



ISSN Print: 2664-8792  
ISSN Online: 2664-8806  
Impact Factor: RJIF 8  
IJRM 2024; 6(1): 530-532  
[www.managementpaper.net](http://www.managementpaper.net)  
Received: 11-05-2024  
Accepted: 15-06-2024

**Nehathmika M**  
Final Year MBA Student, Sri  
Sai Ram Engineering College,  
Chennai, Tamil Nadu, India

**Dr. R Suresh**  
Associate Professor,  
Management Studies, Sri Sai  
Ram Engineering College,  
Chennai, Tamil Nadu, India

**Corresponding Author:**  
**Nehathmika M**  
Final Year MBA Student, Sri  
Sai Ram Engineering College,  
Chennai, Tamil Nadu, India

# International Journal of Research in Management

## Generative AI and its impact on education

**Nehathmika M and Dr. R Suresh**

**DOI:** <https://doi.org/10.33545/26648792.2024.v6.i1f.187>

### Abstract

This abstract provides an overview of a study that conducts a Study on Generative AI and its impact on Education. The era of artificial intelligence (AI) has indeed ushered in significant advancements and opportunities across various industries, and education is no exception. This paper presents a comprehensive review of recent literature to shed light on the multifaceted implications of AI integration in education. By synthesizing current research, this paper provides a nuanced understanding of the evolving landscape of AI in education and its impact on students, educators, and institutions.

**Keywords:** Generative AI, education, impact on students

### Introduction

The 21st century has experienced a rapidly changing landscape in educational practices largely due to advancement in technology (such as artificial intelligence) (Petersen, 2021) [22]. These technological developments have ushered in a new era of learning, shaping the educational landscape and prompting a reevaluation of traditional teaching methods. Generative Artificial Intelligence (Generative AI) is a cutting-edge technology that enables the creation of diverse and contextually relevant content, ranging from text to images. The integration of AI in education has introduced innovative tools and methodologies, contributing to a more personalized and adaptive approach to learning. The integration of AI in education has introduced innovative tools and methodologies, contributing to a more personalized and adaptive approach to learning.

### Review of literature

Xiaoming Zhai (2022) [23] in the article, "ChatGPT User Experience: Implications for Education". This study was conducted by piloting ChatGPT to write an academic paper, titled Artificial Intelligence for Education. Drawing upon the user experience, the paper reflected potential impacts of ChatGPT, as well as similar AI tools, on education. (Baidoo-Anu, 2023) [24] This paper provided an overview of the current arguments around ChatGPT and Academic integrity and concluded that although these technologies are capable of revolutionizing academia, the way ChatGPT and other generative AI systems are used could surely undermine academic integrity.

Enkelejda Kasneci, Kathrin Sessler, Stefan Kuchemann, Maria Bannert (2023) [25] in their research, "ChatGPT for good? On opportunities and challenges of large language models for education". This article presented the potential benefits and challenges of educational applications of large language models, from student and teacher perspectives. Some authors focused briefly on Open AI. They conducted an extensive literature review and experimented with this artificial intelligence (AI) software. (Jürgen Rudolph, 2023) [26]. The articles explained that ChatGPT analyzed a massive amount of text data and generates human-like text responses to prompts given to it. SWOT analysis discusses the Strengths, Weakness, Opportunities and Threats associated with Chatgpt. They felt that SWOT analysis can provide an in-depth analysis of ChatGPT in education. (Mohammadreza Farrokhnia, 2023) [27].

### Need and relevance

In the ever-evolving landscape of artificial intelligence, one remarkable entity has emerged as a testament to the capabilities of language models - ChatGPT. There is an increasing demand for personalized and adaptive learning experiences.

AI can address these needs by providing tailored learning paths for individual students. This present study has been conducted to identify the exploration of ChatGPT in the field of education and its impact on students.

**Objectives**

- To examine the Effectiveness of Gen AI in personalized learning
- To perform the SWOT analysis of using Chat GPT in Education
- To identify the barriers to adaption and implementation
- To anticipate the future prospects

**Methodology**

The entire study is descriptive in nature, wherein both primary and secondary data were used for the study. Primary data has been collected through a structured questionnaire. The study adopted simple random sampling technique to collect the information from respondents, which covered the Students, Researchers with a sample size of 80.

**Hypothesis I**

**Ho:** There is no significant relationship between the integration of AI with education and the Experience of the respondents using AI powered tools.

**Table 1:** Correlation between the integration of AI with education and Experience of the respondents on using AI powered tools.

| Correlation                    | Integration of AI | Experience on AI powered tools |
|--------------------------------|-------------------|--------------------------------|
| Integration of AI              | 1                 | 0.777**                        |
| Experience on AI powered tools | 0.777**           | 1                              |

N=80; \*\*-0.01 Significant Level (p)

**Interpretation**

The ‘p’ value is less than 0.05, indicates a significant relationship between the integration of AI with education and Experience of the respondents on using AI powered tools. The Pearson’s coefficient ‘r’ value (0.777) exhibits a perfect positive correlation. Hence, null hypothesis is rejected.

**Hypothesis II**

**Ho:** There is no relationship between the concerns or challenges with the use of AI and Recommendations to improve the integration of AI.

**Table 2:** Correlation between the concerns or challenges with the use of AI and Recommendations to improve the integration of AI.

| Correlation            | Concerns | Recommendations |
|------------------------|----------|-----------------|
| Concerns or Challenges | 1        | 0.884**         |
| Recommendations        | 0.884**  | 1               |

N=80; \*\*-0.01 Significant Level (p)

**Interpretation**

The ‘p’ value is less than 0.05, indicates a significant relationship between the concerns and recommendations. Participants who express more concerns or challenges with the increasing use of AI in education are more likely to provide recommendations for improving its integration, and vice versa. The Pearson’s coefficient ‘r’ value (0.884)

exhibits a perfect positive correlation. Hence, null hypothesis is rejected.

**Results and Discussion**

The demographic profiles of the respondents are, majority of the respondents are males and nearly half of them belong to the age group of Eighteen to twenty Five years. Also, nearly half of the respondents are students. Around two-thirds of the respondents are familiar with the concept of Generative AI. Half of the respondents use ChatGPT frequently. Moreover, fifty percent of the respondents agreed that AI is very well integrated with education. Almost, sixty percent of the respondents used AI powered tools for the purpose of Education. Furthermore, only six percent of the respondents are not familiar with the concept of Gen AI. Interestingly, fifty percent of the respondents are satisfied with the use of AI powered tools for educational purposes. Almost, forty percent of the respondents felt that Gen AI brings certain potential benefits like personalized learning experience with respect to education. And, majority of the respondents felt that there are certain concerns or challenges with respect to the usage of AI like Data privacy concerns and Lack of human touch in education. Certain recommendations like strict ethical considerations will help in improving the integration of AI with respect to education. In addition to this finding, almost seventy percent of the respondents are more prominent to foresee the role of AI evolving in the field of education over the next decades.

**Conclusion**

The present study revealed that the integration of Generative AI with respect to Education seems to be effective. It has been observed that with strict ethical considerations and proper research on AI’s impact on education, people can have the benefit of personalized learning experience. The study delves into the dynamic intersection of Generative AI and education, exploring the perspectives and behaviors of diverse participants. Therefore, it can be concluded that with improved teaching efficiency and enhanced student engagement practices helps to attain the potential benefits and recommendations with respect to strict ethical considerations will help the AI to improve with respect to the field of education.

**References**

1. Abukmeil M, Ferrari S, Genovese A, Piuri V, Scotti F. A survey of unsupervised generative models for exploratory data analysis and representation learning. ACM Computing Surveys (CSUR). Journal of AI. 2021;54(5):1-40.
2. Alshater M. Exploring the role of artificial intelligence in enhancing academic performance: A case study of ChatGPT; c2022 Dec 26.
3. Aydin O, Karaarslan E. OpenAI ChatGPT Generated Literature Review: Digital Twin in Healthcare. In: Aydin O, editor. Emerging Computer Technologies 2. Izmir: Akademi Dernegi; c2022. p. 22-31.
4. Brown T, Mann B, Ryder N, Subbiah M, Kaplan JD, Dhariwal P, *et al.* Language models are few-shot learners. Advances in Neural Information Processing Systems. 2020;33:1877-1901.
5. Chen Y, Chen Y, Heffernan N. Personalized math tutoring with a conversational agent. arXiv preprint arXiv:2012.12121. 2020.

1. Elsen-Rooney M. NYC education department blocks ChatGPT on school devices, networks; c2023 Jan 24. Available from:
2. <https://ny.chalkbeat.org/2023/1/3/23537987/nyc-schools-ban-chatgpt-writing-artificial-intelligence>
3. Ali S, Payne BH, Williams R, Park HW, Breazeal C. Constructionism, ethics, and creativity: Developing primary and middle school artificial intelligence education. In: International Workshop on Education in Artificial Intelligence K-12. MIT Press; c2019.
4. Allen B, McGough AS, Devlin M. Toward a framework for teaching artificial intelligence to a higher education audience. *ACM Transactions on Computing Education (TOCE)*. 2021;22(2):1-29.
5. Baldoni M, Baroglio C, Bucciarelli M, Gandolfi E, Iani F, Marengo E, *et al.* Empowering AI competences in children: the first turning point. In: International Conference in Methodologies and Intelligent Systems for Technology Enhanced Learning. Springer; c2023. p. 171-81.
6. Wong GK, Ma X, Dillenbourg P, Huan J. Broadening artificial intelligence education in K-12: where to start?. *ACM Inroads*. 2020;11(1):20-9.
7. Suresh R, Venkateswara Prasad B. Internet of Things Enabled Inclusive Business Model for Indian Agriculture. *International Journal of Recent Technology and Engineering*. 2019;8(2511):2901-3. <https://doi.org/10.35940/ijrte.b1365.0982511191>
8. Murugan K, Selvakumar V, Venkatesh P, Manikandan M, Ramu M. The Big Data Analytics and its Effectiveness on Bank Financial Risk Management. 2023 6th International Conference on Recent Trends in Advance Computing (ICRTAC); c2023. p. 313-6. DOI: 10.1109/ICRTAC59277.2023.10480831.
9. DOI: 10.1109/ICRTAC59277.2023.10480831.
10. Venkatesh P, Selvakumar V, Ramu M, Manikandan M, Senthilnathan CR. Measure of Well-Being of Freelancers in IT Sector. 2023 Intelligent Computing and Control for Engineering and Business Systems (ICCEBS); c2023. p. 1-4. DOI: 10.1109/ICCEBS58601.2023.10448738.
11. DOI: 10.1109/ICCEBS58601.2023.10448738.
12. Venkatesh P, Ilakkiya T, Ramu M, Manikandan M, Senthilnathan CR. An Analysis of the Strategic Approach to Utilizing Deep Learning for the Purpose of Predicting Stock Prices. 2023 Intelligent Computing and Control for Engineering and Business Systems (ICCEBS); c2023. p. 1-4. DOI: 10.1109/ICCEBS58601.2023.10449085.
13. DOI: 10.1109/ICCEBS58601.2023.10449085.
14. Ilakkiya T, Manikandan M, RK Ch, KM, Ramu M, Venkatesh P. Neuro Computing-Based Models of Digital Marketing as a Business Strategy for Bangalore's Startup Founders. 2024 Third International Conference on Intelligent Techniques in Control, Optimization and Signal Processing (INCOS); c2024. p. 1-3. DOI: 10.1109/INCOS59338.2024.10527779.
15. Venkatesh P, Selvakumar V, Manikandan M, Ramu M, Senthilnathan CR, Krishnamoorthi M. A Study on The Market Characteristics, Consumer Purchasing, and Behaviour Towards Footwear With Reference to Vellore Dist., Tamilnadu. Proceedings of the 3rd International Conference on Reinventing Business Practices, Start-ups and Sustainability (ICRBSS 2023). DOI: 10.2991/978-94-6463-374-0\_18.
16. Salovey P, Mayer JD. Emotional intelligence. *Imagination, Cognition and Personality*. 1990;9(3):185-211. Available from:
17. <https://journals.sagepub.com/doi/abs/10.2190/DUGG-P24E-52WK-6CDG>
18. Maran K, Sujatha L, Praveen T. Impact of Foreign Direct Investment on Automobile Sector: An Empirical Study with Reference to India. *International Journal of Economic Research*. 2017;14(11):187-96.
19. Selvakumar V, Maran K, Sankar S. Perception on Faculty Academic Relationship Management in Higher Education with Reference to Self-Financing Engineering Colleges. *International Journal of Engineering & Technology*. 2017;7(1.1):56-9.
20. Maran K, Senthilnathan CR, Usha S, Venkatesh P. Impact of Solar Energy on Mitigating Climate Changes for a Sustainable Development in India. 2022 International Conference on Power, Energy, Control and Transmission Systems (ICPECTS); c2022. p. 1-5. DOI: 10.1109/ICPECTS56089.2022.10046744.
21. Maran K, Senthilnathan CR, Usha S, Venkatesh P. Business Analytics Contribution in the Growth of Indian Digital Business. 2022 1st International Conference on Computational Science and Technology (ICCST); c2022. p. 497-500. DOI: 10.1109/ICCST55948.2022.10040343.
22. Petersen LR, Sami S, Vuong N, Pathela P, Weiss D, Morgenthau BM, *et al.* Lack of antibodies to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in a large cohort of previously infected persons. *Clinical Infectious Diseases*. 2021 Nov 1;73(9):e3066-73.
23. Zhai X. ChatGPT user experience: Implications for education. Available at SSRN 4312418; c2022 Dec 27.
24. Baidoo-Anu D, Ansah LO. Education in the era of generative artificial intelligence (AI): Understanding the potential benefits of ChatGPT in promoting teaching and learning. *Journal of AI*. 2023 Jan;7(1):52-62.
25. Kasneci E, Seßler K, Küchemann S, Bannert M, Dementieva D, Fischer F, *et al.* ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and individual differences*. 2023 Apr 1;103:102274.
26. Rudolph J, Tan S, Tan S. ChatGPT: Bullshit spewer or the end of traditional assessments in higher education?. *Journal of applied learning and teaching*. 2023 Jan 25;6(1):342-63.