



THE ADVANTAGES OF AI IN EDUCATION: REVOLUTIONISING LEARNING AND TEACHING.

Rayimjonov Ismoiljon Xoshimjon o'g'li

Allayorov Abdumalik Isoqovich

Khalilova Laylo Ravshanovna

Gulistan State University, 120100, Syrdarya region, Gulistan-4.

Abstract: *Artificial intelligence (AI) has advanced rapidly in recent decades, revolutionising a wide range of industries, with education being one of the most promising. AI in education has the ability to greatly improve teaching and learning processes, addressing long-standing issues in educational systems. AI is transforming the way educators and students educate and learn, from personalised learning experiences to administrative support. This article investigates the scientific basis for artificial intelligence's benefits in education, with an emphasis on student results, teacher effectiveness, and overall educational equity.*

Keywords: *Personalized Learning, Artificial Intelligence (AI), Adaptive Learning Systems, Teacher Effectiveness, Automated Grading, Educational Technology, Lifelong Learning, Skill Development, Assistive Technologies.*

1. Personalized Learning: Tailoring Education to Individual Needs

One of the most well-known advantages of artificial intelligence is its capacity to create personalised learning experiences. Traditional classrooms frequently struggle to meet the different learning needs of children due to huge class numbers and inadequate resources. AI systems may analyse individual student performance in real time and adapt learning materials accordingly, delivering personalised recommendations and paths for progress. Studies have demonstrated that personalised learning models powered by AI lead to increased student engagement and academic success. For example, a 2019 study published in the Journal of Educational Psychology indicated that students who utilised AI-driven adaptive learning platforms performed better on tests and retained more content than those who used traditional teaching approaches. AI may dynamically assess a student's progress and adjust the difficulty or pace of the curriculum to match their present abilities, allowing them to work at their own pace.

2. Enhanced Teacher Effectiveness and Efficiency

AI can also help teachers improve their efficacy by automating administrative activities and offering data-driven insights into student performance. Educators





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frequently devote significant time to repetitious chores such as grading, lesson planning, and managing classroom logistics. AI can help to streamline these processes, freeing up teachers' time for direct education and individualised support.

Scientific Evidence: According to a study published in *Computers & Education* (2020), AI-powered grading systems might save teachers an average of 13 hours per week, which can be focused towards more effective teaching activities. Furthermore, AI systems can provide real-time feedback on student progress, enabling educators to detect difficult pupils early and intervene with focused assistance. This continuous feedback loop not only improves teaching efficiency but also guarantees that pupils receive.

3. Addressing Equity in Education

AI has the potential to improve educational fairness by making high-quality learning resources available to all students, regardless of socioeconomic status. AI-powered platforms can help bridge the digital divide by providing affordable and scalable educational solutions, reaching underserved populations, and increasing educational outcomes for kids who may not have access to traditional educational resources. A 2020 study published in *The International Journal of Artificial Intelligence in Education* emphasised the significance of AI in democratising education. For example, AI-powered online tutoring services have been demonstrated to improve learning results for low-income students by delivering personalised instruction and learning tools that would otherwise be unavailable. Furthermore, AI can assist close teacher shortages by delivering scalable learning tools to schools in rural or poor places.

Conclusion: AI's transformational potential in education is obvious. AI has the potential to address a variety of important difficulties affecting educational systems around the world, including personalised learning and better teacher efficiency, as well as fostering lifelong learning and supporting inclusion. While there are still challenges to solve, such as providing fair access to AI technologies and resolving ethical concerns, the scientific data backing up AI's benefits in education is convincing. As AI evolves, it has the potential to create a more effective, inclusive, and accessible education system that can better address the different requirements of students in an increasingly digital environment.

REFERENCES:

1. Xasanovich, X. R., Isoqovich, A. A., & Ravshanovna, K. L. (2025, April). THE FUNCTION OF DIGITAL TECHNOLOGIES IN MODERN EDUCATION.





MODERN PROBLEMS IN EDUCATION AND THEIR SCIENTIFIC SOLUTIONS

In CONFERENCE OF MODERN SCIENCE & PEDAGOGY (Vol. 1, No. 1, pp. 180-187).

2. Allayorov Abdumalik Isoqovich, Xalilova Laylo Ravshanovna, & Xudayberdiyev Rustamjon Xasanovich (2024). ADVANCEMENTS IN DIGITAL DEVICE TECHNOLOGIES: A COMPREHENSIVE REVIEW. Central Asian Journal of Multidisciplinary Research and Management Studies, 1 (6), 16-19. doi: 10.5281/zenodo.10960591

3. Alibekov, U., & Rayimjonov, I. (2024). TURKIY XALQLARNING KELIB CHIQISHI XIX ASR SHARQSHUNOSLARINING TALQINIDA. Elita. uz-Elektron Ilmiy Jurnal, 2(1), 267-270.

4. Rayimjonov, I. X. O. G. L. (2022). ERSHI (MINGTEPA) HUDUDIDAGI TARIXIY-ARXEOLOGIK YODGORLIKLARI XUSUSIDA. Scientific progress, 3(5), 193-197.

5. Ravshanovna, K. L., & Rustamjon o'g'li, A. D. (2025). THE IMPACT AND FUTURE OF DIGITAL TECHNOLOGY IN TEACHING. MODERN PROBLEMS IN EDUCATION AND THEIR SCIENTIFIC SOLUTIONS, 1(6), 248-253.

6. Ravshanovna, K. L., Isoqovich, A. A., Xasanovich, X. R., & Bazarbayevna, N. N. (2024). Integrating digital technologies to enhance foreign language instruction. Central Asian Journal of Multidisciplinary Research and Management Studies, 1(2), 234-237.

7. Ravshanovna, K. L., Isoqovich, A. A., & Xasanovich, X. R. (2025). ARTIFICIAL INTELLIGENCE IN ENGLISH CLASSES: REVOLUTIONIZING LANGUAGE LEARNING AND TEACHING. ANALYSIS OF MODERN SCIENCE AND INNOVATION, 1(4), 242-247.

8. Xoshimjon o'g'li, R. I. (2024). 8.4 MOVAROUNNAHRGA ISLOM DININING KIRIB KELISHI VA UYG'ONISH DAVRINING BOSHLANISHI. Innovative technologies in construction Scientific Journal, 8(1), 12-15.

9. Ravshanovna, K. L., & Rustamjon o'g'li, A. D. (2025). THE IMPACT AND FUTURE OF DIGITAL TECHNOLOGY IN TEACHING. MODERN PROBLEMS IN EDUCATION AND THEIR SCIENTIFIC SOLUTIONS, 1(6), 248-253.

10. Rayimjonov, I. X. O. G. L. (2022). ERSHI (MINGTEPA) HUDUDIDAGI TARIXIY-ARXEOLOGIK YODGORLIKLARI XUSUSIDA. Scientific progress, 3(5), 193-197.

11. Ravshanovna, K. L., & Kysilkova, E. (2025). DIGITAL TECHNOLOGY IN TEACHING SYSTEMS FOR ENHANCING EDUCATIONAL PRACTICES





MODERN PROBLEMS IN EDUCATION AND THEIR SCIENTIFIC SOLUTIONS

AND FUTURE PROSPECTS. MODERN PROBLEMS IN EDUCATION AND THEIR SCIENTIFIC SOLUTIONS, 1(5), 232-237.

12. Ravshanovna, K. L., Abdi-Xafizovna, K. M., & Erkinjonovna, B. M. (2025). DIGITAL TECHNOLOGIES FOR ADMINISTRATING THE EDUCATION SYSTEM FOR TRANSFORMING MANAGEMENT AND ENHANCING EFFICIENCY. ANALYSIS OF MODERN SCIENCE AND INNOVATION, 1(4), 439-445.

13. Ravshanovna, K. L., Isoqovich, A. A., & Xasanovich, X. R. (2025). ARTIFICIAL INTELLIGENCE IN ENGLISH CLASSES: REVOLUTIONIZING LANGUAGE LEARNING AND TEACHING. ANALYSIS OF MODERN SCIENCE AND INNOVATION, 1(4), 242-247.

14. Ravshanovna, K. L., & Abdi-Xafizovna, K. M. (2025). The role of modern digital technologies in education: transforming learning environments and enhancing student outcomes. MODERN EDUCATIONAL SYSTEM AND INNOVATIVE TEACHING SOLUTIONS, 1(5), 160-165.

15. Ravshanovna, K. L. (2025). DIGITAL TECHNOLOGIES IN HIGHER EDUCATION IN THE 21ST CENTURY: TRANSFORMING LEARNING AND TEACHING. MODERN PROBLEMS IN EDUCATION AND THEIR SCIENTIFIC SOLUTIONS, 1(4), 107-111.

16. Isoqovich, A. A., Abdi-Xafizovna, K. M., Xasanovich, X. R., & Ravshanovna, K. L. (2024). DIGITAL TECHNOLOGIES FOR TEACHING FOREIGN LANGUAGES: A REVIEW OF CURRENT TRENDS AND FUTURE DIRECTIONS. Central Asian Journal of Multidisciplinary Research and Management Studies, 2(1), 148-151.

17. Khalilova, L. (2024). POSSIBILITIES FOR INTEGRATING DIGITAL TECHNOLOGIES IN FOREIGN LANGUAGE TEACHING. Mental Enlightenment Scientific-Methodological Journal, 5(08), 156-163.

18. Khalilova, L. R. (2024). DIGITAL TECHNOLOGIES FOR IMPROVING THE CONTINUITY OF FOREIGN LANGUAGE TEACHING. Web of Technology: Multidimensional Research Journal, 2(10), 71-77.

19. Khalilova, L. R. (2024). DIGITAL TECHNOLOGIES FOR IMPROVING THE CONTINUITY OF FOREIGN LANGUAGE TEACHING. Web of Technology: Multidimensional Research Journal, 2(10), 71-77.

20. Мавлянов, У. Н., Райимжонов, И. Х., & Абдуалимова, З. М. (2025). ФРИДРИХ НИЦШЕ ВА МАДАНИЯТНИНГ ИРОДА АСОСИДАГИ ТАЛҚИНИ. Современные подходы и новые исследования в современной науке, 4(5), 91-98.





MODERN PROBLEMS IN EDUCATION AND THEIR SCIENTIFIC SOLUTIONS

21. Abdi-Xafizovna, K. M., & Ravshanovna, K. L. (2024). ANALYSING LEXICAL UNITS RELATED TO GENDER. *Universal Science Perspectives International Scientific Practical Journal*, 1(1).
22. Ravshanovna, K. L. (2024). Enhancing foreign language education through integration of digital technologies. *Miasto Przyszłości*, 44, 131-138.
23. Isoqovich, A. A., Abdi-Xafizovna, K. M., Xasanovich, X. R., & Ravshanovna, K. L. (2024). DIGITAL TECHNOLOGIES FOR TEACHING FOREIGN LANGUAGES: A REVIEW OF CURRENT TRENDS AND FUTURE DIRECTIONS. *Central Asian Journal of Multidisciplinary Research and Management Studies*, 2(1), 148-151.
24. Ravshanovna, K. L. (2024). Enhancing foreign language education through integration of digital technologies. *Miasto Przyszłości*, 44, 131-138.
25. Ravshanovna, K. L. (2024). BENEFITS OF TEACHING FOREIGN LANGUAGES WITH DIGITAL TECHNOLOGIES. *Galaxy International Interdisciplinary Research Journal*, 12 (1), 84–87.
26. Ravshanovna, K. L. (2024). USING DIGITAL TOOLS IN LANGUAGE TEACHING. *International Journal of Formal Education*, 3(4), 231-234.
27. Isoqovich, A. A., Ravshanovna, X. L., & Xasanovich, X. R. (2024). ADVANCEMENTS IN DIGITAL DEVICE TECHNOLOGIES: A COMPREHENSIVE REVIEW. *Central Asian Journal of Multidisciplinary Research and Management Studies*, 1(6), 16-19.
28. Ravshanovna, K. L., Isoqovich, A. A., Xasanovich, X. R., & Bazarbayevna, N. N. (2024). Integrating digital technologies to enhance foreign language instruction. *Central Asian Journal of Multidisciplinary Research and Management Studies*, 1(2), 234-237.
29. Ravshanovna, K. L., & Abdi-Xafizovna, K. M. (2024). THE CHANGE IN DIGITAL TECHNOLOGY: REVOLUTIONISING SOCIETY AND INDUSTRIES. *Central Asian Journal of Multidisciplinary Research and Management Studies*, 1(2), 238-241.
30. Мавлянов, У. Н., Райимжонов, И. Х., & Абдуалимова, З. М. (2025). СЛАВЯН ЦИВИЛИЗАЦИЈА СИ ВА УНИНГ КЕЛАЖАГИ: ДАНИЛЕВСКИЈ БАШОРАТИ. *Современные подходы и новые исследования в современной науке*, 4(5), 82-90.
31. Ravshanovna, K. L., & Abdi-Xafizovna, K. M. (2024). THE CHANGE IN DIGITAL TECHNOLOGY: REVOLUTIONISING SOCIETY AND INDUSTRIES. *Central Asian Journal of Multidisciplinary Research and Management Studies*, 1(2), 238-241.





MODERN PROBLEMS IN EDUCATION AND THEIR SCIENTIFIC SOLUTIONS

32. Khalilova, L., Allayorov, A., & Yusupov, A. (2025). THE BENEFITS OF AI IN EDUCATION: REVOLUTIONIZING LEARNING AND TEACHING. Академические исследования в современной науке, 4(6), 36-41.

33. Khalilova, L. (2024). A COMPREHENSIVE ANALYSIS OF USING DIGITAL TECHNOLOGIES TO IMPROVE ENGLISH LANGUAGE COURSES. Talqin va tadqiqotlar, 1.

34. Ravshanovna, K. L. (2024). Benefits of teaching foreign languages with digital technologies. Galaxy International Interdisciplinary Research Journal, 12(1), 84-87.

35. Xalilovich, I. S., & Kisilkova, E. (2025). THE INTEGRATION OF DIGITAL TECHNOLOGIES IN EDUCATION: A SCIENTIFIC PERSPECTIVE. MODERN PROBLEMS IN EDUCATION AND THEIR SCIENTIFIC SOLUTIONS, 1(5), 238-242.

36. Khalilova, L. (2024). DIGITAL TECHNOLOGY EVOLUTION: IMPROVEMENT, REFINEMENT, AND EMERGENCE OF NEW TECHNOLOGIES IN VARIOUS FIELDS. Theoretical aspects in the formation of pedagogical sciences, 3(1), 122-126.

37. Khalilova, L. (2024). DIGITAL TECHNOLOGIES IN EDUCATION: REVOLUTIONIZING LEARNING PARADIGMS. Talqin va tadqiqotlar, 1.

38. Khalilova, L. (2024). THE EVOLUTION OF DIGITAL TECHNOLOGIES: REVOLUTIONIZING INDUSTRIES AND SOCIETY. Science and innovation in the education system, 3(1), 47-54.

39. Ravshanovna, X. L., Ogli, H. R. A., Abdunazarovich, S. N., & Ulug'bek Ayakulov Abdigapor, O. G. (2024). ROLE OF DIGITAL TECHNOLOGIES IN EDUCATION. Eurasian Journal of Technology and Innovation, 2(1-2), 64-67.

40. Ravshanovna, K. L., Abdi-Xafizovna, K. M., & Erkinjonovna, B. M. (2025). DIGITAL TECHNOLOGIES FOR ADMINISTRATING THE EDUCATION SYSTEM FOR TRANSFORMING MANAGEMENT AND ENHANCING EFFICIENCY. ANALYSIS OF MODERN SCIENCE AND INNOVATION, 1(4), 439-445.

