



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Impact Of Ai On Education

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Abstract: The impact of Artificial Intelligence (AI) on education is transforming traditional learning environments by enhancing personalized learning, automating administrative tasks, and improving educational accessibility. AI-powered tools facilitate tailored educational experiences, enabling students to learn at their own pace and receive instant feedback. Additionally, AI streamlines administrative processes, freeing up educators to focus more on teaching. While challenges such as data privacy and ethical concerns persist, AI holds significant potential in shaping the future of education by making learning more efficient, inclusive, and adaptive to diverse needs.

Key Words – Artificial Intelligence, Education, Anova

I. INTRODUCTION

Firstly, we will understand what is **Artificial Intelligence**, So AI it is part or can say a major part of computer science these days, the reason or aim for creating this machine was to perform a task that typically needs human brain or intelligence That includes things like learning, problem-solving or decision-making, speech recognition, and visual perception.

Artificial Intelligence is not a single technology, but rather a collection of different approaches and techniques. Some of the most common include:

- **Device gaining knowledge of:** This entails training computers to learn from data without being explicitly programmed.
- **Deep learning:** That could be a subset of gadget mastering that makes use of synthetic neural networks with more than onelayers to investigate records.
- **Natural language processing:** This makes a speciality of permitting computers to understand and generate human language.
- **Computer vision:** This involves training computers to "see" and interpret images and videos.

AI is already having a major impact on our lives, and its potential is only just beginning to be realized. a few examples of the way AI is being used these days consist of:

- **Self-driving cars:** AI is getting used to develop cars that can power themselves.
- **Medical diagnosis:** AI is being used to help doctors diagnose diseases more accurately.
- **Financial trading:** AI is being used to make trading decisions in the stock market.

- **Customer service:** AI-powered chatbots are being used to provide customer service.

As we understand what is Artificial Intelligence now we will understand how it is impacting on our education system in various ways

AI is poised to revolutionize education in numerous ways, impacting students, teachers, and the overall learning environment. Here are some key areas where AI is making a difference:

1. Personalized Learnings:

- AI can Analyze student data (Performance, learning style, etc.) to tailor educational content and pace to individual need .
- Adaptive learning platforms adjust difficulty levels and provide customized feedback, ensuring each student receives the right level of challenge and support.
- This personalized approach can lead to increased engagement, improved learning outcomes, and greater student autonomy.

2. Intelligent Tutoring Systems:

- AI-Powered tutors can provide personalized guidance and Support to Students, offering immediate feedback and addressing specific learning gaps.
- These systems can simulate one-on-one tutoring, making personalized learning more accessible and affordable.
- By handling routine instructional tasks, AI tutors free up teachers' time to focus on more complex issues and individual student need.

3. Automated Grading and Feedbacks:

- AI can automate the grading of objective Assessments (Multiple-Choice, etc .) and provide instant feedback to students.
- AI-powered tools can also analyze written work, providing feedback on grammar, structure, and even content.
- This automation saves teachers time and allows them to provide more frequent and detailed feedback to students.

4. Enhanced Accessibility:

- AI-powered tools can break down barriers for students with disabilities.
- Speech Recognition Software (**SRS**) can transcribe Spoken words into Text for Hearing-Impaired students.
- AI-supported educational games can provide personalized learning experiences for young children with diverse needs.

5. Streamlined Administrative Tasks:

- AI can automate Administrative tasks such as scheduling, report generation, and communication with parents.
- This Frees Up teachers time to focus on teaching & interacting with students.

6. Data-Driven Insights:

- AI can create extra enticing and interactive studying reports via gamification, simulations, and digital truth.
- This statistics can help educators make informed selections about curriculum development, academic techniques, and aid allocation.

7. Engaging and Interactive Learning:

- AI can create more engaging and interactive learning experiences through gamification, simulations, and virtual reality.
- AI-powered tools can adapt to student input in real-time, making learning more dynamic and responsive.

AI remains in its early degrees of development, and its capability in education is only just starting to be found out. As AI technology keeps to improve, we are able to anticipate to look even greater progressive and transformative programs in the future years. via addressing the demanding situations and embracing the possibilities, we will harness the power of AI to create a greater personalised, powerful, and equitable schooling system for all beginners.

II. LITERATURE REVIEW

Li, W. (2024), This study is conducted by author to understand The integration of Artificial Intelligence in educational systems enhances personalized learning by tailoring educational experiences to individual student needs, improving engagement and outcomes. However, it may also lead to over-reliance on technology, potentially weakening critical thinking skills among students.

Singh, T., Reddy, C. K. K., Murthy, B. V. R., Nag, A., & Doss, S. (2024), This study is conducted by author to understand AI is revolutionizing education by personalizing learning experiences, enhancing efficiency, and improving accessibility. It leverages data-driven insights and interactive environments while addressing challenges like data privacy and equity, ultimately fostering greater student engagement and effective educational practices.

Puhach, V. (2024), This study is conducted by author to understand how AI significantly enhances education by personalizing the learning process, automating assessments, and providing real-time support to students. It optimizes educational programs, reduces teacher workload, and increases student motivation through interactive tools. However, effective implementation requires addressing ethical and technical challenges, as well as training educators to utilize new technologies. The potential of AI in education also includes supporting students with disabilities and those with limited access to traditional education, highlighting its importance in improving accessibility and quality.

Dei, M. (2024), This study is conducted by author to understand how AI is significantly transforming education by enabling the adaptation of learning materials and teaching methods to meet individual student needs. It enhances personalized learning, improves student engagement, and allows teachers to better account for differences in students' abilities and learning styles. The implementation of AI in education presents both advantages and challenges, but it ultimately contributes to a more efficient and inclusive learning environment. Continued development and integration of AI technologies are essential for advancing educational practices.

Okhanashvili, S. (2024), This study is conducted by author to understand how Artificial intelligence significantly enhances education by enabling personalized learning through systems like Knewton and ALEKS, which assess students' knowledge and tailor assignments to their strengths and weaknesses. It also facilitates interactive simulations in subjects like physics and chemistry, provides step-by-step guidance in math problem-solving, and automates assignment grading for quick feedback. Additionally, AI monitors

learning progress and suggests relevant materials, ultimately transforming traditional teaching methods and improving the overall quality of education.

Karmakar, S., & Das, T. K. (2024), This study is conducted by author to understand The integration of Artificial Intelligence in educational systems enhances student learning outcomes by providing personalized content, immediate feedback, and advanced analytics. AI tools identify strengths and weaknesses, personalize learning paths, and improve engagement and motivation, ultimately leading to better academic performance.

Yunyi Zhu (2024), This study is conducted by the author to understand **how** AI-assisted teaching enhances learning outcomes by providing personalized educational experiences and fostering student engagement. These technologies, such as intelligent tutoring systems and educational chatbots, significantly improve academic performance while also contributing positively to students' psychological well-being.

Dulundu, A. (2024), This study is conducted by the author to understand how AI integration in education enhances student learning outcomes through personalized learning platforms, automated grading systems, and accessibility technologies. These tools engage students effectively and promote inclusive, high-quality education, aligning with Sustainable Development Goal 4 for lifelong learning opportunities.

Hasan Sari, Benelekser Tumanggor, David Efron (2024), This study is conducted by the author to understand how AI integration in educational systems significantly enhances student learning outcomes by personalizing learning experiences, as evidenced by improved post-assessment scores from 68.4 to 82.7, higher course completion rates, and increased student engagement compared to traditional methods.

M. Soundarya, Joel Jebadurai Devapitchai, (2024), The integration of Artificial Intelligence in educational systems enhances student learning outcomes by improving the interaction between learners and instructors, thereby increasing satisfaction. Understanding AI's impact on these interactions is crucial for creating effective and safe online learning environments.

Holmes, W., & Tuomi, I. (2022). State of the art and practice in AI in education.

Choi, W. C., Choi, I. C., & Chang, C. (2025), AI has transformed education through applications like chatbots, Intelligent Tutoring Systems, and generative AI, enhancing personalized learning, efficiency, and creativity. However, challenges include academic integrity, biased information, and accessibility issues, necessitating ethical integration and AI literacy among educators.

Leong, W. Y., Leong, Y. Z., & Leong, W. S. (2025), The integration of AI in education enhances personalized learning experiences, streamlines administrative tasks, and supports data-driven decision-making for educators. Applications include intelligent tutoring systems, automated grading, and educational analytics, while also addressing challenges and ethical considerations in implementation.

Sumartono, S., Sumartono, W. A. P., & Hashemi Rafsanjani, W. A. (2025), AI significantly impacts education by personalizing learning through adaptive systems, enhancing teaching methods, improving assessment efficiency, and facilitating remote learning. It supports teachers and expands access to quality education while addressing challenges like technological gaps and concerns over teacher replacement.

Wang, Y. (2024), AI in education offers personalized learning, intelligent instruction, and automated administration. However, it raises ethical concerns, such as data privacy, educational inequality, and declining critical thinking skills, necessitating equitable resource allocation and strong data protection measures to maximize benefits.

Kour, J., Bhatia, R., & Joshi, R. (2024), The research highlights that AI in education enhances learning experiences but exacerbates existing disparities, particularly by gender and geography. Male students and urban areas outperform female and rural counterparts, necessitating equitable approaches to ensure fair access to AI benefits.

Kayyali, M. (2025), AI in education tailors learning experiences through adaptive curriculum design, automates administrative tasks, optimizes resource allocation, and enhances student support services.

However, its adoption raises ethical concerns, data protection issues, and necessitates faculty training for effective implementation.

Zhang, C. (2024), AI in education enhances learning through adaptive systems, automated grading, and personalized tutoring, especially post-COVID-19. However, it poses challenges like privacy concerns and access disparities, necessitating ethical policies, teacher training, and transparent guidelines for equitable integration.

Çela, E., Fonkam, M., Vajjhala, N. R., & Vedishchev, A. (2024), AI is transforming education by enabling personalized learning, adaptive curriculum design, and enhanced student engagement. It introduces AI-driven assessment tools and learning analytics, while also raising ethical concerns like algorithmic bias, data privacy, and equitable access in educational settings.

Treve, M. (2024), AI in education significantly enhances student engagement, academic success, and creativity, with engagement scores increasing by 20–23%, GPA rising by 9% to 14%, and innovative thinking skills improving from 44% to 57% post-implementation, according to the study.

Boumediene, H., & Bouakkaz, M. (2024), AI in education enhances personalized learning, automates assessments, and improves classroom management, leading to increased student engagement and better learning outcomes. However, it also raises ethical concerns like algorithmic bias and data privacy, necessitating careful implementation and oversight.

Degni, F. (2024), AI in education enhances quality by personalizing learning experiences, improving educational outcomes, and optimizing institutional management. The research explores both benefits and challenges of AI integration, aiming to understand its effectiveness and implications for students, educators, and educational institutions.

Elstad, E. (2024), The study explores generative AI's integration in education, highlighting its potential for personalized learning and problem-solving, while cautioning against misuse that may undermine deep learning. It emphasizes the need for critical evaluation skills and context-dependent pedagogical strategies.

Jenq, J. (2024), The paper discusses the significant impact of AI on education, highlighting both positive and negative effects. It explores recent AI technologies, their applications in education, and potential solutions to mitigate the challenges faced by educators today.

Widyasari, E., Murtiyasa, B., & Supriyanto, E. (2024), AI in education enhances personalization, administrative efficiency, and accessibility. It analyzes student data for real-time recommendations but poses challenges like inequitable technology access and algorithmic bias. Collaboration among stakeholders is essential for inclusive and ethical AI integration in education.

D'Ambrosio, F. (2025), The paper discusses AI's role in education, focusing on personalizing learning pathways and enhancing quality. It highlights a project using AI tools like ChatGPT to improve mathematical skills, aiming for a scalable model aligned with the European Education Agenda 2030.

Albahijan, N., Al-Suraibi, H., Alotaibi, J. A., & Alotaibi, K. (2025), Artificial intelligence in education enhances learning by improving educational quality, reducing teachers' routine burdens, and enabling a focus on creative teaching. It combines technology with educators to achieve optimal educational outcomes and addresses various challenges and ethical concerns.

III. RESEARCH GAP

A limited questionnaire response presents a significant research gap, as it can skew the representativeness of the data, leading to biased or incomplete insights. When respondents are few, the findings may not accurately reflect the views, behaviors, or experiences of the broader population, limiting the generalizability of the study. This gap highlights the need for strategies to increase response rates, such as improving questionnaire design, targeting diverse participant groups, or employing alternative data collection methods to ensure a more robust and comprehensive understanding of the research topic.

IV. RESEARCH METHODOLOGY

1. Research Design

The study employs a descriptive research design aimed at exploring the perceptions and attitudes of current learner towards the integration of Artificial Intelligence (AI) in education. This design is suitable for capturing a snapshot of current opinions and experiences, providing a comprehensive overview of the subject matter.

2. Hypotheses

a. Null Hypothesis (H0)

There is no significant impact of Artificial Intelligence (AI) on education.

This implies that the integration of AI tools does not lead to any measurable changes in teaching effectiveness, student learning outcomes, or academic staff productivity.

b. Alternative Hypothesis (H1)

There is a significant impact of Artificial Intelligence (AI) on education.

This suggests that the integration of AI tools results in measurable improvements in teaching effectiveness, student learning outcomes, or academic staff productivity.

3. facts series technique primary facts supply

Facts changed into collected through a based questionnaire designed to accumulate quantitative information from vetted source non-public. The questionnaire protected a mixture of closed-ended questions, which allowed for clean quantification of responses, and a few open-ended inquiries to capture qualitative insights.

4. Questionnaire Development

Sample questionnaire link- <https://osf.io/c6bfv/download/>

The questionnaire was selected based on a thorough review of existing literature on AI in education and is chosen to access:

Demographic information (age, gender, academic discipline, etc.)

Familiarity and experience with AI tools

Perceived benefits and challenges of AI in education

Attitudes towards the impact of AI on teaching and learning

Opinions on the ethical implications of AI usage in educational settings

5. Sample Selection

The target population for this study consisted of academics and high education learners. A stratified random sampling method was employed to ensure representation across various academic disciplines and roles (e.g., lecturers, UG students, PG students).

6. Data Collection Procedure

An e mail invitation become sent to all and sundry, offering data about the have a look at's reason, the voluntary nature of participation, and assurances of confidentiality. The questionnaire was allotted via an internet platform (e.g., Google bureaucracy) to facilitate clean access and finishing touch.

7. Data Analysis

Conduction of Descriptive statistics analysis to analyse view of sample population

The collected data was analysed using quantitative methods. One-way ANOVA (Analysis of Variance) was employed to determine if there were statistically significant differences in perceptions of AI among the learner and educators.

Assumptions of ANOVA: The assumptions of normality and homogeneity of variances were checked prior to conducting the ANOVA. If these assumptions were violated, appropriate transformations or non-parametric tests would be considered.

8. Ethical Considerations

The study was conducted in accordance with ethical guidelines for research involving human participants. Informed consent was obtained from all participants, and measures were taken to ensure the confidentiality and anonymity of responses.

9. Limitations

The look at recognizes potential obstacles, which includes a low response rate, which can also have an effect on the generalizability of the findings. moreover, the reliance on self pronounced statistics might also introduce bias.

V. RESULT AND DISCUSSION

Question	Mean	Interpretation	Summary
Do you believe AI can contribute to a more inclusive educational environment?	4.025	Agree	Most respondents agree that AI can contribute to inclusivity.
Do you believe AI can effectively aid in student assessment and marking?	3.96	Agree	Most respondents agree with AI's effectiveness in assessment.
Do you agree with AI can effectively help in growing more attractive and interactive content on your college students?	3.985	Agree	There is strong agreement that AI can enhance engagement and content creation.
Do you believe AI can effectively assist in research-related tasks?	2.97	Neutral	Responses are somewhat neutral, with some doubt about AI's role in research.
Do you believe AI can effectively assist in teaching-related tasks?	3.08	Neutral	Slightly agree, but the sentiment is more neutral.
Do you believe AI has the capability to replace certain factors of your role as an educator?	1.935	Strongly Disagree	Strong disagreement, indicating concern or lack of belief that AI will replace educators.
Do you believe that AI can help college students develop important abilities like important thinking, creativity, communication, and collaboration?	2.01	Strongly Disagree	Strong disagreement, indicating skepticism about AI's impact on skill development.
Do you observed we must educate college students to efficaciously use AI for educational purposes?	2.84	Neutral	Slight agreement, showing mixed opinions on the necessity of training.
How do you feel about the accuracy of AI in assessing student performance?	2.97	Neutral	Neutral stance on the accuracy of AI for assessments.
How do you feel AI will impact the future of your function as an educator?	3.1	Neutral	Slightly agree, but the opinion is divided on AI's future role in education.

How do you feel AI will impact the staff-student relationship?	2.995	Neutral	Neutral feelings towards the impact of AI on staff-student relationships.
How do You understand the impact of AI on creativity and innovation for your teaching or research?	2.92	Neutral	Neutral perception about AI's effect on creativity and innovation.
How do you perceive the impact of AI on the creativity and essential considering college students?	2.94	Neutral	Neutral opinion on AI's influence on creativity and critical thinking.
How do you understand the effect of AI on the time spent on coaching-related tasks?	3.035	Neutral	Slightly agree, indicating AI may have some impact on teaching time.
How do you think AI will affect students' motivation to learn?	3.07	Neutral	Neutral impact on motivation, with mixed opinions.
How do you think AI will impact student engagement in learning?	2.995	Neutral	Neutral feelings on how AI impacts student engagement.
How do you suspect AI will impact college students' capacity to attention and deal with their research?	2.845	Neutral	Neutral to slightly negative impact on focus and concentration.
How do you think we must deal with the use of AI through students?	2.8	Neutral	Neutral stance on managing AI use by students.

Key Observations:

High Agreement: Questions like "Do you believe AI can contribute to a more inclusive educational environment?" (mean = 4.025) show a strong tendency towards agreement, suggesting optimism about AI's positive role.

Neutral Sentiment: Many responses are neutral (around mean values between 2.8 and 3.1). This suggests uncertainty or a mixed stance about the actual impact of AI in education, particularly in areas like research, skill development, and time spent on teaching tasks.

Strong Disagreement: Some areas reflect strong disagreement, particularly on statements like "AI has the potential to replace certain aspects of your role as an educator" (mean = 1.935) and "AI can help

students develop necessary skills like critical thinking" (mean = 2.01). This indicates scepticism about AI's role in replacing educators or fostering certain student skills

Significant Differences Between Groups:

The F-statistic of 32.685, which is much greater than the F critical value of 1.589, suggests that there are significant differences in the means of the different groups (questions). In simpler terms, the responses to the various questions about AI's role in education vary in a meaningful way.

P-value:

The p-value (1.9057E-110) is extremely small, much smaller than the typical significance level (0.05), which confirms that the differences between the groups are statistically significant. This indicates we can confidently reject the null speculation, which said that there aren't any differences among the agencies.

What This Means:

The differences in responses are statistically significant, suggesting that different aspects of AI's role in education are evaluated quite differently by respondents.

Some questions are perceived more positively (e.g., AI contributing to inclusivity, assisting with content creation), while others are seen more negatively or with skepticism (e.g., AI replacing educators, helping students develop critical thinking).

This implies that the opinions about AI's role in education are diverse, and each area needs to be considered separately when planning for AI integration into educational settings.

Based on the objectives, descriptive statistics, and ANOVA analysis of the data, we can draw the following conclusions:

Descriptive Statistics:

The data provided detailed insights into how educators feel about various aspects of Artificial Intelligence (AI) in education. Key findings from the descriptive statistics include:

General Sentiment Toward AI:

Positive Aspects: There is a strong agreement that AI can contribute to a more inclusive educational environment (mean = 4.025) and assist in creating engaging content (mean = 3.985). This suggests that respondents see the potential for AI to support learning and enhance inclusivity.

Neutral to Negative Aspects: On the other hand, areas such as AI replacing educators (mean = 1.935), helping students develop critical thinking (mean = 2.01), and accuracy in assessments (mean = 2.97) reveal skepticism and concern. Many respondents are uncertain or negative about the idea that AI can replace teaching roles or foster key educational skills like critical thinking.

Mixed Opinions: Most of the questions showed neutral responses (means ranging between 2.8 and 3.1), indicating that educators are divided on many aspects of AI in education. While there is optimism in certain areas, there is significant doubt and uncertainty in others.

ANOVA (One-Way Analysis of Variance):

The ANOVA test further supports the conclusion by indicating statistically significant differences in responses across the different statements related to AI in education. The F-statistic (32.685) and p-value (1.9057E-110) demonstrate that there is a significant impact of AI across various aspects of education, as perceived by the respondents. Therefore, we reject the null hypothesis (H_0) and accept the opportunity speculation (H_1).

Hypothesis Testing:

Null Hypothesis (H_0): "There is no significant impact of Artificial Intelligence (AI) on education."

Alternative Hypothesis (H_1): "There is a significant impact of Artificial Intelligence (AI) on education."

since the p-price is extremely small (a good deal much less than 0.05), we reject the null hypothesis and accept the alternative hypothesis. this means that the statistics helps the

realization that AI does have a considerable impact on education, however this effect is considered in another way throughout diverse components.

Final Verdict:

AI's Impact on Education: The findings indicate that AI does indeed have a significant impact on the education system. However, the impact is mixed:

There is strong agreement on some positive aspects, such as AI contributing to inclusivity, supporting content creation, and assessment.

On the other hand, there is skepticism and concern about its ability to replace educators or foster creativity and critical thinking in students.

Many respondents have neutral or uncertain views, suggesting that while AI's potential is recognized, its practical application and long-term effects are still a subject of debate and concern.

Key Takeaways:

AI has potential, especially for improving inclusivity, creating engaging content, and assessing student performance.

There is still resistance or skepticism regarding AI replacing educators or fostering critical thinking and creativity.

The future integration of AI into education will depend on addressing these concerns and further research on how to implement AI effectively without diminishing the role of educators or the quality of education.

In conclusion, while AI will undoubtedly play a growing role in education, its full impact will be shaped by how it is implemented, how educators and students are trained, and how concerns are addressed.

VI. ACKNOWLEDGEMENT

I would like to present my gratitude towards all those people who have come up in order to help me out with this task of completing this report on time. Firstly, I would like my college which gave this subject to us so that we can collect different information on a particular topic. I would like to thank all those people who presented their views on my topic. I would also like to thank my faculty in charge of this subject Dr. Shalini Srivastav for her constant follow ups and friendly support, perfect teachings or guidelines and motivational or encouraging words.

REFERENCES

- Dulundu, A. (2024). *AI in Education: Benefits and Concerns*. 8(1), 81. <https://doi.org/10.62802/3fr4f412>
- Karmakar, S., & Das, T. K. (2024). *Effect of artificial intelligence on education*. 198–211. <https://doi.org/10.1201/9781003536796-8>
- Li, W. (2024). The Influence of Artificial Intelligence on the Education System. *Lecture Notes in Education Psychology and Public Media*, 65(1), 109–114. <https://doi.org/10.54254/2753-7048/65/20240158>
- Puhach, V. (2024). Ai as a tool to increase the efficiency of distance learning. *Педагогика Безнеку*, 9(1), 31–36. <https://doi.org/10.31649/2524-1079-2024-9-1-031-036>
- Dei, M. (2024). *The impact of AI on the adaptation of educational materials and teaching methods to the needs of each student*. 3, 124. <https://doi.org/10.62486/latia2025124>
- Okhanashvili, S. (2024). *Artificial Intelligence in Education*. <https://doi.org/10.52340/erp.2024.05.06>
- Singh, T., Reddy, C. K. K., Murthy, B. V. R., Nag, A., & Doss, S. (2024). AI and Education. *Advances in Educational Technologies and Instructional Design Book Series*, 131–160. <https://doi.org/10.4018/979-8-3693-8151-9.ch005>
- Holmes, W., & Tuomi, I. (2022). State of the art and practice in AI in education. *European Journal of Education*, 57(4), 542–570.

- Choi, W. C., Choi, I. C., & Chang, C. (2025). *The Impact of Artificial Intelligence on Education: The Applications, Advantages, Challenges and Researchers' Perspective*. <https://doi.org/10.20944/preprints202501.1420.v1>
- Leong, W. Y., Leong, Y. Z., & Leong, W. S. (2025). Artificial Intelligence in education. *IET Conference Proceedings*, 2024(22), 183–184. <https://doi.org/10.1049/icp.2024.4341>
- Sumartono, S., Sumartono, W. A. P., & Hashemi Rafsanjani, W. A. (2025). *Transforming Education: The Impact of Artificial Intelligence on Learning and Pedagogical Practices*. 12(1), 75–84. <https://doi.org/10.25139/eckll.v12i1.9605>
- Wang, Y. (2024). The Impact of AI Application in Education on Students. *Journal of Education, Humanities and Social Sciences*, 45, 116–122. <https://doi.org/10.54097/gg1d3q19>
- Kour, J., Bhatia, R., & Joshi, R. (2024). Artificial Intelligence in Education. *Advances in Educational Technologies and Instructional Design Book Series*, 193–210. <https://doi.org/10.4018/979-8-3693-8191-5.ch007>
- Kayyali, M. (2025). AI in Higher Education. *Advances in Educational Technologies and Instructional Design Book Series*, 31–62. <https://doi.org/10.4018/979-8-3693-7949-3.ch002>
- D'Ambrosio, F. (2025). Intelligenza artificiale e istruzione: tra sperimentazione e prospettive evolutive. *Journal of Educational, Cultural and Psychological Studies*, 30. <https://doi.org/10.7358/ecps-2024-030-ambf>
- Zhang, C. (2024). AI in Education: Opportunities, Challenges, and Pathways for Equitable Learning. *Journal of Education, Humanities and Social Sciences*, 45, 723–728. <https://doi.org/10.54097/kfgp6j07>
- Çela, E., Fonkam, M., Vajjhala, N. R., & Vedishchev, A. (2024). Artificial Intelligence in Education. *Advances in Educational Technologies and Instructional Design Book Series*, 1–20. <https://doi.org/10.4018/979-8-3693-7220-3.ch001>
- Treve, M. (2024). Integrating Artificial Intelligence in Education: Impacts on Student Learning and Innovation. *International Journal of Vocational Education and Training Research*, 10(2), 61–69. <https://doi.org/10.11648/j.ijvetr.20241002.14>
- Boumediene, H., & Bouakkaz, M. (2024). Artificial Intelligence in Education. *Advances in Educational Technologies and Instructional Design Book Series*, 407–438. <https://doi.org/10.4018/979-8-3693-7220-3.ch014>
- Degni, F. (2024). The Impact of Artificial Intelligence on Education. *Advances in Educational Technologies and Instructional Design Book Series*, 55–94. <https://doi.org/10.4018/979-8-3693-6170-2.ch003>
- Elstad, E. (2024). *AI in Education: Rationale, Principles, and Instructional Implications*. <https://doi.org/10.48550/arxiv.2412.12116>
- Jenq, J. (2024). The Impact of Artificial Intelligence on Education. *Journal on Systemics, Cybernetics and Informatics*, 22(7), 71–76. <https://doi.org/10.54808/jsci.22.07.71>
- Widyasari, E., Murtiyasa, B., & Supriyanto, E. (2024). Revolusi Pendidikan dengan Artificial Intelligence: Peluang dan Tantangan. *Deleted Journal*, 10(2), 302–311. <https://doi.org/10.37567/jie.v10i2.3405>
- Albahijan, N., Al-Suraibi, H., Alotaibi, J. A., & Alotaibi, K. (2025). Artificial Intelligence in Education. □*al-Majllah al-Dawliyah Lil-Hāsibāt Wa-al-Ma'lūmātīyah*., 4(1), 9–61. <https://doi.org/10.59992/ijci.2025.v4n1p1>