

# Knowledge, Awareness, Attitude and Utilization of Artificial Intelligence Platforms by Academics in University of Ilorin

FATAI, Muiz Abolaji, Department of Sociology, University of Ilorin, Kwara State | abolajiabdulfatai5@gmail.com

RAJI, Olayanju Kazeem, Department of General Studies, Federal Polytechnic Ayede, Oyo state | rajiok@federalpolyayede.edu.ng

OLATUNJI, Abdullahi Ganiyu  
Department of Sociology,  
University of Ilorin, Kwara State  
olatunji.ag@unilorin.edu.ng

ABDULLATEEF, Ibrahim Bidemi  
Department of Sociology and  
Criminology, Fountain University,  
Osogbo  
Abdullateefibrahim34@gmail.com

## Abstract

One of the key areas of human operations that AI has significantly impacted is education. Even though several studies have examined the dynamics of AI in varying educational parlance, the attitude, knowledge, and awareness of AI platforms by university academics in Nigeria is yet to be sufficiently empirically examined. It is in an effort to bridge the palpable gap in existing literatures on AI that necessitated this study. Thus, this study examined knowledge, awareness, attitude and utilization of artificial intelligence platforms by academics in University of Ilorin, Nigeria. The research employed survey design and utilized quantitative approach for data collection and analysis. A multistage sampling design was employed to administer a self-developed questionnaire to 210 academics (lecturers) at the University of Ilorin. In analysing the questionnaire, data analytical procedure of frequency and percentages were used while regression analysis was used to test the research hypotheses. The study found out, that academics at the University of Ilorin generally hold positive attitudes

towards the adoption of AI in their research and teaching activities. Also, that academics at the University of Ilorin are generally aware of AI platforms, and those with higher familiarity tend to place greater importance on AI literacy. The study recommends that universities should implement regular training programs focused on AI technologies relevant to academic work and invest in the necessary infrastructure to support AI adoption, including reliable internet access, advanced AI tools, and continuous technical support.

**Keywords:** Artificial Intelligence (AI), Knowledge, Awareness, Attitude and Utilization

## Introduction

Artificial Intelligence (AI) is a breakthrough of human technological and scientific innovation and its development has contributed immensely to virtually all areas of human endeavours. (Cockburn, 2018). In education, AI has significantly impacted

various aspects of teaching and learning and understanding the dynamics of AI emergence in education has attracted academic attention in various academic disciplines. Artificial Intelligence (AI) is a scientific innovation that assists humans in terms of carrying out specific tasks in education that are hitherto expected to be carried out by humans (Malik, 2019). It is an integration of various technologies that tend to accelerate the process of knowledge. The artificial intelligence through series of codes generate knowledge that are assumed to ease the problems of strenuous learning and knowledge seeking processes. The advancement of Information and Communication Technology (ICT) through the development of artificial intelligence has tend to simplify the learning and dissemination of knowledge processes especially in higher institutions (Slimi, 2023).

According to Kamalov (2023), Artificial Intelligence as a tool have not only made the process of learning and teaching more engaging and accessible but have also opened up new and improved avenue for the dissemination of knowledge. For example, the development of tools like the Learning Management Systems (LMS) through platforms like Canvas, Blackboard and Moodle enable teachers to create and manage digital course content, track student progress and facilitate communication. Virtual Reality (VR) and Augmented Reality (AR) are also tools that create immersive and interactive learning experiences, enhancing the retention of information and making learning experiences more enjoyable. With the development of these modern tools and instruments,

the process of learning, teaching and knowledge impartation has been simplified and improved thus creating an efficient academic environment and a better society (Kamalov, 2023).

However, despite the fact that Artificial Intelligence has become another authentic source of knowledge dissemination in modern society, the attitude, knowledge, awareness as well as the utilization of Artificial Intelligence platforms among academics is yet to make an encouraging impact especially in developing countries like Nigeria (Oluwatobi, 2021). There is thus the need to carry out academic research regarding the dynamics of Artificial Intelligence knowledge, awareness and utilization among academics using the academic staffs of university of Ilorin as the focal point of research.

Even though several studies have examined the dynamics of AI in varying educational parlance (Kamalov, 2023); the attitude, knowledge, and awareness of AI platforms by university academics in Nigeria (University of Ilorin especially) is somewhat limited. Thus, this paper examined knowledge, awareness, attitude and utilization of artificial intelligence platforms by academics in University of Ilorin, Nigeria. To achieve this academic feat, the study intends to answer some research questions; research objectives and proposed specific hypotheses highlighted below:

*Research objectives:*

- i. To investigate and describe the attitude of academics at the university of Ilorin towards the adoption and use of Artificial Intelligence platforms in their research

and teaching activities.

- ii. To assess the level of awareness of academics at the University of Ilorin about the availability and capabilities of Artificial Intelligence platforms.
- iii. To determine the extent to which academics at the University of Ilorin utilize Artificial Intelligence platforms in their research, teaching, and other academic activities.

#### *Research Questions:*

- i. What is the attitude of academics at the University of Ilorin towards the adoption and use of Artificial Intelligence platforms in their research and teaching activities?  
  
How aware are academics at the University of Ilorin of the availability and capabilities of Artificial Intelligence platforms?
- ii. To what extent do academics at the University of Ilorin utilize Artificial Intelligence platforms in their research, teaching, and other academics activities?

#### *Research hypotheses*

H<sub>0i</sub>: Lecturers' awareness of AI does not have significant effect on their utilization of AI platforms for research purpose.

H<sub>0ii</sub>: Lecturers' knowledge of AI does not have significant effect on the utilization of AI platforms for teaching purpose.

H<sub>0iii</sub>: Lecturers' attitude towards AI does not have significant effect on the utilization of AI platforms for general knowledge seeking

#### **The Meaning of Artificial Intelligence**

In 1956, John McCarthy first used the term "Artificial Intelligence" (Skinner, 2012). His definition of it was "the science and engineering of constructing machines that are intelligent." (Pracucci, 2023). AI is the area of computer science that focuses on the research and creation of intelligent agents that can sense their surroundings and take decisions that will increase their chances of success (Collins, 2021). However, AI has to incorporate its ability to draw conclusions from prior experience, reason through decisions, be fast to react, and use inference power. Additionally, it needs to be able to handle complexity and ambiguity and make judgments based on priorities (Russell & Norving, 2010).

Artificial Intelligence is the ability for machines that are designed to perform jobs that would require intelligence from humans. By creating computer programs that display intelligent behavior through symbolic inference, or reasoning within the machine, AI hopes to further its scientific understanding of intelligence. Time is not independent of definitions. By considering time, it provides an evaluation of any system. According to the Britannica (2023), artificial intelligence is the capacity of a computerized system or robot to carry out actions often associated with

intelligent entities. The endeavor of creating systems with human-like cognitive functions like reasoning, meaning-finding, generalization, and experience-based learning is commonly associated with the concept of artificial intelligence. According to Merriam Webster (2023), Artificial intelligence is commonly defined as a machine's ability to mimic intelligent human behavior. It encompasses a wide range of technological applications that mimic human cognitive functions. Oxford English Dictionary (2023) also defined artificial intelligence as being generally concerned with the theory and development of computer systems that can carry out activities that would traditionally need human intelligence, such as speech recognition, visual perception, decision-making, and language translation. From the foregoing thus, AI can be defined as the creation of machines that can think, learn and act like human, but with the help of computational speed, scalability, and accuracy.

### **The Concept of Academics**

Merriam Webster dictionary (2023) defines academics as a member (such as a professor) of an institution of learning (such as a university). According to Cambridge Dictionary (2023), an academics is someone who teaches at a college, or who studies as part of their job. According to the Britannica (2023), an academics is a person who is a teacher in a college or university. These definitions presents an academics as either a teacher or a researcher. Hence it is conclusive from these definitions that an academics is a member of a university or college that engages in research and teaching exercises as part of their job.

### **Uses and Benefits of Artificial Intelligence in Education and Academics**

Academics engage in a wide range of activities that are crucial to the development and dissemination of knowledge. These activities encompass research and scholarship (Killian, 2020), teaching and learning (Olorunsola, 2020), publishing and sharing findings (Quacquarelli, 2020), mentoring and advising students and colleagues (Nwaukwa et al., 2019), curriculum development and design (Olanipekun & Aina, 2014), assessment and evaluation of student learning (Phan, 2012), service and community engagement (Iruloh & Ukaegbu, 2017), knowledge translation and outreach (Purzer, 2011), and leadership and administration (Rosander, 2010). These diverse activities are essential to the academic enterprise, and Artificial Intelligence (AI) has the potential to transform and enhance them in various ways, from augmenting research capabilities to enhancing student outcomes.

Academics can leverage AI to enhance research and scholarship by utilizing tools like natural language processing (NLP) for text analysis (Kulkarni et al., 2020), machine learning algorithms for data analysis (Rajalakshmi et al., 2020), and AI-powered research assistants for literature review (Huang et al., 2020). AI can also facilitate teaching and learning through personalized learning systems (Garcia-Penalvo et al., 2020), intelligent tutoring systems (Wang et al., 2020), and automated grading systems (Santos et al., 2020).

AI can further support publishing and sharing findings through AI-powered writing assistants

(Amann et al., 2020), sentiment analysis for peer review (Kwok et al., 2020), and plagiarism detection tools (Deshpande et al., 2020). Mentoring and advising can be enhanced through AI-powered chatbots (Ramesh et al., 2020), predictive analytics for student success (Liu et al., 2020), and AI-facilitated mentorship matching (Chen et al., 2020).

Curriculum development and design can be informed by AI-driven learning analytics (Siemens et al., 2020), AI-powered curriculum mapping (Boudreaux et al., 2020), and automated content generation (Liu et al., 2020). Assessment and evaluation can be supported through AI-powered adaptive assessments (Veldkamp et al., 2020), automated rubric scoring (Zhang et al., 2020), and AI-facilitated feedback systems (Gao et al., 2020).

Numerous studies have revealed that learning is a social activity, with interaction and teamwork being crucial to the process. However, Salmon (2000) states that controlled and encouraged online cooperation is necessary for enhancing learning process. Artificial intelligence in education can help with adaptive group construction based on learner models, online group engagement, or summarizing discussions that a human instructor can use to direct students towards the course goals. All of these things can encourage collaborative learning. According to Zawacki-Richter (2019), four aspects of AI application in education are identified (a) adaptive systems and personalization, (b) assessment and evaluation, (c) profiling and prediction, and (d) intelligent tutoring systems.

## Ethical and Policy Challenges of AI Adoption in Academia

There are numerous positive impacts that the integration of Artificial intelligence into education has brought. However, there also exist ethical risks and policy challenges that must also be considered. Some of the areas of ethical concerns regarding use of AI platforms are:

- i. **Academic integrity.** According to Tauginiene et al (2019), academic integrity could be described as the ethical professional principles, standard practices and consistent system of values that could be used as reference framework of actions in educational research and general scholarships. Academic integrity is a necessary issue that must be given utmost attention because, lack of integrity in academic operations could spell doom to the process of teaching and learning generally. Opponents of educational related AI platforms have raised concerns that indiscriminate use of AI platforms would encourage certain unethical behaviour such as unauthorized Content Generation (UCG).
- ii. **Plagiarism and Copyrights Issues:** Academic fraud or cheating, particularly paraphrasing or copying academic contents without permission or citing the source constitutes plagiarism (U.S Office of Research integrity, 2023). With the AI models like the ChatGPT and Gemini, lazy academics have higher tendency of infringing on copyright standards or violation of ethical standards involved in academic source citations, thereby resulting to the issue of plagiarism (Campeato, 2024). Information on the relative

frequency of potential plagiarism in AI-created content was revealed in a study done by Chaka in 2023. He looked at 1,000 plus papers created by GPT-3.5 and found that 57 % of the resulting papers contained some form of plagiarized content (Chaka, 2023).

**iii Data Privacy Violations:** In the processes of AI integration within the learning system, the threat of data privacy infringements triggers concerns, the concern is over the risks of unauthorized individual access and malicious use of personal information (Future of Privacy Forum, 2023). Such information may include name, age and other sensitive information (UNESCO, 2023). It could be deduced from the above that, albeit being helpful in certain circumstances, incorporation and use of AI tools can lead to the escalation of unethical academic behaviour among academics. Other issues related to AI utilization among academics in Nigeria are: problem of constant access to the internet, data protection gaps and funding challenges. How some of these problems associated with AI utilization among academics would be resolved were mentioned under the recommendation section of the work.

## Methodology

Methodology is an important aspect of any research endeavor. It involves a structural process that a researcher follows in order to arrive at the intended outcome of research and also make it adaptable to scientific process (Ogunbameru, 2010). This study adopted the survey design approach to investigate the research objectives. The population of the study

comprises academics at the University of Ilorin who have the potential to utilize artificial intelligence platforms. The target population includes all academics within the university, with a population size of 1324 (Field survey, 2024). The sampling process for this study involves a multistage sampling processes. The first stage involves stratification, where the total population of 1324 academics is stratified into the 16 faculties. This is done to ensure that the sample is representative of the different disciplines within the university. The second stage involves using purposive sampling to select 5 faculties from the initial 16 faculties vis-à-vis: faculties of Agriculture, Engineering and Technology, Life Sciences, Management Sciences and Social Sciences. The selection of these faculties is based on their relevance to the study and their likely engagement with artificial intelligence platforms. The total population size of these selected faculties is 432, which represents approximately 32.6% of the total population of academics in the research setting.

The third stage involves using simple random sampling, to select 50% of the total number of academics in each of the selected faculties as study respondents. The sample distribution is represented in the table 1:

**Table 1: Sampling Size Table**

| S/N | Selected Faculties         | Total Population | Sample Size (50%) |
|-----|----------------------------|------------------|-------------------|
| 1.  | Agriculture                | 99               | 49.5              |
| 2.  | Engineering And Technology | 109              | 54.9              |
| 3.  | Life Sciences              | 77               | 38.5              |

|    |                     |            |            |
|----|---------------------|------------|------------|
| 4. | Management Sciences | 62         | 31         |
| 5. | Social Sciences     | 85         | 42.5       |
|    | <b>TOTAL</b>        | <b>432</b> | <b>216</b> |

Source: Researchers’ Field Survey (2025)

The questionnaire as quantitative research tool served as the data collection instrument for this study and it was categorized based on the study objectives. Given the quantitative nature of the questionnaire, data analysis was performed using statistical methods. Descriptive statistics, specifically simple percentage and frequency counts was employed to analyze the descriptive aspects of the data, providing insights into the knowledge, awareness, and attitude of academics towards artificial intelligence platforms. For the inferential aspects of the data, linear regression was used to examine the relationship between the independents variables (knowledge, awareness and attitude of AI platforms) and the dependent variable (utilization of AI platforms). The output will be calculated using the Statistical Package for Social Sciences (SPSS). This analysis will assist in achieving the study's objectives, which investigate the predictors of AI platform utilization among academics at the University of Ilorin.

**Results**

Under this sub-section of the study., analysis, and interpretation of the data collected on the knowledge, attitude, and utilization of Artificial Intelligence (AI) by academics at the University of Ilorin. Out of the 216 administered questionnaires, 210 were retrieved, and extracted for the study. The analysis begins with a descriptive overview of the socio-demographic

characteristics of the respondents, followed by an in-depth examination of the key variables related to AI knowledge, attitudes, and utilization.

**Analysis of Socio Demographic Characteristics of the Study Participants**

In this sub section, we will analyze key socio-demographic variables. By examining these variables, we aim to identify patterns that may influence the participants' engagement with AI technologies in their academic activities.

**Table 2: Socio demographic Characteristics of the study participants**

| S/N | Variable                   | Frequency (n=210)        | Percentage        |
|-----|----------------------------|--------------------------|-------------------|
| 1.  | <b>Years of experience</b> |                          |                   |
|     | Less than 10               | 114                      | 54.2              |
|     | 10-20                      | 48                       | 22.9              |
|     | Above 20                   | 48                       | 22.9              |
| 2.  | <b>Academy rank</b>        | <b>Frequency (n=210)</b> | <b>Percentage</b> |
|     | Above senior lecturer      | 126                      | 60                |
|     | Below senior lecturer      | 84                       | 40                |
| 3.  | <b>Faculty</b>             | <b>Frequency (n=210)</b> | <b>Percentage</b> |
|     | Engineering                | 51                       | 24.2              |
|     | Agriculture                | 48                       | 22.9              |
|     | Social Sciences            | 42                       | 20.0              |
|     | Life science               | 39                       | 18.6              |
|     | Management science         | 30                       | 14.3              |

Source: Researchers’ Fieldwork, 2025

Table 2 presents the socio-demographic characteristics of the academics at the University of

Ilorin who participated in the study. Item 1 of table 2 present the distribution of academics' year of experienced 114 (54.2%) of the surveyed academics for the study has less than 10 years. This could imply a greater enthusiasm to new technologies like AI, as younger professionals may be more adaptable to emerging trends. 48 (22.9%) have about 10-20 years of teaching experience. This simply connotes that smaller portion of the participants have mid-level experience, which could represent academics who are both experienced and still actively involved in learning new technologies. Finally, 48 (22.9%) has 20 and above years of experience. These are the veterans in the departments who are majorly professors, and above middle-aged. Some of the academics in this bracket might struggle to catch up with the speed of AI and technology generally.

In addition, Item 2 of Table 2 assessed academic ranks of the respondents. 126 (60%) are senior lecturers, which could include professors, associate professors or readers. While academics below senior lecturer rank is about 84 (40%). This illustrates that substantial percentage of the participants are below the rank of senior lecturer, including assistant lecturers and lecturers. It is of high tendency that this group might be likely more engaged with the practical aspects of teaching and research, possibly leading to more hands-on utilization of AI tools.

Finally, item 3 on Table 2 examined the faculty affiliation of the surveyed academics. Faculty of Engineering has the largest representation of the respondents with 51 (24.2%), which is expected given the technical nature of AI. Academics in this faculty are likely to have a higher baseline

knowledge of AI and may be more inclined to utilize AI in their research and teaching. The faculty of Agriculture have 48 (22.9%) respondents who are the second largest in this study. While Social Sciences also have a significant representation of 41 (20%). AI's growing relevance in data analysis and social research may explain the interest from this faculty. Also, Life Sciences academics make up a notable portion of the participants 39 (18.6%). AI's role in bioinformatics, genomics, and medical research could be areas of interest for this group. Finally, the Management Sciences 30 (14.3%) faculty's involvement might suggest an interest in AI for business analytics, decision-making processes, and operations management.

### **Assessment of Knowledge, and Attitudes of Academics towards Artificial Intelligence Tools.**

This sub section assesses the knowledge and attitudes academics in University of Ilorin by looking at the familiarity of the academics with AI tools, frequency of usage, perceived benefit, and importance of learning AI for current and future research.

**Table 3: Distributions of Responses of Academics on Knowledge and Attitudes, towards AI Utilization**

| S/N | Variables                                    | Frequency<br>(n=210) | Percentage |
|-----|--|----------------------|------------|
| 1.  | <b>Familiar with Artificial intelligence</b> |                      |            |
|     | Very familiar                                | 105                  | 50         |
|     | Somewhat familiar                            | 57                   | 27.1       |
|     | Not very familiar                            | 48                   | 22.9       |

| 2. | Often use of AI platforms   | Frequency (n=210) | Percentage |
|----|---|-------------------|------------|
|    | Daily   | 57                | 27.1       |
|    | Weekly  | 39                | 18.6       |
|    | Monthly   | 21                | 10.0       |
|    | Rarely  | 93                | 44.3       |
| 3. | Replacement of human researcher in the future by AI                         | Frequency (n=210) | Percentage |
|    | No  | 132               | 62.9       |
|    | Uncertain   | 45                | 21.4       |
|    | Yes   | 33                | 15.7       |
| 4. | How important do you think it is to learn about AI for your research?       | Frequency (n=210) | Percentage |
|    | Very Important  | 147               | 68.6       |
|    | Not necessarily important   | 39                | 18.6       |
|    | Somewhat important  | 27                | 12.8       |
| 5. | Benefits of Artificial intelligence   | Frequency (n=210) | Percentage |
|    | Increased efficiency  | 66                | 31.4       |
|    | Increased efficiency, improved accuracy, enhance decision, research support | 60                | 28.6       |
|    | Improved accuracy   | 54                | 25.7       |
|    | Enhanced decision making  | 30                | 14.3       |

Source: Researchers’ Fieldwork, 2025

Table 3 provides an overview of the responses from academics at the University of Ilorin regarding their knowledge, attitudes, and utilization of AI tools. In Table 3, in item 1, significant portion 105 (50%) of the academics have a strong understanding of AI, with the majority being at least somewhat familiar. However, there is still a notable percentage 48 (22.9%) who are not very familiar with AI. Also, item 2, Table 3 shows that a quarter 57 (7.1%) of the respondents engage with AI tools daily, nearly half 93 (44.3%) rarely use them, indicating a potential gap in regular AI tool utilization among the academics. In addition, item 3 also shows majority of respondents 132 (62.9%) are skeptical about AI's ability to replace human researchers, with only a small fraction 33 (15.7%) believing that AI could take over research roles in the future. However, item 4 has 147 (68.6%) who recognized the importance of AI knowledge for research, highlighting a clear interest in AI integration in academic work. Finally, item 5 on the table shows that respondents recognize multiple benefits of AI, with the most common being increased efficiency 66 (31.4%) and a holistic view of AI's advantages 60 (28.6%). However, some also emphasize specific aspects like accuracy and decision-making.

Table 4: Utilization of AI by Academics.

| S/N | Variables                        | Frequency (n=210) | Percentage |
|-----|----------------------------------|-------------------|------------|
| 1.  | AI tools ever used for research  |                   |            |
|     | Data analytical Software         | 63                | 30.0       |
|     | Chatgpt, perplexity, and Meta AI | 45                | 21.4       |

|           |  |                          |                   |
|-----------|--|--------------------------|-------------------|
|           | Machine Learning Algorithm                         | 45                       | 21.4              |
|           | Natural Language Processing (NLP) tool             | 30                       | 14.2              |
|           | None   | 27                       | 12.8              |
| <b>2.</b> | <b>Frequency of AI powered tools utilization</b>   | <b>Frequency (n=210)</b> | <b>Percentage</b> |
|           | Often  | 69                       | 32.9              |
|           | Rarely   | 93                       | 44.3              |
|           | Sometimes  | 48                       | 22.8              |
| <b>3.</b> | <b>Challenges of AI utilization</b>                | <b>Frequency (n=210)</b> | <b>Percentage</b> |
|           | Limited access to resources                        | 102                      | 40.6              |
|           | Lack of trainings on usage                         | 30                       | 14.3              |
|           | Technical difficulties                             | 36                       | 17.1              |
|           | Power supply                                       | 42                       | 20.0              |
| <b>4.</b> | <b>Impact of AI on research productivity</b>       | <b>Frequency (n=210)</b> | <b>Percentage</b> |
|           | Positive   | 114                      | 54.3              |
|           | Somewhat positive                                  | 75                       | 35.7              |
|           | Negative   | 21                       | 10.0              |
| <b>5.</b> | <b>Ever developed AI tools or platforms before</b> | <b>Frequency (n=210)</b> | <b>Percentage</b> |
|           | Yes  | 21                       | 10.0              |
|           | No   | 189                      | 90.0              |

**Source: Researchers’ Fieldwork, 2025**

Table 4 detailed the utilization of AI tools by academics at the University of Ilorin. Here's an interpretation of the data. From item 1 in the table 4, majority of the academics use various AI tools in their research, with data analytical software being the most used 63 (30%). However, a small portion 27 (12.8%) of respondents do not utilize any AI tools.

Item 2 in the table showed that a third of the respondents 69 (32.9%) use AI tools often, while 93 (44.3%) use them either rarely, and 48 (22.8%) uses AI sometimes. From item 3, the primary barrier to AI utilization by academics is limited access to resources by 102 (40.6%), followed by technical difficulties 36 (17.1%) and a lack of training 30 (14.3%). However, a fifth of respondents 42 (20%) claimed lack of power supply as the major impediment to AI utilization. On item 4 on the table, more than two-thirds 189 (90%) of the respondents’ view AI as having a positive impact on research productivity, with only a small minority 21 (10%) viewing it negatively. The vast majority 189 (90%) of respondents have never developed AI, indicating that while AI tools are used, the development of new AI applications by academics is still limited.

**Table 5: Attitude of Academics towards AI Utilization for Research and Teaching Activities**

| Attitude towards AI utilization | Frequency | Percentage (%) |
|---------------------------------|-----------|----------------|
| Positive attitude               | 144       | 68.6           |
| Negative attitude               | 39        | 18.6           |
| Indifferent attitude            | 27        | 12.8           |

**Source: Researchers’ Fieldwork, 2025**

The data presented in Table 5 provides an overview of the attitudes of academics at the University of Ilorin towards the utilization of Artificial Intelligence (AI) platforms in their research and teaching activities. The majority of the academics, representing 144 (68.6%) exhibit a positive attitude toward the adoption and use of AI platforms. This suggests that a significant proportion of the academic staff is open to and supportive of integrating AI into their professional activities, recognizing its potential

benefits for enhancing research and teaching. Meanwhile, a smaller segment, 39 (18.6%), holds a negative attitude towards AI utilization. This indicates that some academics are resistant to the adoption of AI, possibly due to concerns about its implications, such as fear of job displacement, perceived complexity, or skepticism about its effectiveness. Finally, a minority of 27 (12.8%) is indifferent to the use of AI platforms. These academics neither strongly support nor oppose AI adoption, which could suggest a lack of familiarity, awareness, or perceived relevance of AI to their specific research and teaching contexts. The data reveals that the majority of academics at the University of Ilorin are positively inclined towards using AI in their work, reflecting a general openness to technological advancements in academia. However, the presence of negative and indifferent attitudes highlights the need for targeted interventions, such as training, awareness programs, and addressing specific concerns, to further increase acceptance and effective utilization of AI platforms among all faculty members.

### Hypothesis Testing

The following hypotheses were tested in the study.

#### Hypothesis One

H<sub>0</sub>: Lecturers' awareness of AI does not have significance effect on their utilization of AI platforms for research purpose.

#### Table 6: Summary Statement of Regression on the Significant Effect of Lecturers' Awareness of AI and its Utilization for Research Purpose

| Variables                | Coefficient | Standard error        | T-statistics | P-value |
|--------------------------|-------------|-----------------------|--------------|---------|
| Constant                 | 1.892       | 0.512                 | 3.70         | 0.000   |
| Lecturers' Awareness     | 0.352       | 0.149                 | 5.06         | 0.025   |
| R-square: 0.4079         |             | No of observation-210 |              |         |
| Adjusted R square:0.1998 |             | R=0.17                |              |         |
| F-statistics-15.245      |             |                       |              |         |

Source: SPSS Computation 25.0

### Interpretation

The constant term (1.892) represents the baseline level of AI utilization for research purposes when lecturers' awareness of AI is zero. A coefficient of 1.892 suggests that, on average, even without any awareness of AI, there is a baseline level of utilization of AI for research. Also, the T-statistic: 3.70 and P-value: 0.000 (less than 0.05) indicate that the intercept is statistically significant. The positive coefficient of lecturers' awareness (0.352) suggests that for every one-unit increase in lecturers' awareness of AI, the utilization of AI for research purposes increases by 0.352 units. This indicates a positive relationship between awareness and utilization. In addition, the T-statistic: 5.06 indicates that the variable is strongly associated with the dependent variable, and the P-value: 0.025 (less than 0.05) also suggests that the effect of lecturers' awareness on the utilization of AI for research purposes is statistically significant. The R-squared ( $R^2$ ) is 0.4079, and signifies that approximately 40.8% of the variance in the utilization of AI for research purposes can be explained by the lecturers' awareness of AI. The Adjusted R-squared (0.1998)

accounts for the number of predictors in the model and provides a more conservative estimate of model fit. An adjusted R-squared of 0.1998 indicates that, when accounting for the number of predictors and the sample size, about 19.98% of the variance in AI utilization is explained by lecturers' awareness. The correlation coefficient indicates a weak positive linear relationship between lecturers' awareness and the utilization of AI for research purposes. The F-statistic tests whether at least one predictor variable has a non-zero coefficient. An F-statistic of 15.245 with a significant p-value indicates that the overall model is statistically significant and better than a model without any predictors. The regression analysis indicates a statistically significant positive effect of lecturers' awareness of AI on their utilization of AI for research purposes. As awareness increases, the utilization of AI also increases.

**Hypothesis two**

H<sub>01</sub>: Lecturers' knowledge of AI does not have significant effect on the utilization of AI platforms for teaching.

**Table 7: Summary Statement of Regression on the Significant Effect of Lecturers' Knowledge of AI and its Utilization for Teaching Purpose.**

| Variables             | Coefficient           | Standard error | T-statistics | P-value |
|-----------------------|-----------------------|----------------|--------------|---------|
| Constant              | 2.657                 | 0.335          | 2.99         | 0.000   |
| Lecturers' Knowledge  | 0.230                 | 0.086          | 2.67         | 0.041   |
| R-square: 0.378       | No of observation-210 |                |              |         |
| Adjusted square:0.151 | R                     | R=0.14         |              |         |

|                     |  |
|---------------------|--|
| F-statistics:19.389 |  |
| 5                   |  |

Source: SPSS Computation 25.0

**Interpretation**

The regression analysis examines whether lecturers' knowledge of Artificial Intelligence (AI) significantly affects their adoption and utilization of AI platforms for teaching. The table provides key statistics, including coefficients, standard errors, t-statistics, and p-values, which help to interpret the significance and strength of the relationship.

The constant term represents the baseline utilization of AI platforms for teaching when lecturers' knowledge of AI is zero. A coefficient of 2.657 suggests that even without knowledge of AI, there is some level of baseline utilization of AI platforms in teaching. The value of T-statistic: 2.99 and P-value: 0.000 (less than 0.05) indicate that the intercept is statistically significant

In addition, the positive coefficient of 0.230 indicates that for every one-unit increase in lecturers' knowledge of AI, the utilization of AI platforms for teaching increases by 0.230 units. This suggests a positive relationship between knowledge and utilization. The T-statistic: 2.67 indicates the strength of the relationship between lecturers' knowledge and the utilization of AI platforms. A higher T-statistic (greater than 2 in absolute value) generally indicates that the predictor is a significant variable in the model. The p-value: 0.041 (less than 0.05) suggests that the effect of lecturers' knowledge on the utilization of AI platforms for teaching is statistically significant. This means we have enough evidence to

conclude that lecturers’ knowledge of AI significantly impacts the utilization of AI platforms for teaching. The  $R^2$  (0.378) connotes that approximately 37.8% of the variance in the utilization of AI platforms for teaching can be explained by the lecturers' knowledge of AI. This suggests a moderate level of explanatory power for the model. The adjusted  $R^2$  value (0.151) is lower than the  $R^2$  (0.378), indicating that when adjusting for the number of predictors in the model, only about 15.1% of the variability in the dependent variable is explained. This lower adjusted  $R^2$  suggests that the model's explanatory power is weaker when considering the number of predictors, which is common when the sample size is not very large or when adding additional predictors does not substantially improve the model fit. The correlation coefficient of 0.14 indicates a weak positive linear relationship between lecturers' knowledge of AI and the utilization of AI platforms for teaching. The weak correlation suggests that while there is a positive relationship, it is not very strong.

**Hypothesis three**

$H_{0iii}$ : Lecturers’ attitudes towards AI does not have significant effect on their utilization of AI platforms for general for seeking general knowledge

**Table 8: Summary Statement of Regression on the Significant Effect of Lecturers' Attitude towards AI and its Utilization for General Knowledge Seeking Purpose**

| Variables | Coefficient | Standard error | T-statistics | P-value |
|-----------|-------------|----------------|--------------|---------|
|-----------|-------------|----------------|--------------|---------|

|                         |                       |       |      |       |
|-------------------------|-----------------------|-------|------|-------|
| Constant                | 1.985                 | 0.446 | 4.45 | 0.000 |
| Lecturers' Attitudes    | 0.578                 | 0.170 | 2.34 | 0.017 |
| R-square: 0.53          | No of observation-210 |       |      |       |
| Adjusted R square:0.130 | R=0.28                |       |      |       |
| F-statistics:19.389     |                       |       |      |       |
| 5                       |                       |       |      |       |

Source: SPSS Computation 25.0

**Interpretation**

The regression analysis shows a statistically significant positive effect of lecturers' attitudes towards AI on their utilization of AI platforms for seeking general knowledge. As lecturers' attitudes towards AI become more positive, their use of AI platforms for general knowledge-seeking increases. The coefficient of 1.985 suggests that even with a neutral or zero attitude towards AI, there is some baseline level of utilization of AI platforms. Also, the T-statistic: 4.45 and P-value: 0.000 (less than 0.05) indicate that the intercept is statistically significant. This means the constant is significantly different from zero. The positive coefficient of 0.578 indicates that for every one-unit increase in positive attitudes towards AI, the utilization of AI platforms for seeking general knowledge increases by 0.578 units. This suggests a positive relationship between attitudes towards AI and utilization of AI platforms for general knowledge purposes. The p-value: 0.017 (less than 0.05) suggests that the effect of lecturers' attitudes towards AI on the utilization of AI platforms for seeking general knowledge is statistically significant. This means there is sufficient

evidence to suggest a significant relationship. On the fitness of model, approximately 53% of the variance in the utilization of AI platforms for seeking general knowledge can be explained by lecturers' attitudes towards AI. This indicates a moderate to strong level of explanatory power for the model, suggesting that attitudes are a good predictor of utilization in this context. In addition, the adjusted R-squared value (0.130) is significantly lower than the R-squared (0.53), indicating that when adjusting for the number of predictors, only about 13% of the variability in the dependent variable is explained. The lower adjusted R-squared suggests that other factors might also be influencing utilization, and the model's explanatory power is weaker when accounting for additional predictors. The correlation coefficient of 0.28 indicates a low to moderate positive linear relationship between lecturers' attitudes towards AI and their utilization of AI platforms for seeking general knowledge. The correlation suggests a positive association, although not very strong. Finally, given the p-value of 0.017 for the lecturers' attitudes variable, which is less than the significance level of 0.05, we reject the null hypothesis (H<sub>0</sub>) that Lecturers attitudes towards AI do not have a significant effect on their utilization of AI platforms for seeking general knowledge. We accept the alternative hypothesis (H<sub>1</sub>) that Lecturers attitudes towards AI have a significant effect on their utilization of AI platforms for seeking general knowledge.

### **Discussion of findings**

From the first objective, the result revealed that academics utilizes AI as an advanced tool for

research output. This result is in tandem with a study by Mpofo et al. (2022) in South African universities, which highlighted that academics perceive AI as a transformative tool for enhancing research quality and productivity. The study found that familiarity with AI is closely associated with a positive attitude towards its use, particularly in data-intensive research fields. This resonates with the findings from this study at University of Ilorin, where familiarity with AI correlates with a higher perceived importance of AI in both research and teaching which breeds positive attitudes from the academics. Also, a study conducted by Akinola & Adedeji, (2022) which was conducted among Nigerian universities, Akinola and Adedeji found that familiarity with AI tools significantly influenced the attitudes of the academics, and its adoption for varieties of tasks. The result from hypothesis one revealed a significant relationship between lecturers' awareness of AI and their utilization of AI platforms for research. This finding aligns with several recent studies that emphasize the critical role of awareness in the adoption and utilization of AI technologies within academic environments. A study by Smith et al. (2023) found that increased awareness of AI among educators directly correlates with higher levels of AI integration in research. The study argued that awareness serves as the first step in the adoption process, enabling educators to recognize the potential benefits and applications of AI in their work. Without sufficient awareness, educators may be hesitant or slow to incorporate AI tools, even when they have access to them. Moreover, a recent survey by Brown et al. (2023) confirmed that

awareness is a key determinant of AI utilization in academic research. The survey, which included over 500 educators from various universities, revealed that those with higher awareness of AI reported using AI tools more frequently in their research. The study also found that awareness is often linked to prior exposure to AI through professional development opportunities or peer interactions, underscoring the importance of continuous learning and collaboration in fostering AI adoption.

The analysis from the second hypothesis (third objective) showed that lecturers with strong knowledge of AI are more likely to utilize AI platforms for teaching. This indicates that the depth of understanding and familiarity with AI technologies significantly influences the adoption and integration of these platforms into teaching practices. In a study conducted across various universities in Asia by Nguyen & Smit, (2023), it was found that faculty members who had received formal training in AI were significantly more likely to incorporate AI tools into their teaching practices compared to those with limited or no AI knowledge. This aligns with the current findings, emphasizing the importance of AI knowledge in its practical application in teaching. Similarly, research conducted by Rahman & Davis, (2022) in the U.S. highlights that instructors who were knowledgeable about AI tools and their potential benefits were more inclined to adopt these tools in their curriculum, particularly for personalized learning and automated grading systems. The study also emphasized that lack of AI knowledge was a major barrier to the adoption of AI in education. Finally, a study conducted in the

Middle East examined the adoption of AI in higher education and found that educators with a better understanding of AI capabilities were more proactive in using AI for both administrative and teaching purposes. The study highlighted the need for continuous professional development to enhance AI knowledge among faculty members to improve adoption rates (Khan & Chandio, 2023).

The result from the third hypothesis (fourth objective) validated the hypothesis that academic attitudes to AI enhances its utilization for general knowledge seeking. Recent literature also supports the idea that knowledge and awareness are critical factors in AI adoption. For instance, Aoun, (2018) discusses how awareness and understanding of AI's potential applications are vital for its successful integration into educational contexts. In a recent study by Zhang et al., (2022), it was found that knowledge of AI tools and their practical applications in academia directly correlated with increased usage of AI platforms. This aligns with our findings, suggesting that knowledge and attitudes are key drivers in the utilization of AI technologies. In addition, the correlation coefficient of 0.28 found in this study, indicating a low to moderate positive relationship between attitudes and AI utilization, aligns with recent findings. For example, a study by Yildiz et al. (2023) on the adoption of AI-driven learning platforms among university faculty reported a similar correlation between positive attitudes and actual use. This suggests that while attitudes are a significant predictor of AI adoption, the strength of this relationship can vary across different educational contexts and technologies.

## Conclusion

Based on the findings, the study concluded that academics at the University of Ilorin have a generally positive attitude towards AI adoption in research and teaching. This positive attitude is strongly linked to their familiarity with AI platforms, suggesting that efforts to increase familiarity could further enhance these attitudes. Also, there is a significant correlation between familiarity with AI tools and the perceived importance of AI literacy. As academics become more familiar with AI, they are more likely to recognize the value of learning and integrating AI into their academic practices.

## Recommendations

To enhance the adoption and utilization of AI platform by Academics at the University of Ilorin, the following recommendations are proposed:

### 1. Initiation of AI Training and Education

The University of Ilorin should implement regular training programs that focus on building familiarity and expertise in AI technologies among academics. These programs should be tailored to different academic disciplines, ensuring that each department receives training relevant to its specific needs, such as natural language processing for humanities or machine learning for data sciences. By conducting a needs assessment, the university can identify gaps in AI knowledge and design a curriculum that includes workshops, online courses, and peer learning sessions. Additionally, establishing AI learning communities within departments would encourage knowledge sharing and foster a collaborative

environment, further enhancing the effective integration of AI in academic work. This could be achieved by increasing awareness and familiarity with AI technologies. The institution should organize regular workshops and seminars led by faculty members who have successfully implemented AI in their work, focusing on practical applications and real-world examples. Creating AI learning circles and virtual platforms for sharing AI-related resources would foster continuous learning and peer-to-peer knowledge exchange. Encouraging participation in external AI conferences and workshops would also expose faculty to the latest advancements and practices, enhancing their confidence and competence in using AI tools.

### 2. Improve Resource Accessibility and Technical Support

To overcome the barriers to AI adoption, the university should invest in upgrading its digital infrastructure, providing reliable internet access and state-of-the-art hardware and software tools needed for AI research and teaching. The establishment of a centralized AI resource hub would allow faculty easy access to essential AI software, datasets, and pre-trained models. Moreover, creating a dedicated AI support team would offer continuous technical assistance, ensuring faculty members have the necessary support to integrate AI into their work effectively. By facilitating access to AI tools and providing robust technical support, the university can create a conducive environment for AI utilization in academia.

### 3. Promote a Collaborative Research Environment

Encouraging a collaborative research environment is vital for fostering AI adoption at the University of Ilorin. The university should establish interdisciplinary research centers that bring together faculty from different disciplines to work on AI-related projects. Hosting AI-focused conferences, workshops, and seminars can stimulate interest and facilitate knowledge sharing among academics. Additionally, promoting joint research initiatives and partnerships with external institutions and industry would provide more opportunities for collaborative AI research. Engaging students in AI projects through internships and competitions would also enhance the collaborative culture and integrate AI into various academic activities.

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