Use of AI Tools in Academic Writing among Postgraduates Students in Humanities and Social Sciences in Kenyan Universities: Challenges and Opportunities

Dr. Dorine Lugendo
Maseno University, Kenya

Paper ID: 9487

Abstract

Integrating artificial intelligence (AI) technologies into academic writing presents opportunities and challenges, as use of AI promotes efficiency in knowledge production but also exacerbates existing disparities between developed and developing nations, with developing nations lagging behind in terms of access and the expertise for using them productively. Moreover, while AI tools provide support for innovative research, writing assistance, and data analysis, there are growing concerns about the quality of postgraduate student theses and publications, written using AI tools, as they contain false statements and violate research ethics. Based on survey data and secondary literature, this study investigated the current application of AI tools in academic writing by Humanities and Social Science postgraduate students in a Kenyan university. The study aimed to: establish the uptake and use of AI tools in academic writing, assess student attitudes on using AI tools in academic writing; and explore challenges influencing the use of AI tools in academic writing. The study revealed that students often use AI tools that generate content, provide analysis and paraphrase texts, such as chatGPT, Gemini Grammarly and Quillbot. Students had positive attitudes to adopting AI tools for academic writing, however, they reported limitations in proficient use of AI tools, poor writing and research skills, along with lack of ICT resources and AI tools. It is recommended that for effective integration of AI tools in academic writings, higher education institutions should provide ICT resources, AI tools and offer training in research skills, writing skills and use of AI tools for writing.

Key words: Academic writing, Artificial Intelligence Tools, Digital Divide

1.0 Background

The development of sound academic writing skills among postgraduate students in the AI age presents both opportunities and challenges due to the digital divide existing between resourced Western countries that have access to digital technologies and under-resourced, developing countries, such as those found in sub-Saharan Africa and Southeast Asia which do not. While the adoption of artificial intelligence (AI) technologies has positively impacted efficiency in academic writing practices by offering novel tools for research such searching, summarising, paraphrasing or translating texts (Conde et al, 2024). Limited access AI tools and lack of knowledge on how to effectively use these tools in academic writing, deprives postgraduate students in developing countries of opportunities for AI-assisted scholarly writing.

With limited understanding on how to effectively use AI tools in scholarly writing, a key issue arising among postgraduate students in developing countries such as Kenya is the preservation of authenticity in scholarly writing while using AI tools. This is because AI generated texts have been found to contain false statements (Conde et al, 2024) among and other ethical concerns such as plagiarism. While AI tools such as chatGPT and Google Gemini can compile and synthesize literature, they cannot innovate ideas, which is core to scholarly writing. Beyond regurgitation of information, good writing requires extending literature in specific and useful ways. This calls improved access to AI tools and development of literacy in ethical use of AI tools to foster originality in academic writing among postgraduate students in contexts such as Kenya.

1.1 Statement of the Problem

This study seeks to explore how access and effective use of AI tools can enhance the quality of writing among postgraduate students in developing countries such as Kenya. By fostering inclusive practices, promoting digital literacy, and addressing ethical concerns such as plagiarism and the quest for originality in scholarly outputs, stakeholders can harness the transformative potential of AI while also ensuring quality and equitable participation in global academic discourse.

1.2 Study Objectives

This study aims to: i) establish the uptake and use of AI tools in academic writing, ii) assess attitudes on using AI tools in academic writing, and iii) explore challenges affecting the use of AI tools in academic writing.

1.3 Research Questions

The study will answer the following research questions (1) What AI tools do postgraduate students use in academic writing? (2) What are postgraduate students' attitudes towards using AI tools in academic writing? (3) What challenges influence how postgraduate students use AI tools in academic writing?

1.4 Significance of the Study

The significance of this study lies in its potential to address pressing issues at the intersection of academic writing, AI technology, and global disparities. By focusing on postgraduate students in a Kenyan university, the study sheds light on the disparities in access to AI tools for academic writing, how they are used by postgraduate students, with implications on the quality of their publications. Understanding these disparities is crucial for devising strategies to bridge the digital divide and promote quality and equitable participation in scholarly discourse as envisioned by Sustainable Development Goals (SDGs), specifically those envisioning the reduction of inequalities in knowledge production (SDG 12) and the creation of global partnerships for sustainable development technology (SDG 17).

The findings of the study can inform policy decisions and academic practices aimed at promoting digital literacy, enhancing access to AI tools, and supporting the writing practices of postgraduate students in developing countries. By identifying challenges and opportunities, the research recommendation can guide efforts to harness the transformative potential of AI, while ensuring quality and equitable participation in academic discourse.

2.0 Literature review

The wide adoption of artificial intelligence (AI) tools that can generate text have significant implications in the higher education sector in which written outputs are key for knowledge development and dissemination. AI tools can generate content on any topic, summarize, translate, or paraphrase text, provide citations (Anani et al, 2025; Curtis, 2023; Ray 2023; Marchandot et. al 2023). While these capabilities are useful for academic writing, the use of AI tools raises concerns, as there are valid implications on the quality of knowledge produced using these tools and mastery of research and writing skills among students.

Globally, postgraduate students are increasingly adopting assistive AI tools for writing research proposals, theses and papers for publication. In relation to students from the global south, studies have shown that writing is the most difficult skill for second language learners, who have to deal with the demands of academic writing with and poor language skills. The complexities are further compounded by global standards as high level writing skills are required for scholarly outputs such as proposals, theses and publications. Al Fadda (2012) describes academic writing as "a mental and cognitive activity since it is a product of the mind", implying that it is a complex process requiring "careful thought, discipline and concentration" (Grami, 2010). A study on problems students face in academic writing by Alfaki (2015) found that students face difficulties in complexity of content, organisation, purpose, linguistic competence, and audience resulting in failure.

In light of these challenges, the advent of assistive technologies such as generative AI language models provide much needed support for budding writers by helping students to generate new ideas, checking grammar and spelling, checking plagiarism and tendering in new writing styles and techniques (Abdalkader, 2022), without the support of their supervisors (Schmohl, et al. 2020). However, there are rising concerns that the adoption of AI writing tools by students may negatively impact critical thinking skills in future (Storey, 2023), along with ethical concerns such as falsehoods in AI generated texts and plagiarism (Conde et al, 2024).

While studies on the use of AI tools in academic writing have explored the supportive benefits, a study by Shikokoti, H. and R. Mutegi (2024) on influence of AI on the quality of higher education reported a positive perception and adoption of AI in higher education. However, little is known on postgraduate students' attitudes, proficiency in using AI tools in academic writing and the challenges they faced by students in the Kenyan context, hence the need for this study.

3.0 Methodology

This study investigated the current use of AI tools among postgraduate students in Humanities and Social Sciences in a Kenyan public university. The study utilized a descriptive survey (Creswell, J. W., & Creswell, J. D., 2017). using a questionnaire deployed through Google forms. The questionnaire was used to establish uptake and use of AI tools, attitudes of students to AI tools, and the challenges they experienced while using AI tools in academic writing. A simple random sample of 40 students drawn from about 400 Masters and PhD students from programs in Humanities and Social Sciences in a Kenyan university was used. Only postgraduate students from Humanities and Social Science were sampled to ensure uniformity in the requirements for originality in academic writing as Science programs have different requirements. Survey data was analysed using descriptive statistics such as frequencies and percentages to reveal levels of access, types of AI tools and attitudes to AI tools. Narratives from open responses within the questionnaire were used to glean the challenge experienced by the students when using AI tools for writing.

4.0 Findings

This section reports the results from the analysis of the survey data in order to understand the way postgraduate students in Humanities and Social Science use of AI tools in academic writing, their attitudes and the challenges they face in the process. The findings are presented in three sections, namely: uptake of AI tools used in relation to writing tasks, attitudes of students on the use AI writing tools and challenges faced by students when using AI tools for scholarly writing.

Demographically, 67.5% of 40 respondents were male while 32.5% were female. In terms of age of the respondents: 12.5% were below 29 years, 37.5% below 39 years, 27.5% below 49 years and 22.5% above 50 years of age, implying a balance between youthful and middle age respondents.

4.1 Uptake and Use of AI tools in academic writing

The analysis revealed that of the 40 respondents 42.5% had used AI tools in academic writing while 57.5% had not. In terms of familiarity and use, the most known and used AI tools by number of respondents was chatGPT (31), Grammarly (24), Gemini (16) and Quillbot (13). The least used AI tools by number of respondents were: Wordtune (2), Undetectable (3) and Paperpal (4) and interestingly 13 respondents had not used any AI tool. The results imply that students use well-known AI tools, which are generally used to compile and paraphrase information but are yet to adopt custom tools such as Paperpal, a smart editing writing tool suited for academic writing as it provides suggestions, corrections and research support.

In relation to writing tasks, by number respondents, students agreed that AI tools supported writing tasks as follows: language suggestions (30), grammar checks (32), paraphrasing (27), summarising (25), citation (20), literature review (17), data analysis (18), hypothesis generation (16), researching (20) and brainstorming (26). These findings confirms Abdalkader's (2022) suggestion that AI tools help budding writers with language skills such generating new ideas, check grammar and spelling. This implies that there is need to sensitize students on development of proficiency in using AI for research skills relating to hypothesis, literature and data.

4.2 Attitudes of students to AI writing tools

This section reports on the perceptions of students regarding the supportive role played by AI tools for academic writing. In terms of frequency of use of AI tools: 10% of the students reported to never have used AI tools for writing, rarely (13%), sometimes (35%), often (6%) and always (7.5%). With a total of only a total of 23% leaning towards not using the tools for writing, the finding indicates a positive attitude towards adoption of AI tools for writing, as was found by studies by Anani et al (2025) in Ghanaian higher education context and Shikokoti and Mutegi (2024) in the Kenyan higher education context.

On if AI tools contribute positively to innovations in academic writing, the students responded as follows: strongly disagree (15%), disagree (17.5%), somewhat agree (30%), agree (17.5%) and strongly agree (20%). This finding indicates a positive attitude among students to the benefits of AI in academic writing.

Asked if they believed that AI tools improve efficiency in academic writing, the respondents reported as follows: not at all (5%), slightly (17.5%), moderately (32.5%), very much (30%) and extremely (15%). As much as the perceived benefits on using AI tools for efficiency are positive, training students on how AI improves efficiency in academic writing would enhance their productivity.

Asked how comfortable they were integrating AI tools in academic writing, the students responded as follows: very comfortable (12.5%), comfortable (20%), somewhat comfortable (30%), uncomfortable (20%) and very uncomfortable (17.5%). This finding indicates that there is need to boost student confidence in the benefits and use of AI tools for writing by training them on how to use them effectively as was emphasised by Anani et al (2025).

Similarly, asked if they were likely to recommend the use of AI tools to others, the students responded as follows: very unlikely (15%), unlikely (17.5%), maybe (37.5%), likely (5%) and very likely (17.5%). These finding indicates an apprehension about recommending the use of AI tools for writing, there is therefore need to improve their confidence in AI tools through training.

4.3 Challenges faced by students when using AI tools in academic writing

Regarding to use of AI tools by postgraduate students, the ease or difficulty in using AI tools in academic writing stems from a number of factors as discussed next.

The absence of institutional support for applying AI tools in academic writing stands out as a major challenge experienced by student in the adoption and effective use of AI tools. 82.5% of the students surveyed reported not to have received any support while only 15% reported receiving some support in areas such as citation, grammar checks and paraphrasing of texts.

As was postulated by Alfaki (2015) that students have problems relating to complexity of content, organisation, purpose, linguistic competence, and audience, it was confirmed that Kenyan higher education students face similar challenges as listed below:

- Combining different AI features for quality work
- Not knowing how to use citation software
- AI tools require knowledge on how to use them
- AI tools kill creativity and originality
- Lack of access to the internet
- AI generated texts do not provide source of information
- AI generated information is not very accurate
- Ideas generated by AI tools are too general to be useful
- Content generated not matching information needs
- Misinformation
- Lack of clarity on what constitutes plagiarism
- Losing ideas pasted in AI tools for summarising to the database
- Lack of funds to purchase rights to AI tools
- Need to training in use of AI tools
- Preservation of originality

Finally, the students were asked about the skills they hoped to develop in order to effectively use AI tools in academic writing. The following responses were recorded:

- Citation skills
- Streamlining thoughts and writing coherently
- Data analysis and brainstorming
- Adding author’s voice to AI generated texts
- Originality
- Effective communication, grammar and fluency
- Paraphrasing
- Researching and literature review
- How to use AI tools
- Interpretation skills
- Developing ICT skills
- Interactivity
- How to do data analysis
- Summarising
- Writing skills

These findings indicate that postgraduate students require training in language skills, research skills, writing skills and use of AI tools in writing for effective production of quality research outputs.

5.0 Conclusion and recommendations

This study on the AI tools used by postgraduate students in Humanities and Social Sciences for academic writing revealed that: students mainly used AI tools used for content generation such as chatGPT and Gemini along with those used for paraphrasing such as Grammarly and Quillbot. Students mostly sort assistance for language features in writing tasks such as grammar checks, paraphrasing and summarising, followed by research skills such as citation, literature review and data analysis. While students attitude to adoption of AI tools were positive, the students were significantly uncomfortable in the application of AI writing tools implying weak proficiency in the application of AI tools in writing. The limitations in proficient use of AI tools for writing stem from challenges relating to lack of language skills such as: grammar, paraphrasing, summarising. Also reported are limited research skills such skill such as conducting literature review, data analysis, interpretation and citation; and challenges with writing skills such as brainstorming, coherence and originality, along with lack of AI tools and ICT equipment such as internet. To address these issues, higher education institutions need to avail ICT infrastructure and AI tools and enhance training in research skills, writing skills and the integration of AI tools in academic writing for quality research outputs.

6.0 Limitations

The study consider experiences of postgraduate students from several disciplines in Humanities and Social Sciences from only one university in Kenya, using only a descriptive survey to explore student experiences when using AI tools in academic writing. For more insights, future studies can consider experiments using selected AI tools and actual writing samples, to uncover the actual skills required for effective integration of AI in academic writing for quality outputs.

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