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An Analysis of Student Attitudes toward Excessive Dependence on Chatbots

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ABSTRACT: The rapid growth of Artificial Intelligence (AI) technologies has significantly influenced the education sector. Among these innovations, AI-powered chatbots such as OpenAI's ChatGPT have gained widespread popularity among students for academic assistance. While chatbots enhance accessibility, speed, and personalized learning, concerns regarding excessive dependence and its impact on critical thinking and independent learning skills are increasing. This study examines student attitudes toward chatbot usage and overreliance. Using a descriptive research design, primary data were collected from 146 students through a structured questionnaire. Statistical tools such as percentage analysis, mean, standard deviation, chi-square test, correlation, and ANOVA were applied. The findings reveal high daily usage and positive perceptions of usefulness, but moderate levels of dependency concerns. The study concludes that responsible and balanced use of AI chatbots is essential to maintain academic integrity and cognitive development.

KEYWORDS: Chatbots, Artificial Intelligence, Student Attitudes, Overreliance, Academic Performance, Digital Learning

I. INTRODUCTION

The advancement of artificial intelligence has transformed educational practices worldwide. AI-powered chatbots have become widely accessible tools that assist students in answering queries, completing assignments, and understanding complex topics. Their speed and availability make them attractive learning companions. However, excessive dependence on chatbots may reduce independent thinking and analytical skills. This study focuses on analyzing students' perceptions, usage behavior, and awareness regarding chatbot overreliance.

Artificial Intelligence has transformed modern education by introducing automated and interactive learning tools. AI chatbots simulate human conversation and provide instant responses to academic queries. These tools are increasingly used for assignment writing, concept clarification, coding assistance, and exam preparation.

The emergence of conversational AI systems such as ChatGPT has reduced barriers to information access. However, continuous reliance on these systems may gradually reduce students' independent research capability, creativity, and analytical reasoning skills. The present study aims to analyze how students perceive chatbot usage and whether excessive dependence is becoming a concern in higher education.

II. LITERATURE REVIEW

Several researchers have studied chatbot adoption and its implications:

Dwivedi et al. (2023) found that trust and perceived usefulness significantly influence chatbot adoption in digital environments.

Ouyang et al. (2022) discussed reinforcement learning techniques used to train large language models, emphasizing reliability and human feedback integration.

Adamopoulou & Moussiades (2023) examined the evolution and applications of chatbots across industries, including education.

While existing literature explores effectiveness and adoption, limited studies focus specifically on excessive dependence among students. This research attempts to bridge that gap.



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III. OBJECTIVES

1. To examine the frequency of chatbot usage among students.
2. To analyze student attitudes toward chatbot usefulness.
3. To measure the level of perceived dependency.
4. To test the relationship between chatbot usage and dependency levels.
5. To provide recommendations for responsible AI usage in education.

IV. RESEARCH METHODOLOGY

The study adopts a descriptive research design with a quantitative approach. Primary data were collected using a structured questionnaire from 146 respondents selected through convenience sampling. Secondary data were obtained from journals and academic publications. Statistical tools including percentage analysis, correlation, and ANOVA were used to test hypotheses and interpret results.

V. DATA ANALYSIS AND INTERPRETATION

1. Frequency of Chatbot Usage

Usage Type	Frequency	Percentage
Daily	72	49.32%
Weekly	28	19.18%
Occasionally	24	16.44%
Rarely	22	15.06%

Interpretation: Nearly half of the respondents use chatbots daily, indicating strong integration into academic routines.

2. Purpose of Usage

Purpose	Percentage
Academic Learning	52.05%
Assignment Completion	24.66%
Doubt Clarification	15.07%
General Information	8.22%

VI. CHI-SQUARE TEST

Chi-square calculated value = 1.32 (approx.)

Since the calculated value is less than the critical value at 5% significance level, there is no strong statistical difference among dependency categories. However, observable variation exists.

VII. FINDINGS

The analysis indicates that 49.32% of respondents use chatbots daily, and 52.05% primarily use them for learning and academic purposes. Approximately 36.99% reported feeling dependent on chatbots, while 31.51% were uncertain about their dependency level. More than 80% agreed that chatbots are helpful for academic purposes. While satisfaction with response speed and usability is high, neutrality in trust levels suggests cautious acceptance. The hypothesis testing indicates a significant relationship between positive attitudes toward chatbots and levels of overreliance.



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VIII. CONCLUSION

The study concludes that chatbots play a significant supportive role in academic learning. However, increasing daily usage and reliance raise concerns about potential overdependence. Educational institutions should encourage responsible AI usage by promoting critical thinking and independent learning strategies. Future research may explore longitudinal effects of chatbot dependence on academic performance.

The study concludes that AI chatbots are widely accepted and beneficial for academic support. However, excessive reliance may gradually reduce independent learning and analytical skills. Educational institutions must establish AI usage guidelines that encourage responsible and ethical usage.

Balanced integration of AI tools can enhance learning outcomes without compromising cognitive development.

IX. RECOMMENDATIONS

1. Introduce AI literacy programs in colleges.
2. Encourage critical thinking-based assignments.
3. Implement institutional AI usage policies.
4. Promote blended learning approaches.
5. Conduct awareness sessions on digital dependency risks.

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AUTHOR BIOGRAPHY

Sudharsan Baskar is a postgraduate student in Commerce specializing in International Business. His research interests include Artificial Intelligence in Education, Digital Learning Behavior, Financial Analytics, and Technology-Driven Academic Transformation.

REFERENCES

1. Sao, A., Sharma, R., & Patel, K. (2025). Impact of AI-enabled chatbots on service quality dimensions. *Journal of Real Estate Technology and Management*.
2. Zhai, C., & Wibowo, S. (2022). Cultural and empathetic dimensions in learning chatbots. *Computers & Education*.
3. Dwivedi, Y. K., et al. (2023). Trust-based adoption of conversational agents. *International Journal of Information Management*.
4. Ouyang, L., et al. (2022). Training language models with human feedback. *Advances in Neural Information Processing Systems*.
5. Adamopoulou, E., & Moussiades, L. (2023). Chatbots: History, technology, and applications. *Machine Learning with Applications*.



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