Retrieved from https://cajssh.centralasianstudies.org/index.php/CAJSSH/article/view/463
13. Burkhonov, I. M. (2020). “ZAKAT” HAS ENSURED FAIRNESS AND BALANCE IN SOCIETY. Theoretical & Applied Science, (5), 201-204.
14. qizi Abdullayeva G. V., ugli Murodilov K. T. PROVIDING GEO-INFORMATION FOR THE MONITORING OF THE CLUSTER ACTIVITY OF THE REGIONS AND DEVELOPING THE BASIS OF WEB-MAPS (IN THE CASE OF FERGANA REGION) //Innovative Development in Educational Activities. – 2023. – Т. 2. – №. 7. – С. 342-347.
15. Muhiddinovich, B. I. (2020). Negative impact of the tax system on political life-on the example of the history of the Kokand Khanate (1850–1865). ACADEMICIA: An International Multidisciplinary Research Journal, 10(5), 790-795.
16. Burkhonov, I. (2021, June). The importance of the scientific heritage of asomiddin urinboyev in the study of the history of the Kokand khanat. In Конференции.

17. Бурхонов, И. М. (2019). ҚЎҚОН ХОНЛИГИ МАЪМУРИЙ БОШҚАРУВИДА СОЛИҚ ТИЗИМИНИНГ СИЁСИЙ ХАЁТГА САЛБИЙ ТАЪСИРИ (1850-1865). ВЗГЛЯД В ПРОШЛОЕ, (19).
18. Burkhonov, I. (2021). The importance of the scientific heritage of asomiddin urinboyev in the study of the history of the Kokand khanat: https://doi. org/10.47100/conferences. v1i1. 1242. In RESEARCH SUPPORT CENTER CONFERENCES (No. 18.05).
19. Бурханов, И. (2023). Научное наследие Шарафиддина Али Язди в интерпретации Асомиддина Оринбоева. Актуальные проблемы истории Узбекистана, 1(1), 165–171.
20. BURKHONOV, I. FROM THE HISTORY OF THE TRANSLATION OF THE WORK OF ABURAZZAK SAMARKAND" MATLA'I SA'DAYN AND MAJMA'I BAHRAIN. ЭКОНОМИКА, 138-144.
21. Murodilov K. T. et al. USE OF GEO-INFORMATION SYSTEMS FOR MONITORING AND DEVELOPMENT OF THE BASIS OF WEB-MAPS //Galaxy International Interdisciplinary Research Journal. – 2023. – Т. 11. – №. 4. – С. 685-689.
22. Muhiddinovich, B. I. (2022). The Importance of Asomiddin Urinboev's Scientific Research in the Study of the History of the Kokan Khanate. Kresna Social Science and Humanities Research, 3, 175-179.
23. ogli Jasurbek N. O., Murodilov K. T. HISTORY OF CREATION OF WEB CARDS AND CURRENT PROSPECTS: PROBLEMS AND SOLUTIONS //Educational Research in Universal Sciences. – 2023. – Т. 2. – №. 2. – С. 184-186.
24. Бурхонов, И. М. (2020). «ЗАКОТ»-ХАЛҚИМИЗ ҲАЁТИДА АДОЛАТ ВА МУТАНОСИБЛИК ОМИЛИ. ВЗГЛЯД В ПРОШЛОЕ, 3(5).
25. Muhiddinovich, B. I. (2022). In the Study of the History of the Kokand Khanate. Eurasian Journal of History, Geography and Economics, 6, 68-71.
26. Burkhanov , I. . (2022). FROM THE HISTORY OF THE USE OF THE SCIENTIFIC HERITAGE OF KOKAND SCIENTISTS ASOMIDDIN URINBOEV. International Bulletin of Medical Sciences and Clinical Research, 2(10), 63–67.
27. Хатамова, З. (2021, August). EXPENDITURE OF INCOME FROM TAXES AND LEVIES IN THE KOKAND KHANATE: https://doi. org/10.47100/conferences. v1i1. 1230. In RESEARCH SUPPORT CENTER CONFERENCES (No. 18.05).
28. Хатамова, З. Н. Особенности налоговой системы Кокандского ханства / З. Н. Хатамова. — Текст : непосредственный // Молодой ученый. — 2020. — № 5 (295). — С. 254-256. — URL: https://moluch.ru/archive/295/66918/
29. Murodilov K. T. et al. USE OF GEO-INFORMATION SYSTEMS FOR MONITORING AND DEVELOPMENT OF THE BASIS OF WEB-MAPS //Galaxy International Interdisciplinary Research Journal. – 2023. – Т. 11. – №. 4. – С. 685-689.
30. Nazirjonovna, H. Z., & Abdumannobovich, N. M. (2020). Tax system on the territory of kyrgyzstan during the Kokand Khanate. ACADEMICIA: An International Multidisciplinary Research Journal, 10(6), 209-212.

31. Murodilov K. T., Muminov I. I. THEORY OF CREATING CLUSTER MONITORING WEB MAPS USING GEOINFORMATION SYSTEMS //Open Access Repository. – 2023. – Т. 4. – №. 3. – С. 1430-1436.
32. Xatamova, Z. (2020). Expenditure of state funds replenished by taxes in the history of the kokand khanate. EPRA International Journal of Research and Development (IJRD), 5(3), 274-277.
33. Хатамова, З. Н. (2020). ҚЎҚОН ХОНЛИГИДА СОЛИҚЛАР ҲИСОБИГА ТЎЛДИРИЛГАН ХАЗИНАНИНГ САРФ ЭТИЛИШИГА ОИД МАЪЛУМОТЛАР. ВЗГЛЯД В ПРОШЛОЕ, (SI-1№ 4).
34. Xatamova Zumradxon Nazirjonovna. INFORMATION ON THE PROVISION OF THE FUND IN THE KOKAND KHAN. Look to the past. 2020, SI,pp.590-595