Reimagining Education – Exploring the Factors Influencing Perception Towards Artificial Intelligence and Its Educational Outcome

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Abstract

In recent years, there has been a growing interest in exploring the integration of AI technologies into educational settings to enhance teaching and learning experiences. However, the successful adoption of AI in education depends significantly on the perceptions and attitudes of teachers, who play a crucial role in implementing and utilizing these technologies in the classroom. The article aims to examine teachers' perceptions of using artificial intelligence in education, exploring their attitudes, concerns, and expectations regarding AI integration. In addition, many school administrators and educators have not had direct experience with AI-based learning assistance and may just see it as a marginally improved kind of instructional technology. The researcher concluded that, educators should try out AI-powered learning tools for themselves to get a feel for how they may enhance STEM education—and scientific writing in particular—before implementing them in the classroom and assessing their efficacy. Understanding the relationship between AI integration and educational outcomes is essential for informing policy, guiding practice, and fostering evidence-based approaches to AI implementation in education. Many educators feel ill-equipped to navigate the complexities of AI technologies leverage them effectively in the classroom. Educators, policymakers, and technology developers must work collaboratively to establish robust data protection policies, transparent data governance frameworks, and mechanisms for ensuring algorithmic fairness and accountability.

Keywords: Cultural, Social Norms, Education and Exposure, Educational Environment, Effort Expectancy, Ethical Concerns and Media.

Introduction

Artificial intelligence (AI) has been radically altering the structure of every business and making them more accessible than ever before [3]. There has been a consistent push to integrate AI into the classroom as a result of the profound impact this cutting-edge technology has had on pedagogical methods. Even though AI-enabled learning supports have a lot of potential, teachers still aren't ready to use them effectively in the classroom. Furthermore, researchers have shown that the mindset of the lesson's instructor has a significant impact on the effectiveness of new instructional technology [12]. There has been much professional development on the topic of educational technology integration for decades, yet many educators still have a poor impression of and reluctance to utilize technology in the classroom. They refuse to change their methods of instruction or use new resources because they fear it would have a detrimental impact on their students [9]. Therefore, it is imperative that educators acquire the skills necessary to not only operate technological devices but also to effectively incorporate them into their lesson plans [1]. Teachers also need to know why educational technology is important and what benefits it may provide to the classroom before they can be receptive to using cutting-edge tech into their teachings. For the most part, educators who have favourable attitudes towards the use of artificial intelligence in education tend to perceive it as a potentially useful instrument that may improve the efficiency of teaching, facilitate the learning of students, and advance educational fairness and inclusion [13].

Integration of AI in education

The integration of artificial intelligence (AI) in education represents a transformative shift in instructional practices, offering opportunities to enhance teaching effectiveness, personalize learning experiences, and improve educational

outcomes. AI technologies, such as machine learning algorithms, natural language processing, and intelligent tutoring systems, have the potential to revolutionize various aspects of education, from classroom instruction to assessment and administrative tasks. Adaptive learning systems, can dynamically adjust the pace, content, and difficulty level of instructional materials based on students' real-time performance, promoting mastery learning and academic success. Moreover, AI-powered educational tools and applications can facilitate collaborative learning experiences, enabling students to engage in interactive activities, peer feedback, and real-time communication with classmates and instructors [2]. AI-powered chatbots and virtual assistants installed in virtual learning environments may provide students instant help and support, encouraging self-directed learning, independent inquiry, and problem-solving abilities. While integrating AI into education has many potential advantages, there are a number of issues and concerns that need to be taken into account in order to maximise its benefits and minimise any hazards [8]. One difficulty in ensuring the smooth introduction and integration of AI technology in educational settings is the need for sufficient infrastructure and technical assistance [6]. The inadequacy of resources, knowledge, and bandwidth in many schools and institutions may impede their capacity to efficiently install and manage AI-driven systems [2]. There are concerns about the ethical implications of AI in education, particularly regarding data privacy, security, and algorithmic bias. AI-powered educational platforms rely on vast amounts of student data to personalize learning experiences and make data-driven decisions, raising questions about the collection, storage, and use of sensitive information [7].

Theoretical Framework- Artificial Intelligence

Machine learning techniques, which generate and use data-based models in an adaptable manner, have recently accounted for the vast majority of AI implementations. In order for computers to learn, machine learning creates and refines algorithms and processes automatically. Machine learning methods find several applications across various domains, from predicting outputs with high accuracy from input data to discovering patterns in large datasets via analysis, grouping, and sequencing. Use of AI is pervasive throughout many industries, including education.

Chart: 01

AI-Assisted Learning system

Source: https://www.google.com/url?sa=i&ur
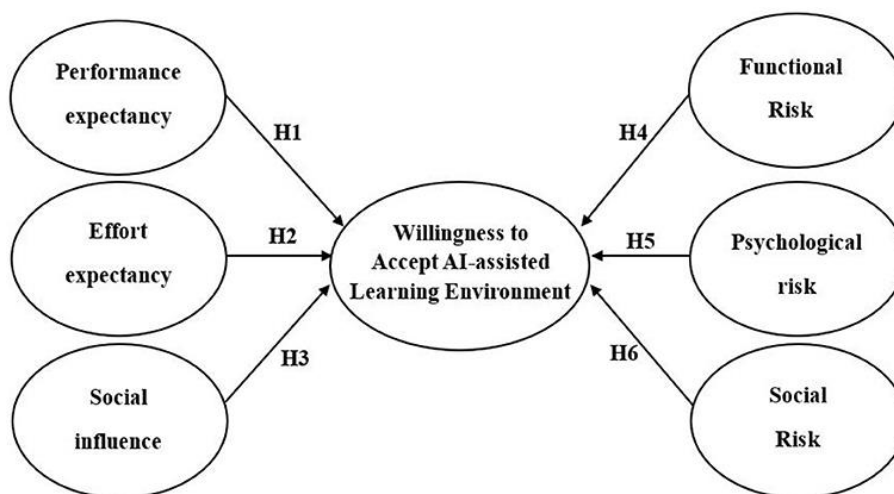
Perceptions of AI in Education

Teachers' awareness of AI technologies, their views about teaching and learning, and their experiences with integrating technology into their instructional practices, all play a role in shaping their perspectives on the use of artificial intelligence (AI) in education. It has been shown via research that although some educators believe that artificial

intelligence (AI) is a helpful tool for boosting educational results, others express scepticism or worry about the possible influence that AI may have on teaching and pupil learning. The potential advantages of artificial intelligence in education are widely recognized by educators. These advantages include personalized learning experiences, adaptive examinations, and decision-making that is driven by data. Educational tools and platforms that are driven by artificial intelligence are able to analyze student data in order to give individualized learning routes, highlight areas that need development, and deliver focused interventions. Furthermore, artificial intelligence technologies have the capability to automate mundane chores, such as grading assignments and delivering feedback, which enables educators to devote more of their attention to individualized education and engaged student learning. Additionally, there are educators who believe that artificial intelligence may be used to solve educational inequalities by giving students from a variety of backgrounds with access to high-quality educational materials and through the provision of personalized assistance.

Concerns and Challenges on AI-driven instructional tools

Despite the potential benefits, many teachers also express concerns and reservations about the integration of AI in education. One common concern is the fear of technology replacing human teachers or diminishing the importance of interpersonal connections in the classroom. Some educators worry that reliance on AI-driven instructional tools may lead to depersonalized learning experiences and undermine the teacher-student relationship, which plays a critical role in fostering motivation, engagement, and socio-emotional development. Additionally, there are concerns about data privacy and security issues associated with the use of AI technologies in education. Teachers worry about the collection, storage, and sharing of sensitive student data by AI-powered systems, as well as the potential for data breaches or misuse. Maintaining student privacy and confidentiality is paramount, and educators emphasize the importance of transparent policies and practices regarding data handling and protection. Moreover, there are concerns about the accessibility and inclusivity of AI-powered educational tools, particularly for students with disabilities or those lacking access to reliable internet connectivity and digital devices. Ensuring that AI technologies are designed and implemented in a manner that accommodates diverse learning needs and preferences is essential for promoting equitable educational opportunities for all students. Another challenge is the need for professional development and training to support teachers in effectively integrating AI into their instructional practices.

Statement of the Problem

The rapid advancement of AI technologies offers unprecedented opportunities to revolutionize education, yet it also presents challenges and uncertainties that must be addressed. One significant problem lies in the diverse and often contradictory perceptions held by educators towards AI in education. While some teachers embrace AI as a tool for enhancing teaching effectiveness, personalizing learning experiences, and improving educational outcomes, others express skepticism or apprehension about its potential impact on pedagogy, student engagement, and socio-emotional development. In addition, the opinions that educators have towards the use of artificial intelligence in education are impacted by a wide range of circumstances. These aspects include their degree of technical literacy, their attitudes towards innovation, and their beliefs regarding teaching and learning, and their concerns regarding equality, ethics, and privacy. Educators' opinions of artificial intelligence (AI) and their preparedness to incorporate technology into their teaching methods are also significantly influenced by institutional variables such as access to resources, support from school administration, and chances for professional development. There is a deficiency of research about the particular educational results and consequences of incorporating AI in a variety of educational settings. While anecdotal evidence and case studies highlight the potential benefits of AI in promoting personalized learning, adaptive assessment, and data-driven decision-making, empirical research is needed to examine its impact on teaching effectiveness, student achievement, and overall learning experiences. The problem statement revolves around the need to understand the multifaceted factors that influence educators' perceptions towards AI in education and to investigate its specific educational outcomes and implications. Addressing these challenges requires interdisciplinary research, collaborative efforts, and a nuanced understanding of the complex dynamics shaping the intersection of AI and education.

Research objectives and Methodology

As education undergoes a transformative evolution in the digital age, the integration of artificial intelligence (AI) has emerged as a compelling avenue for reimagining teaching and learning practices. However, understanding the factors that influence educators' perceptions towards AI and its potential educational outcomes is essential for successful implementation and adoption. The study investigates s into the problem statement, exploring the complex interplay of factors that shape educators' attitudes, beliefs, and expectations regarding AI in education. 200 randomly chosen teachers from the state of Maharashtra participated in the research. The purpose of this survey is to collect data from instructors and students on their perspectives on AI in the classroom and the results it has produced. The first ever thorough systematic synthesis of AI user acceptability is presented in this work. In this study, the features of studies that have looked at user adoption of AI technology, as well as the key elements that have been identified as predicting such acceptance. The current literature on AI acceptance has four contributions from this study. Google Forms were used to get the data.

Perception of artificial intelligence (AI) technology

AI can help educators optimize their workflow and allocate resources more efficiently, ultimately enhancing productivity and job satisfaction. The descriptive statistics from the data analysis helps to rank the practices. The result is given below.

Table 1: Perception towards Artificial intelligence

Factors	Mean	Std. Deviation	Mean Rank
Access and Equity	3.01	1.219	7.55
Career Aspirations	3.69	1.258	6.62
Cultural and Social Norms	2.58	1.584	5.64
Education and Exposure	2.40	1.334	6.13
Educational Environment	2.32	1.426	5.85
Ethical and Societal Concerns	3.26	1.130	6.39
Media and Culture	3.43	1.408	7.02
Personal Experience	3.95	1.339	7.51
Personal Values and Beliefs	2.90	1.534	4.10
Trust in Technology	3.28	0.998	6.18
No of Respondents	200		
Kendall's W[a]	0.013		
Chi-Square	11.392		
difference	9		
Sig.	0.031		

According to the data in the table, the estimated Chi-Square value for 9 degrees of freedom is more than the critical threshold. Significance level of 3.1%, which is less than the cutoff of 5%. Thus, it is reasonable to assume that the respondents' ratings of the various factors are significant. There is great promise for a paradigm shift in education that may result from the incorporation of artificial intelligence (AI), but the success of this shift will hinge heavily on the training and familiarity of educators with AI tools. Training, professional development, and practical experience all play a role in boosting teachers' self-assurance, competency, and desire to use AI technologies in the classroom, and this paragraph delves into how exposure and education affect their use of AI in education. Teachers who obtain formal training in AI ideas, principles, and techniques are more able to recognise the advantages and prospects of incorporating AI into their teaching activities.

Factors the potential of AI for enhancing teaching and learning outcomes

There is a need for comprehensive professional development and training to support teachers in effectively integrating AI into their instructional practices. Many educators may lack the necessary skills, knowledge, and confidence to leverage AI technologies in the classroom, necessitating ongoing professional learning opportunities and resources. Providing educators with access to high-quality training programs, instructional materials, and peer support networks is essential for building their capacity to harness the potential of AI for enhancing teaching and learning outcomes. The data reduction approach is used to categories these fourteen elements. In order to minimize the number of components based on their uniqueness, factor analysis is used. The KMO and Bartlett's tests is used to make sure our data; the results are below.

Table 2-KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.896
Bartlett's Test of Sphericity	Approx. Chi-Square	21178.002
	df	66
	Sig.	0.000

The data are trustworthy (>0.700) according to the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) test, which indicates a value of 0.842 in the table above. With 66 degrees of freedom, the Bartlett's test yields a Chi-square value of 21178.002. At the 1% level, it is substantial (0.000). Therefore, it demonstrates that the factor-related data is sufficient for factor analysis. In addition, the findings from the factor analysis.

Table 3-Principal Component Analysis

	Factors	Initial	Extraction
1.	Access and Equity	1.000	.512
2.	Career Aspirations	1.000	.638
3.	Cultural and Social Norms	1.000	.573
4.	Education and Exposure	1.000	.507
5.	Educational Environment	1.000	.568
6.	Effort Expectancy	1.000	.588
7.	Ethical Concerns	1.000	.687
8.	Media and Culture	1.000	.598
9.	Performance Expectancy	1.000	.738
10.	Personal Experience	1.000	.777
11.	Personal Values and Beliefs	1.000	.709
12.	Social Influence	1.000	.532
13.	Societal Concerns	1.000	.791
14.	Trust in Technology	1.000	.810
Method: PCA			

The fact that all of the components included in the research had extraction values greater than 0.500 indicates that their data may be used for further analysis. The following is the breakdown of the 14 components and the extent to which they explain the group's variation, as well as the degree of extraction:. Teachers' career aspirations can significantly impact their utilization of artificial intelligence (AI) in education. For educators who aspire to innovate and stay at the forefront of educational practices, integrating AI technologies into their teaching methods may align with their professional goals. These teachers may view AI as a tool to enhance their effectiveness, engage students, and improve learning outcomes. They may seek out opportunities to learn about AI and explore its potential applications in the classroom, motivated by a desire to remain competitive in their field and provide the best possible education for their students.

TABLE 4-Total Variance Explained

Component	Eigen values			Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.971	49.79	49.79	6.971	49.79	49.79	4.796	34.259	34.259
2	1.778	12.699	62.49	1.778	12.699	62.49	3.345	23.893	58.152
3	1.103	7.88	70.37	1.103	7.88	70.37	1.71	12.218	70.37
4	0.76	5.426	75.796						
5	0.714	5.102	80.898						
6	0.493	3.519	84.417						
7	0.452	3.226	87.644						
8	0.4	2.857	90.5						
9	0.358	2.556	93.056						
10	0.286	2.041	95.097						
11	0.234	1.674	96.77						
12	0.208	1.486	98.257						
13	0.166	1.184	99.441						
14	0.078	0.559	100						
Extraction Method: Principal Component Analysis.									

The first four components all have initial Eigen values greater than 1, as seen in the table above. All four factors contribute to a total of 70.370% variation. A higher degree of significance is shown by the percentage. Utilising the varimax rotation, the data is partitioned into four components with the aim of reducing the number of factors. Teachers whose career aspirations focus more on traditional teaching methods or maintaining stability in their roles may approach AI integration with caution or skepticism. They may be hesitant to adopt new technologies due to concerns about their own proficiency, the impact on their teaching style, or potential resistance from students or colleagues. For these educators, the perceived risks and challenges of incorporating AI into their practice may outweigh the potential benefits, leading them to prioritize familiarity and consistency over innovation. There is a noticeable lack of empirical research on how the general public views artificial intelligence in the existing body of literature, which presents a promising area for further investigation. The results of Gerlich's (2023) [18] research revealed some fascinating trends in consumer behaviour, especially when it came to the majority of participants' claims that they believed AI-driven influencers to be sincere and selfless. There is a clear gap in the literature, even with the abundance of works discussing various aspects of artificial intelligence and the difficulties it presents for the corporate world. One unresolved issue is how society will be ready for the impending changes and how people will feel about cutting edge technology like chatbots, AI, and other sophisticated instruments. Kaplan and Haenlein (2019) [19] point out, artificial intelligence is still in its infancy and has a lot of questions about where it will go in the future. A more sophisticated comprehension and prudent use of AI

necessitates taking into account a number of factors, such as employment, ethics, education, entente, enforcement, and development. The dominant discourse in academia is that public opinion has a major impact on how emerging technologies are assimilated and how adoption choices are made. Numerous academic initiatives concentrate on examining intangible assets including virtual worlds, social networks, and artificial intelligence.

TABLE 5-Rotated Component Matrix

Factors	1	2	3	4
Access and Equity	.629			
Career Aspirations	.752			
Cultural and Social Norms	.633			
Education and Exposure	.634			
Educational Environment		.636		
Effort Expectancy		.714		
Ethical Concerns		.895		
Media and Culture		.707		
Performance Expectancy			.625	
Personal Experience			.867	
Personal Values and Beliefs			.898	
Social Influence			.807	
Societal Concerns				.866
Trust in Technology				.728

According to their degree of uniqueness, the elements falling within the four categories are shown in the varimax rotation result.Teachers' career aspirations may be influenced by external factors such as institutional priorities, professional development opportunities, and support from school leadership. Educators who receive encouragement, resources, and training to explore AI integration may be more likely to incorporate these technologies into their teaching practice, regardless of their initial career aspirations. Teachers' career aspirations play a significant role in shaping their attitudes and approaches to using AI in education. By aligning AI integration efforts with educators' professional goals and providing them with the necessary support and resources, schools and educational institutions can empower teachers to leverage AI technologies effectively and enhance their teaching practice. Ethical concerns surrounding the use of artificial intelligence (AI) can significantly impact teachers' decisions and attitudes towards integrating AI into their practice. The potential for algorithmic bias, where AI systems may unintentionally perpetuate or exacerbate existing inequalities based on factors such as race, gender, or socioeconomic status. Teachers are acutely aware of the importance of fairness and equity in education, and they may be hesitant to adopt AI tools if they perceive a risk of bias or discrimination. AI systems often rely on vast amounts of student data to personalize learning experiences and make data-driven decisions. Educators are responsible for safeguarding this sensitive information and ensuring that students' privacy rights are protected. The prospect of data breaches, unauthorized access, or misuse of student data by AI systems can erode trust and confidence in these technologies, leading teachers to approach AI integration with caution. Furthermore, educators grapple with ethical dilemmas related to the depersonalization of learning experiences and the potential loss of human connection in the classroom. While AI technologies offer opportunities for personalized instruction and adaptive learning, teachers are mindful of the importance of interpersonal relationships and the unique insights that human educators bring to the teaching process. They may worry that overreliance on AI-driven tools could diminish the teacher-student relationship and undermine the holistic development of students.

Discussion

A fundamental belief in the importance of fostering human connections and personalized learning experiences may lead to reluctance regarding the use of AI. They may prioritize interpersonal interactions and individualized instruction over the perceived efficiency or effectiveness of AI-driven tools. Conversely, teachers who value innovation, efficiency, and data-driven decision-making may embrace AI as a means of enhancing teaching effectiveness and student outcomes.

Additionally, personal values related to equity, inclusivity, and ethical considerations can impact teachers' perspectives on AI integration. Educators who prioritize equity may be cautious about the potential for AI to exacerbate existing disparities in educational access and outcomes. Similarly, concerns about data privacy, algorithmic bias, and the ethical implications of AI may influence teachers' willingness to adopt AI technologies in their practice. They may seek opportunities for professional development and training to enhance their understanding of ethical issues related to AI and develops strategies for promoting responsible and ethical AI integration in the classroom. Ultimately, educators' commitment to upholding ethical principles and values plays a pivotal role in shaping their approach to using AI in education and ensuring that these technologies are deployed in a manner that prioritizes the well-being and interests of students.

Implications for Teaching and Learning

 AI technologies have the potential to empower educators to adopt more student-centred, personalized instructional strategies that cater to diverse learning needs and preferences. By leveraging AI-powered analytics and insights, teachers can gain valuable insights into students' learning trajectories, identify areas for targeted intervention, and provide timely feedback and support, thereby fostering a more supportive and responsive learning environment. Moreover, AI-enabled educational tools and applications can facilitate active, experiential learning experiences that promote critical thinking, creativity, and collaboration.

Research Contribution

In this quickly evolving digital era, where e-commerce, mobile technology, and the Internet of Things are becoming more and more widespread, it is especially important for businesses to stay current with the latest technological breakthroughs in order to maintain their competitive edge [4]. Businesses are required to implement technological advancements such as artificial intelligence and other innovations; nevertheless, in order to make the most of these innovations and apply them with the highest level of accuracy and precision, it may be even more vital to have a comprehensive understanding of these techniques and the effects they have. In order to improve the alignment between artificial intelligence applications and consumer demands, businesses need to have a thorough understanding of the technological and behavioural elements of their clients [2]. In order to possibly enhance the overall impact at different times throughout the adoption process, it is necessary to take all of this into consideration. This will eventually result in an increase in user confidence and the resolution of difficulties that are specific to people [10]. The objective of this survey is to collect opinions from people all around the world on artificial intelligence. It is anticipated that the results will contribute to a deeper comprehension of the elements that influence the perception of artificial intelligence (AI) among the general public, as well as any potential implications for the adoption and dissemination of AI. It is possible that the study may give answers and identify potential obstacles to the mainstream application of artificial intelligence.

Conclusion

Virtual reality simulations can immerse students in interactive, hands-on learning environments, enabling them to explore complex concepts, conduct experiments, and solve authentic problems in a safe and controlled setting. By integrating AI-driven adaptive learning pathways and intelligent tutoring systems, educators can scaffold learning experiences and provide differentiated instruction that meets students' individual needs and learning styles. Addressing these concerns and challenges requires collaborative efforts from policymakers, education stakeholders, and technology developers to ensure that AI technologies are deployed responsibly and ethically in educational settings. Providing educators with the necessary support, resources, and training is essential for fostering positive attitudes toward AI integration and empowering teachers to leverage these technologies effectively to enhance teaching and learning experiences for all students. Ultimately, teachers' personal values and beliefs serve as critical determinants of their approach to incorporating AI into education, highlighting the importance of thoughtful reflection, dialogue, and professional development to navigate the complex intersection of technology and teaching. In navigating these ethical concerns, teachers may advocate for transparent policies, guidelines, and ethical frameworks governing the use of AI in education.

Reference

1. Cooper G. Examining science education in Chat Gpt: An exploratory study of generative artificial intelligence. Journal of Science Education and Technology. 2023 Jun;32(3):444-452

2. Dicheva D, Dichev C, Agre G, Angelova G. Gamification in education: A systematic mapping study. Journal of Educational Technology & Society. 2015;18(3):75-88

3. Gansser, Oliver A., and Christoph S. Reich. 2021. A new acceptance model for artificial intelligence with extensions to UTAUT2: An empirical study in three segments of application. Technology in Society 65

4. Holmes W, Porayska-Pomsta K, editors. The Ethics of Artificial Intelligence in Education: Practices, Challenges, and Debates. London: Taylor & Francis; 2022

5. Jaradat, Mohammed Riad M., and Mohammad S. Al Rababaa. 2013. Assessing Key Factor that Influence on the Acceptance of Mobile Commerce Based on Modified UTAUT. International Journal of Business and Management 8: 102

6. Kilty TJ, Burrows AC. Integrated STEM and partnerships: What to do for more effective teams in informal settings. Education in Science. 2022;12(1):58

7. Lisberg A, Woods B. Mentorship, mindset and learning strategies: An integrative approach to increasing underrepresented minority student retention in a STEM undergraduate program. Journal of STEM Education. 2018;19(3):14-20

8. Littman ML, Ajunwa I, Berger G, Boutilier C, Currie M, Doshi-Velez F, et al. Gathering Strength, Gathering Storms: The One Hundred Year Study on Artificial Intelligence (AI100) 2021 Study Panel Report. arXiv preprint arXiv:2210.15767. 2022 Oct 27

9. Lu Y. Artificial intelligence: A survey on evolution, models, applications and future trends. Journal of Management Analytics. 2019;6(1):1-29

10. Park, Jonghyuk, and Sang Eun Woo. 2022. Who likes artificial intelligence? Personality predictors of attitudes toward artificial intelligence. The Journal of Psychology 156: 68–94.

11. Pillai, Rajnandini, and Brijesh Sivathanu. 2020. Adoption of artificial intelligence (AI) for talent acquisition in IT/ITeS organizations. Benchmarking: An International Journal 27: 2599–629.

12. Ramirez J, Yu W. Reinforcement learning from expert demonstrations with application to redundant robot control. Engineering Applications of Artificial Intelligence. 2023;119:105753

13. Reckwitz, A. 2020. The Society of Singularities. In Futures of the Study of Culture: Interdisciplinary Perspectives, Global Challenges. Edited by D. Bachmann-Medick, J. Kugele and A. Nünning. Berlin and Boston: De Gruyter, pp. 141–54

14. Schofield JW, Eurich-Fulcer R, Britt CL. Teachers, computer tutors, and teaching: The artificially intelligent tutor as an agent for classroom change. American Educational Research Journal. 1994;31(3):579-607

15. Uunona GN, Goosen L. Leveraging ethical standards in artificial intelligence technologies: A guideline for responsible teaching and learning applications. In: Handbook of Research on Instructional Technologies in Health Education and Allied Disciplines. Pennsylvania: IGI Global; 2023. pp. 310-330

16. Williams R, Park HW, Breazeal C. A is for artificial intelligence: The impact of artificial intelligence activities on young children's perceptions of robots. In: Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems. Chicago. 2019. pp. 1-11

17. Wolf MK. Interconnection between constructs and consequences: A key validity consideration in K–12 English language proficiency assessments. Lang Test Asia. 2022;12(1):44

18. Raparthi, M., Dodda, S. B., & Maruthi, S. H. (2020). Examining the use of Artificial Intelligence to Enhance Security Measures in Computer Hardware, including the Detection of Hardware-based Vulnerabilities and Attacks. European Economic Letters, 10(1), https://doi.org/10.52783/eel.v10i1.991

19. Gerlich, Michael. 2023. The Power of Virtual Influencers: Impact on Consumer Behaviour and Attitudes in the Age of AI. Administrative Sciences 13: 178.

20. Kaplan, Andreas, and Michael Haenlein. 2019. Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence. Business Horizons 62: 15–25