Investigating Mathematics Students' Level of Awareness of the Use of AI Tools for Wealth Creation

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Abstract
This study investigates the level of awareness among mathematics students regarding the use of Artificial Intelligence (AI) tools for wealth creation. A descriptive survey research design was adopted, and data were collected from 150 undergraduate mathematics students using structured questionnaires. The data were collected using a google form 20- item structured questionnaire which is divided into three sections: Section A: Demographic information, Section B: Awareness of AI tools and Section C: Use of AI tools for wealth creation. Four research question were posed and one hypothesis formulated to guide the study. A reliability index of 0.85 indicating high reliability was established using Cronbach's Alpha. The data was analyzed using SPSS version 21 of Frequency and percentages, Mean and standard deviation and Pearson correlation. The findings reveal that while students are generally aware of AI tools, their understanding of how to apply them for wealth creation is limited. Statistical analysis shows a moderate level of awareness but low practical application. The study recommends integrating AI literacy into mathematics curricula and promoting digital entrepreneurship training.
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Keywords*:* Artificial Intelligence, Mathematics Students, Wealth creation, Awareness, Digital Economy

Introduction

Artificial intelligence (AI) refers to computer systems capable of performing tasks that typically require human intelligence, such as learning, reasoning, and problem-solving (Russell and Norvig, 2021). AI tools for wealth creation are platforms that help you make money, automate work, analyze data, or create valuable products/services. These AI tools include platforms for automation, data analysis, and content creation. Wealth creation involves generating income and financial assets through various means, including entrepreneurship and digital innovation. AI has expanded opportunities for wealth creation by enabling individuals to automate processes and access global markets. Artificial intelligence (AI) has become a transformative force across various sectors, including finance, education, and business. AI tools such as chat-bots, predictive analytics, and automation platforms are increasingly being used for wealth creation through freelancing, digital marketing, algorithmic trading, and content generation.

Mathematics students possess analytical and problem-solving skills that position them well to benefit from AI-driven opportunities. Awareness of these opportunities is essential for effective utilization. According to Open AI, AI tools are designed to enhance productivity and innovation, yet their benefits depend largely on users' knowledge and application. Some studies indicate that students' awareness of digital tools significantly influences their adoption. For example, a study by Smith (2022) found that University students with higher digital literacy were more likely to engage in online income-generating activities. Similarly, Johnson (2023) reported that lack of awareness is a major barrier to the adoption of AI tools among students in developing countries. Despite the growing relevance of AI, many students remain unaware of how these tools can be leveraged for financial gain. This gap highlights the need for the investigation.

Statement of the Problem

With the rapid advancement of AI technologies, opportunities for income generation through digital platforms, automation, and data-driven decision-making have increased. Students' awareness and readiness to utilize these tools remain uncertain. Although AI tools offer numerous opportunities for wealth creation, many mathematics students lack adequate awareness and practical knowledge of how to utilize them effectively. This limits their ability to participate in the digital economy and achieve financial independence. To this end ,the researchers investigates the level of awareness among mathematics students regarding the use of artificial intelligence (AI) tools for wealth creation.

Purpose of the Study

Generally, the study sought to investigate the level of awareness among mathematics students regarding the use of artificial intelligence (AI) tools for wealth creation. Specifically, the study sought to:

1. determine the level of awareness of AI tools among Mathematics students.
2. examine students' knowledge of AI applications in wealth creation.
3. identify factors influencing awareness levels.
4. assess the relationship between awareness and usage of AI tools.

Research Questions

Four research questions were posed to guide the study

1. What is the level of awareness of AI tools among mathematics students?
2. What is the level of students' knowledge about AI applications in wealth creation?
3. What factors influence their awareness?
4. Is there a relationship between awareness and usage of AI tools?

Research Hypothesis

One null hypothesis (H_0) was tested t 0.05 level of significance

H_0: There is no significant relationship between students' awareness of AI tools and their use for wealth creation

H_1: There is a significant relationship between students' awareness of AI tools and their use for wealth creation.

Method

The descriptive survey design was adopted for this study because it is widely used in educational research for gathering data from large populations through questionnaires and analyzing them statistically (Chukwudum et al., 2024; Prasad and Kumar, 2024). It is also effective in studies assessing students' awareness and utilization of concepts (Mtebe and Raisamo, 2024). The purposive sampling technique was used to select a sample of 150 volunteer mathematics students from tertiary institutions in Anambra state through their National Association of Mathematics Science Students of Nigeria (NAMSSN) platforms. The data were collected using a google form 20- item structured questionnaire which is divided into three sections: Section A: Demographic information, Section B: Awareness of AI tools and Section C: Use of AI tools for wealth creation. The instrument was weighted in a four-point scale type of Strongly Agree (SA-4), Agree (A-3), Disagree (D-2), and Strongly Disagree (SD-1). The instrument was validated by three lecturers each in the department of Mathematics; and measurement and evaluation from three tertiary institutions in Anambra State. Validity of the instruments was established considering the structure of items and research questions. The reliability was established through the split half method by administering 20 questionnaires to other science students who were not part of the study. A reliability index of 0.85 indicating high reliability was established using Cronbach's Alpha. Data was analyzed using SPSS version 21 of Frequency and percentages, Mean and standard deviation and Pearson Product Moment Correlation

Coefficient.

Results

The results of the study was presented according to research questions and hypothesis.

Research Question1: What is the level of awareness of AI tools among mathematics students?

Table 1: Level of Awareness of AI Tools

Response level	Frequency	Percentage(%)
High	45	30%
Moderate	75	50%
Low	30	20%

The results in table 1 shows that the majority of mathematics students (50%) have a moderate level of awareness of AI tools.

Research Question 2: What is the level of students' knowledge about AI applications in wealth creation?

Table 2: Students' level of knowledge of AI Use in Wealth Creation

Response	Frequency	Percentage (%)
Aware	60	40%
Not Aware	90	60%

The results in table 2 shows that a significant proportion of students lack knowledge of how AI tools can be used for wealth creation.

Research Question 3: What factors influence mathematics students' awareness of AI tools for wealth creation?

Table 3: Factors Influencing Awareness of AI Tools (N = 150)

S/N	Factors	Mean($\bar{x}$)	Std.Dev.(S)	Decision
1	Access to internet	3.85	0.92	Agree
2	Exposure through social Media	3.90	0.85	Agree
3	Academic curriculum	2.80	1.01	Disagree
4	Training/workshops on AI	2.65	1.10	Disagree
5	Peer influence	3.60	0.95	Agree
6	Availability of digital Devices	3.72	0.89	Agree

Decision Rule:

Mean $\geq$ 2.50 = Agree; Mean < 2.50 = Disagree

The results in table 3 show that access to the internet ($\bar{X}$ = 3.85), social media exposure ($\bar{X}$ = 3.90), and availability of digital devices ($\bar{X}$ = 3.72) are the major factors influencing students' awareness of AI tools. Peer influence also contributes significantly ($\bar{X}$ = 3.60). However, academic curriculum ($\bar{X}$ = 2.80) and training/workshops ($\bar{X}$ = 2.65) were rated low, indicating that formal education systems are not significantly contributing to students' awareness of AI tools.This implies that students mainly gain awareness informally (internet & social media) rather than through structured education.

Research Question 4**:** Is there a relationship between awareness and usage of AI tools for wealth creation?

H_0: There is no significant relationship between students' awareness of AI tools and their use for wealth creation.

Table 4: Pearson Correlation Analysis Between Awareness and Usage

Variables	N	r-value	P-value	Decision
Awarenes vs Usage	**150**	**0.58**	**0.01**	**significant**

The result in Table 4 shows a moderate positive correlation (r = 0.58) between awareness and usage of AI tools for wealth creation. The p-value (0.01) is less than 0.05, indicating that the relationship is statistically significant.This means that as students' awareness of AI tools increases,their likelihood of using these tools for wealth creation also increases. Therefore, the null hypothesis is rejected, and the alternative hypothesis is accepted, thus: **H_0:** There is significant relationship between students' awareness of AI tools and their use for wealth creation.

Discussion of Findings

The findings indicate that although mathematics students are somewhat aware of AI tools, their ability to apply these tools for wealth creation is limited. This supports that Technology Acceptance Model (TAM) awareness alone is not enough, but it is a strong predictor of usage. The findings of this study revealed that internet access, social media exposure, availability of digital devices, and peer influence are major factors influencing students' awareness of AI tools, while formal education (curriculum and training) contributes less. This finding is consistent with recent empirical studies. For instance, a study on AI awareness among Nigerian undergraduates found that students' exposure to digital technologies and everyday interactions significantly shapes their awareness and perception of artificial intelligence tools (El-Shara et al, 2025). Similarly, research shows that students develop awareness of AI not only through formal education but also through informal environments such as social media, online platforms, and peer interactions.

A recent multi-country study on AI adoption in African higher education institutions reported that AI training and structured educational programs are still limited, which affects students' level of awareness and understanding (Mtebe & Raisamo, 2024). This supports the present finding that curriculum and workshops have a lower influence compared to informal sources. It implies that students rely more on informal digital exposure than structured academic systems for AI awareness, indicating a gap in curriculum integration. The study found a moderate positive relationship (r = 0.58) between awareness and usage of AI tools for wealth creation, indicating that students who are more aware are more likely to use AI tools. This result aligns with several recent empirical studies. For example, research on ChatGPT adoption among university students found that awareness significantly influences students' intention to adopt and use AI tools, with perceived usefulness and ease of use acting as mediating factors. Similarly, another study confirmed that higher levels of awareness lead to more positive attitudes and increased usage behavior of AI technologies. In addition, studies grounded in the Technology Acceptance Model (TAM) consistently show that awareness is a critical precursor to technology adoption, as users must first understand a technology before they can utilize it effectively.

Conclusion

The study revealed that mathematics students have a moderate level of awareness of AI tools but lack practical knowledge for wealth creation. This gap limits their participation in AI-driven economic opportunities. Based on the findings the following recommendations were made

1. There is need for curriculum planners to Integrate AI education into mathematics curricula.
2. Government should organize seminars workshops on digital entrepreneurship at all levels of education.
3. There is need for all the stakeholders to encourage students to explore AI-based income

opportunities which will help to alleviate poverty

4. There is need for the provision of access to AI tools and training resources for students

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