



An impact of analyzing the academic integration of Chatgpt with special reference to Coimbatore City

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Abstract

This research explores the academic engagement with ChatGPT among students and faculty in Coimbatore, aiming to evaluate its adoption, usage trends, and influence within educational contexts. Employing a mixed-methods approach through surveys and interviews, the study examines awareness levels and the practical use of ChatGPT in academic activities such as writing, research, problem-solving, and exam preparation. It also investigates the perceived effects of ChatGPT on learning experiences and academic achievement, while addressing user opinions on its advantages, limitations, and ethical implications—including concerns around plagiarism, over-reliance, and authenticity. The findings reflect a range of perspectives, from recognizing ChatGPT as a valuable academic aid to cautioning against potential misuse. Drawing from these insights, the study offers recommendations for the mindful and responsible use of AI tools in academia, emphasizing the need for digital literacy, ethical practices, and critical thinking. This case study adds to the ongoing conversation on artificial intelligence in education and its emerging role in transforming academic work.

Keywords: Chatgpt, academic, research, impact, usage level, AI

Introduction

In recent years, Artificial Intelligence (AI) has emerged as a transformative force across various sectors, including education. Among the most widely recognized AI tools is ChatGPT, a conversational language model developed by OpenAI. Designed to understand and generate human-like text, ChatGPT has found widespread use in academic settings for tasks such as writing assistance, coding support, content summarization, and conceptual understanding. As educational institutions increasingly adopt digital tools to enhance learning, the integration of AI-powered platforms like ChatGPT presents both opportunities and challenges. On one hand, such tools can support personalized learning, improve efficiency, and provide real-time assistance. On the other, concerns related to academic integrity, over-dependence, and ethical implications have sparked important debates among educators and policymakers.

Objectives of The Study

- To assess awareness and usage of ChatGPT among students and faculty in Coimbatore.
- To explore how ChatGPT is used for academic tasks.
- To analyze its impact on learning and performance.
- To understand perceptions of benefits, challenges, and ethical concerns.
- To provide recommendations for responsible academic use of ChatGPT.

Scope of The Study

This study focuses on students and faculty members in Coimbatore, examining their awareness and usage of ChatGPT in academic contexts. It explores how ChatGPT is utilized for various academic tasks such as writing, research, and learning support. The study also analyzes the impact of ChatGPT on learning outcomes and overall academic performance. Furthermore, it investigates the perceived

benefits, challenges, and ethical issues associated with the use of ChatGPT in education. Based on the findings, the study aims to provide practical recommendations for the responsible and effective use of ChatGPT in academic settings.

Limitations of The Study

The study is limited to the Coimbatore region, which may affect the generalizability of the results to other areas. The sample size may not fully represent all perspectives, and the short duration of the study could have limited the depth of data collected. Future research with larger samples and longer timeframes is recommended.

Research Methodology

This research utilizes both primary and secondary data to explore the adoption and impact of ChatGPT among academicians. The primary data was gathered through a structured questionnaire administered to a random sample of 50 respondents in Coimbatore city. The study aims to assess the scope of ChatGPT in academic settings and provide relevant suggestions for OpenAI based on the findings.

Primary Data: Primary data refers to original information collected firsthand for a specific research purpose. In this study, it has been utilized to analyze how academicians are impacted by the use of ChatGPT.

Secondary Data: Secondary data was obtained from various sources related to ChatGPT, including newspapers, social media platforms, magazines, and other published materials.

Review of Literature

Kasneji, E., Sessler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., & Kasneji, G. (2023).

“ChatGPT for good? On opportunities and challenges of large language models for education.” (Learning and Individual Differences, Elsevier) This study explores how ChatGPT can support personalised learning, improve student engagement, and assist teachers in generating learning materials. It also highlights ethical issues such as misinformation and over-reliance on AI, emphasising the need for responsible integration in academic settings.

Tlili, A., Huang, R., Shehata, B., & Burgos, D. (2023). “What if the devil is my guardian angel? ChatGPT as a case study of using chatbots in education (Smart Learning and Environment) The authors examine the dual nature of ChatGPT in education—its ability to enhance creativity, writing quality and problem-solving skills, while also posing risks related to academic integrity and plagiarism. The study suggests educators adopt ethical guidelines and AI literacy programmes.

Rudolph, J., Tan, S., & Tan, S. (2023). “ChatGPT: Bullshit spewer or the end of traditional assessments?” (Journal of Applied Learning and Teaching) This paper discusses how ChatGPT challenges traditional forms of assessment and learning evaluation. It notes that while students can use ChatGPT to understand complex topics, it may also promote superficial learning if used uncritically. It calls for assessment redesign in academic institutions.

Data analysis and interpretation

Table 1: Gender Status of the Respondents

S. No	Gender	No. of respondents	percentage
1	Female	34	65.4%
2	Male	18	34.6%
	Total	52	100%

Source: primary data

Gender/ Purpose of Using CHAT GPT	Learning New Concepts	Language Translation	Summarizing Texts	Other	Grand total
Female	26	19	2	0	34
Male	15	6	2	1	18
Grand total	41	25	4	1	52

Gender// Purpose of Using CHAT GPT	Learning New Concepts	Language Translation	Summarizing Texts	Other
Female	26.81	16.35	2.62	0.65
Male	14.19	8.65	1.38	0.35

Interpretation

The table clearly shows the respondents of Using Chat GPT

Observed value (O)	Expected value (E)	(O-E)	(O-E) ²	(O-E) ² /E
26	26.81	0.81	0.65	0.13
19	16.35	2.65	7.13	0.43
2	2.62	0.62	0.38	0.15
0	0.65	0.65	0.42	0.64
15	14.19	0.81	0.65	0.14
6	8.65	2.65	7.13	0.82
2	1.38	0.62	0.38	0.37
1	0.35	0.65	0.42	1.2

Level of Significance

$\alpha=0.05$ alpha = 0.05 $\alpha=0.05$

Tabulated X^2

$X^2=3.88$ $X^2=3.88$ calculator= 7.815

Total chi square value

Interpretation

The above table shows that 65.4% of the respondents are Female, 34.6% of the respondents are Male, Hence, majority (65.4%) of the respondents are Female.

Table 2: Purpose of Using CHAT GPT frequently by Respondents.

S. No	Purpose of Using CHAT GPT	No. of respondents	percentage
1	Learning New Concepts	25	48.8%
2	Language Translation	14	26.92%
3	Summarizing Texts	12	23.8%
4	Other	1	1.92%
	Total	52	100

Interpretation

The table shows that 48.8% of the respondents are Learning New Concepts, 26.92% of the respondents are Language Translation, 23.8% of the respondents are Summarizing Texts, 1.92% of the respondents are Other. Hence, majority (48.8%) of the respondents are Learning New Concepts.

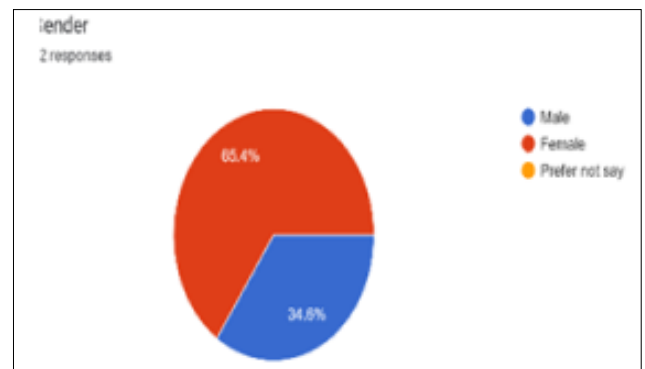


Chart 1: Chi – Square Test

$X^2 = 0.13 + 0.43 + 0.15 + 0.64 + 0.14 + 0.82 + 0.37 + 1.2 = 3.88$
 Chi- Square analysis = $\chi^2 = \sum (O_i - E_i)^2 / E_i$

Hypothetical statement

The alternative hypothesis (H_1) states that there is a significant relationship between gender and using Chat GPT. Since 7.815 > 3.88, we reject the null hypothesis.

Findings

- The majority (59.6%) of the respondents ages are between 18-21.
- The majority (65.4%) of the respondents are female.
- The majority (63.5%) of respondents are undergraduate.
- The majority (48.1%) of respondent’s experience are in education field.
- The majority (51.9%) of the respondent’s monthly income is between Rs. 20000.
- The majority (78.8%) of the respondents in CHAT GPT are using Learning New Concepts.
- The majority (46.2%) of the respondents rarely used by Chat GPT.

- The majority (61.5%) of the respondents feel satisfied while using Chat GPT.
- The majority (3.52%) of the respondents. People trust using Chat GPT.

Overview of the study

The rapid growth of AI has greatly impacted higher education. ChatGPT, a popular AI language model, is widely used by students and faculty for tasks like content creation, learning support, and research. This study examines how aware academicians are of ChatGPT, how they use it in their work, and its effects on learning and performance. It also explores the benefits, challenges, and ethical concerns related to its use in education.

Suggestions

Increase Awareness and Training

Educational institutions in Coimbatore should organize workshops and training sessions to raise awareness about ChatGPT and educate students and faculty on its effective and ethical use.

Integrate ChatGPT Responsibly in Academics

- Encourage the use of ChatGPT as a supplementary tool for tasks like brainstorming, drafting, and research assistance, rather than a substitute for original work.

Conclusion

This study highlights the growing significance of ChatGPT as an academic tool among students and faculty in Coimbatore. While there is a moderate to high level of awareness and diverse usage of ChatGPT for various academic tasks, its impact on learning and performance varies depending on user engagement and understanding. The findings reveal both notable benefits, such as enhanced research support and improved writing efficiency, as well as challenges including ethical concerns and the risk of over-reliance. To maximize the potential of ChatGPT while maintaining academic integrity, it is essential for educational institutions to develop clear guidelines, promote responsible use, and foster continuous digital literacy. With proper integration and oversight, ChatGPT can serve as a valuable aid in the academic journey of students and educators alike.

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