**A Comparative Analysis of Lecturers’ and Students’ Perspectives on Artificial Intelligence in Higher Education: A Case Study of Nkhoma University, Malawi**

**Abstract**
This study presents a comparative analysis of lecturers’ and students’ perspectives on the use of generative Artificial Intelligence (AI) in higher education at Nkhoma University, Malawi. Drawing on semi-structured interviews with 18 students and questionnaire data from 15 lecturers, this research explores awareness, perceived benefits, and challenges surrounding AI use in teaching and learning. Findings reveal that students exhibit higher awareness and engagement with AI, primarily influenced by peer interaction and social media. They use AI to enhance understanding, save time, and support independent learning. In contrast, lecturers, particularly older ones, demonstrate limited awareness and engagement, with some expressing concerns about academic integrity and the impact of AI on learning quality. Key challenges identified by both groups include ethical risks, inadequate digital infrastructure, and cognitive overreliance. The study concludes by recommending institutional training, improved infrastructure, and clear policies to ensure the responsible integration of AI in higher education.

**Key words:** Artificial Intelligence (AI); Higher Education; Generative AI Tools; Lecturers’ Perceptions; Malawi

**1. Introduction**

The rapid advancement of Artificial Intelligence (AI) technologies is transforming various sectors, including higher education. Tools such as ChatGPT, Perplexity AI, and DeepSeek are increasingly being utilized to enhance teaching, learning, and research processes. In the context of Malawi, these technologies have a significant potential to improve the quality and accessibility of education. Their adoption could meaningfully contribute to the realization of development goals, particularly the goals outlined in Malawi Vision 2063 and the United Nations Sustainable Development Goals (SDGs).

As with any technology, AI in a university environment presents both opportunities and challenges. AI technology can have a profound impact on transforming instruction and learning through individualized educational experiences, grading, supporting new methodologies in research, and improving administrative efficiency (Saaida, 2024). AI technology can make assessments easier through the rapid detection of plagiarism by comparing students’ work with enormous databases, liberating instructors from spending considerable time on this task (Slimi, 2022). AI can review attendance, grading, and engagement, allowing instructors and academic support departments to respond early and deliver personalized interventions to at-risk students (Abonamah et al., 2021).

Despite these advantages, the integration of AI into tertiary-level studies is challenging. The loss of academic integrity is a concern for the stakeholders. AI-authored compositions can impersonate originals and, in so doing, destroy the integrity of academic qualifications (Cohen, 2023). In the event that proper controls and supervision frameworks have not yet been constructed, AI can be exploited to bypass academic requirements, undermining the worthiness of tertiary-level studies and institutional integrity (Cohen, 2023). In addition, university teachers perceive AI as a future threat to job security (Al Dhaen et al., 2022; McGrath, 2023), whereas others are concerned about students’ plagiarism of AI-generated work (Dien, 2023; King, 2023). There are privacy concerns, namely, AI keeping private and sensitive information (Crawford et al., 2023). Another concern is the accuracy of the information generated by AI (Murugesan & Cherukuri, 2023). Studies have found that most faculty members have no awareness of AI’s potential application of AI in instruction, and even when knowledgeable, they have no expertise or time to apply (Chiu & Chai, 2020; Crawford et al., 2023).

Technological opportunities and challenges have not spared developing countries such as Malawi. AI is a relatively new technology in most African higher learning institutions, and the question lingers about the readiness of universities in Malawi regarding the integration of AI in teaching and learning. McGrath et al. (2023) observe that universities are slow in terms of technology integration. The effective integration of AI in higher learning institutions is contingent upon its active acceptance and use by faculty members. The faculty plays a significant role in educational practice, and their attitudes and perceptions towards AI integration are important. In the African context, with AI being a new technology, little is known about its application in instruction and how various stakeholders such as lecturers and students perceive it. Against this background, this study aims to explore the perspectives of university lecturers and students regarding the use of AI in teaching and learning. The findings of this study will inform higher education stakeholders on how to best integrate AI into higher learning institutions.

**1.2 Problem statement**

The rapid emergence of artificial intelligence (AI) presents opportunities and challenges for higher education institutions across African countries (Mwakalinga, 2024; Abdelaal et al., 2024; Chigwaro & Muchowe, 2024). Despite growing global interest, scholarly engagement with AI in Malawian higher education remains limited. In particular, there is a notable gap in the understanding of how lecturers and students in Malawi perceive the integration of AI into teaching and learning processes. This study seeks to address this gap by examining the perspectives of students and lecturers at Nkhoma University regarding the use of AI tools. It investigates the levels of awareness, perceived benefits, and ethical, pedagogical, and infrastructural challenges associated with AI adoption in the academic environment. The findings provide evidence-based recommendations to guide policy, institutional training, and curriculum reform, ensuring that AI integration supports both teaching effectiveness and meaningful student learning.

**1.3 Research Questions**

1. What is the level of awareness and use of generative artificial intelligence (AI) tools among lecturers and students at Nkhoma University?
2. What are the perceived benefits of integrating generative AI tools in teaching, learning, and academic tasks at Nkhoma University?
3. What challenges do lecturers and students encounter in adopting and using generative AI tools at Nkhoma University?

**2. Literature review**

**2.1 Theoretical framework**

This study utilizes a combined framework of the Technology Acceptance Model (TAM) and diffusion of innovation theory (DOI) to explore the adoption of AI tools in Malawian higher education. The TAM, proposed by Davis (1989), focuses on two core aspects: perceived usefulness and perceived ease of use. Perceived usefulness refers to the belief that using a technology will be beneficial to the user, whereas perceived ease of use emphasizes the simplicity of the technology. These two constructs are central to understanding how lecturers and students in Malawian higher education perceive and decide whether to adopt AI tools.

Additionally, the diffusion of innovation theory (Rogers, 2003) provides an important perspective on how individuals adopt new technologies. The theory’s five stages–awareness, interest, evaluation, trial, and adoption are crucial for examining how students and lecturers at Nkhoma University become aware of, evaluate, and adopt AI tools for learning. This approach is particularly relevant in resource-constrained environments, where lecturers and students may face unique challenges when engaging with AI technologies.

Together, these frameworks acknowledge the interplay between lecturers’ and students’ perceptions and behaviours. Lecturers’ and students’ decisions to adopt AI tools are influenced by their assessment of the technology’s usefulness and ease of use and they progress through the stages of awareness, evaluation, and adoption. This integrated framework provides a holistic understanding of AI adoption in higher education and informs strategies to promote responsible, inclusive, and effective AI integration in the academic environment.

**2.2 Empirical Literature: Lecturers’ Knowledge, Perceptions, and Challenges in Using AI**

Recent research highlights the growing global interest in the integration of Artificial Intelligence (AI) in higher education; however, significant disparities persist in lecturers’ knowledge, perceptions, and capacity to adopt such technologies. Empirical findings have consistently revealed uneven awareness and engagement levels among academic staff, particularly across disciplines and regions.

In Egypt, Abdelaal et al. (2024) reported low levels of AI familiarity among lecturers, with notable variations based on age and discipline. Younger academics and those in computing fields tended to demonstrate greater proficiency in a trend echoed in Zimbabwe by Chigwaro and Muchowe (2024), who found that AI knowledge was disproportionately concentrated among technology-oriented faculties. Hodges and Ocak (2023) observed that AI competence tends to cluster within computer science departments, reinforcing the view that disciplinary alignment strongly influences digital preparedness. However, even when basic awareness exists, a deeper pedagogical understanding remains limited. Many lecturers lack knowledge of AI’s practical applications and benefits of AI, suggesting a broader need for structured professional development.

Mwakalinga (2024) adds a compelling generational perspective from Tanzania, where students reportedly demonstrate greater familiarity with AI than their lecturers. This reversal of traditional knowledge hierarchies signals a widening digital gap with implications for faculty credibility and pedagogical relevance. Collectively, these studies suggest that while AI awareness is growing, gaps in technical fluency and applied knowledge remain major constraints to integration.

Lecturers’ perceptions of AI reflect a similarly complex terrain. While some view AI as a transformative tool, others express deep skepticism, rooted in ethical and pedagogical concerns. In Zimbabwe, Chigwaro and Muchowe (2024) documented predominantly negative perceptions, especially regarding plagiarism. Many lecturers expressed concern that students relied excessively on tools such as ChatGPT to complete assignments, undermining academic integrity and bypassing critical thinking processes. These concerns reflect broader anxieties about AI’s potential to dilute intellectual rigor and erode educators’ roles in shaping original thoughts.

Comparable apprehensions have been identified in Tanzania, where Mwakalinga (2024) found that lecturers perceived AI as both beneficial and potentially harmful. While recognizing AI’s utility of AI in automating routine tasks, many worried that students’ misuse could lead to superficial learning outcomes. This study underscores the tension between the pedagogical potential of AI and the risk of diminished cognitive engagement.

Abdelaal (2024) further elaborates on this dilemma in the Egyptian context, where lecturers raised concerns about AI diminishing interpersonal connections in teaching, devaluing human mentorship, and potentially rendering educators obsolete. Such views echo wider debates on the dehumanizing effects of educational technologies and the importance of preserving relational pedagogy in the face of increasing automation.

Mutanga et al. (2024) reported a divided academic landscape in South Africa. While some lecturers embraced AI for its capacity to personalize learning and enhance engagement, others resisted its adoption because of fears of ethical misuse, student dependency, and the inadequacy of AI to address complex educational needs.

Similar divisions are evident beyond Africa. Kotamjani et al. (2024) examined instructors in Uzbekistan and found mixed perceptions. Some praised AI’s capacity to support creativity and streamline instruction, whereas others expressed concerns about reduced critical thinking, job displacement, and loss of instructional autonomy.

Across these studies, a consistent pattern emerges while lecturers increasingly recognize AI’s potential in transforming higher education, its adoption is hindered by ethical concerns, pedagogical uncertainty, and uneven digital readiness. Fears about plagiarism, weakened critical thinking, and diminished interpersonal learning relationships remain central to academic scepticism.

**2.3 Empirical Literature: Students’ Knowledge, Perceptions, and Challenges in Using AI**

Although awareness of Artificial Intelligence (AI) is increasing among university students, largely due to exposure via social media, this awareness often lacks depth.

Tripathi (2024), in a study of 123 undergraduates in Nepal, found that while students acknowledged AI’s academic and career relevance of AI, their actual knowledge and application skills were limited. This indicates a disconnect between perceived utility and practical competence. Similarly, Alimi et al. (2021) reported low AI awareness among Nigerian university students, with no significant gender differences, suggesting structural rather than demographic barriers.

In contrast, El-Shara et al. (2025) found high levels of AI awareness and positive attitudes among Jordanian students. A similar optimism appears in Uganda, where Ajalo et al. (2025) reported that over 75% of medical students had used AI tools, primarily ChatGPT, for academic purposes. Mudenda et al. (2025) noted that medical students in Zambia generally demonstrated strong AI knowledge and attitudes but lacked an understanding of its clinical relevance. Likewise, Anani et al. (2025) found that postgraduate students viewed AI tools as helpful in academic writing, especially for grammar and idea generation, but their responses varied widely, reflecting uncertainty about AI’s broader academic role.

Regarding perceived benefits, students often view AI as a means of enhancing individualized learning, academic integrity, and critical thinking. Slim et al. (2025) highlight the value of tools such as Turnitin, Grammarly, and ChatGPT, although the distinction between utility and educational effectiveness remains underexplored. Obenza et al. (2023) found similar positive perceptions in the Philippines, although local context and access shaped students’ experiences.

However, despite these benefits, concerns persist. Jie et al. (2025) identified key challenges in Malaysia, including privacy risks, overreliance, ethical concerns, and lack of understanding. Michel-Villarreal et al. (2023) and Chan and Hu (2023) raised doubts about AI’s reliability, creativity, and ethical implications of AI, warning that uncritical adoption may undermine student development and academic values.

Overall, the literature reflects a growing engagement with AI in education but with uneven depth and readiness. Challenges and opportunities exist in developing countries, such as Malawi. In Malawi, research on students’ and lecturers’ experiences with AI remains scarce. Therefore, this study fills this critical gap by examining how students and academic staff perceive AI integration.

**3. Methodology**

**3.1 Study Design**

This study employed a qualitative research design, utilizing a phenomenological case study approach, to explore the perceptions of both university lecturers and students regarding the integration of Artificial Intelligence (AI) in teaching and learning. A qualitative approach was chosen to gain in-depth insights into how AI is perceived and utilized within the context of Nkhoma University in Malawi (Creswell, 2017).

**3.2 Study Site and Population**

This research was conducted at Nkhoma University, located in Lilongwe, Malawi. The university hosts a diverse student body across the Faculties of Education, Theology, and Commerce, thus providing a relevant context for examining varying levels of AI exposure and usage. This study targeted undergraduate students and lecturers from the Faculty of Education, providing a comprehensive view of AI integration within an academic setting.

**3.3 Sampling Strategy and Size**

Purposive sampling was employed to deliberately select participants who were most likely to provide rich, relevant, and diverse insights aligned with the research objectives. This non-probability sampling technique was appropriate given the exploratory nature of the study, which required in-depth perspectives rather than generalizability. The method allowed the researcher to target individuals with specific characteristics, such as experience with or exposure to AI in education. A total of fifteen lecturers from the Faculties of Education, Theology, and Commerce participated in the study. These lecturers varied in age, gender, and years of teaching experience, ensuring a broad range of perspectives on the integration of AI in teaching practices. Similarly, the student sample was carefully selected to reflect variation in gender, age, academic discipline, and year of study. While a few invited individuals did not participate, this did not compromise the depth or diversity of the data collected. The final sample was deemed adequate for capturing a wide range of views relevant to the study’s objectives**.**  Tables 1 and 2 provide descriptions of the study participants.

**Table 1: Sample Description of Lecturers**

| **Participant** | **Age range** | **Sex** | **Years of Experience** |
| --- | --- | --- | --- |
| Lecturer 1 | 25-34 | M | 4 years |
| Lecturer 2 | 25-34 | F | 2 years |
| Lecturer 3 | Above 65 | M | 8 years |
| Lecturer 4 | 55-64 | M | 11 years |
| Lecturer 5 | 25-34 | M | 3 years |
| Lecturer 6 | 25-34 | F | <1 year |
| Lecturer 7 | 25-34 | F | <1 year |
| Lecturer 8 | 25-34 | M | <1 year |
| Lecturer 9 | 25-34 | F | <1 year |
| Lecturer 10 | 25-34 | M | 7 years |
| Lecturer 11 | 35-44 | F | 6 years |
| Lecturer 12 | 45-54 | M | 20 years |
| Lecturer 13 | 35-44 | M | 1 year |
| Lecturer 14 | 35-44 | M | 3 years |
| Lecturer 15 | 55-64 | M | 5 years  |

**Table 2: Sample Description of Students**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Participant** | **Sex** | **age** | **Program of study** | **Year of study** |
| S1FE  | M | 32 | Bachelor of Education in Social Studies | 1 |
| S2FE  | F | 20 | Bachelor of Education in Languages | 2 |
| S3FE  | F | 22 | Bachelor of Education in Social Studies | 3 |
| S4FE  | M | 22 | Bachelor of Education in Languages | 3 |
| S5FE | M | 35 | Bachelor of Education in Languages | 4 |
| S6FE | M | 35 | Bachelor of Education in Languages | 3 |
| S1FT | M | 28 | Bachelor of Theology | 2 |
| S2FT | M | 27 | Bachelor of Theology | 3 |
| S3FT | F | 19 | Diploma in Theology | 1 |
| S4FT | M | 26 | Bachelor of Theology | 3 |
| S5FT | M | 22 | Bachelor of Theology | 2 |
| S6FT | M | 21 | Bachelor of Theology | 3 |
| S1FC | M | 22 | Bachelor of Business and Entrepreneurship | 2 |
| S2FC | F | 21 | Bachelor of Business and Entrepreneurship | 3 |
| S3FC | M | 24 | Bachelor of Business and Entrepreneurship | 3 |
| S4FC | M | 22 | Bachelor of Business and Entrepreneurship | 3 |
| S5FC | F | 22 | Bachelor of Business and Entrepreneurship | 2 |
| S6FC | M | 24 | Bachelor of commerce in business management | 4 |

**3.4 Data Collection Methods**

Data for this study were collected through multiple methods to provide a comprehensive understanding of participants' perceptions and experiences with AI.

**3.4.1 Questionnaires**

Data from lecturers was collected using open-ended questionnaires. This method was chosen for its flexibility, allowing lecturers to complete the questionnaires at their convenience, given their busy schedules. The open-ended format enabled participants to freely express their views, offering in-depth insights into their perceptions of AI in education.

**3.4.2 Semi-Structured Interviews**

In-depth semi-structured interviews were conducted with students. The interviews were guided by open-ended questions, allowing participants to reflect on their personal experiences with AI and to explore the impact of AI on teaching, learning, and academic engagement. The flexibility of the semi-structured format allowed the interviewer to probe deeper into emerging themes.

**3.5 Data Analysis**

The data collected through the interviews and questionnaires were analyzed using thematic analysis (Braun & Clarke, 2022). The analysis followed the six-phase process outlined by Braun and Clarke: (1) familiarization with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the final report.

**4. Result and Discussion**

This section presents the findings for the study’s three research questions. The analysis was thematically organized into (1) awareness and use of AI tools, (2) perceived benefits, and (3) challenges.

**4.1 Awareness and Use of AI Tools**

The findings revealed a noticeable gap in the awareness and use of AI tools between students and lecturers at Nkhoma University. Among students, regardless of age, awareness of generative AI technologies, particularly tools such as ChatGPT, Grammarly and Meta-AI, was widespread. However, this awareness was primarily shaped through informal peer-led channels rather than structured institutional guidance. While students from the Faculty of Commerce reported more direct exposure through coursework, those in Theology and Education tended to rely on information shared through social media platforms or interpersonal networks. One student noted, *“I first learnt about it from friends here at school”* (S1FE), while another commented, *“Our lecturer introduced Meta AI to us in class”* (S2FT).

These patterns are consistent with Rogers’ (2003) diffusion of innovation theory, which emphasizes the role of informal social networks in accelerating the adoption of new technologies. What emerges here is a form of grassroots digital literacy in which students, not institutions, are primary agents of AI engagement.

Beyond awareness, many students described the regular or occasional use of AI tools for academic purposes, most commonly for information gathering, grammar checking, paraphrasing, and completing assignments. As one participant shared, *“Before I knew AI tools, I was taking much time to finish my assignments… now it helps me to save time”* (S4FE). Another added, *“I use AI to check grammar in my work before submitting to the lecturer”* (S6FT). These responses suggest that students have not only integrated AI into their academic routines but have come to rely on these tools for efficiency and performance enhancement.

In contrast, lecturer awareness was uneven and limited in some cases. Six of the fifteen lecturers reported minimal familiarity with AI tools, often encountering them only through students or informal discussions. A few younger academics, primarily those under the age of 35, demonstrated active engagement with tools such as the ChatGPT. One lecturer explained, *“Yes, I use ChatGPT, Perplexity, Chat Wen, Gemini, and Meta”* (L10). In contrast, more senior faculty members tended to express either unfamiliarity or scepticism. For instance, one stated, *“Since I am not much familiar, it’s difficult to explain about it”* (L4), while another remarked, *“These tools encourage laziness; I prefer traditional research methods”* (L8).

This generational pattern mirrors findings from other sub-Saharan contexts (e.g., Mwakalinga, 2024), where younger academics are more likely to experiment with new technologies, while older staff members express caution or resistance. Similarly, the data from Nkhoma University suggest that the diffusion of AI tools occurs more rapidly among students and younger staff, with institutional structures struggling to keep pace.

Moreover, the findings indicate a lack of formal support for AI adoption within universities. Most AI usage among students and lecturers appeared to be self-initiated, with no evidence of structured training or institutional endorsement. This mirrors the trends identified in other African universities, where lecturers often have limited exposure to AI due to gaps in professional development (Chigwaro & Muchowe, 2024; Hodges & Ocak, 2023). As Shahsavar and Choudhury (2023) argue, the awareness and use of AI in teaching are significantly shaped by institutional capacity and the availability of relevant information. In the case of Malawi, the absence of a clear AI policy framework or digital literacy program for academic staff appears to have created a situation in which AI use is diffused informally primarily through students rather than integrated as part of a broader pedagogical shift.

A comparison of AI awareness and usage between lecturers and students reveals a noticeable disparity. Students demonstrate greater awareness and higher engagement with AI tools than lecturers. In contrast, many lecturers appear to have limited exposure or practical interaction with AI technologies. This finding aligns with Eryenyu’s (2024) study in Uganda, which reported that while students were actively using AI tools to assist with coursework, most lecturers remained largely unaware of these technologies.

In sum, the findings reveal a bottom-up pattern of AI adoption at Nkhoma University, with students leading in both awareness and usage, often through informal networks. Lecturer engagement remains limited and uneven, especially among older faculty, reflecting generational and institutional gaps. These findings highlight the importance of institutional investment in digital training and policy development to bridge the widening gap between students and lecturers.

**4.2 Perceived Benefits of AI Integration in Teaching and Learning**

Both the students and lecturers acknowledged the benefits of AI in academic contexts, although their interpretations diverged significantly in scope and depth. Students largely perceive AI as an academic enabler, improving learning efficiency, supporting comprehension, and reducing cognitive workload. The majority reported that AI tools, especially generative AI, such as ChatGPT, contributed to a better understanding of course materials and improved academic outcomes.

As one student remarked, *“AI helps me to understand concepts I missed in class… this makes me catch up with my friends”* (S3FT), while another shared, *“AI provides simplified explanations of difficult concepts”* (S6FC). Students frequently described AI as a mechanism for individualized learning, particularly when lecturers were unavailable or traditional instruction proved insufficient. A third-year student reflected, *“AI helps me to gather information and this has improved my learning experience by helping to save time when studying”* (S3FE). This suggests not only time-saving advantages, but also a shift toward autonomous and self-regulated learning.

Beyond comprehension, the students reported using AI for grammar checking, translation, and summarizing complex content. A Theology student noted, *“It translates Greek theology texts instantly, saving me weeks of manual work”* (S4FT). These statements illustrate how AI functions as a practical academic support system, especially for students working across linguistic and conceptual barriers. Collectively, such engagement corresponds to the constructs of perceived usefulness and ease of use, as defined in the Technology Acceptance Model (Davis, 1989) and supports prior research highlighting AI's capacity to foster learner autonomy and engagement (Almarashdeh, 2021).

Lecturers who interacted with AI tools also recognized their benefits. The most frequently cited advantage was the time-saving function of lesson preparation and access to instructional content. One lecturer observed, *"I easily find notes and saves my time for preparing lessons as such I always go to class prepared to teach"* (L5), while another highlighted AI’s adaptive potential: *"Yes, it gives the content that gives/meets the individual student need, adapting difficulty levels and learning style"* (L7). Others pointed to its role in simplifying complex material: *"Yes, I do. It is a simple and direct way of gaining information"* (L11).

Despite this acknowledgment, the depth of integration remains limited. While some lecturers used AI tools for routine tasks such as grammar checks or lesson planning, *“AI saves me 5+ hours a week”* (L5), and many did not move beyond instrumental uses. Lecturer 6, for instance, remarked, *“I have not used AI because our institution still favors traditional pedagogies.”* It was observed that lecturers had limited understanding of the benefits of AI despite literature showing that AI technology can have a profound impact on transforming instruction and learning through individualized educational experiences, grading, supporting new methodologies in research, and improving administrative efficiency (Saaida, 2023).

While some lecturers viewed AI as beneficial, others offered opposing opinion lecturer 8 had this to say “*AI* *cannot improve the quality of education. learners just goggle information since it already contains well laid up questions and answers. Learners just copy and present for marking. This results into a teacher marking AI information and not learners’ knowledge. Teachers fail to evaluate learning progress”* Another Lecturer (7) said: 8) *Students have begun doing things quickly. However, the stuff googled is not used and internalised in them for use in their independent studies, hence no actual learning from content. Laziness and lack of preparation by both teachers and learners.* This suggests that while other lecturers see it as beneficial, they see it as a risk that can affect the quality of education. This reflects a negative attitude towards AI.

These findings are broadly consistent with those of Slim et al. (2025), who observed that students value AI tools for their ability to support individualized learning, enhance critical thinking, and provide timely feedback. In the Philippines, Obenza et al. (2023) documented strong student engagement with generative AI technologies, reporting nuanced perceptions of both advantages and limitations. Tools such as Turnitin, ChatGPT, and Grammarly were appreciated for their roles in improving writing quality, academic integrity, and overall task efficiency.

On the other hand, lecturers’ perceptions were largely shaped by concerns of practicality, particularly in streamlining lesson preparation and facilitating access to instructional resources. These patterns mirror those found by Mutanga et al. (2024) and Nisar et al. (2023), who similarly reported that lecturers tend to view AI as a support mechanism rather than a tool for pedagogical innovation. This negative attitude towards AI aligns with other studies in African universities (Chigwaro & Muchowe, 2024; Mutanga et al., 2024). Ultimately, the findings point to the potential of AI to enhance teaching and learning, but both groups recognize the risks associated with it.

In sum, while both students and lecturers recognize the benefits of AI in education, their perspectives differ in depth and application. Students view AI as a vital academic support system, using it to enhance comprehension, save time, and support independent learning. On the other hand, some lecturers acknowledge that AI is beneficial but remain cautious as there are concerns over academic integrity and its impact on learning quality. These contrasting views underscore the need for institutional frameworks that promote informed, balanced, and purposeful use of AI in teaching and learning.

**4.3 Challenges Associated with the Use of AI in Universities**

The challenges identified in this study fall into three broad categories: ethical concerns, institutional barriers, and cognitive risk.

**a) Ethical Concerns and Academic Integrity**

Both groups raised concerns about plagiarism and the misuse of AI. Students feared being accused of copying because of similarities in the AI-generated answers. *“AI can give similar examples to many students, and teachers may think we copied from each other”* (S2FE). Others admitted overdependence: *“AI promotes laziness… students just copy everything”* (S4FE). Some participants also raised ethical and safety concerns, including data privacy and exposure to inappropriate content such as pornography.

*“I fear that my data is not secured when using AI.”* (S2FT)

Lecturers expressed deeper concerns about their diminished originality and intellectual rigor. Lecturer 1 stated, *“AI has increased practices of plagiarism… students just copy and paste content.”* The lack of institutional guidelines compounded this problem, leaving both groups uncertain about what constitutes acceptable use.

Some lecturers have raised moral concerns. *“AI exposes students to unnecessary things like pornography”* (L6FE), highlighting the absence of content regulation or training in digital ethics.

**b) Infrastructure and Institutional Resistance**

Both students and lecturers highlighted infrastructure as a key barrier. Students reported unreliable Wi-Fi, expensive data bundles, and lack of access to devices. *“Our Wi-Fi does not accommodate many students at once”* (S1FE); *“At Nkhoma university we have limited infrastructure and this hinders the adoption of AI, for example we have limited internet connectivity which limits access to AI”* (S5FC).

 *“Some lecturers discourage the use of AI in academic work.” (S1FC)
“Most of the students lack technical know-how… they don’t realize the importance of AI tools.” (S5FT)*

Lecturers pointed to institutional inertia and absence of training. *“There is no institutional policy or training on AI use”* (Lecturer 4). Some actively discouraged the use, further demotivated students. One student noted, *“Some lecturers talk badly about AI and discourage its use”* (S1FC). These dynamics are consistent with Hodges and Ocak (2023), who argued that digital resistance among staff is a major hurdle in sub-Saharan higher education.

These structural and attitudinal constraints are consistent with studies across sub-Saharan Africa (UNESCO, 2023), which emphasize the role of institutional readiness in enabling or hindering digital adoption. This finding suggests that without a supportive ecosystem (adequate connectivity, training, and policy), the transformative potential of AI in education may remain unrealized.

**c) Cognitive Dependency and Declining Critical Thinking**

Concerns regarding cognitive dependency have frequently been raised. Students admitted to reduced efforts in research and reflection. A Theology student observed, *“We’re graduating with empty heads”* (S6FT), while Lecturer 9 added, *“Students can’t defend their arguments without AI crutches.”* These findings reflect the risks of “deskilling” (Selwyn, 2019), where learners outsource critical thinking to machines. The misuse of AI by students is a significant concern among lecturers, especially in relation to assignments and assessments. Many felt that the students were submitting AI-generated content without critical engagement.

*"This cannot improve the quality of education. learners just goggle information since it already contains well laid up questions and answers. Learners just copy and present for marking. This results into a teacher marking AI information and not learners’ knowledge. Teachers fail to evaluate learning progress"* (Lecturer 8).

However, significant challenges have emerged, particularly regarding ethical concerns about academic integrity, reliability of AI-generated content, and fear of reduced critical thinking among students, echoing the findings of other studies (Chigwaro & Muchowe, 2024; Jie et al., 2025; Chan & Hu,2023). Many lecturers expressed scepticism about AI's pedagogical fit, especially in disciplines requiring deep analytical engagement, reflecting broader debates about responsible AI adoption.

In sum, both students and lecturers recognize that AI use in universities presents serious challenges. Key concerns include plagiarism, overreliance, poor infrastructure, lack of institutional support, and declining critical thinking. Without clear policies, training, and ethical guidelines, AI risks undermining academic integrity and deep learning.

**5. Conclusion**

This study provides a comparative analysis of how students and lecturers in Malawian higher education perceive and engage with generative AI tools. Using Nkhoma University as a case study, 15 lecturers and 18 students were involved. The findings show that while both groups recognize AI's potential to enhance teaching and learning, there are differences in their levels of awareness, usage, and attitudes. Students are more aware and engaged users, adopting AI tools out of academic necessity and peer influence. In contrast, lecturers tend to be more cautious, with adoption often limited by unfamiliarity and scepticism. Despite the evident benefits, there are concerns such as plagiarism, overreliance and declining critical thinking. These findings highlight the urgent need for universities to develop clear policies, offer structured digital training, and integrate AI into teaching and learning frameworks.

**6. Policy Implications**

To promote the effective and ethical integration of AI in higher education, universities must prioritize the development of clear guidelines on acceptable AI use and academic integrity. Structured training for both students and lecturers is necessary to ensure responsible and pedagogically sound application of these tools. Equally important is investment in digital infrastructure, including reliable Internet connectivity and access to devices. Assessment methods should also evolve to emphasize critical thinking and originality, thereby reducing the risk of AI misuse in academic tasks.

**7. Limitations**

This study was limited to one institution and relied on self-reported data, which may not capture actual usage behaviours or performance outcomes. Additionally, the perspectives of university administrators and policymakers were not included, which may have provided further insight into institutional readiness and planning for AI integration.

**8. Further Research**

Future research should explore the integration of AI in multiple institutions across Malawi and the broader sub-Saharan region to assess cross-institutional trends. Mixed-method approaches, including surveys and performance analytics, can offer deeper insights into the actual impact of AI on learning outcomes.

 **Ethical Approval and consent**

Ethical guidelines were adhered to throughout the research process to ensure the protection of the participants’ rights and welfare. Permission to conduct the study was obtained from the Nkhoma University before the study began. Informed consent was obtained from all participants who were provided with detailed information about the study's purpose, methods, and potential risks. Participants were made aware of their right to withdraw from the study at any time without penalties. To protect the participants' privacy, confidentiality and anonymity were maintained using pseudonyms, as shown in Tables 1 and 2.

**Disclaimer (Artificial intelligence)**

Authors hereby declare that NO generative AI technologies such as Large Language

Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

**Conflict of Interest Statement**

The authors declare that they have no conflicts of interest.

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**Authors’ Contributions**

Gift Mbewe conceptualized and designed the study, conducted the data analysis, and drafted the initial manuscript. Prince Chamba and Violet Duwa were responsible for data collection. The other authors contributed to reviewing the analysis and provided critical feedback on the manuscript. All authors read and approved the final version of the manuscript.

**References**

Abdelaal, N., & Al Sawi, I. (2024). Perceptions, challenges, and prospects: University professors’ use of artificial intelligence in education. *Australian Journal of Applied Linguistics, 7*(1), 1–24. https://doi.org/10.29140/ajal.v7n1.1309

Abonamah, A. A., Tariq, M. U., & Shilbayeh, S. (2021). On the commoditization of artificial intelligence. *Frontiers in Psychology, 12*, 696346. <https://doi.org/10.3389/fpsyg.2021.696346>

Ajalo, E., Mukunya, D., Nantale, R., Kayemba, F., Pangholi, K., Babuya, J., et al. (2025). Widespread use of ChatGPT and other artificial intelligence tools among medical students in Uganda: A cross-sectional study. *PLOS ONE, 20*(1), e0313776. <https://doi.org/10.1371/journal.pone.0313776>

Aladesusi, G. A., & Babalola, E. O. (2021). University students' awareness of, access to, and use of artificial intelligence for learning in Kwara State. *Journal of Educational Technology, 12*(3), 45-58.

Aldhaen, F. (2022). The use of artificial intelligence in higher education–Systematic review. *COVID-19 Challenges to University Information Technology Governance*, 269-285.

Alimi, A. E., Buraimoh, O. F. (2021). Digital literacy among Nigerian university students. *African Journal of Educational Research, 15*(2), 112-125.

Almarashdeh, I. (2021). Sharing instructors' and students' perspectives towards virtual classrooms: A case study. *Education and Information Technologies, 26*(1), 705-720. <https://doi.org/10.1007/s10639-020-10235-3>

Anani, G.E., Nyamekye, E. & Bafour-Koduah, D. (2025). Using artificial intelligence for academic writing in higher education: The perspectives of university students in Ghana. *Discover Education, 4*, 46. <https://doi.org/10.1007/s44217-025-00434-5>

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>

Chan, C. K. Y., & Hu, W. (2023). Students' voices on generative AI: Perceptions, benefits, and challenges in higher education. *International Journal of Educational Technology in Higher Education, 20*, 43. <https://doi.org/10.1186/s41239-023-00411-8>

Chingwaro, L., & Muchowe, R. M. (2024). Perceptions and attitudes of lecturers towards the emergence of artificial intelligence in Zimbabwe state universities. *Perception Motivation and Attitude Studies, 2*(1). <https://doi.org/10.5281/zenodo.10900808>

Chiu, T. K., & Chai, C. S. (2020). Sustainable curriculum planning for artificial intelligence education: A self-determination theory perspective. *Sustainability, 12*(14), 5568. <https://doi.org/10.3390/su12145568>

Cohen, B. (2023). ChatGPT and the impulse to cheat. *Top Hat Blog Higher Education Trends*. <https://tophat.com/blog/cheat-chatgpt/>

Crawford, J., Cowling, M., & Allen, K. A. (2023). Leadership is needed for ethical ChatGPT: Character, assessment, and learning using artificial intelligence (AI). *Journal of University Teaching & Learning Practice, 20*(3), 02.

Creswell, J. W., & Poth, C. N. (2017). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319-340. <https://doi.org/10.2307/249008>

Dien, J. (2023). Generative artificial intelligence as a plagiarism problem. *Biological Psychology, 108621*. <https://doi.org/10.1016/j.biopsycho.2023.108621>

El Shara', I. A., Saeed, A. S., & Arouri, Y. M. (2025). University students' awareness and attitudes toward the use of artificial intelligence applications (AIAs) in learning: A descriptive study. *International Journal of Information and Education Technology, 15*(3), 539-548. <https://doi.org/10.18178/ijiet.2025.15.3.2264>

Eryenyu, C., Owomugisha, G., Biira, S., & Waako, P. (2024). The challenges and opportunities of artificial intelligence (AI) use in higher education: The case of Busitema University. *Journal of Research Innovation and Implications in Education, 8*(4), 598-610.

Fasola, O. S. (2024). Awareness, perception, and use of artificial intelligence tools by LIS educators in Nigerian higher institutions. *Cybrarian Journal, 72*. <https://doi.org/10.70000/cj.2024.72.591>

Frieder, S., Pinchetti, L., Griffiths, R.R., Salvatori, T., Lukasiewicz, T., Petersen, P.C., Chevalier, A., & Berner, J. (2023). Mathematical capabilities of ChatGPT. *arXiv preprint* arXiv:2301.13867.

Gulyamov, S. (2023). The impact of artificial intelligence on higher education and the economics of information technology. *International Journal of Law and Policy, 2*(31).

Hodges, C., & Ocak, C. (2023). Integrating generative AI into higher education: Considerations. *EDUCAUSE Review*. <https://er.educause.edu/articles/2023/8/integrating-generative-ai-into-highereducation-considerations>

Ibrahim, A. B. (2024). Assessing the knowledge and perception of artificial intelligence for teaching and research among lecturers in the faculties of arts in Nigeria. *Journal of Global Research in Education and Social Science, 18*(2), 25-33. <https://doi.org/10.56557/JOGRESS/2024/v18i28671>

Jie, A. L.X., & Kamrozzaman, N. A. (2024). The Challenges of Higher Education Students Face in Using Artificial Intelligence (AI) against Their Learning Experiences. *Open Journal of Social Sciences*, 12, 362-387. doi: [10.4236/jss.2024.1210025](https://doi.org/10.4236/jss.2024.1210025).

Kanyemba, F., Mumba, F., & Banda, M. M. (2023). University faculty and students' awareness and use of artificial intelligence tools for teaching, learning and research in Zambia. *International Journal of Educational Development Using Information and Communication Technology (IJEDICT), 18*(2), 181-193.

King, M. R., & ChatGPT. (2023). A conversation on artificial intelligence, chatbots, and plagiarism in higher education. *Cellular and Molecular Bioengineering, 16*(1), 1-2.

Lodge, J. M., Thompson, K., & Corrin, L. (2023). Mapping out a research agenda for generative artificial intelligence in tertiary education. *Australasian Journal of Educational Technology, 39*(1), 1-8.

McGrath, C., Pargman, T.C., Juth, N., & Palmgren, P.J. (2023). University teachers' perceptions of responsibility and artificial intelligence in higher education: An experimental philosophical study. *Computers and Education: Artificial Intelligence, 4*, 100139.

Michel-Villarreal, R., Vilalta-Perdomo, E., Salinas-Navarro, D. E., Thierry-Aguilera, R., & Gerardou, F. S. (2023). Challenges and opportunities of generative AI for higher education as explained by ChatGPT. *Education Sciences, 13*, 856.

Mogali, S.R. (2023). Initial impressions of ChatGPT for anatomy education. *Anatomical Sciences Education, 16*(4), 1-4.

Mudenda, S., Syansowa, L., Mwaba, M., Kasanga, M., Mohamed, S., & Mufwambi, W. (2025). Exploring medical students' knowledge, attitudes, and practices on artificial intelligence: A study at the University of Zambia. *Creative Education, 16*, 356-367. <https://doi.org/10.4236/ce.2025.163022>

Murugesan, S., & Cherukuri, A.K. (2023). The rise of generative artificial intelligence and its impact on education: The promises and perils. *Computer, 56*(5), 116-121.

Mutanga, M.B., Jugoo, V., & Adefemi, K.O. (2024). Lecturers' perceptions on the integration of artificial intelligence tools into teaching practice. *Trends in Higher Education, 3*(4), 1121-1133. <https://doi.org/10.3390/higheredu3040066>

Mwakalinga, S. E. (2024). The use of artificial intelligence in teaching and learning: Opportunities and challenges Students vs lecturers' perception. *International Journal for Multidisciplinary Research, 6*(5), 1–7.

Obenza, Brandon and Salvahan, Alexa and Rios, Alexandra Nicole and Solo, Althea and Alburo, Rea Ashlee and Gabila, Rey Jose, University Students' Perception and Use of ChatGPT: Generative Artificial Intelligence (AI) in Higher Education (February 13, 2024). International Journal of Human Computing Studies, 5(12), 5-18, 2024, Available at SSRN: [https://ssrn.com/abstract=4724968](https://ssrn.com/abstract%3D4724968)

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.

Saaida, M.B.E. (2023). AI-driven transformations in higher education: Opportunities and challenges. *International Journal of Educational Research and Studies, 5*(1), 29-36.

Sedigheh, S., Shakib Kotamjani, S., Shirinova, S., & Mehrnaz, M., Fahimirad. (2023). Lecturers' perceptions of using artificial intelligence in tertiary education in Uzbekistan. *Proceedings of the International Conference on Future Networks and Distributed Systems* (pp. 1-9). <https://doi.org/10.1145/3644713.3644797>

Selwyn, N. (2019). *Should robots replace teachers? AI and the future of education*. Polity Press.

Shahsavar, Y., & Choudhury, A. (2023). User intentions to use ChatGPT for self-diagnosis and health-related purposes: Cross-sectional survey study. *JMIR Human Factors, 10*(1), e47564. <https://doi.org/10.2196/47564>

Shakib Kotamjani, S., Shirinova, S., & Fahimirad, M. (2023, December). Lecturers’ perceptions of using artificial intelligence in tertiary education in Uzbekistan. In *Proceedings of the 7th International Conference on Future Networks and Distributed Systems* (pp. 570-578).

Slimi, Z. (2023). The impact of artificial intelligence on higher education: An empirical study. *European Journal of Educational Studies, 10*(1). <https://doi.org/10.19044/ejes.v10no1a17>

Tripathi, C. R. (2024). Awareness of artificial intelligence (AI) among undergraduate students. *NPRC Journal of Multidisciplinary Research, 1*(7), 126-142. <https://doi.org/10.3126/nprcjmr.v1i7.72478>

UNESCO. (2023). *Technology in education: A tool on whose terms? Global education monitoring report*. https://www.unesco.org/gem-report/en/technology

Venkatesh, V. (2003). A unified theory of acceptance and use of technology: Toward an integrative perspective. *MIS Quarterly, 27*(3), 425-476.

Ventayen, R.J.M. (2023). OpenAI ChatGPT generated results: Similarity index of artificial intelligence-based contents. *SSRN* 4332664. [https://ssrn.com/abstract=4332664](https://ssrn.com/abstract%3D4332664)