STUDENTS' ATTITUDE ON THE USE OF ARTIFICIAL INTELLIGENCE (AI) IN LEARNING IN THE FACULTY OF EDUCATION, UNIVERSITY OF BENIN, BENIN CITY, NIGERIA

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Abstract

Artificial Intelligence (AI) is a revolutionary technology that's transforming modern education and institutional structures. As a rapidly evolving field, AI has the potential to significantly alter conventional approaches across various sectors, particularly within academia. Given its growing influence, there is an urgent need for stakeholders to proactively adapt to its integration. This study explores the attitudes of students in the Faculty of Education at the University of Benin towards the use of AI in learning. Employing a survey research design, we used a multistage sampling technique to select a sample of 220 students. Data were collected using a structured instrument titled "Questionnaire on Attitude of Students towards the Use of Artificial Intelligence (QAUAI)," which yielded a reliability coefficient of r=0.717 using Cronbach's alpha. The instrument was administered to the students by the researcher and two research assistants. We answered the research questions using descriptive statistics such as mean and standard deviation. Findings revealed that students generally exhibited a highly positive attitude toward the application of AI in education. Despite acknowledging its numerous advantages, some students expressed mild reservations about its adoption. Nevertheless, their overall willingness to embrace AI in learning remained strong. Based on these insights, the study recommends that university management implement targeted training programs to enhance AI literacy and provide students with the necessary skills for effective utilization. Furthermore, orientation initiatives should be introduced to deepen students' understanding of AI's capabilities. It is also imperative that higher education institutions invest in modern technological infrastructure to alleviate apprehension and foster student confidence in digital learning environments.

Introduction

Student learning in universities is a complex process that goes beyond simply delivering content. It involves cultivating higher-order skills like critical thinking and problem-solving, along with practical competencies and personal traits such as motivation and resilience (Biggs & Tang, 2011; Pascarella & Terenzini, 2005). Effective learning also requires collaboration, intercultural awareness, and the ability to apply theoretical knowledge to real-world problems (Kuh, 2008; Tinto, 2012). In this broader context, higher education institutions are responsible for not only imparting disciplinary knowledge but also for nurturing holistic student development that supports lifelong learning and active citizenship.

Despite its importance, student learning is often hindered by structural and pedagogical challenges, including overcrowded classrooms, limited personalized feedback, and unequal access to resources. These obstacles can prevent learners from fully engaging with their education. The emergence of Artificial Intelligence (AI) in education offers a transformative way to address these gaps. AI-driven tools, such as intelligent tutoring systems and adaptive learning environments, enable personalized learning experiences,

real-time feedback, and data-informed insights into student progress (Holmes et al., 2021; Zawacki-Richter et al., 2019). By using real-time analytics, AI can detect learning challenges early, suggest tailored interventions, and dynamically adjust instruction to meet individual needs, which enhances both student engagement and academic success. Additionally, AI applications can improve accessibility and inclusivity for students from diverse backgrounds. Integrating AI into higher education provides a compelling opportunity to make student learning more adaptive, efficient, and equitable. While traditional teaching methods have focused on knowledge transmission, AI technologies can refine and elevate these processes, preparing students for success in an increasingly digital and data-centric world.

Artificial intelligence (AI) is a top technological innovation of the information age, influencing various aspects of modern life, from healthcare and business to education and governance. AI systems are increasingly being integrated into processes that traditionally depended on human intelligence. AI involves the replication of human cognitive abilities, allowing machines to acquire knowledge, reason, and think critically (Russell & Norvig, 2020).

The origins of AI can be traced back to the mid-20th century when Alan Turing (1950) posed the question, "Can machines think?" and introduced the Turing Test as a way to evaluate machine intelligence. Since then, AI has developed through multiple stages of progress, from early symbolic reasoning to expert systems, and now to flourishing with machine learning, deep learning, and natural language processing. These advancements have made AI a transformative force, shaping human interaction with information and knowledge (Zhang & Aslan, 2021).

In education, AI applications like intelligent tutoring systems, adaptive learning platforms, and automated grading are increasingly used to improve teaching and learning. However, AI's effectiveness is determined by how it is perceived and accepted by students. Attitude, a psychological tendency that influences how an object or innovation is viewed, is a key factor in how learners engage with and adopt AI technologies (Eagly & Chaiken, 2021).

Despite the rapid growth of AI in education, research shows that students often have mixed perceptions of its use. While some authors (Almassaad et al., 2024; Wu et al., 2025) view AI as a valuable tool for improving learning outcomes and decreasing workload, others express skepticism or concern about trust, ethics, fairness, and the fear of replacing human educators (Kaplan & Haenlein, 2019; Schei et al., 2024; Vieriu et al., 2025). In developing contexts, additional challenges like limited infrastructure and a lack of exposure can also influence how students perceive and respond to AI. These dynamics highlight the importance of understanding student attitudes toward AI, as this insight can inform strategies for successful integration, policy formulation, and capacity building.

Therefore, examining students' attitudes toward AI is not only timely but also essential. It provides a foundation for the productive and ethical incorporation of AI into teaching and learning, ensuring it aligns with learners' needs and expectations.

This study is based on the Technology Acceptance Model (TAM), originally proposed by Davis (1989), which is a major framework for understanding user attitudes toward

new technologies. TAM suggests that two core concepts—Perceived Usefulness (PU) and Perceived Ease of Use (PEOU)—shape an individual's attitude toward a technology, which then influences their intention to use it.

In this study, Perceived Usefulness refers to students' belief that AI tools can significantly improve their learning outcomes and academic performance. Perceived Ease of Use refers to the extent to which students find AI applications to be intuitive, accessible, and easy to use. Together, these perceptions inform students' overall disposition toward AI, ultimately determining their readiness to incorporate such tools into their educational practices. The relevance of TAM to this study is highlighted by its widespread use in educational technology research, offering a strong framework for analyzing user acceptance of innovative learning tools (Venkatesh & Davis, 2000). By using TAM, this study aims to systematically explore the key factors that determine students' attitudes toward AI and provide actionable insights to support its effective integration into higher education.

Statement of the Problem

Artificial Intelligence is rapidly transforming educational systems through applications such as virtual tutors, automated grading, and personalized learning platforms. While these innovations have the potential to improve teaching and learning, their effectiveness largely depends on how students perceive and accept them. Attitude, as a psychological tendency to evaluate a subject with favor or disfavor, plays a significant role in shaping technology adoption and use. Students with positive attitudes toward AI are more likely to use it in learning, whereas negative attitudes—often linked to a fear of complexity, ethical concerns, or lack of trust—may lead to resistance. Despite the growing relevance of AI in education, limited research has explored students' attitudes toward its integration, especially in developing contexts. This gap makes it difficult for educators and policymakers to design strategies that address misconceptions, enhance acceptance, and ensure that AI fulfills its intended role in improving educational experiences.

Research Question

What is the attitude of students towards Artificial Intelligence in learning in the faculty of Education of the University of Benin, Benin City?

Methodology

The sample size for this study was 220 full-time undergraduate students from the Faculty of Education at the University of Benin, Benin City. A multistage sampling procedure was used to select participants. Stage 1: Department Selection Using a simple random sampling technique (balloting), four of the eight departments (50%) within the Faculty of Education were selected. The names of all eight departments were written on separate pieces of paper, folded, and placed in a container. The papers were thoroughly shuffled, and a researcher drew one paper at a time. After a department was drawn and recorded, the paper was returned to the container. This process was repeated until four departments were selected. Stage 2: Student Selection From the four selected departments, a proportionate sampling technique was used to select 220 students. This represented 5% of the total student population across the selected departments. The

Questionnaire on Attitude of Students towards the Use of Artificial Intelligence (QAUAI) was designed to address the research questions. The questionnaire had two parts: Part A: Collected demographic data, such as sex. Part B: Collected data on students' attitudes towards the use of Artificial Intelligence. The questionnaire consisted of 15 items in total. It used a Likert scale with responses indicating the extent to which students agreed or disagreed with a statement. Responses of Strongly Agree (SA) and Agree (A) were considered a collectively positive response, while Disagree (D) and Strongly Disagree (SD) were a collectively negative response. Respondents were asked to indicate their answers by ticking the appropriate option. The instrument's validity was confirmed by three experts. Its reliability was assessed using Cronbach's alpha, yielding a coefficient of 0.717. The questionnaire was administered to the students by the researcher and two research assistants. Data Analysis Descriptive statistics, including mean and standard deviation, were used to answer the research questions.

Presentation of the Results and Discussion of Findings

Research Question One

What is the attitude of students towards the use of Artificial Intelligence in learning in the faculty of Education.

Table 1: **Mean and Standard Deviation of Students Attitude towards the use of Artificial Intelligence**

S/N	Items	SA	A	D	SD	Mean	Std, Dev
1	I feel positive about using AI in my learning	180	20	12	8	1/95	1.02
2	AI motivates me to engage more in my studies	160	32	38	20	2.00	1.17
3	I would recommend AI tools to other students	200	10	7	3	2.01	1.04
4	The benefits of AI in education outweigh the risks	150	50	10	10	1.57	.824
5	I support the integration of AI into higher education	190	43	20	7	1.87	.787
6	AI tools are easy to use for learning purposes	210	4	2	4	2.03	.882
7	I can quickly adapt to using AI applications for my studies	170	30	12	8	1.47	.816
8	AI reduces the amount of time I spend on academic tasks	22	25	20	153	1.56	.898
9	It is convenient to integrate AI into my daily learning activities	194	14	1	5	1.57	.903
10	AI supports creativity in my assignments and projects	167	34	9	10	1.64	.984
11	Using AI improves my academic performance	200	8	8	4	1.98	1.13
12	AI makes it easier to understand difficult concepts	210	5	1	4	1.98	1.03
13	AI tools help me learn more effectively	208	7	2	3	1.63	.875
14	Information generated by AI may not always be accurate	120	50	32	18	1.91	-848
15	Relying too much on AI can weaken my critical thinking skills	80	31	32	77	1.95	.885
	Cluster					39.83	14.42

Table 1 shows a calculated mean of 39.83 and standard deviation of 14.42. Since the calculated value is higher than the normative mean of 37.50, this implies that the

students have a moderate positive attitude in the usage of Artificial Intelligence in learning in the faculty of Education.

Discussion of Finding

The analysis of the first research question revealed that students within the Faculty of Education hold a generally positive attitude toward the use of Artificial Intelligence (AI) in learning. This suggests that students possess favorable cognitions, emotions, and behavioral inclinations that support the integration of AI into educational processes. The consistency in responses across the sample indicates a shared understanding and acceptance of AI-related concepts, reflecting a high level of technological familiarity among the participants.

This widespread positivity can be attributed to students' increasing exposure to digital tools and modern technologies, which likely enhances their receptiveness to AI applications. However, while general awareness of "Artificial Intelligence" is common, individual levels of familiarity and understanding vary depending on personal experiences and technological engagement. These findings align with the Artificial Intelligence Index (2023), which reported regional disparities in AI comprehension, with countries such as Saudi Arabia, South Africa, Chile, Peru, Russia, and Mexico demonstrating higher levels of understanding. Similarly, Keles and Aydin (2021) found that university students in Eastern Anatolia were broadly aware of AI, particularly in relation to its everyday applications.

Conclusion

The findings of this study underscore a broadly positive attitude among university students toward the integration of AI in educational settings. This favorable disposition is promising not only for the students themselves but also holds significant implications for institutional stakeholders, including school administrators and policymakers who are tasked with shaping the future of learning environments. The study further affirmed that a substantial majority of students perceive AI as a valuable tool for enhancing personalized learning and instruction. This reflects a growing recognition of AI's potential to tailor educational experiences to individual needs, thereby fostering more effective and engaging learning outcomes.

Recommendations

Based on the study's findings, the following recommendations are proposed to enhance the integration and effectiveness of Artificial Intelligence (AI) in higher education:

1.   University management should encourage students to explore AI-based educational interventions to understand their potential benefits. This will enable students to meaningfully integrate these technologies into their current academic and future professional practices.
2.   Students should actively seek opportunities to engage with AI technologies, particularly in areas like personalized learning, academic research, and problem-solving, to deepen their technological competence. They can achieve this by connecting with peers who have already integrated AI technologies into their work.

3. Institutions should organize regular workshops, seminars, and orientation sessions to increase students' awareness and understanding of AI applications in education. These initiatives will help demystify AI and foster a culture of innovation.

4. Government bodies and educational administrators should prioritize equipping universities with modern digital tools and infrastructure. Enhanced access to technology will reduce apprehension among students and build their confidence and proficiency in using AI.

5. Higher education institutions should be empowered to adopt emerging digital innovations that align with evolving learning environments. This includes rethinking instructional strategies to incorporate AI-driven methods that support adaptive, student-centered learning experiences

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