# DEALING WITH ACADEMIC INTEGRITY VIOLATION WHILE USING ARTIFICIAL INTELLIGENCE IN RESEARCH

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***Abstract***

*The paper focused on dealing with academic integrity violation while using artificial intelligence in research. Three research questions and corresponding hypotheses guided the study which adopted a descriptive survey design. The population of the study was 7, 791 (5, 117 postgraduate students and 2, 674) lecturers from the three public Universities in Rivers State (University of Port Harcourt, Rivers State University and Ignatius Ajuru University of Education). The sample of the study was 380 (250 students and 130 lecturers) which was determined using the Taro Yamane formula for sample size determination while the respondents were sampled using stratified sampling technique. The instrument used for data gathering was a 15-item questionnaire tagged "Dealing with Academic Integrity while Using Artificial Intelligence in Research Questionnaire" (DAIAIRQ). The questionnaire was responded to on a four point modified Likert scale of Strongly Agree, Agree, Disagree and Strongly Disagree with weighted scores of 4, 3, 2 and 1. A criterion mean of 2.50 was used for decision making. The questionnaire was validated by three experts in Measurement and Evaluation at the University of Port Harcourt while the reliability was estimated as 0.84 using Cronbach alpha. Out of the 380 copies of questionnaire administered, 369 copies from 237 students and 132 lecturers were retrieved indicating a 97.1% retrieval rate. The research questions were answered using mean and standard deviation while the hypotheses were tested using z-test at 0.05 level of significance. The result of the study indicated that factors promoting the use of AI in research included analysis of large data, identification of knowledge gaps in research, among others. It was equally shown that work overload and anxiety for performance were drivers of academic integrity violation. The study indicated adequate sensitization on academic integrity and training on use of AI are part of the strategies for correcting these violations. It was recommended that training should be organized on how staff and students can use AI responsibly in their research activities.*

***Keywords:*** *Academic Integrity Violation; Artificial Intelligence; Research, Technology*

## Introduction

The emergence of technology has found relevance across all works of life and the education sector is not left out of the transformation that comes with this advancement (Rodrigues et al., 2023). Lecturers and students in tertiary educational institutions find these technologies useful for different purposes which Palmquistas cited in Perkins (2023) stated that has continued to gain relevance since the 1980s as a writing tool for different academic purposes since this period.

Over the years, there has been a continuous rise in the cases of violation of ethics in the academia and this threatens the quality of research activities and outputs. As the academic demands of lecturers and students increase, there is the need for more sophisticated technological tools which can assist them achieve more educational outcomes.

Lecturers and students in tertiary educational institutions are expected to engage in three key functions which include teaching and learning, research and community development and the research components of these functions is essential for achieving career progression and sustainable development. The integration of technology in the execution of these functions has continued to gain attention over the years for the purpose of achieving targeted educational goals and objectives.

There are several technologies that lecturers and students engage in the execution of their functions, but the emergence of Artificial Intelligence (AI) has come to change the narrative. It was on this note that Pigola et al., (2023) stated that Artificial Intelligence (AI) has come to be recognized as a transformative force in this digital era which influences the academic research carried out by stakeholders. However, complying with extant rules in the use of these technologies remains an issue of concern in education and research (Abd-Elaal et al., 2019) and this has continued to call for restraint in the use of AI in the education space, particularly in the Universities.

Lecturers and students embrace the use of AI because of the known and unforeseen possibilities that it comes with. As Nobles and Paganucci (2015) stated, these tools have a long history of evolution and change whichthey believe are able to support them in improving their research output. Artificial Intelligence therefore plays a significant role in lecturers' and students' teaching and learning as well as research activities which are instrumental to the achievement of the goals and objectives of University education.

According to Allen (2020), Artificial Intelligence are simply machines that have the ability to perform task that would normally require human intelligence. This means that this technology aids human intelligence in carrying out complex educational tasks. On the other hand, Verma (2018) stated that Artificial Intelligence is an aspect of computer science in which intelligent machines work and give reactions just like human beings in solving contemporary problems which can be educational or otherwise. More technically, Leyton-Brown (2023) asserted that AI is the study, design, and development of computational processes to solve problems that previously required human intelligence. This means that with AI, it is easy for lecturers and students to solve problems that would previously require only human intelligence and efforts, whether in the areas of research or other aspects of education.

There are several activities that AI can be deployed for in the University. According to Limongi (2024), this technology has greatly reshaped the process of literature reviews, creating knowledge maps, conducting analysis, and writing articles and it has also remained an indispensable tool which has the capacity for processing and analyzing large volumes of data and providing efficient and accurate information, as well as providing deep insights and accelerating the discovery process in research. In a similar manner, the revolution of AI has seen the emergence of several digital platforms where this technology is used to identify publications, books, proceedings, and editorial comments in any area of research which researchers intend to carry out this study (George et al., as cited in Pigola et al., 2023). This has aided the research process more than ever before.

AI are also relevant to students and lecturers in the process of making research predictions, automating research processes and discerning patterns in large volumes of data which has the capacity of changing the research process and outcomes which are useful in solving societal problems (Pigola et al., 2023). However, the manner in which this technology is used in the research process remains an issue of concern as a result of the several cases of academic integrity violation that are recorded, particularly in the ivory towers.

The integration of AI in research by lecturers and students comes with benefits but also raises concerns on the adherence to extant research regulations. Hiney (2015) stated that there are issues of fabrication, falsification and plagiarism which are at the core of research misconduct which continues

to raise concerns within and outside the University. According to Tertiary Education Quality and Standards Agency (2020), members of the academic community are expected to carry out their research and non-research activities with honesty, trust, fairness, respect and responsibility which this appears to be eroding fast with the introduction of AI in Universities, like other centres of learning. One of the basic issues in the use of AI in the University which has continued to generate concern is the problem of plagiarism.

Mishra (2023) stated that plagiarism involves presenting another person's work or ideas as one's own. This is one of the serious ethical violations in the University which undermines the principles of academic integrity. This process has continued to erode the credibility of educational institutions and also hampers the growth and development of original thought and research (Mishra, 2023). It has also continued to generate concern on the quality of research output from the Universities for national growth and development.

Chan and Lee (2023) as well as Hosseini et al., (2023) stated that complying with extant ethical considerations in academic writing are important for fairness, integrity, authenticity, safeguarding the rights of research as well as maintaining transparency and accuracy, and upholding academic standards in all educational institutions, particularly the ivory towers. This explains the call for interventions that will enable lecturers use AI more responsibly in the course of carrying out their research work.

Abd-Elaal et al., (2019) indicated the need for proper sensitization of educators on how to use AI in their research process. The need for workshops, conferences and other training programmes to enable users deploy this technology appropriately in their research process have continued to generate attention. Amigud and Lancaster (2019) added that the need for users to manage their academic aptitude, perseverance, personal issues, competing objectives, and self-discipline were important to manage this technology properly in the research process such that the issue of violation of academic integrity is kept under control. Mishra (2023) hence stated that other technologies that can help to spot this violation must be put in place across all institutions, and according to Gehrmann et al. (2019), such technologies must possess the capacity for a high level of precision. This means that aside human surveillance and policies, the deployment of AI detection technologies must also be put in place in institutions where this technology is used for research.

Researchers have conducted several studies to interrogate the issue of violation of academic integrity in research within and outside tertiary educational institutions and one of these studies was carried out by Bancoro (2024) on the relationship between Artificial Intelligence (AI) usage and academic performance of business administration students in Philippines. There were 293 Negros Oriental State University Main Campus 1 students studying business administration who participated in the study as respondents. According to the study's findings, students use AI in a somewhat widespread manner in terms of its functionality, accessibility, and complexity. Nonetheless, the students demonstrated above-average academic competence as seen by their good grades, high examination scores, and course mastery. The use of AI and academic achievement do not significantly correlate.

On the other hand, Wen et al., (2024) carried out an evaluation of the impact of artificial intelligence on university students' learning. The K-medoids clustering algorithm was used to analyze the chosen impact indicators, and the results showed that the indicators could be divided into five groups: attitudes and expectations regarding the use of AI learning tools, future prospects and adaptability of AI learning tools, patterns and purposes of AI use, safety and related concerns of AI tools, and beneficial and desirable features of AI learning tools. ANOVA was then employed for analysis, and the results showed a p-value of less than 0.05, indicating that the evaluation metrics chosen were appropriate. The study showed thoughtful selection of evaluation criteria in the context of AI educational application**.**

Similarly, Ekundayo et al., (2024) conducted a related study on evaluating the influence of artificial intelligence on scholarly research focusing on academics. In order to bring together academics from various institutions throughout the globe for a Zoom video conference, seven individuals were purposefully selected for the study. A thematic analysis approach was employed to analyze the data

gathered from them, with an emphasis on identifying significant themes and patterns that surfaced from the data. The results of this investigation enhance comprehension of the influence of artificial intelligence (AI) on scholarly research and offer perspectives on the prospective trajectory of AI in academic research in the future.

Khan et al., (2023) carried out an empirical study on the views of practitioners and lawmakers on the ethics of AI. The study used a survey approach, and 99 respondents—AI developers and lawyers from 20 different countries on five continents—were chosen at random. The study's conclusions supported the notion that the most important AI ethical principles are accountability, privacy, and openness. Conversely, the most prevalent AI ethics difficulties were found to be a lack of ethical expertise, a lack of legal frameworks, and a lack of monitoring bodies. Conflict in practice is a very serious difficulty, according to the impact analysis of the challenges across the principles. Additionally, there exists a statistical correlation between the perspectives of legislators and practitioners on specific ideals like freedom and fairness, as well as issues like the absence of oversight bodies and machine distortion.

The study by Serey et al., (2021) focused on artificial intelligence methodologies for data management. The study's technique involved content analysis using documents. The research utilized big data, artificial intelligence, and machine learning data collected between 2017 and 2021. Out of the 181 references that the study chose, 120 are included in the literature review. There were twelve categories, four groups, and eight subgroups in the conceptual framework. The four machine learning groups supervised learning, unsupervised learning, semi-supervised learning, and reinforced learning show symmetry in the study of data management utilizing AI approaches. Additionally, K-means, Bayesian approaches, support vector machines, and artificial neural networks are the AI techniques with greater symmetry across all groups. These reviews suggest that several modifications have continued to take place globally on the adoption of AI in the research space.

**Aim and Objectives of the Study**

The aim of the study was on dealing with academic integrity violation while using artificial intelligence in research in Universities in Rivers State. Specifically, the objectives of the study were to:

1. examine the reasons for the rise in the use of artificial intelligence in research in Universities in Rivers State.
2. determine the factors contributing to academic integrity violation while using artificial intelligence in research in Universities in Rivers State.
3. ascertain the strategies for mitigating academic integrity violation while using artificial intelligence in research in Universities in Rivers State.

**Research Questions**

The following research questions were raised to guide the study:

1. What are the reasons for the rise in the use of artificial intelligence in research in Universities in Rivers State?
2. What are the factors contributing to academic integrity violation while using artificial intelligence in research in Universities in Rivers State?
3. What are the strategies for mitigating academic integrity violation while using artificial intelligence in research in Universities in Rivers State?

**Hypotheses**

The following hypotheses were tested at 0.05 level of significance:

1. There is no significant difference between the mean ratings of lecturers and students on the reasons for the rise in the use of artificial intelligence in research in Universities in Rivers State.

2. There is no significant difference between the mean ratings of lecturers and students on the factors contributing to academic integrity violation while using artificial intelligence in research in Universities in Rivers State.
3. There is no significant difference between the mean ratings of lecturers and students on the strategies for mitigating academic integrity violation while using artificial intelligence in research in Universities in Rivers State.

## Methodology

The study adopted a descriptive survey design as it focused on investigating a current phenomenon. The population of the study was 7, 791 respondents consisting of (5, 117 postgraduate students and 2, 674 lecturers from the three public Universities in Rivers State, namely: University of Port Harcourt, Rivers State University, and Ignatius Ajuru University of Education. The sample of the study was 380 respondents made up of 250 students and 130 lecturers which was arrived at using the Taro Yamane formula for minimum sample size determination technique. The respondents were sampled using stratified sampling technique. Instrument used for data collection was a 15-item questionnaire named "Dealing with Academic Integrity while Using Artificial Intelligence in Research Questionnaire" (DAIAIRQ). The questionnaire was responded to on a four point modified Likert scale of Strongly Agree, Agree, Disagree and Strongly Disagree with weighted scores of 4, 3, 2 and 1. These scores were summed to 10 and divided by 4 to get 2.50 which was the criterion mean score for decision making. Questionnaire items that had mean score above the criterion mean score of 2.50 were 'agreed' while those below the criterion mean score were 'disagreed'. The questionnaire was validated by three experts in Measurement and Evaluation at the University of Port Harcourt while the reliability was established as 0.84 using Cronbach alpha. Out of the 380 copies of questionnaire administered, 369 copies from 237 students and 132 lecturers were retrieved indicating a 97.1% retrieval rate. The research questions raised were answered using mean and standard deviation while the hypotheses were tested using z-test at 0.05 level of significance.

## Results

### Answer to Research Questions

**Research Question One:** What are the reasons for the rise in the use of artificial intelligence in research in Universities in Rivers State?

**Table 1: Mean and Standard Deviation Scores on the Reasons for The Rise in The Use of Artificial Intelligence in Research in Universities in Rivers State**

| S/No | Items | Students n=237 | | Lecturers n=132 | | Mean Set | |
|---|---|---|---|---|---|---|---|
| | | Mean $\bar{X}_1$ | SD | Mean $\bar{X}_2$ | SD | X $\bar{X}$ | Decision |
| 1 | Complexities in big data analysis | 2.70 | 0.84 | 2.88 | 0.84 | 2.79 | Agreed |
| 2 | Showcases knowledge gap in research | 2.62 | 0.87 | 2.74 | 0.84 | 2.68 | Agreed |
| 3 | Ease of publishing research outputs | 2.83 | 0.88 | 2.67 | 0.83 | 2.75 | Agreed |
| 4 | Data prediction abilities of AI in research | 2.81 | 0.88 | 2.92 | 0.86 | 2.87 | Agreed |
| 5 | Quick literature review process | 2.87 | 0.89 | 2.95 | 0.86 | 2.91 | Agreed |
| | **Grand Mean and Standard Deviation** | **2.77** | **0.87** | **2.83** | **0.85** | **2.80** | **Agreed** |

Following the decision mean score of 2.50 where items above the criterion mean score of 2.50 were agreed while those below the criterion mean score showed that they were disagreed, Table I

indicated that with mean set score of 2.79, 2.68, 2.75, 2.87 and 2.91 to items 1, 2, 3, 4 and 5, respectively, the students and lecturers agreed that complexities in big data analysis, identification of knowledge gap in research, ease of publishing research output, data prediction abilities and quick literature review process were the reasons for the rise in the use of artificial intelligence in research in Universities in Rivers State.

**Research Question Two:** What are the factors contributing to academic integrity violation while using artificial intelligence in research in Universities in Rivers State?

**Table 2: Mean and Standard Deviation Scores on the Factors Contributing to Academic Integrity Violation While Using Artificial Intelligence in Research in Universities in Rivers State**

| S/No | Items | Students n=237 | | Lecturers n=132 | | Mean Set | |
|---|---|---|---|---|---|---|---|
| | | Mean $\bar{X}_1$ | SD | Mean $\bar{X}_2$ | SD | $\bar{X}$ $\bar{X}$ | Decision |
| 6 | Inadequate reward/compensation for ingenuity | 2.72 | 0.89 | 2.97 | 0.82 | 2.85 | Agreed |
| 7 | Academic work overload | 2.58 | 0.87 | 2.83 | 0.85 | 2.71 | Agreed |
| 8 | Time management behaviour | 2.42 | 0.86 | 2.44 | 0.81 | 2.43 | Disagreed |
| 9 | Anxiety for improved performance | 2.76 | 0.90 | 2.88 | 0.82 | 2.82 | Agreed |
| 10 | Absence of institutional research guidelines | 2.40 | 0.86 | 2.34 | 0.86 | 2.37 | Disagreed |
| | **Grand Mean and Standard Deviation** | **2.58** | **0.88** | **2.69** | **0.83** | **2.63** | **Agreed** |

Table 2 indicated that with mean set score of 2.85, 2.71, 2.43, 2.82 and 2.37, the students and lecturers agreed that inadequate reward and compensation for ingenuity, academic work overload and anxiety for improved performance were the factors contributing to academic integrity violation while using artificial intelligence in research in Universities in Rivers State while time management behaviour and absence of institutional research guidelines were not and this followed the criterion mean score decision rule.

**Research Question Three:** What are the strategies for mitigating academic integrity violation while using artificial intelligence in research in Universities in Rivers State?

**Table 3: Mean and Standard Deviation Scores on the Strategies for Mitigating Academic Integrity Violation While Using Artificial Intelligence in Research in Universities in Rivers State**

| S/No | Items | Students n=237 | | Lecturers n=132 | | Mean Set | |
|---|---|---|---|---|---|---|---|
| | | Mean $\bar{X}_1$ | SD | Mean $\bar{X}_2$ | SD | $\bar{X}$ $\bar{X}$ | Decision |
| 11 | Adequate sensitization on acts that violate academic integrity | 2.80 | 0.87 | 2.92 | 0.88 | 2.86 | Agreed |
| 12 | Institutionalization of academic integrity policy | 2.83 | 0.88 | 2.95 | 0.86 | 2.89 | Agreed |
| 13 | Digitalization of research processes | 2.69 | 0.87 | 2.83 | 0.85 | 2.76 | Agreed |
| 14 | Provision of adequate digital resources for efficient research activities | 2.75 | 0.87 | 2.97 | 0.86 | 2.86 | Agreed |
| 15 | Adequate training on best research practices | 2.87 | 0.89 | 2.98 | 0.86 | 2.93 | Agreed |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Grand Mean and Standard Deviation** | **2.79** | **0.88** | **2.93** | **0.86** | **2.86** | **Agreed** |

Table 3 established that the students and lecturers responded to items 11, 12, 13, 14 and 15 with mean set scores of 2.86, 2.89, 2.76, 2.86 and 2.93 which were all above the criterion mean score of 2.50 used for decision making and this implied that adequate sensitization on acts that violate academic integrity, institutionalization of academic integrity policy, digitalization of research processes, provision of digital resources for efficient research and adequate training on best research practices were the strategies for mitigating academic integrity violation while using artificial intelligence in research in Universities in Rivers State.

**Test of Hypotheses**

**Hypothesis One:** There is no significant difference between the mean ratings of lecturers and students on the reasons for the rise in the use of artificial intelligence in research in Universities in Rivers State.

**Table 4: Summary of z-test Analysis on the Difference between the Mean Scores of Lecturers and Students On the Reasons for The Rise in The Use of Artificial Intelligence in Research in Universities in Rivers State**

| Variable | n | Mean | SD | df | z-cal. | z-crit. | Level of Significance | Decision |
|---|---|---|---|---|---|---|---|---|
| Students | 237 | 2.77 | 0.87 | 367 | 0.64 | 1.96 | 0.05 | Not Rejected |
| Lecturers | 132 | 2.83 | 0.85 | | | | | |

Table 4 indicated that the value of z-cal. of 0.64 was less than the value of z-crit. of 1.96 and as such, the decision was that the null hypothesis will not be rejected. This means that there was no significant difference between the mean ratings of lecturers and students on the reasons for the rise in the use of artificial intelligence in research in Universities in Rivers State.

**Hypothesis Two:** There is no significant difference between the mean ratings of lecturers and students on the factors contributing to academic integrity violation while using artificial intelligence in research in Universities in Rivers State

**Table 5: Summary of z-test Analysis on the Difference between the Mean Scores of Lecturers and Students On the Factors Contributing to Academic Integrity Violation While Using Artificial Intelligence in Research in Universities in Rivers State**

| Variable | n | Mean | SD | df | z-cal. | z-crit. | Level of Significance | Decision |
|---|---|---|---|---|---|---|---|---|
| Students | 237 | 2.58 | 0.88 | 367 | 1.19 | 1.96 | 0.05 | Not Rejected |
| Lecturers | 132 | 2.69 | 0.83 | | | | | |

Table 5 showed that the value of z-cal. of 1.19 was less than the value of z-crit. of 1.96 and as such, the decision was that the null hypothesis will not be rejected, hence there was no significant difference between the mean ratings of lecturers and students on the factors contributing to academic integrity violation while using artificial intelligence in research in Universities in Rivers State.

**Hypothesis Three:** There is no significant difference between the mean ratings of lecturers and students on the strategies for mitigating academic integrity violation while using artificial intelligence in research in Universities in Rivers State

**Table 6: Summary of z-test Analysis on the Difference between the Mean Scores of Lecturers and Students On the Strategies for Mitigating Academic Integrity Violation While Using Artificial Intelligence in Research in Universities in Rivers State**

| Variable | n | Mean | SD | df | z-cal. | z-crit. | Level of Significance | Decision |
|---|---|---|---|---|---|---|---|---|
| Students | 237 | 2.79 | 0.88 | 367 | 1.49 | 1.96 | 0.05 | Not Rejected |
| Lecturers | 132 | 2.93 | 0.86 | | | | | |

Table 6 revealed that the value of z-cal. of 1.49 was less than the value of z-crit. of 1.96 and as such, the decision was that the null hypothesis will not be rejected, and so there was no significant difference between the mean ratings of lecturers and students on the strategies for mitigating academic integrity violation while using artificial intelligence in research in Universities in Rivers State.

**Discussion of Findings**

The emergence of Artificial Intelligence (AI) has seen a rise in its adoption but different industries use this technology for different purposes. However, from the responses of the students and lecturers sampled for the study, it was shown that the reasons why AI use has been on the increase among them is that it assists in quick literature review. Wen et al., (2024) pointed out in their study that AI has a lot of desirable features which compels its use. This has actually been a source of concern among technology experts as it is believed that AI can be used to produce great volumes of literature review thereby affecting originality. However, the respondents alluded to the fact that they can engage in a quick literature review using AI. It was also stated from their responses that they find this technology useful for making predictions which can be useful for forecasting research outcomes. This aligns with the result of the study by Bancoro (2024) which showed that accessibility, functionality and complexity were the major reasons why AI is used in academic activities. The respondents and lecturers also agreed that this technology aids them in carrying out complex data analysis, identification of knowledge where research has not covered and also easily publish their research output which helps the researcher to reach a wide audience.

The fact that AI is useful to the researchers (students and lecturers) is not a guarantee for its abuse. The emergence of AI is not supposed to replace human knowledge. AI is expected to be complementary to human intelligence and not an alternative. However, responses from the students and lecturers showed that there are certain factors that inform why AI is used to violate academic integrity which is important in the development of quality research output. From their responses, the students and lecturers agreed that there is often no reward for integrity and this explains why so many researchers compromise academic integrity using AI. This indicates that quality must begin to be rewarded for researchers to use AI responsibly. The respondents also stated that anxiety to perform is also a factor and this means that so many lecturers want to be above board. This agrees with the position of Khan et al., (2023) who pointed out that there is lack of ethical expertise in the use of AI and relevant stakeholders need to look into this. Students want to complete their theses on time and lecturers want to publish as much articles as possible for promotion, and this results to violation of academic integrity in research. They also agreed that work overload is a contributing factor, but disagreed that time management behaviour and absence of institutional research guidelines are determining factors.

So far, the respondents agreed that there are ways in which these violations can be managed and from their responses, they pointed out the need for adequate sensitization where students and lecturers can be oriented on what constitutes academic violation. This means that there are some users of AI in research who don't understand what constitutes a breach of ethics in the use of AI, and they need to be

properly educated. They also pointed out the need for institutionalization of academic integrity policy which can be helpful in guiding the research activities of researchers. Ekundayo et al., (2024) alluded to this by stating in their study that a trajectory on the use of AI must be provided wherever it is being used. The respondents also stated the need for the digitalization of research process which to a large extent can be helpful in monitoring the research activities of lecturers and to quickly spot out when a violation has occurred. This aligns with the result of the study by Serey et al., (2021) which found that there are different layers of supervision in the use of AI which need to be more standardized. They also mentioned the need for the provision of adequate digital resources which may include softwares and other internet based materials which can aid their research work when using AI. The need for adequate training on how to carry out quality research work was also identified as fundamental in dealing with issues of ethics violation when students and lecturers use AI for their research work.

## Conclusion

The study concluded that there are personal and institutional factors that compel staff and students to violate established standards in the use of AI in their research activities. The use of AI can however be properly managed in the researches carried out by these stakeholders if proper measures are put in place. The respondents did not differ in their opinion regarding these.

## Recommendations

The recommendations made in the study are as follows:

1. The University management needs to digitalize the research process so that all academic materials can be online and be easily verified in case of violations of ethical guidelines in the research activities carried out by staff and students.
2. Adequate training needs to be provided for staff and students on how to carry out their research works using available technological tools, particularly AI, in a responsible manner so that the quality of their research works can meet acceptable standards.
3. Punitive measures should also be institutionalized so as to prevent staff and students from violating ethical standards in their research works as this will discourage users of AI from engaging in practices that can violate extant research standards within and outside the University.

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