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# AI Chat Boards, Teacher Educator Readiness, and Graduate Academic Writing

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**ABSTRACT**

The rapid proliferation of artificial intelligence (AI) chat boards, such as ChatGPT, is reshaping higher education and raising critical questions about teacher educators' preparedness to guide graduate students in academic writing. This study explores how Tanzanian teacher educators perceive and respond to the integration of AI tools in graduate-level research and writing. Using a qualitative case study design, data were collected through in-depth interviews and focus group discussions with seven teacher educators and four graduate students at the University of Arusha. Guided by the Unified Theory of Acceptance and Use of Technology (UTAUT), the findings reveal both opportunities and challenges. While participants acknowledged AI's potential to enhance efficiency, provide immediate feedback, and support creativity, they also raised concerns about over-reliance, diminished critical thinking, and threats to academic integrity. The study highlights variations in digital readiness among educators, the influence of peer and institutional pressures, and the absence of clear policy frameworks for ethical AI use. Recommendations include targeted professional development for educators, AI literacy programs for students, and the establishment of institutional guidelines to ensure responsible and constructive adoption of AI in graduate academic writing.

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**KEYWORDS:**
Artificial Intelligence, Teacher Educators, Graduate Students, Academic Writing, UTAUT, Academic Integrity

## INTRODUCTION

Application of artificial intelligence (AI) technologies in learning settings is revolutionizing the way learners, instructors, and institutions imagine learning and assessment. AI conversation boards such as OpenAI's ChatGPT are becoming the latest trendy tools that facilitate all sorts of learning activities, ranging from idea generation and writing essays to commenting on student writing (Kasneci et al., 2023). While AI resources promise much for extending learning experiences, their adoption also raises challenges particularly with graduate student writing and the preparedness of teacher educators for advanced use.

Given the transformative potential of these technologies, it is essential to reflect on how AI might impact the development of critical thinking, creativity, and academic writing skills (Zawacki-Richter et al., 2019).

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Graduate programs, which are typically focused on advanced research and writing proficiency, may face unique challenges from AI tools that can generate and refine written content. Although studies show AI can support student learning, it may also lead to over-reliance on machine-generated content, resulting in superficial engagement and declining writing skills (Fryer et al., 2021). This situation raises concerns about whether teacher educators are adequately prepared to revise their instructional methods to leverage AI's benefits while minimizing its drawbacks (Anderson & Rainie, 2023).

Moreover, AI introduces serious ethical concerns surrounding originality, plagiarism, and academic integrity. Institutions are just beginning to develop policies to address these issues, yet many educators remain uncertain about how to responsibly integrate AI into their teaching (Rudolph et al., 2023). This study investigates how prepared teacher educators are to handle these evolving dynamics and explores how AI is reshaping academic writing among graduate students. Understanding these developments is critical to ensuring AI is used in a way that supports not weakens the depth and integrity of academic work at the graduate level.

***Research question***

The primary aim of this study is to examine how teacher educators perceive and prepare for the use of AI chat boards in guiding graduate students' academic research writing within Tanzanian higher education institutions. Specifically, the study seeks to answer:

- How do teacher educators perceive the impact of AI-driven chat boards on student learning and academic writing?
- What kinds of professional development are necessary to enable teacher educators to effectively integrate AI tools into their instruction for graduate students?

## LITERATURE REVIEW

***Emergence of AI Chat Boards in Education***

Artificial intelligence (AI) has increasingly transformed educational contexts worldwide, with chat boards such as ChatGPT gaining prominence as interactive learning tools (Kasneci et al., 2023; Zhai, 2023). These platforms employ natural language processing to provide real-time responses, feedback, and support, thereby reshaping how students and teachers engage with knowledge (Kooli, 2023). Studies indicate that AI chat boards can enhance access to learning, provide tailored feedback, and reduce teachers' workload by offering individualized support to students (Sonderegger & Seufert, 2022; Doroudi, 2022). Learners now benefit from mobile, desktop, and online access to academic assistance, signaling a shift towards more flexible and student-centered modes of education (Masanja & Mkumbo, 2020).

***Opportunities and Pedagogical Potential***

The promise of AI chat boards lies in their ability to facilitate creativity, improve writing processes, and reduce barriers to learning. Research suggests that AI tools can help students brainstorm ideas, overcome writer's block, and refine academic arguments more efficiently (Fryer et al., 2021; Kasneci et al., 2023). Teacher educators may also benefit from reduced administrative burden, allowing more focus on higher-order teaching tasks (Doroudi, 2022). UNESCO (2019) highlights AI's potential to support the Sustainable Development Goals by addressing shortages of qualified teachers and bridging achievement gaps. In developed contexts, AI integration has extended to domains such as automated essay scoring, intelligent tutoring systems, and learning analytics (Jaiswal & Arun, 2021).

***Risks, Ethical Concerns, and Academic Integrity***

Despite these opportunities, AI integration raises critical concerns regarding originality, bias, and academic honesty. Scholars caution that over-reliance on machine-generated content may erode students' independent reasoning, critical thinking, and authorship skills (Rudolph et al., 2023; Zawacki-Richter et al., 2019). The capacity of AI to produce near-human text has prompted fears of plagiarism and a weakening of scholarly integrity. Furthermore, AI systems can reproduce existing biases and are not yet capable of fostering complex skills such as self-evaluation, collaboration, and reflective judgment (X. Zhai, 2023). This duality suggests that AI must be positioned not as a substitute for learning but as a complementary tool that supports, rather than replaces, intellectual engagement.

***Educator Readiness and Pedagogical Challenges***

Successful integration of AI in higher education depends largely on educators' readiness and pedagogical approaches. While some educators are optimistic about AI's potential, many remain uncertain about how to incorporate these tools ethically and effectively into their teaching (Anderson & Rainie, 2023; Bates et al., 2021). Teacher educators face challenges in aligning AI with conventional learning goals that emphasize originality, creativity, and research-based scholarship. Current professional development opportunities are limited, leaving many educators underprepared to guide students in balancing AI use with academic rigor. This highlights the need for targeted training, institutional guidelines, and pedagogical innovation to equip educators with the skills necessary for AI-enhanced teaching.

***The African and Tanzanian Context***

In Africa, AI adoption is emerging but uneven. Countries such as Kenya, Nigeria, and South Africa have been early adopters, while others struggle with limited resources and infrastructure (Mirondo, 2019; Mtambalike, 2019). Tanzania, in particular, is witnessing rapid technological expansion, with internet penetration growing to over 23 million users by 2019 (Masanja & Mkumbo, 2020). This digital growth has created fertile ground for integrating AI in higher education. However, concerns persist regarding the preparedness of institutions, educators, and students to engage with AI responsibly. Although AI's potential to support graduate writing is acknowledged, few studies in Tanzania have examined how teacher educators are equipped to manage both the opportunities and risks of AI adoption.

***Identified Gap***

The existing literature underscores AI's transformative potential in education while also highlighting risks related to ethics, bias, and academic integrity. However, most studies are situated in Western or developed contexts, with limited attention to African realities and particularly to Tanzanian higher education. Very little is known about how Tanzanian teacher educators perceive AI chat boards, how prepared they are to integrate such tools into graduate teaching, and how AI influences academic writing at the postgraduate level. Addressing this gap is essential to ensure that AI adoption in Tanzania strengthens, rather than undermines, academic writing and scholarly integrity.

***Theoretical framework***

The Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003; Williams et al., 2015) provides the most appropriate theoretical lens for this study

because it integrates and extends earlier models such as the Technology Acceptance Model (TAM) (Davis, 1989) and Diffusion of Innovations (Rogers, 2003), offering a more holistic account of technology adoption. While TAM focuses narrowly on perceived usefulness and ease of use, and Diffusion of Innovations emphasizes how new practices spread through social systems, UTAUT combines these insights into four comprehensive constructs Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions that capture both individual perceptions and institutional dynamics. This study is not simply concerned with whether AI chat boards are being used in Tanzanian higher education, but rather with how teacher educators perceive, accept, and integrate them into graduate academic writing. UTAUT aligns effortlessly with the research questions by linking Performance Expectancy and Effort Expectancy to ***Research Question One***, which explores educators' perceptions of the benefits and challenges of AI for student learning and writing, and by linking Social Influence and Facilitating Conditions to ***Research Question Two***, which investigates the professional development and institutional support necessary for effective AI integration. In this way, UTAUT allows the study to move beyond generic accounts of AI adoption, providing a structured framework to analyze why educators accept or resist AI, under what conditions, and with what implications for graduate academic writing in the Tanzanian context.

## METHODOLOGY

### *Research design*

This study employed a qualitative case study design to explore teacher educators' perceptions and readiness to integrate AI chat boards into graduate-level academic writing. The case study approach was chosen because it allows for an in-depth, contextualized understanding of participants' experiences and attitudes within a real institutional setting (Yin, 2018).

### *Research Site*

The study was conducted at the **University of Arusha**, a higher education institution in Tanzania. This site was selected purposively due to its active graduate education programs and significant integration of information and communication technology (ICT) in teaching and learning. The institution's emphasis on digital innovation made it an appropriate context for examining the adoption of AI chat boards in academic writing.

### *Participants and Sampling*

A purposive sampling strategy was employed to select participants with relevant experience in teaching and graduate writing. The sample comprised:

- Seven teacher educators with teaching experience ranging from 6 to 20 years.
- Four graduate students enrolled in education programs.

Participants were selected based on their familiarity with digital tools and their ability to provide rich insights into the use of AI in academic writing.

### *Data collection method*

Data were collected using two complementary methods:

1. Semi-structured Interviews Conducted with seven teacher educators individually. Interview durations ranged from 10 to 26 minutes. The flexible format allowed probing for detailed accounts of perceptions, experiences, and challenges.
2. Focus Group Discussion (FGD) Conducted with four graduate students. The session lasted approximately 30 minutes and provided opportunities for interactive dialogue and shared perspectives.

Using multiple data sources enhanced the credibility and depth of the findings through triangulation.

### *Interview*

An interview is a dialogue between interviewee and interviewer for the aim of collecting information. In research interview an interviewer is one who organizes the whole process by probing questions. An interviewee is one who gives answers to those questions. The study uses interview which allowed the investigator to probe and ask continuation questions as a way of trying to get detailed data. The research was done after working hours in the evening time, in which 04 participants was participated in focus group discussion because of having same time after working hours. While the remaining 07 out of 11 participants were invited individually to an interview due to variation in their timetable after working hours, and duration of time was 09 to 26 minutes.

**Table 02: Interviewees and time taken in collecting data to both interview and focus group discussion.**

| Respondent name | Sex | Work Experience | Method | Date | Time used |
|---|---|---|---|---|---|
| Teacher A | *Female* | 15 Years | Interview | 06/11/2024 | 15 minutes |
| Teacher B | Male | 10 Years | Interview | 07/11/2024 | 16 minutes |
| Teacher C | Male | 08 Years | Interview | 10/11/2024 | 26 minutes |
| Teacher D | Female | 20 Years | Interview | 06/11/2024 | 10 minutes |
| Teacher E | Female | 06 Years | Interview | 10/11/2024 | 26 minutes |
| Teacher F | Female | 08 Years | Interview | 10/11/2024 | 26 minutes |
| Graduate Student | *Male* | 28 Years | Focus group discussion | 08/11/2024 | 15 minutes |
| Graduate Student | Male | 25 Years | Focus group discussion | 07/11/2024 | 14 minutes |

| | | | | | |
|---|---|---|---|---|---|
| Graduate Student | Male | 06 Years | Focus group discussion | 09/11/2024 | 13 minutes |
| Graduate Student | Male | 04 Years | Focus group discussion | 10/11/2024 | 26 minutes |

***Focus group discussion***

Focus group methodology involves the engagement to a small number of interviewees in group discussion. The discussion was centered on sequenced questions between interviewee and interviewer Silverman (2011). Therefore, the focus group discussion was done with four teachers sitting together for 30 minutes this was done after working hours it was evening time.

***Data Analysis***

All interviews and focus group discussions were audio-recorded, transcribed verbatim, and subjected to thematic analysis following Braun and Clarke's (2006) guidelines. Transcripts were coded inductively and deductively, aligning emerging patterns with the constructs of the Unified Theory of Acceptance and Use of Technology (UTAUT). Themes were refined through iterative comparison across participants to ensure consistency and analytic depth.

***Trustworthiness***

The study employed strategies to enhance trustworthiness (Lincoln & Guba, 1985):

- **Credibility**: Use of simple, clear interview questions and triangulation across interviews and focus group data.
- **Transferability**: Provision of detailed descriptions of the research site, participants, and procedures to enable applicability to similar contexts.
- **Dependability**: Use of multiple data collection methods and transparent documentation of procedures.
- **Confirm ability**: Ensuring findings were grounded in participants' accounts, supported by direct quotations, and free from researcher bias.

***Ethical considerations***

Ethical principles were strictly observed. Participation was voluntary, and informed consent was obtained from all participants. Anonymity was preserved by using pseudonyms (e.g., Teacher A, Teacher B, Graduate Student 1). Confidentiality was ensured by restricting access to data for research purposes only. The study adhered to institutional and professional guidelines for conducting ethical research.

***Findings***

Findings are presented according to the four constructs of the Unified Theory of Acceptance and Use of Technology (UTAUT): Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions.

**Performance Expectancy**

Teacher educators expected that AI chat boards would improve the writing process by helping students brainstorm, structure their ideas, and polish drafts. The majority of educators felt that AI tools might enhance writing quality by offering immediate feedback on grammar and structure, possibly decreasing the time spent on these aspects in teaching. Nonetheless, worries were expressed about excessive dependence on AI for idea generation, as it may compromise students' critical thinking and creativity. Graduate students shared comparable mixed expectations: although they appreciated the efficiency that AI tools added to writing assignments, a few highlighted a possible decrease in their involvement with intricate research and synthesis activities. This underscores the necessity for explicit direction on aligning AI advantages with more profound learning goals.

> "I utilize AI for grammar and formatting assistance as it saves time." Yet at times, it seems as though I'm allowing the tool to make the decisions, and I'm not as engaged in thoroughly grasping the material. It's a difficult equilibrium to achieve." (Graduate Student 1, 2024)
>
> "From what I've seen, students utilizing AI frequently create a basic draft more quickly, but I remain skeptical about its impact on the quality of their writing or their critical engagement. At times, they appear to 'leap' over stages in the reasoning process as the AI offers an abundance of suggestions. ." (Teacher Educator B, 2024)

In responding to the research question one; what are teacher educators' perceptions of the impact of AI chatboards on student learning and academic writing?

The views expressed by Graduate Student 1 and Teacher Educator B highlight fundamental worries regarding the function of AI in academic tasks, especially in writing activities.

Graduate Student 1 recognizes the time-saving advantages of AI for grammar and formatting but worries that dependence on the tool could lessen personal engagement in understanding the content. This emphasizes a conflict between efficiency and deep learning. The student appears to indicate that AI could unintentionally encourage superficial interaction with the content, prompting concerns about the possibility of excessive dependence on technology, potentially undermining cognitive effort and critical analysis. Teacher Educator B also recognizes how quickly students can generate a fundamental draft with AI, yet assesses the standard of that result. The educator suggests that AI-generated drafts might not possess the depth of insight and critical evaluation required for advanced academic

endeavors. This suggests a possible problem of cognitive "shortcutting," where students skip crucial cognitive stages (e.g., brainstorming, drafting, revising) because the AI provides instant proposals or completes sections for them. This could result in a lack of development of the student's personal ideas and intellectual involvement.

Both viewpoints highlight an important concern: although AI tools can enhance efficiency and simplify tasks, they might also hinder deeper cognitive and academic processes, including critical thinking, content understanding, and the generation of original ideas. The difficulty, therefore, is in finding a balance between using AI to boost productivity while maintaining the richness and genuineness of learning.

**Effort Expectancy**

The ease of use, or effort expectancy, differed among the participants. Teacher educators who had previous experience with educational technology felt more at ease using AI chat boards and considered them easy to navigate. Nevertheless, some teachers expressed difficulties in grasping the operational subtleties of AI, suggesting that there is a need for specialized training on AI functionalities and their use in academic writing. Graduate students indicated varying degrees of comfort with adapting to AI tools; although numerous individuals found chat boards easy to use, a few faced challenges with advanced features that could assist in detailed writing tasks, like preserving academic tone or incorporating discipline-specific terminology. This suggests that the simplicity of use might be influenced by previous technology experience and knowledge of AI features.

> "For me, learning to use AI tools like chat boards has been a challenge. I understand the basics, but integrating them into a meaningful academic exercise requires more than just knowing the tool – it requires understanding how it aligns with the goals of academic writing." (Teacher Educator C, 2024)
>
> "I found AI chat boards easy to use for basic tasks, but they're not always good at complex academic phrasing or formal tone. Sometimes, I have to rewrite what it generates to make it sound more scholarly, which can be frustrating." (Graduate Student 2, 2024)
>
> "I would feel more comfortable if there were workshops or resources specific to AI use in academic settings. It's one thing to know the tool exists and quite another to know how best to use it without compromising learning goals." (Teacher Educator D, 2024)

The passage explores the constraints and possible drawbacks of utilizing AI resources in scholarly writing. Educator C highlights the significance of comprehending how AI tools correspond with the objectives of academic writing. Graduate Student 2 observes that AI chat platforms might not consistently produce high-quality results, necessitating further editing and revision. Teacher Educator D expresses a wish for additional resources and workshops on implementing AI tools in educational environments.

**Social Influence**

Social influence emerged as a critical factor in the adoption of AI for academic writing. Many teacher educators felt pressure from peers and institutional policies to adopt AI tools, especially given the growing use of AI in educational settings. However, some voiced apprehensions about AI's impact on academic integrity and expressed uncertainty regarding its appropriateness for fostering authentic writing skills. Graduate students reported that their peers' opinions and departmental recommendations significantly influenced their own AI usage, with some students viewing AI positively as a competitive edge and others remaining skeptical of its academic merit. The findings suggest that social influence plays a dual role, driving adoption while simultaneously shaping educators' and students' ethical concerns about AI.

> "A lot of my classmates use AI chat boards and talk about them in a positive way, which made me more interested. But I'm also aware that some professors look down on it, so I'm careful about when and how I mention using AI in my work." (Graduate Student 3, 2024)
>
> "There's definitely pressure from the institution to keep up with these technologies. Other faculties are using AI in their classrooms, and there's an expectation that we should too. But I worry about encouraging students to use AI without a clear framework for what is appropriate use."(Teacher Educator E, 2024)
>
> "I feel conflicted. I want to use AI tools because I see other educators adopting them, but I also don't want students to feel like they can bypass developing foundational skills. My colleagues and I have different perspectives on where the balance should be."(Teacher Educator F, 2024)

The data sheds light on how peer and institutional forces spur interest in AI use by students and educators yet also surfaces notable apprehensions over ethical use, skill-building, and consistency. Students receive mixed signals, with peer excitement standing alongside skepticism from professors. Educators meanwhile sense institutional pressure to use AI yet are struggling to deal with the effects of AI upon historic skill sets. To meet these issues head-on, institutions need to establish definite guidelines, encourage frank discussion of

AI's role in teaching and learning, and offer preparation to ensure wise, informed implementation of AI tools.

**Facilitating Conditions**

The study identified facilitating conditions, such as policy and institutional support, as essential for AI integration success. Teacher educators indicated that having explicit guidelines and resources available would be critical to integrating AI successfully in an educationally sound manner. Policies establishing AI use in academic writing did not exist at most institutions, leaving the teachers unclear about what was considered best practice. Additionally, the absence of formal professional development on AI in writing left some teachers feeling inadequately prepared. Graduate students also reported insufficient institutional support, with some expressing dissatisfaction with ambiguous guidelines on the application of AI in assignments and thesis studies. The study calls for robust institutional support mechanisms, such as training, guidelines, and ethical use policies on AI.

> "There aren't enough resources or policies on AI usage yet. We're navigating a lot of unknowns about how much to allow students to use these tools in their work. I'd appreciate clear guidelines from the institution on acceptable uses of AI in academic writing." (Teacher Educator G, 2024)
>
> "I think it would help if there were official guidelines about when and how to use AI for assignments. I don't want to inadvertently violate any academic integrity rules, but it's unclear what's considered ethical use at this point." (Graduate Student 4, 2024)
>
> "Support from the institution, like dedicated workshops and specific training on the ethical use of AI, would be valuable. Right now, each instructor is left to interpret what's 'responsible' use of AI, which means there's inconsistency in how we handle it." (Teacher Educator A, 2024)

The report identifies that confusion is rife among educators and learners of the ethical and practical use of AI in teaching due to undefined institutional policies and resources. Teachers report varying use of AI usage management procedures in different courses, while learners mention concern over the possibility of violating academic integrity. Both mention the significance of clearly stated guidelines, workshops, and training to use AI in a responsible way. The lag between swift AI adoption and slow institutional intervention generates the potential for confusion and inequality. Organizations need to respond to these problems through the development of detailed policies, standardizing procedures, and organized support to allow for informed and responsible use of AI to teaching.

Adapting the UTAUT model to graduate writing students' and teacher educators' qualitative data demonstrates hesitation and enthusiasm for embracing AI chat boards for educational writing. Performance expectancy demonstrated overwhelming belief in AI's writing capability, yet concern over skill decay. Effort expectancy difference suggests that technology experience exerts influence over perceived ease of use, therefore requiring more user training. Social influence exerts much influence over adoption, depending upon peer influence and organizational pressure, while enabling conditions demonstrate the need for stronger policies and resources to promote ethical, productive AI use for learning. Individually, these outcomes indicate that successful use of AI for educational writing depends upon the interplay of training, policy support, and teaching practice to ensure responsible, skill-building use of AI.

Respondent commentary reveals varied attitudes toward AI application in research writing. Teacher educators value AI for its effectiveness yet feel apprehensive about its possible impact on critical reflection and creativity. Students react favorably to the convenience of AI yet desire clearer knowledge of appropriate AI use in academics. Both respondents agree to external social and institutional pressure toward AI application yet indicate that they do not obtain enough institutional advice and support. These replies reveal a similar need for training, ethical guidelines, and policy support to stimulate responsible and productive use of AI in teaching settings.

## DISCUSSION AND CONCLUSION

It contributes to the growing body of studies of AI and higher learning by situating teacher educators' readiness in the Tanzanian context. Employing the UTAUT model, the study revealed that while AI chat boards hold much promise for graduate writing refinement, their application raises pedagogical, ethical, and institutional concerns. Both teacher educators and their learners felt torn: they appreciated the efficacy and availability of AI but feared its effects on critical thinking, creativity, and scholarly discipline. Institutional policy absence and professional preparation only contribute to these concerns, making educators and their learners question how to use it appropriately.

In order to move forward, Tanzanian higher education institutions must strike balance between innovation and integrity. Encouraging guidelines, professional development experiences, and student-centered AI literacy courses are required to foster responsible use. Lastly, AI must be conceptualized as not replacing learning endeavor, but rather extending creativity that enables critical involvement and highlights the values of scholarly integrity. By being proactive and reflexive, institutional settings can ensure that

AI is the driving force for fostering, not hindering, the graduate writing of the future.

## RECOMMENDATIONS

From the findings of this study, it is recommended that Tanzanian higher learning institutions and policymakers adopt phased strategies to facilitate responsible use of AI chat boards for graduate academic writing. Short-term, institutions should adopt professional learning of teacher educators through expert workshops that build technical and ethical capability, and lay out institutional guidelines clearly that indicate acceptable and unacceptable use of AI in conjunction with principles of academic integrity. Medium-term universities should integrate AI literacy courses into graduate programs that enable learners to use AI resources critically and creatively as complementary rather than substitutive resources, and amend curricula to reflect AI structured ways that preserve originality and inspire trans disciplinary innovation. Long-term national actors such as the Ministry of Education and the Tanzania Commission for Universities (TCU) should entertain holistic policies that ensure frequent use of AI that is regular, ethically minded, and contextually fit, and facilitate longitudinal research to track the impact of AI upon writing, criticality, and creativity. Finally, broader cultural change is needed to provoke openness and deliberation of AI, frame it as complementing human scholarship rather than shortcuts, thus ensuring that AI is used to inspire innovation rather than to undermine academic quality.

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