# THE NEXUS BETWEEN STUDENTS' USE OF ARTIFICIAL INTELLIGENCE TOOLS AND STUDENTS' ACADEMIC PERFORMANCE IN HIGHER EDUCATION. A CASE STUDY OF FACULTY OF EDUCATION, UNIVERSITY OF NAIROBI

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## Abstract

*This study investigated the nexus between Artificial Intelligence and the on Students' Performance in Higher Education. A case Study of Faculty of Education, University of Nairobi, Kenya. The Research Hypothesis Was $H_0$1: There Is No Significant Relationship between Students' Use of Ai and Students' Academic Performance. $H_0$2: There Is No Significant Relationship between Ethical Implications in using Ai and Students' Academic Performance. The study was based on the Constructivist Learning Theory developed by Jean Piaget in 1936 and expanded by Lev Vygosky in 1960 who posits that learners actively construct knowledge rather than passively receive it. The study used descriptive Survey research design. The study targeted 1500 students, 300 lecturers and 5 Head of Departments and 5 ICT Administrators. A sample of 20% was used on both lecturers and students. Simple random sampling was used to select the students while census sampling was used to select ICT administrators and Lecturers. Google forms were used to collect data from the lecturers, ICT administrators while questionnaires were used on students.* The results for the first Hyothesis show that *Students' Use of Ai and Academic Performance in Higher Education institutions where (r=.689, p-value<0.05) were rejected at p<0.05 significance level of which the null hypothesis was rejected. The findings showed that Ethical Implications of Ai use has a Statistically Significant relationship on Students' Performance where Chi square (df=1, Pearson Chi square($\chi$2) =32.683 and p=0.012 at 0.05 level of significance. The study concluded that Ai influences Students' Academic Performance in Higher Education. Students' Use of Ai had a significant relationship on Students' academic performance and Ethical Implications of Ai use has a Statistical Significant relationship on Students' Academic Performance. It was then recommended that The University of Nairobi and other Kenyan universities should integrate digital and AI ethics into academic writing, research methodology, and ICT-related courses to sensitize students on responsible use of tools like ChatGPT, emphasizing academic integrity, citation practices, and avoiding overdependence. The Commission for University Education (CUE) and university senates should formulate clear policies and guidelines for the ethical use of generative AI tools in coursework, research, and assessments to address plagiarism, originality, authorship, and acceptable limits of AI assistance. The University of Nairobi should formulate and implement comprehensive guidelines on the responsible use of ChatGPT and other AI tools which clearly distinguish between acceptable academic support and academic dishonesty, with specific provisions on citation, originality, and ethical usage to preserve academic integrity.*

**Keywords: Students' Use of Artificial Intelligence Tools, Nexus, Students' Use of AI, Ethical Implications of AI Use, Students' Academic Performance**

## 1.0 Introduction

The UNESCO Quick Start Guide" (2023) provides an introduction to Ai and its applications in higher education and outlines how Ai can be utilized in teaching and learning processes and highlights the ethical challenges associated with its use especially on concerns about plagiarism and the authenticity of student work when using AI tools, the potential for AI to perpetuate existing biases or disseminate incorrect information, Issues related to the collection and use of personal data by AI systems and ensuring all students have equal access to AI technologies to prevent widening the digital divide. World Bank (2020) discusses the role of educational technology (EdTech), including AI, in transforming education systems and emphasizes the importance of ethical considerations in the deployment of these technologies in ensuring that AI technologies are implemented with clear educational objectives, designing AI tools that are accessible to all students, regardless of their background, using AI to support teachers, not replace them, and enhance their ability to facilitate learning and utilize data responsibly to inform educational strategies while safeguarding student privacy.

In USA, Zohaib & Loupias (2025) found that students widely use Ai for research assistance, writing assignments, and exam preparation and while students report high satisfaction levels, concerns about plagiarism and data privacy are prevalent emphasizing the need for clear guidelines and responsible usage policies to mitigate associated risks. In United Kingdom, The Guardian (2025) found that AI usage among students rose from 66% in 2024 to 92% in 2025 and students use AI to explain concepts, summarize articles, and suggest research ideas but concerns over academic misconduct and unreliable results persist, highlighting the need for universities to train staff on AI's capabilities and collaborate on best practices. In China Cao, Fan, & Yang, (2024) found that ethical issues include the weakening of teacher-student relationships, privacy concerns, and academic misconduct due to improper human-computer interaction.

In Nigeria, Izevbigie, Olajide, Olaniran & Akintayo, (2025) established that while AI has the potential to enhance teaching, learning, and institutional efficiency, challenges such as plagiarism, bias, and lack of technological infrastructure pose significant concerns through an online survey of 242 university students revealed that awareness of AI-related challenges is a significant predictor of ethical considerations. Ezeani, (2024) argues that while ChatGPT offers positive potentials, in a context where education is often devalued, it could become a tool for shortcuts, undermining creative research and diligent learning.nigerianjournalsonline.com. In South Africa, Mlambo (2024) found that Lecturers expressed concerns that ChatGPT might promote laziness among students and diminish critical thinking skills although they acknowledged its potential as a supportive tool for teaching and learning. Motala, Sayed & De Kock (2023) found that while ChatGPT can aid in language and writing development, there are concerns about its potential misuse leading to plagiarism and emphasizes the need for educators to develop strategies to integrate such technologies responsibly. In Ghana, Osei, & Boateng, (2024) found that ChatGPT is helpful to students in understanding difficult topics and improving academic performance although concerns were raised about over-dependence on technology, potential hindrance to critical thinking, and violations of academic policies. Asare & Mensah, (2024) discovered that ChatGPT enhanced personalized learning and student engagement although ethical dilemmas such as over-reliance on AI and potential displacement of traditional learning methods were noted.In Egypt, Ayman, Abou

El-Seoud, Nagaty, & Karam, (2023) found that while ChatGPT can enhance learning efficiency, concerns arise regarding academic integrity, over-reliance on AI, and the potential erosion of critical thinking skills. Hasanein & Sobaih, (2023) found that students appreciate ChatGPT's assistance in learning but express concerns about academic dishonesty and the need for clear guidelines on ethical usage.

In Tanzania, Matto, (2024) found that approximately 81.5% of students use ChatGPT for academic purposes and while it aids in learning, concerns about reduced academic integrity and critical thinking were noted. Mbwambo & Kaaya, (2024) discovered that while ChatGPT assists in writing tasks and material creation, issues related to academic integrity, privacy, and biases are prevalent. In Uganda, Nuwenyine & Washika (2023) discovered that students find ChatGPT helpful for managing academic tasks although educators express concerns about its impact on creativity and critical thinking. Mukunya et. al., (2025) found that while AI tools assist in generating teaching content and grading, concerns about plagiarism, incorrect responses, and privacy issues are prevalent. In Rwanda, Manirakiza, (2025) established that while ChatGPT aids in essay writing and grammar, over-reliance may hinder the development of critical thinking and originality.

In Kenya, Jepkemoi, Mulwa & Mwanda, (2024) found that ChatGPT enhances personalized learning by enabling self-paced study and providing immediate feedback. However, concerns arise regarding over-reliance on AI, potentially diminishing critical thinking skills. Chevose (2024) asserts that High adoption rates are noted, with undergraduates at 66.7% and postgraduates at 83.3% and ethical concerns include data privacy, misinformation, and the potential erosion of academic integrity. Achayo, (2023) argues that reliance on ChatGPT may hinder students' ability to analyze information deeply and develop problem-solving skills, essential for innovation and societal contribution. Ogalo & Mtenzi, (2024) established that AI tools have the potential to improve pedagogy and promote learning. However, significant ethical concerns include maintaining academic integrity, the risk of plagiarism, the stifling of critical thinking, and data privacy. Bonyo & Omar, (2023) assert that while AI offers personalized learning and administrative efficiency, challenges include data scarcity, ethical concerns, bias, and high computational costs. Citizen Digital (2023) found that Students find ChatGPT helpful for managing academic tasks although concerns arise about its impact on creativity and critical thinking. Murimi, (2024) found that while ChatGPT enhances efficiency and productivity, concerns include unethical appropriation, generation of inaccurate answers, and over-reliance. The absence of ethical guidelines leads to misuse, such as plagiarism and lack of transparency. Owidi & Lyanda, (2024) found the use of ChatGPT presents challenges related to academic integrity, including plagiarism and diminished critical thinking.

### 1.2 Statement of the Problem

The emergence of generative AI tools like ChatGPT has transformed higher education in Kenya, particularly at the University of Nairobi’s Faculty of Education, where students increasingly use such tools for research, writing, and academic support. While AI enhances access to resources, productivity, and personalized learning, it also raises ethical concerns around academic integrity, including plagiarism, unauthorized assistance, and reduced critical thinking. Faculty members struggle to detect AI-generated content, and in the absence of clear institutional guidelines, students face uncertainty regarding acceptable use, leading to inconsistent and potentially unethical

practices. Moreover, issues such as data privacy, misinformation, and fairness remain poorly understood, posing risks to educational quality. This study, therefore, aims to examine the influence of Artificial Intelligence Use on students' academic performance with a focus on ethical considerations to inform policy development within the Faculty

### 1.2 Purpose of the Study

This study investigated The Nexus between Students' Use and Students' Academic Performance in Higher Education. A case study of Faculty of Education, University of Nairobi, Kenya.

### 1.3 Research Objectives

The study was based on the following research objectives:

1. To examine the nexus between Students' Use of Ai on Students' Academic Performance in Higher Education Institutions. A case study of Faculty of Education, University of Nairobi, Kenya.
2. To establish nexus between Ethical Implications of Ai use and Students' Academic Performance in Higher Education Institutions. A Case Study of Faculty of Education, University of Nairobi, Kenya.

### 1.4 Research Hypothesis

The study was based on the following research hypothesis

1. $H_0$1: There is no significant relationship between Students' Use of AI and Students' Academic Performance in higher education institutions.
2. $H_0$2: There is no significant relationship between Ethical Implications of AI use on Students' Academic Performance in Higher Education Institutions.

## 2.0 Literature Review

### 2.1 Students' Use of Ai and Students' Academic Performance

Wanjiru & Otieno, (2024) explored the influence of ChatGPT on the academic performance of Kenyatta University students and found that ChatGPT provides timely academic support and enhances understanding, especially in areas like essay writing and research but concerns about over-dependence on the tool, especially in critical thinking, were highlighted. Lindiwe & Karanja, (2023) examined the role of ChatGPT in student engagement and its subsequent impact on academic performance and indicated that while students' engagement levels have increased, there is a risk of diminished academic integrity, leading to concerns about cheating and plagiarism. Kibet & Muli, (2024) investigated how ChatGPT contributes to enhancing critical thinking and academic writing among Strathmore University students and found that while students have improved in organizing and expressing their ideas, there are concerns regarding the originality of their work and potential over-reliance on AI-generated content.

Njeri & Nyambura, (2025) assessed the impact of ChatGPT on academic performance at Moi University and highlighted that students who use ChatGPT to supplement their learning materials

tend to perform better in written assessments although the study also raises ethical concerns about AI's role in academic integrity. Okoth & Ngugi, (2023) evaluated the role of ChatGPT in transforming learning and performance among postgraduate students in Kenyan universities and concluded that students who utilized ChatGPT for research and coursework demonstrated improved academic outcomes, particularly in complex areas like literature review and data analysis. Shikokoti and Mutegi (2024) conducted a study on the use of AI-driven tools like ChatGPT among university students in Kenya, emphasizing how students engage with AI for learning tasks such as content summarization, research assistance, and concept clarification and found that students who used ChatGPT to supplement their understanding of course content demonstrated improved performance, provided the tool was used for interactive and constructive engagement rather than content replication. Kimani & Muthoni, (2025) explored students' perceptions of ChatGPT and its impact on their academic performance at Egerton University and found that students using ChatGPT for assignments and research had higher academic performance. However, some students felt it hindered their ability to develop critical thinking skills.

### 2.2 Ethical Implications of Ai use and Students' Academic Performance

Kariuki & Wambui (2024) examined the ethical implications of using ChatGPT at the University of Nairobi and found that while ChatGPT enhances students' academic performance, it also raises concerns about academic dishonesty, including plagiarism and the erosion of critical thinking. Njoroge & Ndukai, (2023) assessed the ethical concerns arising from ChatGPT's use at Kenyatta University and found that while ChatGPT supports academic achievement, it also encourages academic shortcuts and undermines students' ability to engage with the material independently and ethical challenges such as misuse for assignments and exams were noted. Kamau & Muturi, (2025) explored the ethical impact of ChatGPT on students' academic performance at Moi University and indicated that while ChatGPT aids students in completing assignments quickly, its widespread use is leading to ethical dilemmas, particularly regarding plagiarism and the risk of diminishing students' original work andcalls for an institutional framework to balance AI use with ethical standards.

Kibet & Mwangi, (2024) analyzed the influence of ChatGPT on student performance and academic ethics at Strathmore University and highlighted how AI-based tools like ChatGPT are reshaping the way students approach their assignments as ethical challenges identified include the temptation to over-rely on AI-generated content, reducing the development of original thought and creativity. Wambua & Njiru, (2023) investigated the ethical implications of ChatGPT use in academic settings at Egerton University and identified that while the tool can enhance performance, it also raises concerns about the integrity of students' work especially reliance on AI for cheating and plagiarism are discussed, with a call for universities to develop robust academic policies addressing AI use. Mutua & Mugo, (2025) explored the ethical and academic challenges posed by ChatGPT's influence on student performance at the University of Nairobi and found a growing concern regarding the tool's potential to promote laziness, discourage independent thinking, and lead to ethical breaches.

### 2.3 Theoretical Framework

The study was based on the Constructivist Learning Theory developed by Jean Piaget in 1936 and expanded by Lev Vygosky in 1960 who posits that learners actively construct knowledge rather than passively receive it. It emphasizes the importance of social interaction, prior knowledge, critical thinking, and problem-solving in learning. The theory asserts that learning is most effective when learners are engaged in authentic tasks that stimulate exploration and reflection. Piaget focused on cognitive development and how learners build knowledge structures through interaction with their environment, while Vygotsky emphasized the role of culture and social interactions, including the use of tools like language and technology in facilitating learning. This theory is particularly relevant to understanding the influence of ChatGPT on students' performance in higher education, as ChatGPT can be viewed as a technological tool that aids in the construction of knowledge. Students interact with the AI to generate ideas, clarify concepts, and solve problems core elements of constructivist learning. The extent to which students use Ai to actively engage with learning content affects the depth and quality of their academic performance. Constructivism emphasizes learner responsibility and reflection, and Ethical use of Ai aligns with this principle as students must be guided to critically assess when and how to use AI ethically, ensuring it supports learning without promoting dependency or academic dishonesty. Educators are also challenged to integrate AI in ways that encourage ethical reasoning and independent thought.

### 3.0 Methodology

Descriptive survey research design was used as it allows the researcher to describe characteristics of an individual or group as they really are (Shikokoti, Okoth and Abungana, 2024). Descriptive surveys are only concerned with conditions or relationships that exist, opinions that are held and processes that are ongoing. The study targeted 1500 students, 300 lecturers, 1 Dean and 4 Chairs of Department. Purposive sampling was used to select the Deans and Chairs of Departments. To select the lecturers, a 20% sample was used which was deemed to be a big sample (Mugenda & Mugenda, 2019) and large enough to identify a significant effect (Kothari, 2019) According to Cohen, Manions & Morrison (2018), simple random sampling technique allows a researcher to get a representative sample without biasness. Therefore, all lecturers had equal chances to participate. Simple random sampling was used and google forms were used to collect data from the lecturers and students were used because of their ability to contend alot of information from respondents over a short period of time. They are also free from the bias of the researcher. They contained close-ended questions. Orodho (2009) further explains that questionnaires capture information on people's attitudes, opinions and habits. The questionnaires had two sections; Section A captured the background information which contained the gender Section B contained Influence of ChatGPT on Students' Performance in Higher Education. A case study of Faculty of Education, University of Nairobi, Kenya which on a likert scale ranging from Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree seeking information on the quality of education in higher education. To enhance the content validity of the instruments a pre-test of the instruments was carried out. Piloting aimed at testing the clarity of test items, suitability of language used and the feasibility of the study. The reliability of the instruments was determined using test-retest technique. Pearson product moment correlation was used to compute the reliability coefficient (Shikokoti, Okoth and Abungana, 2024). Descriptive statistics were used in the analyses of the data collected. For inferential statistics,

Pearson product moment correlation was used for Hypothesis One and Chi-square test was used to test objective two on the relationship between the hypothesis. The hypothesis test was at 5% level of significance The null hypothesis was rejected and accepted if the p-value is greater than 0.05 ($P \geq 0.05$) or 0.01 ($P \geq 0.01$). It was rejected if the p-value is less than or equal to 0.05 ($P \leq 0.05$) and 1% level of significance if the p-value was less than or equal to 0.01($P \leq 0.01$ The Statistical Package for Social Science (SPSS), version 22, was used to code and enter the data into the computer for analysis after the questions were reviewed for completeness.

**4.0 Results**

**Table 1: Students' responses on whether AI has helped them understand complex academic concepts more effectively.**

| Statement | Frequency | Percentage | Mean | Std |
|---|---|---|---|---|
| Agree | 20 | 6.7 | 4.21 | 0.844 |
| Strongly agree | 280 | 93.3 | | |
| Total | 300 | 100.0 | | |

Table 1 shows majority 280(93.3%) of the students Strongly Agreed that using Ai has helped me understand complex academic concepts more effectively while 20(6.7%) Strongly Agreed with a mean of (Mean=4.21, Std=0.844). This implies that Ai has made students understand complex academic concepts more effectively.

Table 2 shows Lecturers response on Students' use of AI has enhanced their ability to understand and apply academic concepts.

**Table 2: Lecturers response on whether Students' use of AI enhanced their ability to understand and apply academic concepts.**

| Statement | Frequency | Percent | Mean | Std |
|---|---|---|---|---|
| Strongly Disagree | 28 | 80.0 | 2.38 | 0.744 |
| Disagree | 3 | 8.6 | | |
| Neutral | 4 | 11.4 | | |
| Total | 35 | 100.0 | | |

Table 2 shows majority 28(80.0%) of the Lecturers Strongly Disagreed that Students' use of Ai has enhanced their ability to understand and apply academic concepts while 11.4% were Neutral with a mean of (Mean=2.38, Std=0.744). This implies that Students' use of ChatGPT has not enhanced their ability to understand and apply academic concepts. The findings are in line with Jepkemoi and Mulwa (2024) who found that Ai facilitated personalized learning among undergraduate Religious Education teacher trainees and enabled self-paced learning and reflection, enhancing comprehension and retention of complex concepts.

Table 3 shows Lecturers response on I have observed an improvement in students' academic performance due to the use of Ai

**Table 3: Lecturers response on whether students' academic performance improved due to the use of AI**

| Statement | Frequency | Percentage | Mean | Std |
|---|---|---|---|---|
| Disagree | 5 | 14.3 | 3.50 | 0.756 |
| Neutral | 8 | 22.9 | | |
| Agree | 22 | 62.9 | | |
| Total | 35 | 100.0 | | |

Table 3 shows majority 22(62.9%) of the lecturers Agreed that students' academic performance improved due to the use of Ai while 8(22.9%) were Neutral with a mean of (Mean=3.50, Std=0.756). This implies that Ai has improved students' academic performance.

Table 4 shows Students' response on AI has improved the quality of my assignments and essays.

**Table 4: Students response on AI has improved the quality of my assignments and essays.**

| Statement | Frequency | Percentage | Mean | Std |
|---|---|---|---|---|
| Neutral | 5 | 1.7 | 4.41 | 1.299 |
| Agree | 28 | 9.3 | | |
| Strongly agree | 267 | 89.0 | | |
| Total | 300 | 100.0 | | |

Table 3 shows majority 267(89.0%) Strongly Agreed that Ai has improved the quality of my assignments and essay while 28(9.3% Agreed with a mean of (Mean=4.41, Std=1.299). This implies that AI has improved the quality of student's assignments and essay. The findings concur with Chivose (2023) who revealed that students perceived ChatGPT as beneficial in enhancing the quality of their academic work and the AI tool assisted in information retrieval, research facilitation, and problem-solving, leading to improved assignment quality

Table 5 shows Students responses on I feel that using Ai saves me time on academic tasks such as assignments and research.

**Table 5: Students' responses on I feel that using AI saves me time on academic tasks such as assignments and research.**

| Statement | Frequency | Percentage | Mean | Std |
|---|---|---|---|---|
| Strongly agree | 300 | 100.0 | 4.00 | 1.00 |
| Total | 300 | 100.0 | | |

Table 5 shows All 300(100.0% of the students Strongly Agreed that I feel that using Ai saves me time on academic tasks such as assignments and research with a Mean of (Mean=1.00, Std= 1.00). This implies that using Ai saves students time on academic tasks such as assignments and research. Murimi (2024) concurred that ChatGPT to be timesaving and AI tool's efficiency boosted productivity, allowing users to complete tasks at a faster rate due to immediate support

Table 6 shows Lecturers responses on the use of Ai has led to a higher quality assignment

**Table 6: Lecturers responses on the use of AI has led to a higher quality assignment**

| Statement | Frequency | Percentage | Mean | Std |
|---|---|---|---|---|
| Disagree | 12 | 34.3 | 3.25 | 1.035 |
| Neutral | 8 | 22.9 | | |
| Agree | 20 | 57.1 | | |
| Total | 35 | 100.0 | | |

Table 6 shows majority 20(57.5%) of the Lecturers Agreed that the use of AI has led to a higher quality assignment while 12(34.3%) Disagreed. This implies that the use of Ai has led to a higher quality assignments submitted by students.

Table 7 shows Students' response on the use of AI has positively impacted my exam preparation.

**Table 7: Students' response on the use of AI has positively impacted my exam preparation.**

| Statement | Frequency | Percentage | Mean | Std |
|---|---|---|---|---|
| Strongly disagree | 25 | 8.3 | 3.23 | 1.228 |
| Disagree | 150 | 50.0 | | |
| Neutral | 15 | 5.0 | | |
| Agree | 10 | 3.3 | | |
| Strongly agree | 100 | 33.3 | | |
| Total | 300 | 100.0 | | |

Table 7 shows Majority 175(58.3%) of the students (150(50.0%) Disagreed and Strongly 25(8.3%) Disagreed) that the use of AI has positively impacted my exam preparation while 100(33.3%) Strongly Agreed with a mean (Mean=3.23, Std=1.228). This implies that the use of AI has not positively impacted on exam preparation.

Table 8 shows Lecturers responses on AI helps students to better prepare for exams by providing additional resources and study material.

**Table 8: Lecturers' response on AI helps students to better prepare for exams by providing additional resources and study material.**

| Statement | Frequency | Percent | Mean | Std |
|---|---|---|---|---|
| 2.9 | 1 | 2.9 | 4.38 | 0.744 |
| Neutral | 2 | 5.7 | | |
| Agree | 2 | 5.7 | | |
| Strongly Agree | 30 | 85.7 | | |
| Total | 35 | 100.0 | | |

Table 8 shows majority 32(91.4%) of the Lecturers (30(85.7%) Strongly Agreed and 2(5,7%) Agreed) that AI helps students to better prepare for exams by providing additional resources and study material while 2(5.7%) were Neutral with a mean of (Mean=4.38, Std=0.744). This implies that Ai helps students to better prepare for exams by providing additional resources and study material.

Table 9 shows students' response on whether theyrely on AI for completing academic assignments and projects.

**Table 9: Students' response on whether they rely on AI for completing academic assignments and projects.**

| Statement | Frequency | Percentage | Mean | Std |
|---|---|---|---|---|
| Disagree | 20 | 6.7 | 3.02 | 1.279 |
| Neutral | 10 | 3.3 | | |
| Agree | 40 | 13.3 | | |
| Strongly agree | 230 | 76.7 | | |
| Total | 300 | 100.0 | | |

Table 9 shows majority 270(90.0%) of students (230(76.7%) Strongly Agreed and 40(13.3%) Agreed that they rely on AI for completing academic assignments and projects while 20(6.7%) Disagreed) with a mean of (Mean=3.02, Std=1.279). This implies that students rely on ChatGPT for completing academic assignments and projects. The findings concur with Citizen Digital (2023) that many Kenyan university students have adopted AI for academic tasks and AI tool provided quick and comprehensive information, making it a go-to resource for assignments and projects.

Table 10 shows Lecturers responses on whether students who use AI are more efficient in completing academic tasks.

**Table 10: Lecturers responses on whether students who use AI are more efficient in completing academic tasks.**

| Statement | Frequency | Percent | Mean | Std |
|---|---|---|---|---|
| Neutral | 3 | 8.6 | 4.00 | 0.926 |
| Agree | 2 | 5.7 | | |
| Strongly Agree | 30 | 85.7 | | |
| Total | 35 | 100.0 | | |

Table 10 shows majority 32(91.4%) of Lecturers (30(85.7%)Strongly Agreed and 2(5.7%) Agreed) they have noticed that students who use AI are more efficient in completing academic tasks while 3(8.6%) were Neutral with a mean of (Mean=4.00, Std=0.926). This implies that students who use AI are more efficient in completing academic tasks.

*$H_0$1: There is no significant relationship between Students' Use of AI and Academic Performance in Higher Education institutions, Kenya*

In order to test the relationship between Students' Use of AI and Academic Performance in Higher Education institutions, Kenya. Pearson product moment correlation was used to test the hypothesis. The null hypothesis states that there is no significant relationship between Students' Use of AI and Academic Performance in Higher Education institutions, Kenya

Table 11 shows correlation matrix between Students' Use of AI and Students' Academic Performance in Higher Education institutions

**Table 11: Correlation matrix between Students' Use of AI and Students' Academic Performance in Higher Education institutions,**

| | | Students' Use of AI | Students' Academic Performance |
|---|---|---|---|
| Students' Use of Ai | Pearson Correlation | 1 | .689* |
| | Sig. (2-tailed) | | .000 |
| | N | 300 | 300 |
| Students' Academic Performance | Pearson Correlation | .689* | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 300 | 300 |

**. Correlation is significant at the 0.05 level (1-tailed).

The correlation result in Table 23 shows a positive and strong significant coefficient between Students' Use of AI and Students' Academic Performance in Higher Education institutions where (r=.689, p-value<0.05) were rejected at p<0.05 significance level of which the null hypothesis was rejected. Hence there is a strong significant relationship between Students' Use of AI and Students' Academic Performance in Higher Education institutions. The findings concur with Jepkemoi, Mulwa & Mwanda, (2024) who investigated how Ai features influence adaptive learning experiences among undergraduate Religious Education teacher trainees and indicated that ChatGPT facilitated personalized learning by providing summarized information, which enhanced emotional, cognitive, and behavioral engagement and concluded that AI educational affordances positively impacted students' adaptive learning experience

The Dean, Faculty of Education was interviewed on Students' Use of AI and Students' Academic Performance and his response was as follows:

> *"Ai has reshaped how students access information and complete assignments and while it improves efficiency, there's growing concern that students may be relying on it excessively, leading to shallow understanding as cases of well-written but poorly defended coursework during oral exams have been reported suggesting AI-generated inputs therefore we must balance its use with strengthening students' research and critical thinking skills." (Dean Faculty of Education, 2025)*

From the response of the Dean, Faculty of Education we can imply that there is need to restructure and redefine educational practices to ensure that while AI tools like ChatGPT are embraced, they should not replace students' active engagement in research, analysis, and critical thinking.

The 5 Chairs of Departments were interviewed on Students' Use of AI and Students' Academic Performance. Their responses were as follows:

> *"Some students use ChatGPT to explore concepts faster, which supports learning although without proper guidance, it becomes a shortcut and increased uniformity in essays, sometimes too polished for their academic level have been noticed and although the tool boosts performance, it may not reflect actual student ability unless monitored." (Chair of Department, 2025)*

*"The adoption of Ai has helped students struggling with academic writing and bridges gaps in language and structure but has also introduced ethical concerns of whether we are grading students or AI-generated work? therefore we need to rethink how we assess learning outcomes to ensure fairness." (Chair of Department, 2025)*

*"Ai can stimulate critical thinking if integrated into teaching for example, comparing AI responses with class discussions helps learners identify gaps and biases. However, without training, many students just copy-paste academic performance may go up, but cognitive development might suffer." (Chair of Department, 2025)*

*"We're at a crossroads since Ai supports flipped classrooms and independent study, which is great but we've also had cases where students submit assignments with AI-generated citations that don't exist and although there's a learning curve, we must guide students on responsible use." (Chair of Department, 2025)*

*"Performance metrics have improved in some cases, especially among students who traditionally struggled but deeper analysis shows many can't articulate their arguments when asked verbally showing that performance may be improving on paper, but not in practice." (Chair of Department, 2025)*

With the responses obtained from the Chairs of Department we can imply that there is urgent need for academic institutions to rethink assessment strategies, integrate digital literacy and responsible AI usage into the curriculum, and reinforce critical thinking through guided instruction to ensure AI becomes a tool for learning rather than a shortcut to success

**4.2 Ethical Implications of AI use and Students' Academic Performance**

Table 12 shows Students' responses on Using AI without proper citation constitutes academic dishonesty.

**Table 12: Students' responses on Using AI without proper citation constitutes academic dishonesty.**

| Statement | Frequency | Percent | Mean | Std |
|---|---|---|---|---|
| Strongly disagree | 27 | 9.0 | 3.97 | 1.127 |
| Disagree | 9 | 3.0 | | |
| Neutral | 6 | 2.0 | | |
| Agree | 63 | 21.0 | | |
| Strongly agree | 195 | 65.0 | | |
| Total | 300 | 100.0 | | |

Table 12 shows majority 258(86.0%) of the students (195(65.0%)Strongly Agreed and 63(21.0%) Agreed that Using Ai without proper citation constitutes academic dishonesty while 27(9.0%) Strongly Disagreed and with a mean of (Mean=3.97, Std=1.127). this implies that Using AI without proper citation constitutes to academic dishonesty.

Table 13 shows Lecturers responses on whether students use AI without proper citation in their academic work

**Table 13: Lecturers responses on whether students use Ai without proper citation in their academic work.**

| Statement | Frequency | Percent | Mean | Std |
|---|---|---|---|---|
| Agree | 7 | 20.0 | 4.13 | 1.246 |
| Strongly Agree | 28 | 80.0 | | |
| Total | 35 | 100.0 | | |

Table 13 shows majority 28(80.0%) of the Lecturers Strongly Agreed on whether students use AI without proper citation in their academic work while 7(20.0%) Agree with a mean of (Mean=4.13, Std=1.246). This implies that most students use AI without proper citation in their academic work. The findings concur with Mwangi and Kiarie (2023) who reported increased cases of AI-generated assignments with no attribution and lecturers expressed concern over their ability to detect such submissions without sophisticated plagiarism tools.

Table 14 shows Students response on whether using AI encourages students to take shortcuts in their academic work.

**Table 14: Students response on whether using AI encourages students to take shortcuts in their academic work.**

| Statement | Frequency | Percent | Mean | Std |
|---|---|---|---|---|
| Neutral | 20 | 6.7 | 4.67 | 1.345 |
| Agree | 30 | 10.0 | | |
| Strongly agree | 250 | 83.3 | | |
| Total | 300 | 100.0 | | |

Table 14 shows majority 250(83.3%) of the students Agree that they believe that using AI encourages students to take shortcuts in their academic work while 30(10.0%) Agreed with a mean of (Mean=4.67, Std=1.345). This implies that using AI encourages students to take shortcuts in their academic work. Wanjiru and Njoroge (2024) concur that over 60% of students admitted using Ai to "reduce workload," highlighting a tendency to use it as a shortcut rather than a supplementary tool

Table 15 shows Lecturers' response on the use of AI has led to increased academic dishonesty, such as plagiarism, among students.

**Table 15: Lecturers' response on the use of AI has led to increased academic dishonesty, such as plagiarism, among students.**

| Statement | Frequency | Percent | Mean | Std |
|---|---|---|---|---|
| Agree | 2 | 5.7 | 4.38 | 0.518 |
| Strongly Agree | 33 | 94.3 | | |
| Total | 35 | 100.0 | | |

Table 15 shows majority 62.5% of the Lecturers Agreed that the use of AI has led to increased academic dishonesty, such as plagiarism, among students while 37.5% Strongly Agreed with a mean of (Mean=4.38, Std=0.518). This implies the use of AI has led to increased academic dishonesty, such as plagiarism, among students. Okoth and Njuguna (2023) Concur that 74% of respondents considered unacknowledged use of tools like ChatGPT as a form of plagiarism and academic dishonesty

Table 16 shows Students' response on the use of AI makes it difficult for students to develop their own original ideas and arguments.

**Table 16: Students' response on the use of AI makes it difficult for students to develop their own original ideas and arguments.**

| Statement | Frequency | Percent | Mean | Std |
|---|---|---|---|---|
| Strongly Disagree | 12 | 4.0 | 3.48 | 1.491 |
| Disagree | 34 | 11.3 | | |
| Neutral | 17 | 5.7 | | |
| Agree | 10 | 3.3 | | |
| Strongly agree | 227 | 75.7 | | |
| Total | 300 | 100.0 | | |

Table 16 shows majority 227(75.7%) of the students Strongly Agreed on the use of AI makes it difficult for students to develop their own original ideas and arguments while 34(11.3%) Disagreed and 17(5.7%) were Neutral respectively with a mean of (Mean=3.48, Std=1.491). This implies that the use of AI makes it difficult for students to develop their own original ideas and arguments.

Table 17 shows Lecturers' response on Students' use of AI negatively affects their ability to develop original thought and independent analysis.

**Table 17: Lecturers' response on Students' use of AI negatively affects their ability to develop original thought and independent analysis.**

| Statement | Frequency | Percent | Mean | Std |
|---|---|---|---|---|
| Agree | 2 | 5.7 | 4.88 | 0.835 |
| Strongly Agree | 33 | 94.3 | | |
| Total | 35 | 100.0 | | |

Table 17 shows majority 33(94.3%) of the Lecturers Strongly Agreed that students' use of AI negatively affects their ability to develop original thought and independent analysis while 2(5.7%) Agreed with a mean of (Mean=4.88, Std=0.835). This implies students' use of AI negatively affects their ability to develop original thought and independent analysis. The findings are in line with Mutua, Kamau & Wekesa, (2023) who observed that continued reliance on Ai by students reduced critical thinking and that students found it easier to "paraphrase" Ai answers than generate ideas from scratch.

Table 18 shows Students response on whether theyunderstand the ethical implications of using Ai in my academic work.

**Table 18: Students response on whether they understand the ethical implications of using Ai in my academic work.**

| Statement | Frequency | Percent | Mean | Std |
|---|---|---|---|---|
| Strongly Disagree | 75 | 25.0 | 3.94 | 0.981 |
| Disagree | 60 | 20.0 | | |
| Neutral | 5 | 1.7 | | |
| Agree | 156 | 52.0 | | |
| Strongly agree | 4 | 1.3 | | |
| Total | 300 | 100.0 | | |

Table 18 shows majority 156(52.0%) of the students Agreed that they understand the ethical implications of using Ai in their academic work while 75(25.0%) Strongly Disagreed and 60(20.0%) Disagreed respectively with a mean of (Mean=3.94, Std=0.981). This implies that students do understand the ethical implications of using Ai in their academic work.

Table 19 shows Lecturers response on whether students are unaware of the ethical implications of using Ai in their academic work.

**Table 19: Lecturers' response on whether students are unaware of the ethical implications of using Ai in their academic work.**

| Statement | Frequency | Percent | Mean | Std |
|---|---|---|---|---|
| Strongly Disagree | 34 | 97.1 | 1.38 | 0.518 |
| Disagree | 1 | 3.9 | | |
| Total | 35 | 100.0 | | |

Table 19 shows majority 34(97.1%) of the Lecturers Strongly Disagreed that students are unaware of the ethical implications of using AI in their academic work while 1(3.9%) Disagreed with a mean of (Mean=1.38, Std=0.518). This implies are aware of the ethical implications of using AI in their academic work. The findings are in agreement with Otieno and Chepkorir (2023) who found that while 68% of students were aware that AI could be misused, only 37% could correctly identify situations where its use would be unethical. **Table 20 shows Students response on whether there should be institutional policies and guidelines to regulate the ethical use of AI tools like ChatGPT in academic tasks**

**Table 20: Students response on whether there should be institutional policies and guidelines to regulate the ethical use of AI tools like ChatGPT in academic tasks**

| Statement | Frequency | Percent | Mean | Std |
|---|---|---|---|---|
| Neutral | 30 | 10.0 | 4.98 | 1.345 |
| Strongly agree | 270 | 90.0 | | |
| Total | 300 | 100.0 | | |

Table 20 shows majority 270(90.0%) of the students Strongly Agree that there should be institutional policies and guidelines to regulate the ethical use of AI tools like ChatGPT in academic tasks while 30(10.0%) Agreed with a mean of (Mean=4.98, Std=1.345). This implies that there should be institutional policies and guidelines to regulate the ethical use of AI tools like ChatGPT in academic tasks.

Table 21 shows Lecturers' response on there should be institutional policies and guidelines to regulate the ethical use of AI tools like ChatGPT in academic tasks.

**Table 21: Lecturers' response on there should be institutional policies and guidelines to regulate the ethical use of AI tools like ChatGPT in academic tasks.**

| Statement | Frequency | Percent | Mean | Std |
|---|---|---|---|---|
| Agree | 2 | 5.7 | 4.42 | 0.518 |
| Strongly Agree | 33 | 94.3 | | |
| Total | 35 | 100.0 | | |

Table 21 shows majority 33(94.3%) of the Lecturers Strongly Agreed that there should be institutional policies and guidelines to regulate the ethical use of AI tools like ChatGPT in academic tasks while 2(5.7%) Agreed with a mean of (Mean=4.43, Std=0.518). This implies that there should be institutional policies and guidelines to regulate the ethical use of AI tools like ChatGPT in academic tasks. The findings concur with a policy audit by The Centre for Teaching Excellence, Strathmore University (2024) which recommended the creation of formal guidelines on AI use and noted a lack of standardized policy in most Kenyan institutions, causing uncertainty among both students and faculty

*$H0_2$: There is no significant relationship between Ethical Implications of AI use and Academic Performance in Higher Education institutions, Kenya*

In order to test whether there was a relationship between Ethical Implications of AI use and Students' Academic Performance in higher education institutions**.** Chi square test($\chi^2$) was used to test the hypothesis. The null hypothesis states that there is no significant relationship between Ethical Implications of AI use and Academic Performance in Higher Education Institutions, Kenya.

Table 22 shows chi square test between Ethical Implications of AI use and Students' Academic Performance in Higher Education Institutions

**Table 22: Chi square test between Ethical Implications of AI use and Students' Academic Performance in Higher Education Institutions**

| | Value | Df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 32.683[a] | 12 | .012 |
| Likelihood Ratio | 33.954 | 12 | .006 |
| Linear-by-Linear Association | 12.648 | 1 | .000 |
| N of Valid Cases | 300 | | |

a. 24 cells (68.6%) have expected count less than 5. The minimum expected count is .02.

The Chi square table 22 confirms that there is a relationship between Ethical Implications of Ai use and Students' Academic Performance in Higher Education Institutions, Kenya. The null hypothesis ($H0_2$) was tested using Chi square (df=12, Pearson Chi square($\chi^2$)=32.683 and p=0.012 at 0.05 level of significance. The null hypothesis($H0_2$) there is no significant relationship between Ethical Implications of Ai use and Students' Academic Performance in Higher Education Institutions, Kenya was therefore rejected hence there is a strong significant relationship between the Ethical Implications of Ai use and Students' Academic Performance in Higher Education Institutions. This means that Ethical Implications has a great influence on the Academic Performance in Higher Education Institutions. The findings are in line with AfricLaw. (2023) who discusses the ethical challenges associated with the use of AI in academia, including issues of academic dishonesty, data privacy, and the need for transparent AI systems and emphasizes the importance of developing ethical guidelines and policies to govern the use of AI tools like ChatGPT in educational settings.

The Dean, Faculty of Education was interviewed on Ethical Implications of Ai use and Students' Academic Performance and his response was as follows:

> *"While Ai presents new learning opportunities, it poses serious ethical challenges since a thin line between academic support and academic dishonesty has been experienced especially when students submit AI-generated assignments without proper citation, which raises integrity concerns therefore there's a need to update our assessment guidelines to reflect responsible use of AI tools." (Dean Faculty of Education, 2025)*

From the response of the Dean, Faculty of Education we can imply that while Ai holds educational potential, its ethical misuse threatens the credibility and quality of academic achievement and higher education institutions like the University of Nairobi must evolve, aligning policies, pedagogy, and assessment practices to promote ethical and responsible AI use

The 5 Chairs of Departments were interviewed on Ethical Implications of Ai use and Students' Academic Performance. Their responses were as follows:

> *"The biggest issue is that some students are bypassing the learning process and rely on Ai to complete essays and research tasks which affects their ability to think critically and engage with content deeply therefore we must incooperate AI ethics in our teaching. (Chair of Department, 2025)*
>
> *"Ai like ChatGPT can support academic planning and study management, but when misused, it undermines the purpose of education therefore students must be guided on ethical usage using it to enhance learning, not to replace their intellectual efforts." (Chair of Department, 2025)*
>
> *"I've noticed that students using Ai without guidance tend to disconnect from classroom discourse and ethically, we are concerned with the overdependence on AI for answers rather than developing original ideas since it's affecting their performance, especially in conceptual analysis." (Chair of Department, 2025)*
>
> *"We cannot ignore Ai although its use without a proper academic framework can promote plagiarism and we have had to remind students to acknowledge AI-generated input and are now considering including AI literacy and ethics in our curriculum." (Chair of Department, 2025)*
>
> *"Interestingly, students who use Ai for brainstorming and self-testing seem to perform better although the issue isn't the tool itself but the intent and the ethical concern lies in misuse, particularly when students submit unedited outputs or bypass classroom discussions." (Chair of Department, 2025)*

With the responses obtained from the Chairs of Department we can imply that ethical use of Ai is a double-edged sword with the potential to enhance or hinder academic performance depending on how it is used therefore, the Faculty of Education and similar institutions must adopt a proactive approach by embedding AI ethics in pedagogy, policy, and academic support system

## 4.0 CONCLUSION/RECOMMENDATIONS

### 4.1 CONCLUSION

The study established that Ai use significantly influences students' academic performance at the Faculty of Education, University of Nairobi. On one hand, the tool has enhanced students' access to information, improved writing skills, and supported concept exploration, especially for those facing academic challenges. On the other hand, ethical concerns have emerged, particularly regarding plagiarism, overreliance on AI, and questions about the authenticity of student work. The findings underscore the need for balanced integration of Ai into academic environments promoting its benefits while safeguarding academic integrity through clear guidelines, innovative assessment methods, and digital literacy training. As AI tools become more embedded in learning, higher

education institutions must adapt to ensure they enhance rather than hinder genuine academic growth

## RECOMMENDATION

- The University of Nairobi should formulate and implement comprehensive guidelines on the responsible use of Ai and other AI tools which clearly distinguish between acceptable academic support and academic dishonesty, with specific provisions on citation, originality, and ethical usage to preserve academic integrity.
- To ensure students use Ai constructively, there is a need to integrate AI and digital literacy modules into the Faculty of Education curriculum with focus in ethical considerations, critical evaluation of AI-generated content, and skills for combining AI input with personal insight and reasoning.
- Lecturers and Departmental heads should be trained on detecting AI-generated work and on methods to engage students in reflective learning.
- The University should invest in AI-detection software and promote the use of learning management systems that help track students' progress and flag inconsistencies in academic submissions to help identify students who might be misusing Ai and provide timely intervention.
- The Commission for University Education (CUE) and university senates should formulate clear policies and guidelines for the ethical use of generative AI tools in coursework, research, and assessments to address plagiarism, originality, authorship, and acceptable limits of AI assistance

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