World Journal of Advanced Research and Reviews
eISSN: 2581-9615 CODEN (USA): WJARAI
Cross Ref DOI: 10.30574/wjarr
Journal homepage: https://wjarr.com/

(RESEARCH ARTICLE)

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Behaviour of students in using Artificial Intelligence for educational purposes

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World Journal of Advanced Research and Reviews, 2025, 26(03), 1043-1048

Publication history: Received on 19 April 2025; revised on 08 June 2025; accepted on 10 June 2025

Article DOI: https://doi.org/10.30574/wjarr.2025.26.3.2086

Abstract

This research studies the behavior and readiness of undergraduate students in utilizing artificial intelligence (AI) tools for academic purposes at Isabela State University. Using a structured survey with 487 respondents, the study explores four key indicators: familiarity with AI, frequency of use, perceived benefit, and comfort with institutional monitoring. Results show that students possess moderate to high familiarity with AI technologies (mean = 3.80), yet frequency of use remains lower (mean = 2.81), indicating a gap between awareness and application. Perceived benefit of AI tools was generally positive (mean = 3.45), while comfort with monitoring lagged (mean = 3.21), suggesting trust and privacy concerns. Correlation analysis revealed strong relationships between frequency of use and perceived benefit (r = 0.69), and between familiarity and use (r = 0.62). Additional analysis showed a progressive increase in all three variables as AI usage frequency rose. These findings underscore the importance of integrating ethical AI training, user-centered exposure, and data privacy policies into educational frameworks to foster responsible and effective AI adoption in academic contexts.

Keywords: AI; Data Analysis; Education; Student Behavior

1. Introduction

One of the main pillars of technological innovation in education nowadays is artificial intelligence (AI). Educational platforms are progressively incorporating artificial intelligence (AI) applications such natural language processing tools, adaptive learning environments, predictive analytics, and intelligent tutoring systems. The objectives of these systems are to enhance student outcomes, personalize the learning process, and assist teachers in providing effective education [1]. AI has the potential to completely transform conventional teaching and learning approaches because of its capacity to evaluate vast amounts of data and modify learning trajectories in real time. Also, AI are used in different fields [14][15][16[17].The use of AI in education was further pushed by the COVID-19 epidemic. AI tools were essential to preserving academic continuity when schools transitioned to remote and hybrid learning. AI-powered learning analytics assisted in identifying students who were at risk of falling behind, chatbots offered immediate assistance, and automated grading systems decreased instructor responsibilities [2]. But the quick adoption of these tools also brought to light issues with data privacy, accessibility, and the student digital divide.

For AI tools to be used effectively and ethically, it is essential to comprehend how students act toward them in educational environments. Student behavior includes attitudes, motivation, trust, and perceived utility of AI systems in addition to usage behaviors [3]. How students engage with and adopt AI-driven educational tools can be greatly influenced by a number of factors, including academic level, socioeconomic situation, past technological exposure, and

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even cultural background. Others may voice worries about data exploitation, academic dishonesty, or even job displacement, while others may enthusiastically welcome AI due to its efficiency and simplicity.

Additionally, there has been an increase in interest in the ethical issues surrounding AI in education. Students' perceptions of AI's role in learning are seriously called into question by problems like algorithmic bias, surveillance, and over-reliance on technology. Students' opinions must be heard in conversations concerning the creation and application of AI as it develops further. Their actions can provide information about how to make user-centered design, policy, and the creation of fair educational resources better [4]. The goal of this study is to investigate how students behave when utilizing AI for learning. Its specific goal is to pinpoint the driving forces and difficulties related to their engagement with AI systems. Institutions and developers can more effectively customize AI apps to promote inclusive and successful education by comprehending these behavioral tendencies.

AI's incorporation into classrooms has had a big impact on students' learning habits and engagement. Personalized learning experiences have been made possible by AI-powered solutions like adaptive learning platforms and intelligent tutoring systems. Platforms like as AutoTutor, for example, simulate human tutoring by having students converse in natural language, improving their understanding of computer literacy and physics [5]. Moreover, AI applications like QANDA utilize optical character recognition to solve mathematical problems, offering step-by-step solutions that aid students in understanding complex concepts [6]. These tools not only facilitate learning but also promote self-paced education, allowing students to learn at their convenience. However, student conduct has also changed because of the reliance on AI tools. Research shows that although AI can improve learning effectiveness, it may also lead to procrastination since students may put off assignments in favor of using AI to do them quickly [7]. This change calls for a well-rounded approach to AI integration in education, making sure that technology enhances rather than replaces conventional teaching strategies.

The rapid adoption of AI in education raises significant ethical concerns, particularly regarding academic integrity. The use of AI tools like ChatGPT has blurred the lines between assistance and plagiarism, prompting debates on what constitutes cheating in the digital age [8]. Furthermore, issues of data privacy and algorithmic bias have come to the forefront. AI systems often require access to personal data to function effectively, raising concerns about data security and consent [9]. Additionally, biases embedded within AI algorithms can perpetuate existing inequalities, affecting the fairness of educational outcomes [10]. To address these challenges, educational institutions must establish clear guidelines on AI usage, emphasizing the importance of ethical practices and academic honesty. Incorporating AI literacy into the curriculum can also equip students with the skills to use these tools responsibly [11].

Different countries have adopted varied approaches to integrating AI into their educational systems. Estonia, for example, has embraced AI by providing students with personal AI accounts to enhance learning, reflecting a progressive stance on technology in education [12]. In contrast, some institutions in the United States have expressed concerns over AI's impact on liberal arts education, where the subjective nature of assignments makes it challenging to detect AI-generated content, thereby complicating assessments of student learning [13].

In the digital revolution, adaptability was suggested to adapt education to Aritifial Intelligence or state of the art methods. thus, the goal of this study is to assess how ready students are in adapting AI in Education.

2. Methods

This study employed a quantitative descriptive research design to assess the behavior, attitudes, and readiness of students in utilizing artificial intelligence (AI) tools for academic purposes. The survey-based approach aimed to gather data on students' familiarity, frequency of use, perceived benefits, ethical concerns, and willingness to undergo training related to AI in education.

The respondents were undergraduate students from University, comprising different year levels and departments, primarily within computing-related disciplines such as Information Technology and Computer Science. A total of 487 valid responses were collected using convenience sampling over the month of February 2025. Participation was voluntary, and all responses were anonymized to ensure ethical compliance.

The data collection instrument was a structured online survey form designed in Google Forms. It consisted of 14 items categorized into:

- **Demographics**: Year level and department;

- **Technology Access**: Availability of digital devices;
- **AI Exposure**: Familiarity with AI, frequency of use, and use cases;
- **Perceived Benefits and Challenges**: Ratings of helpfulness, comfort with monitoring, and challenges faced;
- **Behavioral Intention**: Willingness to learn and perceptions of AI's future role.

3. Results

Table I presents the distribution of responses based on four key indicators: familiarity with AI technologies, frequency of AI tool usage, perceived benefit, and comfort with institutional monitoring. The most frequently selected rating across all variables was "3", indicating moderate perceptions and usage patterns among respondents. Specifically, 164 students rated themselves as "5" (very familiar) with AI tools, while 138 selected "3", suggesting that the population has a moderately high level of awareness. However, frequency of usage was lower, with most students selecting "3" (206 responses), followed by "2" (114 responses). This gap implies that familiarity with AI does not directly translate into regular use in academic settings.

Table 1 Distribution of response

Metric	Mean	Std Dev	Median	Mode	Min–Max Range
Familiarity with AI	3.80	1.11	4.0	5.0	1–5
Frequency of Use	2.81	1.06	3.0	3.0	1–5
Perceived Benefit	3.45	1.08	3.0	3.0	1–5
Comfort with Monitoring	3.21	0.94	3.0	3.0	1–5

As shown in Table I, over 186 students rated AI's usefulness as "3", while 101 students gave it the highest score of "5". This reflects a generally positive perception of AI's role in enhancing learning outcomes. Students found AI particularly beneficial for assignments, research, and projects, as gathered from open-ended survey responses. Despite these benefits, students expressed moderate to low comfort with the idea of colleges monitoring AI tool usage, with the majority choosing "3" (246 responses). This hesitancy may stem from concerns about surveillance, privacy, and academic freedom.

A strong positive correlation ($r = 0.69$) was found between frequency of AI usage and perceived benefits, suggesting that students who use AI more frequently tend to find it more valuable. A moderate correlation ($r = 0.62$) was observed between familiarity with AI and frequency of use, indicating that awareness and confidence in using AI are likely to drive regular engagement. A weaker correlation ($r = 0.37$) between perceived benefits and comfort with monitoring suggests that even among those who find AI helpful, concerns about institutional oversight persist. While a significant number of students rated themselves as highly familiar with AI tools, the actual frequency of use remains inconsistent. This highlights a need for structured integration of AI tools within academic workflows to foster responsible, consistent use. Additionally, 80% of respondents expressed interest in attending training on ethical and effective use of AI. This suggests a gap in formal education on AI ethics, bias, and data privacy, warranting immediate inclusion in university-level digital literacy programs.

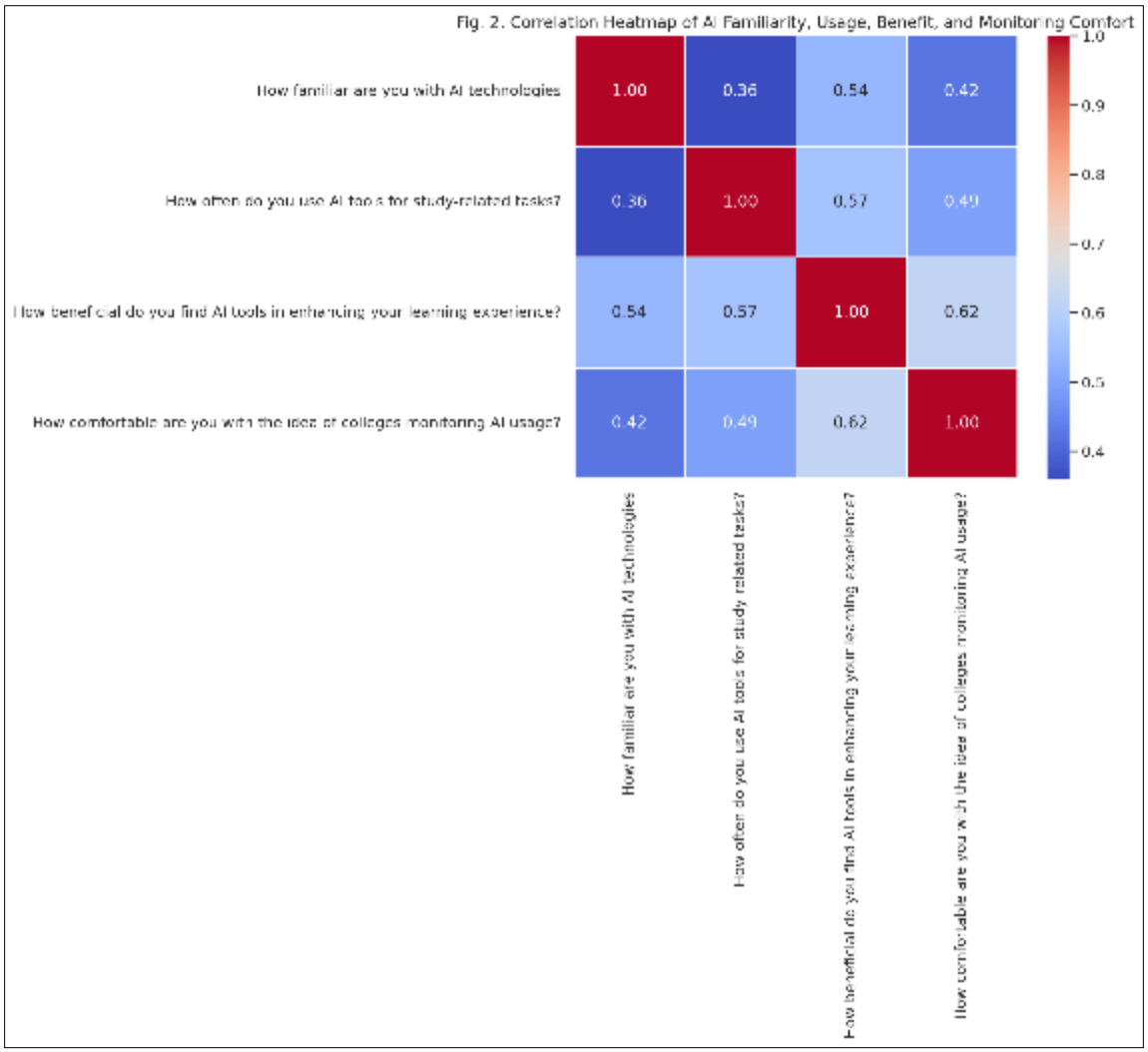

Figure 1 Correlational Heatmap

An additional layer of analysis was conducted by grouping responses according to the frequency with which students reported using AI tools for study-related tasks. This revealed a clear ascending trend: as the frequency of AI use increased from rarely (rating = 1) to very often (rating = 5), the mean scores for familiarity, perceived benefit, and comfort with institutional monitoring also increased. Students who rated their frequency of use as "1" had relatively low mean scores across all dimensions—3.05 for familiarity, 2.47 for perceived benefit, and 2.45 for comfort with monitoring. In contrast, those who rated their usage as "5" reported significantly higher averages: 4.60 for familiarity, 4.63 for benefit, and 4.26 for monitoring comfort. This consistent increase across all three metrics suggests a strong behavioral linkage, wherein greater exposure to AI tools correlates with more positive attitudes and greater trust in how such tools are governed.

Table 2 Grouped Means of AI Familiarity, Perceived Benefit, and Monitoring Comfort by Frequency of Use

AI Tool Usage Frequency (1–5)	Average Familiarity with AI	Average Perceived Benefit	Average Comfort with Monitoring
1	3.05	2.47	2.45
2	3.46	2.97	2.94
3	3.94	3.53	3.21
4	4.13	4.28	3.80
5	4.60	4.63	4.26

4. Conclusion

The findings of this study provide a comprehensive overview of how undergraduate students at University perceive and interact with artificial intelligence (AI) technologies in their academic environment. The data shows a clear trend of moderate to high familiarity with AI tools (mean = 3.80), yet this familiarity does not necessarily lead to frequent usage (mean = 2.81). This disconnect suggests that while students are aware of AI's presence and potential, structural or motivational barriers may inhibit regular application. The perceived benefit of AI in academic settings was generally positive (mean = 3.45), with students acknowledging its usefulness in areas such as research, assignments, and idea generation. Despite these advantages, comfort with institutional monitoring of AI usage was lower (mean = 3.21), indicating underlying concerns about privacy, academic freedom, or surveillance-related policies. Correlational analysis further reinforces these behavioral patterns. The strong correlation between AI usage frequency and perceived benefit ($r = 0.69$) implies that students who actively use AI tend to derive greater academic value from it. Similarly, familiarity with AI correlates moderately with frequency of use ($r = 0.62$), which supports the idea that exposure leads to integration. However, a weaker correlation ($r = 0.37$) between benefit and monitoring comfort reveals a potential trust gap students may find AI helpful but are not entirely at ease with being monitored.

A second-level analysis, grouping responses by usage frequency, demonstrated a clear upward trend in average scores across familiarity, perceived benefit, and comfort with monitoring. Students who use AI tools more frequently tend to report greater understanding and trust in institutional AI frameworks. These trends underline the need for guided, practical exposure to AI, paired with discussions on ethical usage, data protection, and responsible deployment in educational environments. The results collectively suggest that enhancing AI readiness in education must go beyond tool availability it must include structured training, trust-building policy, and ethical awareness. Institutions should prioritize AI literacy as part of the broader goal of digital transformation in higher education.

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