KENYA

SUMMARY:

PRELIMINARY REPORT. AN ASSESSMENT OF THE EFFICACY OF STUDIOSITY IN ENHANCING ACADEMIC PERFORMANCE: A PILOT STUDY AMONG STUDENTS IN THE FACULTY OF ARTS AND SOCIAL SCIENCES AT THE UNIVERSITY OF NAIROBI.

Researchers:
Telesia K. Musili
John Oredo
Ndeti Ndati

Key findings:

- Studiosity contributed positively across all assessed domains.
- In the area of critical thinking, more students reported consistently evaluating arguments, analysing multiple perspectives, and validating the credibility of sources.
- The study concludes that Studiosity is a valuable complement to traditional lecturer feedback in higher education.
- It is recommended that universities consider scaling the use of Studiosity across faculties, while investing in infrastructure, digital literacy, and continuous monitoring to ensure sustainability. Adoption should be integrated into broader teaching and learning strategies.

AN ASSESSMENT OF THE EFFICACY OF STUDIOSITY IN ENHANCING ACADEMIC PERFORMANCE: A PILOT STUDY AMONG STUDENTS IN THE FACULTY OF ARTS AND SOCIAL SCIENCES AT THE UNIVERSITY OF NAIROBI

REPORT

Dr. Telesia K. Musili
Department of Philosophy and Religious Studies

Dr. John Oredo
Department of Library and Information Science

Prof. Ndeti Ndati
Department of Journalism and Media Studies

September, 2025

EXECUTIVE SUMMARY

This study assessed the effectiveness of Studiosity, an online academic writing support tool, in enhancing the writing skills of students in the Faculty of Arts and Social Sciences (FASS) at the University of Nairobi. The research was informed by the recognition that academic writing remains a persistent challenge for many students, with common issues including grammatical errors, limited vocabulary, weak structural coherence, and difficulties in referencing and critical thinking. These challenges are compounded by high student-to-lecturer ratios, which constrain the provision of timely, individualized feedback. Studiosity was introduced as a potential solution, offering real-time, personalized feedback aimed at improving both technical accuracy and higher-order academic competencies.

The study employed a mixed-methods, quasi-experimental design that captured data at three stages. At the pre-implementation stage, a baseline survey was conducted to establish the initial competencies across grammar, structure, critical thinking, language use, and referencing, among the students. During the implementation phase, students actively engaged with the platform by submitting draft assignments and receiving feedback, while usage analytics provided insights into engagement levels. Finally, a post-implementation survey mirrored the baseline, allowing for direct comparison of pre- and post-intervention outcomes. To enrich these quantitative findings, qualitative insights were gathered through student reflections, focus group discussions, and interviews with faculty.

The results demonstrated that Studiosity contributed positively across all assessed domains. In the area of critical thinking, more students reported consistently evaluating arguments, analyzing multiple perspectives, and validating the credibility of sources. In language use, students expanded their vocabulary, employed more complex sentence structures, and demonstrated greater

awareness of tone and style, while also reporting increased clarity and conciseness in expression. Technical accuracy also improved, as more students regularly reviewed their work for spelling and grammatical errors and expressed confidence in their ability to produce grammatically correct sentences. Engagement with sources strengthened significantly, with students reporting improvements in citation, paraphrasing, and critical evaluation of references. Essay structure was another area of growth, with greater emphasis placed on outlining, logical sequencing of ideas, use of transitions, and overall cohesion.

Equally important, students expressed high levels of satisfaction with the platform, with more than three-quarters of them describing themselves as extremely satisfied with Studiosity's feedback services. This satisfaction was not only linked to technical improvements but also to enhanced confidence and motivation to engage more deeply with the writing process. These findings resonate with broader national and international priorities that emphasize the integration of digital tools into higher education to improve quality, inclusivity, and student outcomes. Globally, they reflect UNESCO's call for the responsible use of digital technologies to strengthen learning environments. In the Kenyan context, they align closely with the objectives of the Digital Master Plan (2022–2032) and the Commission for University Education's emphasis on quality assurance.

The study therefore concludes that Studiosity is a valuable complement to traditional lecturer feedback in higher education. It addresses long-standing gaps created by limited staff capacity and large class sizes, while equipping students with both the technical skills and higher-order competencies required for effective academic writing. Moving forward, it is recommended that universities consider scaling the use of Studiosity or similar platforms across faculties, while investing in infrastructure, digital literacy, and continuous monitoring to ensure sustainability. Adoption should be integrated into broader teaching and learning strategies, ensuring that

automated feedback supports, rather than replaces, human interaction. By doing so, institutions can create an enabling environment for students to thrive academically and contribute more effectively to scholarly discourse.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1. Introduction

Academic writing is a key skill for university students because it shows their ability to understand subjects, think critically, and communicate ideas clearly. Early studies such as Lea and Street (1998) showed that writing is not just about grammar but also about learning how knowledge is shaped within academic communities. Later, Wingate (2006) stressed that writing should be taught within subject areas, since students often struggle when it is treated as a separate skill. These classic works remind us that writing development is both a technical and a social process. More recent studies confirm that many students continue to face difficulties in writing, especially those from diverse backgrounds or who study in English as a second language (Delaney, 2013).

The increasing integration of digital learning tools in higher education has transformed academic support systems, especially in writing-intensive disciplines such as the arts and social sciences (Diaz-García et al., 2022). Studiosity, an AI-powered academic writing support tool, provides formative feedback to students, enhancing their writing skills while preserving their original ideas. Unlike traditional tutoring, Studiosity provides immediate, personalised suggestions on grammar, structure, and critical thinking, elements crucial for academic success (Smith, 2022). However, despite its increasing adoption in Western universities, its effectiveness remains under-researched in African higher education contexts, where digital literacy and access to resources vary significantly (Muthanga et al., 2024). This study aimed to fill this gap by evaluating Studiosity's impact on students at the University of Nairobi, where writing proficiency is a crucial factor in academic performance (Ochieng, 2021).

Academic writing is a key skill in the Faculty of Arts and Social Sciences (FASS), where students need to express complex ideas using scholarly standards (Hyland, 2019). However, many students face difficulties with coherence, critical analysis, and proper citation, which are exacerbated by

large class sizes and limited opportunities for individual feedback (Cosgrove, 2018). AI-powered tools like Studiosity aim to address these issues by offering scalable, real-time writing support. Research conducted at Australian and UK institutions suggests that such tools enhance students' confidence in writing and reduce the grading workload for instructors (Dawson & Bearman, 2020). Nonetheless, critics contend that excessive reliance on AI feedback may impede deep learning, as students may focus on surface-level corrections rather than engaging in meaningful critical thought. This pilot study critically evaluated whether Studiosity promotes comprehensive development in academic writing or simply improves superficial aspects of writing.

The Faculty of Arts and Social Sciences at the University of Nairobi presents a unique case study due to its diverse student population and varying levels of digital access. While Studiosity has been successful in well-funded institutions, its effectiveness in environments with unreliable internet and varying digital skills remains uncertain (Selwyn, 2024). Early studies in South Africa have shown that students benefit from AI writing tools, but often require additional training to maximise their effectiveness (Mbangeleli & Funda, 2024). Cultural and language differences might also affect how Kenyan students interact with AI feedback compared to students in Western countries (Kariuki et al, 2025). This study examined these contextual factors, contributing to the ongoing discussion about the responsible use of AI in global higher education.

The existing literature on AI in education highlights both the opportunities and risks associated with it. Proponents argue that AI tools democratise academic support by providing instant, bias-free feedback (Luckin et al., 2022). Opponents, however, caution that AI may reinforce passive learning if students treat suggestions as prescriptive rather than reflective (Yuan & Hu, 2024). A meta-analysis by Deep and Chen (2025) found that AI writing aids improve technical accuracy but have a limited impact on the depth of argumentation, a critical skill among students in the faculty.

This pilot study thus evaluated not only grammar and structure but also how Studiosity influences students' critical engagement with their own writing. By doing so, it provided empirical data on whether AI tools complement or constrain higher-order cognitive skills in an African academic setting.

Given the rapid digitisation of higher education, understanding the effectiveness of tools like Studiosity is vital for evidence-based policy decisions (UNESCO, 2023). It is recommended that effective AI academic tools, such as Studiosity, be integrated into university support frameworks to reduce lecturer workload while enhancing student outcomes (Alqahtani & Wafula, 2025). Conversely, recognised limitations, such as barriers to accessibility or over-reliance on AI, guide targeted interventions, including blended learning models that combine AI and human feedback (Means & Neisler 2021). This study thus has significant implications for pedagogical strategies, not only at the University of Nairobi but also across all Kenyan universities and similar contexts where digital education tools are still being adopted.

Academic writing is a crucial aspect of higher education, particularly in disciplines such as the Arts, Humanities, and Social Sciences, where students must express complex ideas, develop coherent arguments, and engage with scholarly sources (Hyland, 2019). However, many students face difficulties with writing proficiency due to issues with grammar, structure, critical analysis, and adherence to academic norms (Cosgrove, 2018). At the University of Nairobi, where large class sizes and limited opportunities for individual feedback are common, students in the Faculty of Arts and Social Sciences encounter extra challenges in improving their writing skills (Ochieng & Were, 2021). While traditional support systems, such as lecturer feedback and peer review, remain essential, their scalability is often limited by time and resource constraints. This gap in academic writing support highlights the need for innovative solutions, such as AI-powered writing

tools like Studiosity, which offer automated, formative feedback to students. However, despite its increased use in Western universities, the effectiveness of Studiosity within African higher education, particularly in Kenya, is still largely unexplored. Therefore, this baseline study was necessary.

A significant challenge in academic writing in most higher education institutions is the limited availability of personalised feedback for students. Due to high lecturer-to-student ratios, many students receive minimal detailed guidance on their writing, resulting in recurring errors in argumentation, referencing, and language use (Obura & Emoit, 2024). Research shows that timely and constructive feedback is crucial for developing writing skills; yet, conventional methods often fall short of meeting this need (Dawson & Bearman, 2020). Although peer review workshops and writing centres exist, their reach is frequently limited, leaving many students without sufficient support (Alqahtani & Wafula, 2025). This gap is concerning, particularly given that strong writing skills are directly linked to academic success and employability in fields such as literature, sociology, and political science (UNESCO, 2023).

Another significant gap is the absence of digital writing support tools specifically designed for the Kenyan academic environment. Many e-learning platforms, including Grammarly and Turnitin, are tailored to institutions in the Global North, potentially neglecting linguistic and stylistic norms pertinent to Kenyan students (Obura & Emoit, 2024). For example, while AI tools may correct grammar effectively, they might not fully consider local academic writing standards or the multilingual backgrounds of University of Nairobi students, who often switch between English, Swahili, and indigenous languages in their thinking. This raises questions about whether Studiosity, an AI-based tool primarily designed for Anglophone institutions, can effectively

support students at the Faculty of Arts and Social Sciences without perpetuating linguistic biases or conflicting with local pedagogical expectations.

2. Problem Statement

Many university students continue to struggle with developing strong academic writing skills. Weaknesses appear in several areas such as critical thinking, use of language, grammar, and the ability to structure essays logically. Earlier studies highlighted that writing is not simply about following rules but about engaging in the practices of academic communities (Lea & Street, 1998; Wingate, 2006). Despite this understanding, research shows that students often leave university without the level of writing competence expected for higher education and future employment (Delaney, 2023). This gap suggests that existing classroom support is not always enough to meet the diverse needs of learners.

The growth of digital learning tools has created new opportunities to support students, but it has also raised concerns. On one hand, platforms that combine artificial intelligence and human support can give students timely feedback on their writing, helping them to improve over time (Zhang & Hyland, 2022). On the other hand, there are fears that poorly designed tools may encourage surface learning or even academic misconduct (Pecorari, 2003). Institutions, therefore, need to carefully evaluate whether such technologies genuinely improve students' skills while also protecting academic integrity. Without this evidence, universities risk investing in tools that may not deliver long-term benefits for learners.

Studiosity is one platform that aims to address these challenges by offering on-demand writing support with human oversight. However, while the service has been integrated into many institutions, there is limited published evidence on its effectiveness in enhancing specific writing skills across critical domains. For universities and policy makers, this creates a knowledge gap that

needs to be filled before scaling its use more widely. Understanding whether Studiosity helps students to think critically, write clearly, use sources properly, and structure essays more effectively is therefore a pressing need. This study sought to address that gap by examining students' self-reported skills before and after using the platform.

The University of Nairobi is at a pivotal moment in its adoption of digital education, particularly in the integration of AI tools to support student learning. While platforms such as Studiosity present promising solutions to challenges in academic writing support, their use must be guided by evidence and adapted to the specific institutional context (UNESCO, 2023). Therefore, this study examined three key issues: the effectiveness of Studiosity in improving academic writing performance among students in the Faculty of Arts and Social Sciences, the extent to which the tool is accessible, usable, and satisfactory for a diverse student population and the broader pedagogical implications of incorporating AI writing aids into academic writing instruction.

3. General Objective of the Study

The main objective of this study was to critically examine the efficacy of the Studiosity platform in enhancing academic writing performance among students in the Faculty of Arts and Social Sciences at the University of Nairobi. The study sought to assess how students' reported skills and confidence levels change after engaging with Studiosity compared to their baseline abilities. By focusing on multiple dimensions of writing, including grammar, spelling, language use, structural organization, critical thinking, and responsible use of sources, the objective was to capture both technical accuracy and higher-order competencies. The intention was not only to measure immediate improvements in writing outcomes but also to evaluate the quality of feedback provided and the adaptability of the tool within the Kenyan higher education context. Ultimately, the

objective was to generate evidence that can inform institutional decisions and pedagogical strategies on the integration of digital support platforms in university learning environments.

3.1 Specific Objectives of the Study

In order to achieve the main goal, the study had several specific objectives. These were to:

i. Assess whether students improve their ability to apply critical thinking in academic writing, including evaluating arguments and developing independent perspectives.
ii. Examine changes in language use, such as vocabulary range, clarity of expression, and adaptation of style to different audiences and purposes.
iii. Evaluate improvements in spelling and grammar, focusing on the accuracy of sentences and the ability to self-correct errors.
iv. Determine whether students become more skilled in the use of sources, including citation, paraphrasing, and the evaluation of evidence.
v. Analyze how students develop their skills in overall essay structure, especially in organizing ideas logically, using transitions effectively, and producing cohesive texts.

4. Justification of the Study

The findings of this study are expected to be valuable to multiple stakeholders within the university community. Foremost, students stand to benefit directly from the application of Studiosity in their academic writing. The platform has the potential to strengthen critical aspects of writing such as grammar, coherence, critical thinking, and argumentation, thereby equipping learners with the skills needed to communicate effectively in scholarly contexts. Such improvements not only support individual academic success but also align with broader national goals of enhancing the quality of higher education in Kenya as outlined in the Commission for University Education's (CUE) standards and guidelines.

Faculty members are also likely to find the tool useful in supporting the development of students' writing abilities and cognitive skills. By enhancing competence in academic expression, Studiosity can contribute to nurturing students who are better prepared to write critically, engage meaningfully with scholarship, and make timely and relevant contributions to academic discourse. This supports global calls, such as those advanced by UNESCO (2023), for higher education institutions to integrate digital tools that foster inclusive, flexible, and skills-oriented learning. Through Studiosity, lecturers can extend writing support beyond the classroom, thereby complementing traditional pedagogy with technology-enhanced learning strategies.

In addition, the outcomes of this study should inform both students and lecturers on how to effectively utilize Studiosity as a tool for enhancing writing proficiency. At the institutional level, the findings may provide evidence to guide university management in validating the role of such platforms in improving academic writing. This evidence can further support decisions on refining, scaling, and integrating Studiosity into broader teaching and learning strategies. Such integration is consistent with Kenya's Digital Master Plan (2022–2032), which emphasizes leveraging digital innovations to enhance access, efficiency, and quality in education.

Beyond the national context, this study speaks to global higher education priorities around digital learning adoption, quality assurance, and academic integrity. Universities worldwide are grappling with the dual challenge of upholding rigorous academic standards while adapting to the opportunities and risks presented by artificial intelligence in education. By critically examining the efficacy of Studiosity in a Kenyan university setting, this study contributes to the global evidence base on how AI-driven writing support can be deployed responsibly to enhance learning outcomes. In doing so, it responds to international policy agendas that call for the ethical use of

digital technologies to improve higher education delivery and equip students with the competencies necessary for a knowledge-driven global economy.

5. Limitations and Delimitations of the Study

One of the major limitations encountered in this study was the relatively low level of participation among students, the primary target group. During the sensitisation phase, many students expressed reluctance to engage with the platform, arguing that their academic schedules were already demanding and that participation in Studiosity activities would add to their workload. This perception resulted in lower-than-expected turnout, particularly in the early stages, and created challenges in mobilising a representative sample. Furthermore, a proportion of the student body held negative attitudes towards the study, which limited their willingness to test or adopt the tool meaningfully. These dynamics highlight the broader challenge of introducing new digital interventions into already burdened academic environments, where adoption depends heavily on the willingness of students to balance innovation with existing commitments.

Faculty engagement presented another notable limitation. Despite the potential value of Studiosity in improving academic writing, many lecturers in the Faculty of Arts and Social Sciences demonstrated minimal interest in the study. Attendance at sensitisation meetings was lower than anticipated, and several members of staff cited workload pressures as a reason for not participating actively. Some expressed concerns that their existing teaching responsibilities left no room to take on additional tasks such as marking student assignments related to the platform. A further challenge arose from perceptions among a section of faculty that participation required monetary facilitation, with assumptions that the research was externally funded and should therefore compensate them. These misconceptions and attitudes contributed to a degree of apathy, which hindered the smooth rollout of the study. Nonetheless, through persistent effort, the research team

was able to mobilise a critical mass of students and faculty to engage with the project, thereby mitigating some of the difficulties experienced in implementation.

6. Methodology

This study adopted a mixed-methods research design to evaluate the effectiveness of Studiosity, an AI-enabled academic writing support platform, among students in the Faculty of Arts and Social Sciences (FASS) at the University of Nairobi. The rationale for employing a mixed-methods approach was to capture both the measurable outcomes of Studiosity on students' academic writing performance and the lived experiences of users interacting with the tool. Quantitative data offered insights into measurable changes such as improvements in writing confidence, skill acquisition, and tool usage patterns, while qualitative feedback provided a deeper understanding of user perceptions, challenges, and contextual adaptability. The study was conducted over a period of six months and was structured into three main phases: pre-implementation (baseline assessments and sensitisation), implementation (student engagement with Studiosity and monitoring of usage), and post-implementation (evaluation through surveys, focus groups, and comparative analysis of results). This multi-phased approach ensured that both short-term outcomes and evolving patterns of tool adoption were adequately captured.

6.1 Study Design

The study employed a quasi-experimental design that combined pre-test and post-test assessments in order to evaluate changes in students' academic writing skills after exposure to Studiosity. This design was particularly suitable because it enabled comparison of self-reported competencies and writing performance before and after the intervention without necessitating full randomisation. The Faculty of Arts and Social Sciences, being the largest faculty within the University of Nairobi and consisting of fourteen (14) departments, provided an ideal setting for the study as it offered a

diverse and representative sample of the university's broader student population. The design integrated both quantitative and qualitative strands: quantitative data were obtained through structured surveys, usage analytics, and pre/post assessment scores, while qualitative data were collected through focus group discussions, open-ended survey responses, and key informant interviews with faculty. This triangulation of data sources was intended to enhance validity and reliability by allowing convergence of evidence from multiple perspectives (Kothari, 2004).

6.2 Sampling Method

A purposive sampling strategy was applied to recruit participants from across the Faculty of Arts and Social Sciences. The faculty has an estimated student population of about 10,000, and the study targeted a 10% response rate, equivalent to approximately 1,000 students, to achieve adequate statistical reliability and to capture a broad range of experiences (Kothari, 2004). To ensure that the sample was representative of the faculty's disciplinary diversity, stratification was conducted by department, with participants drawn from fields such as Philosophy and Religious Studies, Library and Information Science, Literature, Sociology, History, Journalism, Linguistics, and related disciplines. This stratified purposive sampling ensured inclusion of students from both humanities and social sciences backgrounds, thereby reflecting the breadth of writing practices across the faculty. In addition to students, lecturers and administrative staff involved in e-learning and academic support were purposely selected to provide complementary perspectives on the feasibility, challenges, and pedagogical implications of integrating Studiosity into the university's teaching and learning ecosystem.

6.3 Phases of the Study

The study was conducted in three overlapping phases over a six-month period, excluding the initial setup period that began in March 2024. Each phase was designed to build on the previous one,

ensuring that ethical foundations were established, implementation was carefully managed, and evaluation was systematic and comprehensive.

6.3.1 Phase 1: Pre-Implementation

The first phase focused on laying the ethical, legal, and operational groundwork for the study. Ethical approval was obtained from the University of Nairobi's institutional review board to ensure compliance with institutional and regulatory standards. Informed consent was obtained from all participants, with both students and lecturers receiving clear explanations about the purpose of the study, their roles, and their rights. Following these approvals, orientation sessions and interactive training workshops were conducted to introduce participants to Studiosity. These workshops covered the practical use of the platform, including navigating the interface, uploading assignments, and interpreting feedback. This ensured that all users felt adequately prepared before full-scale implementation. At the same time, baseline data collection was carried out through a pre-test survey administered via SurveyMonkey. The survey assessed key competencies such as grammar, coherence, argumentation, critical thinking, and confidence in writing. This baseline served as the benchmark for measuring change over time. By addressing ethics, building participant readiness, and gathering initial performance data, this phase established a strong foundation for the execution of the study.

6.3.2 Phase 2: Implementation

The second phase marked the active use of Studiosity in academic contexts. The process began with an onboarding stage, during which lecturers received targeted training on integrating Studiosity into their course units with writing components. They were guided on aligning the platform's feedback mechanisms with their course objectives to ensure smooth integration. Students were then required to submit at least two assignments via Studiosity during the

intervention period. These submissions enabled students to engage hands-on with the platform by uploading drafts, receiving automated feedback, and revising their work before final submission. This practical engagement helped to build both confidence and competence in using the tool. The intervention lasted for one academic semester, during which students regularly submitted assignments and received real-time feedback on their work. Continuous monitoring was undertaken throughout this phase to track engagement and usability. Usage analytics including login frequency, time spent on the platform, and specific features accessed were recorded to measure participation levels. In addition, technical support logs documented common challenges, enabling prompt troubleshooting and system adjustments. This close monitoring ensured that implementation challenges were addressed quickly, maximizing the effectiveness of Studiosity. By combining structured onboarding, regular practice, and real-time monitoring, this phase ensured that the platform was effectively embedded into students' writing processes.

6.3.3 Phase 3: Post-Implementation

The final phase of the study was dedicated to evaluating the effectiveness of Studiosity and gathering comprehensive feedback from participants. A post-test survey was administered through Google Forms and was deliberately designed to mirror the pre-test instrument. This parallel structure allowed for a direct comparison between baseline and endline results, ensuring that changes in performance could be reliably measured. Key competencies, including grammar, coherence, spelling, argumentation, and overall confidence in writing, were assessed in order to capture improvements in academic writing proficiency. The quantitative analysis of these results provided measurable evidence of the platform's impact on student learning outcomes and highlighted specific areas where Studiosity contributed most significantly to growth.

In addition to quantitative measures, qualitative data were collected to provide deeper insights into the student experience. A Likert-scale satisfaction survey was conducted to assess perceptions of the platform's usability, the quality of feedback received, and the extent to which students felt it contributed to their learning. This was complemented by semi-structured interviews with a purposely selected group of 10 to 15 students. These interviews created space for participants to reflect on how Studiosity influenced their writing processes, their engagement with feedback, and their broader academic performance. The discussions uncovered nuanced challenges, such as difficulties in interpreting automated suggestions, as well as unexpected benefits, such as improved motivation and increased willingness to revise work. Such insights added depth to the findings that surveys alone could not fully capture.

The post-implementation assessments, which included comparative tests, structured surveys, and in-depth interviews, offered a comprehensive understanding of the platform's overall effectiveness. The combined evidence validated Studiosity's role in enhancing student proficiency in academic writing, not only in technical areas such as grammar and coherence but also in higher-order skills such as critical thinking and argument development. Furthermore, the findings generated actionable insights that can guide both faculty and institutional leadership in refining the use of the platform, ensuring its long-term integration into teaching and learning. This phase concluded the implementation cycle by linking systematic evaluation with practical recommendations for sustainable adoption.

6.4. Data Collection Procedures

Data collection for this study was carried out in three sequential phases aligned with the pre-implementation, implementation, and post-implementation stages. In the pre-implementation phase, baseline data were collected using a structured entry questionnaire that assessed students'

self-reported academic writing abilities across key domains, including critical thinking, grammar, spelling, vocabulary, source use, and essay organization. This questionnaire also captured demographic information and prior exposure to digital learning platforms. The baseline provided a benchmark against which post-intervention changes could be compared.

During the implementation phase, participants were introduced to Studiosity through sensitisation workshops and guided orientation sessions. Students were given structured opportunities to submit drafts of their assignments to the platform and to receive formative feedback. Data were collected at this stage through usage analytics generated by Studiosity, including the number of submissions, feedback turnaround time, and patterns of tool engagement. Concurrently, faculty and administrative staff were interviewed to provide perspectives on usability, integration into academic workflows, and challenges of adoption.

The post-implementation phase involved a combination of quantitative and qualitative data collection methods. A structured exit survey, parallel in design to the entry questionnaire, was administered to assess changes in students' reported abilities and confidence levels. Focus group discussions were held with students from different departments to capture in-depth reflections on the effectiveness, accessibility, and perceived value of Studiosity. Additionally, semi-structured interviews with faculty members provided insights into how the tool influenced pedagogy and writing support practices. This triangulation of surveys, focus group discussions, and interviews ensured that both the measurable outcomes and experiential dimensions of Studiosity adoption were comprehensively captured.

6.5 Data Analysis Methods

Data analysis was carried out using both quantitative and qualitative techniques to align with the mixed-methods design. For the quantitative component, survey responses were coded and entered

into the Statistical Package for the Social Sciences (SPSS, version 28) for analysis. Descriptive statistics, including frequencies, percentages, and means, were used to summarise demographic characteristics and self-reported competencies.

For the qualitative component, a video recording of some students sharing their experiences regarding use of Studiosity acted as the main source of data. The video was transcribed verbatim using Otter.ai software. Statements from the transcription were used to complement the results obtained from quantitative analysis. Triangulation between survey data, usage analytics, and qualitative narratives were undertaken to ensure credibility and consistency of findings.

Together, the combination of statistical analysis and thematic interpretation provided a comprehensive understanding of Studiosity's impact. Quantitative findings revealed measurable changes in students' writing performance and confidence, while qualitative insights contextualized these results, highlighting the practical realities of using AI-driven feedback in a Kenyan university setting. This integration of methods strengthened the validity of the study and supported a nuanced interpretation of Studiosity's role in academic writing development.

6.6 Ethical Considerations

Ethical integrity was central to the design and execution of this study, ensuring that the rights, dignity, and well-being of all participants were safeguarded at every stage. The study received formal ethical and legal clearance from the University of Nairobi's Research Ethics Committee and the Legal Office, which provided oversight and validation of the research process. This approval was granted following the submission of a comprehensive proposal that outlined the study's methodology, identified potential risks, and detailed the measures that would be put in place to mitigate them. The approval also confirmed that the study aligned with institutional regulations and broader ethical standards for research involving human participants.

Prior to data collection, all participants including both students and faculty were provided with detailed information about the study. This included a clear explanation of its purpose, the procedures involved, the anticipated benefits, and any potential risks. This process ensured that consent was fully informed and voluntary, allowing participants to make deliberate and educated decisions regarding their involvement (Resnik, 2020). In addition to informed consent, strict measures were implemented to maintain confidentiality and protect participant privacy. Survey responses, assignment submissions, and interview transcripts were anonymized at the point of collection, and all personally identifiable information was either removed or replaced with coded identifiers. This ensured that data could not be traced back to individual participants even during the analysis and reporting stages. By embedding these safeguards, the study upheld the highest standards of ethical practice while fostering trust and openness among participants.

7. Findings

The purpose of this study was to examine how the Studiosity platform influenced students' academic writing skills across five domains: critical thinking, language use, spelling and grammar, use of sources, and overall essay structure. Since the study used a before-and-after design, it was expected that students would show some degree of improvement in their self-reported abilities after using the platform. In particular, the intervention was anticipated to help students think more critically about arguments, use more precise language, reduce grammatical errors, engage more responsibly with sources, and produce essays that were better organized and cohesive.

To explore these expectations, the results are presented by comparing responses from the entry questionnaire with those from the exit questionnaire. This comparison allows us to see where meaningful changes occurred and whether the anticipated improvements were realized. The findings are organized thematically according to the five skill domains, with each domain

accompanied by descriptive statistics and visual displays of pre- and post-responses. Together, these results provide a clear picture of the areas where Studiosity had the strongest impact, as well as the aspects of writing where further support may still be needed.

7.1 Participant Profile (Implementation Phase)

The implementation phase generated rich descriptive data on the characteristics of the participating students and their engagement with Studiosity. Table 1 summarizes the distribution of participants by teaching department. The results indicate that Philosophy and Religious Studies accounted for nearly four-fifths of all participants (78.8%), while Library and Information Science followed at 7.1%. Other departments such as Kiswahili, Psychology, History and Archaeology, and Political Science contributed much smaller shares. This skew suggests that the uptake of Studiosity was strongest in departments with intensive essay-based coursework, especially Philosophy and Religious Studies.

Table 1:Distribution of the selected variables by study type

	Full Time (N=155)	Part Time (N=15)	Overall (N=170)
Teaching Department			
Diplomacy and International Studies	3 (1.9%)	0 (0%)	3 (1.8%)
History and Archeology	5 (3.2%)	3 (20.0%)	8 (4.7%)
Library and Information Science	11 (7.1%)	1 (6.7%)	12 (7.1%)
Philosophy and Religious Studies	123 (79.4%)	11 (73.3%)	134 (78.8%)
Political Science and Public Administration	4 (2.6%)	0 (0%)	4 (2.4%)
Psychology	7 (4.5%)	0 (0%)	7 (4.1%)
Sociology, Social Work and African Women Studies	2 (1.3%)	0 (0%)	2 (1.2%)
Year Level			
1st Year Undergraduate	89 (57.4%)	14 (93.3%)	103 (60.6%)
2nd Year Undergraduate	2 (1.3%)	1 (6.7%)	3 (1.8%)
3rd Year + Undergraduate	49 (31.6%)	0 (0%)	49 (28.8%)
Higher Degree Research	15 (9.7%)	0 (0%)	15 (8.8%)
Context Title			
DATABASE MANAGEMENT	2 (1.3%)	0 (0%)	2 (1.2%)
DISTRIBUTED SYSTEMS	9 (5.8%)	0 (0%)	9 (5.3%)
ETHICAL ISSUES IN RELIGION AND SOCIETY	89 (57.4%)	14 (93.3%)	103 (60.6%)
RELIGION AND SCIENCE	3 (1.9%)	0 (0%)	3 (1.8%)
RESEARCH METHODS IN RELIGIOUS STUDIES	52 (33.5%)	0 (0%)	52 (30.6%)
STATISTICAL AND INFORMETRICS METHODS	0 (0%)	1 (6.7%)	1 (0.6%)
Study Mode			
Campus	131 (84.5%)	13 (86.7%)	144 (84.7%)
Online	24 (15.5%)	2 (13.3%)	26 (15.3%)

Analysis by year of study shows that participation was concentrated at the undergraduate level, with first-year students comprising 60.6% of the sample. Among part-time students, this concentration was even more pronounced, with over 90% drawn from the first year, indicating that part-time cohorts were primarily at the introductory level. Contextual course data reinforces this concentration, with over 60% of activity linked to courses such as *Ethical Issues in Religion and Society* and a further 30% to *Research Methods in Religious Studies*.

Tables 2 and 3 provide insights into writing activity by department and year level. Writing activity was highly uneven across departments, with Philosophy and Religious Studies and Library and

Information Science generating the longest and most variable sessions, typically exceeding 2,000 words and lasting up to 35 minutes, with some outliers extending to over 7,000 words and 85 minutes. Mid-range activity was observed in History, Archaeology, and Political Science, while Psychology, Diplomacy, and Sociology produced shorter and more uniform sessions. A clear progression was observed across year levels: first-year sessions were shorter (median ~1,160 words, 20 minutes), while advanced undergraduates and postgraduate students produced longer texts (median 2,930–3,230 words) over extended sessions lasting 35–45 minutes.

Table 2:Summary of word count and minutes by Teaching Department

	Count of Words Type	Typing Period in Minutes
Diplomacy and International Studies (N=3)	Mean (SD): 482 (4.73) Median [Min, Max]: 484 [477, 486]	Mean (SD): 15.0 (0) Median [Min, Max]: 15.0 [15.0, 15.0]
History and Archeology (N=8)	Mean (SD): 1430 (451) Median [Min, Max]: 1580 [401, 1820]	Mean (SD): 22.5 (3.78) Median [Min, Max]: 25.0 [15.0, 25.0]
Library and Information Science (N=12)	Mean (SD): 2240 (1920) Median [Min, Max]: 2070 [341, 7440]	Mean (SD): 33.8 (19.6) Median [Min, Max]: 35.0 [15.0, 85.0]
Philosophy and Religious Studies (N=134)	Mean (SD): 2230 (1630) Median [Min, Max]: 1720 [164, 7120]	Mean (SD): 31.7 (18.1) Median [Min, Max]: 25.0 [15.0, 85.0]
Political Science and Public Administration (N=4)	Mean (SD): 1550 (39.0) Median [Min, Max]: 1560 [1490, 1580]	Mean (SD): 23.8 (2.50) Median [Min, Max]: 25.0 [20.0, 25.0]
Psychology (N=7)	Mean (SD): 837 (87.0) Median [Min, Max]: 800 [800, 1030]	Mean (SD): 15.7 (1.89) Median [Min, Max]: 15.0 [15.0, 20.0]
Sociology, Social Work and African Women Studies (N=2)	Mean (SD): 987 (0) Median [Min, Max]: 987 [987, 987]	Mean (SD): 15.0 (0) Median [Min, Max]: 15.0 [15.0, 15.0]
Overall (N=170)	Mean (SD): 2080 (1590) Median [Min, Max]: 1580 [164, 7440]	Mean (SD): 30.1 (17.5) Median [Min, Max]: 25.0 [15.0, 85.0]

Table 3:Summary of word count and minutes by Year Level of Study

	Count of Words Type	Typing Period in Minutes
1st Year Undergraduate (N=103)	: Mean (SD): 1260 (585) Median [Min, Max]: 1160 [164, 4890]	: Mean (SD): 21.0 (6.11) Median [Min, Max]: 20.0 [15.0, 60.0]
2nd Year Undergraduate (N=3)	: Mean (SD): 442 (156) Median [Min, Max]: 363 [341, 621]	: Mean (SD): 15.0 (0) Median [Min, Max]: 15.0 [15.0, 15.0]
3rd Year + Undergraduate (N=49)	: Mean (SD): 3400 (1710) Median [Min, Max]: 3230 [1050, 7440]	: Mean (SD): 45.3 (19.5) Median [Min, Max]: 45.0 [20.0, 85.0]
Higher Degree Research (N=15)	: Mean (SD): 3690 (1850) Median [Min, Max]: 2930 [976, 6890]	: Mean (SD): 46.0 (19.1) Median [Min, Max]: 35.0 [15.0, 75.0]
Overall (N=170)	: Mean (SD): 2080 (1590) Median [Min, Max]: 1580 [164, 7440]	: Mean (SD): 30.1 (17.5) Median [Min, Max]: 25.0 [15.0, 85.0]

Figures 1 to 5 further illustrate these trends. Figure 1 highlights the dominance of Philosophy and Religious Studies, while Figures 2 and 3 show strong differences across departments in both word counts and session durations, with Philosophy and Library and Information Science recording high medians and wide variability. Figure 4 compares session lengths by mode of delivery, showing that online students tended toward shorter, more compact sessions, while campus-based students were more likely to engage in extended writing sessions. Figure 5 demonstrates a near-linear relationship between word counts and session duration, with an implied average typing pace of approximately 80–85 words per minute, suggesting steady engagement and time taken to integrate Studiosity feedback.

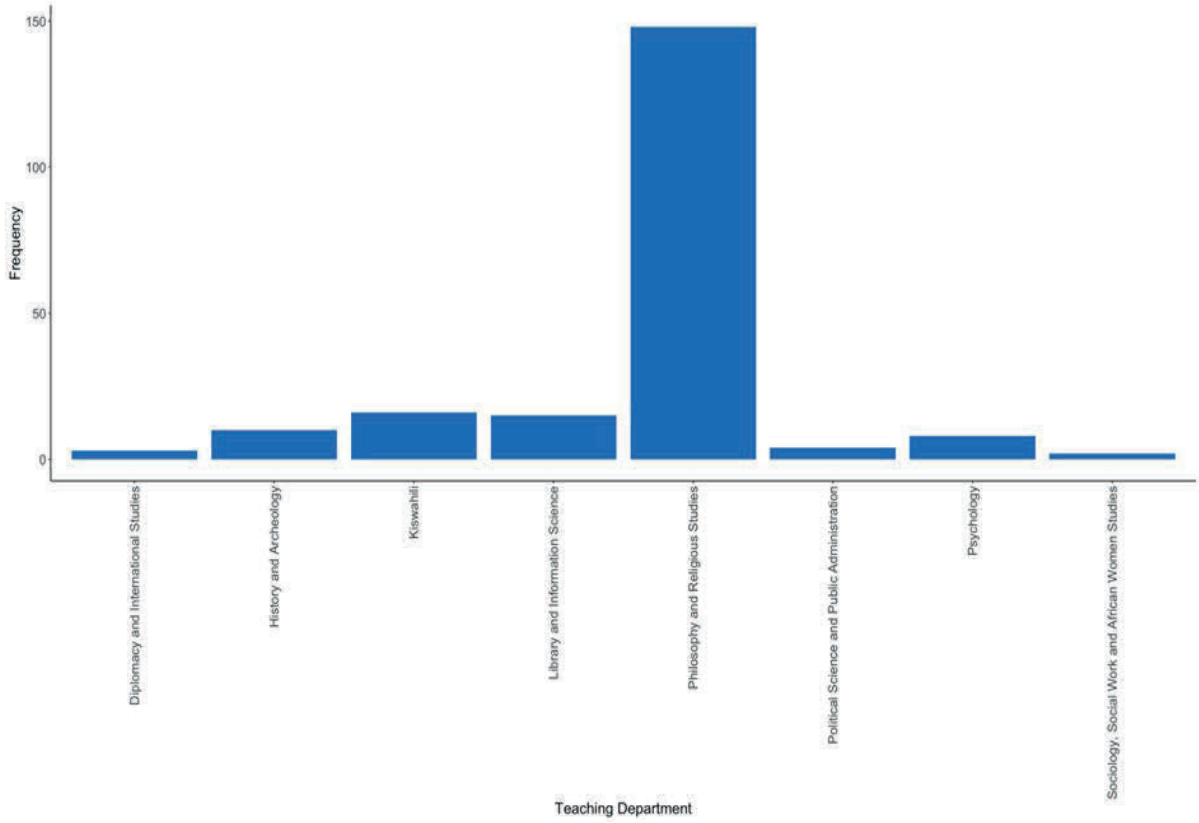

Figure 1:Distribution of participants by teaching department

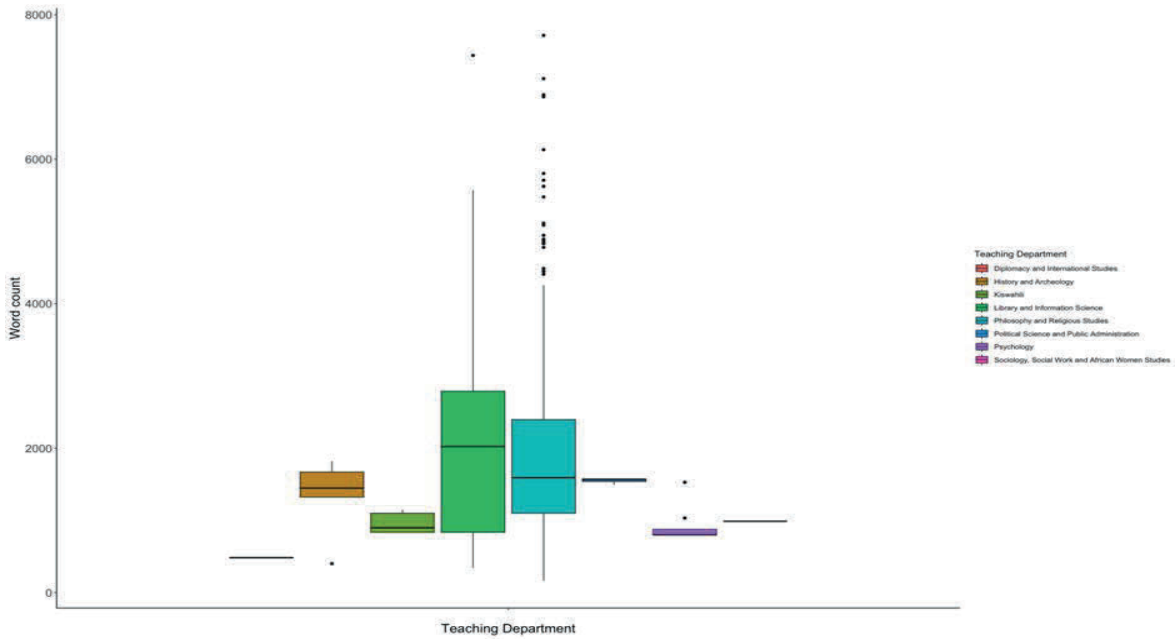

Figure 2:Box plot showing word count distribution by department

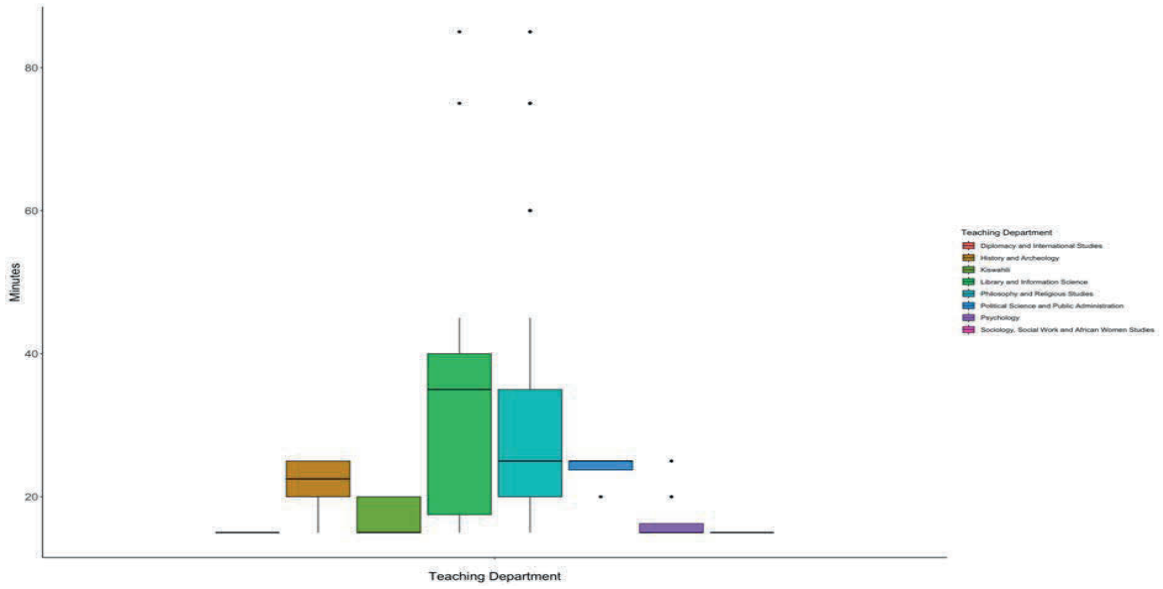

Figure 3:Box plot showing word count distribution by department

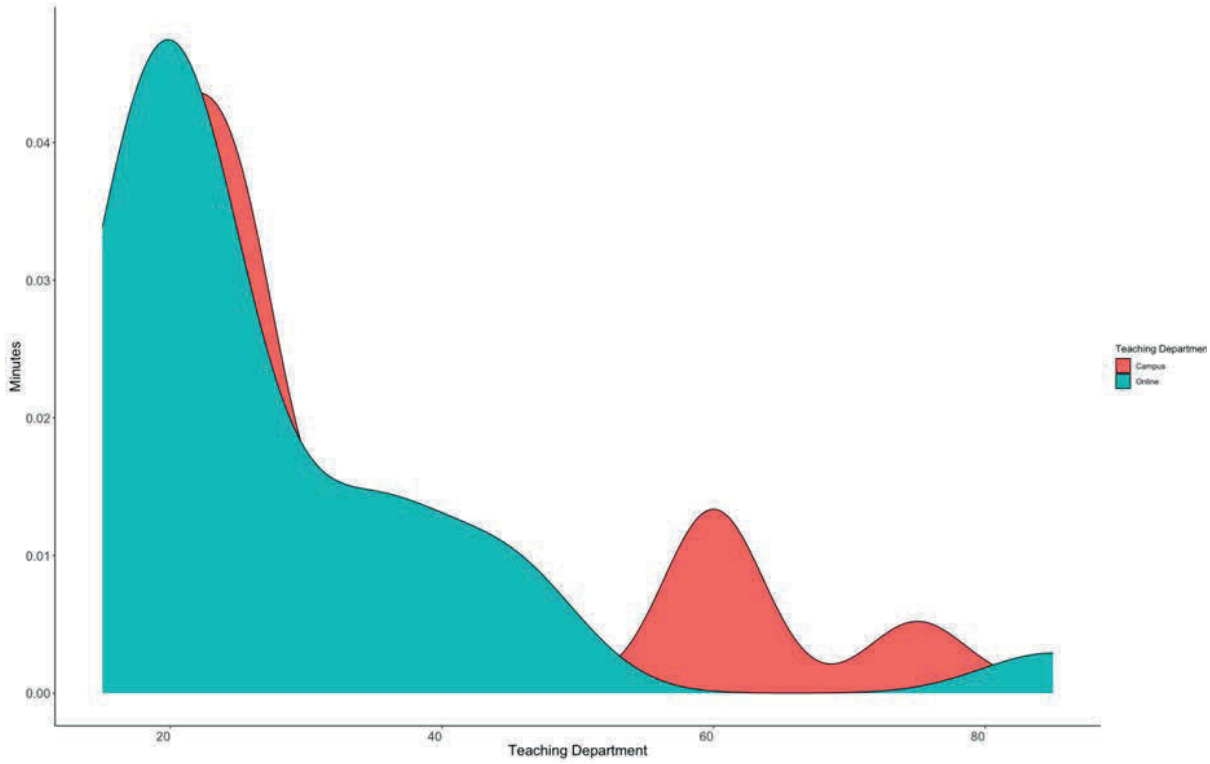

Figure 4:Graph showing word count distribution by department

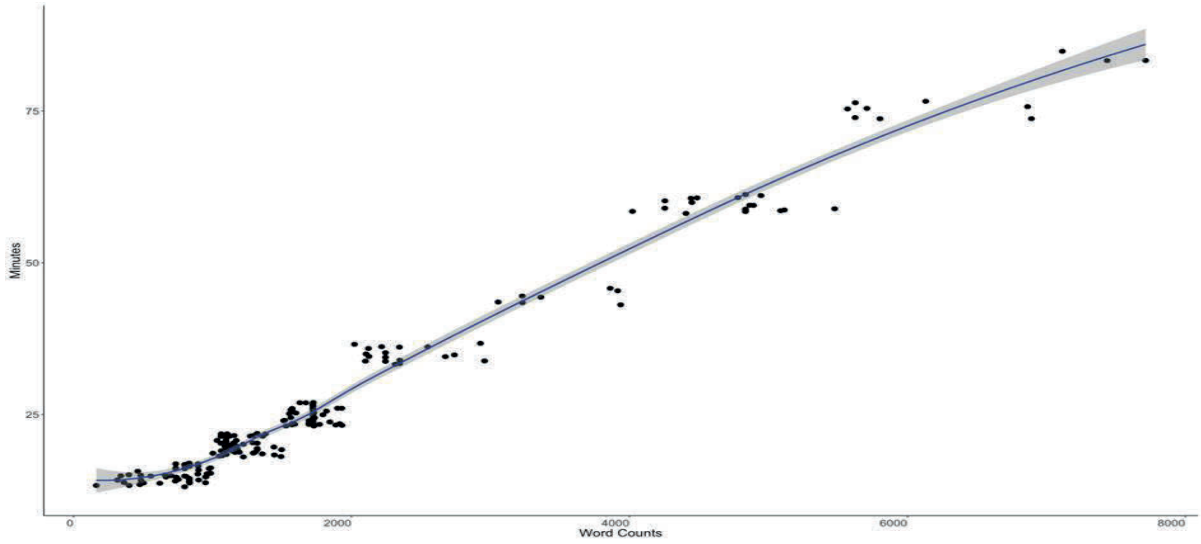

Figure 5:Graph showing word count distribution by department

Collectively, these findings provide a comprehensive demographic and engagement profile of the study participants. They indicate that Studiosity was primarily adopted in essay-intensive disciplines, that participation was highest among first-year students, and that writing output varied substantially across departments and year levels. This baseline understanding of the participant cohort sets the stage for interpreting the pre- and post-test comparisons of writing performance.

7.2 Critical Thinking in Academic Writing: Argument Evaluation, Perspective Analysis, Source Validation, and Argument Development

***Student Reflection**: "Academic writing has been a bit of struggle. Sometimes I have some ideas in my head but getting them onto paper in a clear and structured way was difficult. Thanks to Studiosity, I can now organize my thoughts better.*

Critical thinking remains a central pillar of academic writing, allowing students to interrogate assumptions, evaluate arguments, and present reasoned positions. In this study, four dimensions

were examined: evaluation of arguments, analysis of perspectives, validation of sources, and confidence in developing independent arguments. Each of these areas is fundamental because without them, students risk producing descriptive rather than analytical work. Recent research emphasizes that digital learning platforms can nurture critical engagement by offering structured feedback and opportunities for reflection, which in turn fosters greater analytical depth . The results presented here therefore provide insight into whether Studiosity contributed to measurable growth in these areas of student performance.

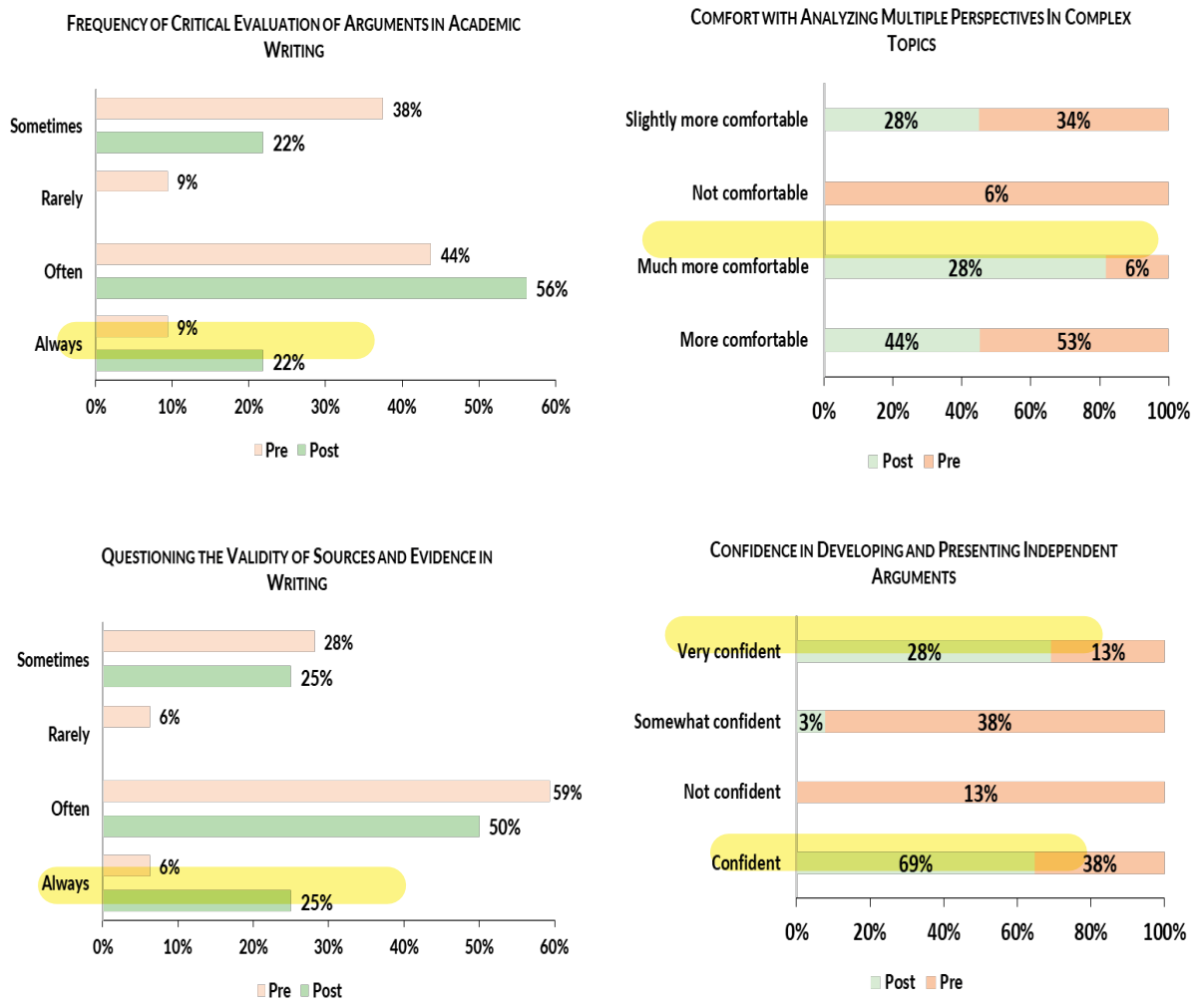

Figure 6:Critical Thinking in Academic Writing Dimensions

At the start, just 9 percent of students reported that they always evaluated arguments in their writing; 38 percent did so only sometimes. After the intervention, the proportion of students who always engaged in argument evaluation rose to 22 percent, while the sometimes category dropped to 22 percent. No students remained in the rare category, indicating universal minimum engagement. This trend aligns with findings that, combined human and analytics feedback encourages students to actively reflect and reason rather than respond superficially (Suraworachet et al., 2022). Handling diverse perspectives is critical for nuanced academic writing. Initially, only 6 percent of students felt "much more comfortable" analyzing multiple viewpoints, while 53 percent rated themselves merely as "more comfortable." Post-intervention, 28 percent reported feeling much more comfortable, and none remained in the "not comfortable" category; a notable improvement in student readiness to engage with complex topics. This finding resonates with research showing that structured feedback helps learners integrate diverse perspectives confidently (Busby & Malone, 2023). The increase in consistent argument evaluation signals and analysis of multiple viewpoints suggested that interaction with Studiosity deepened students' analytical approaches and broadened their critical framing of issues.

Evaluating the credibility and relevance of sources is a hallmark of academic rigor. At baseline, only 6 percent of students always questioned the validity of their sources, while 59 percent did so often. After the intervention, that "always" group increased to 25 percent, and no students remained in the rare category. This reinforces the idea that structured, timely feedback prompts students to critically assess evidence before incorporation, aligning with broader findings about effective feedback methods (Suraworachet et al., 2022). Students' belief in their own writing ability can drive deeper engagement. At entry, only 13 percent felt "very confident" in developing

arguments, and 38 percent "confident," with the remainder less so. After using Studiosity, 28 percent felt very confident and 69 percent confident—showing a dramatic increase—and notably, no students were not confident. This aligns with findings that supporting feedback can bolster students' writing self-efficacy (Busby & Malone, 2023). The shift demonstrates both enhanced skill and stronger confidence, showing how Studiosity strengthened students' engagement with source quality and overall argumentative capacity.

The findings showed that students indicated a marked improvement in all four critical thinking domains after using Studiosity. Their habits in evaluating arguments, comfort with multiple perspectives, scrutiny of sources, and confidence in building arguments all significantly increased. These results support emerging evidence that technology-enhanced feedback, especially when blended with human input, can strengthen higher-order thinking and engagement (Suraworachet et al., 2022; Busby & Malone, 2023).

7.3 Language Use and Expression in Academic Writing: Vocabulary, Structure, Style, and Clarity

***Student Reflection**: "Studiosity has helped us in grammar and punctuation. If there are problems, the platform may help you analyze and correct them."*

Language remains a cornerstone of effective academic writing because it shapes how arguments are communicated and understood. In this study, students were asked to reflect on their ability to use varied vocabulary, construct complex sentences, adapt tone and style, and clearly express ideas. These aspects go beyond correctness and influence how persuasively and coherently ideas are presented. Recent studies highlight that targeted feedback helps students to expand their language resources, refine sentence construction, and adopt academic conventions with greater

consistency. The results below illustrate how students' self-reported language use developed after engaging with Studiosity.

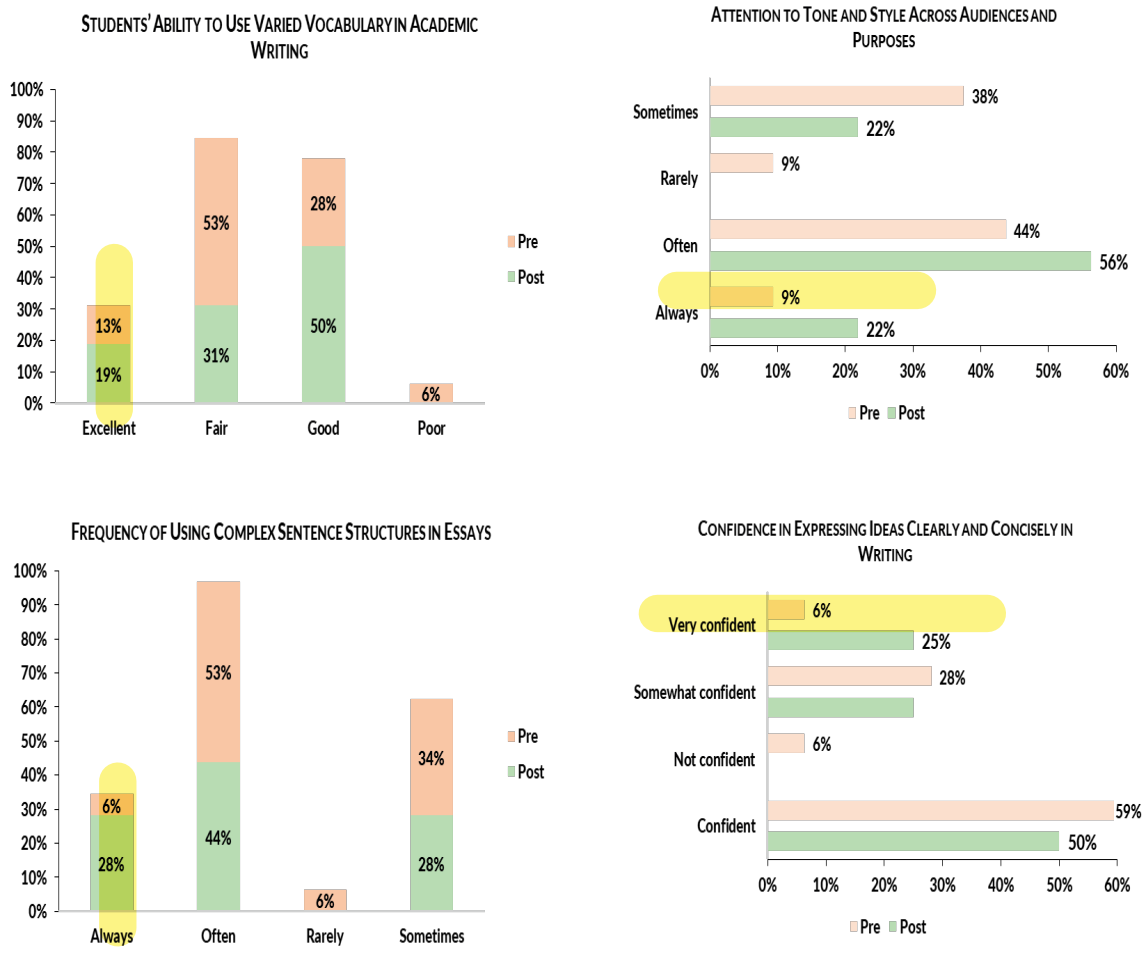

Figure 7:Dimensions of Language Use and Expression in Academic Writing

Initially, over half (53 percent) of students rated their vocabulary use as "fair," while 6 percent placed themselves in the "poor" category. After the intervention, those in the "fair" category dropped to 31 percent. At the same time, two stronger categories; "good" (50 percent) and "excellent" (19 percent), rose considerably. No student remained in the "poor" category. This shift

indicates that exposure to feedback prompted students to expand their vocabulary. The finding aligns with evidence that timely, individualized feedback supports learners in incorporating a broader range of academic lexis (Hojeij & Ayber, 2022). At baseline, only 9 percent of students always used complex sentence structures, while 38 percent did so only sometimes, and 9 percent rarely. After using Studiosity, the "always" category increased to 22 percent, while the "rarely" group dropped to zero. The "often" group also saw a rise, increasing from 44 percent to 56 percent. This pattern suggests that the platform encouraged learners to adopt syntactically richer expressions. Existing research supports this, showing that digital feedback helps learners vary sentence complexity and improve cohesion (Hojeij & Ayber, 2022).

Only 6 percent of students initially reported always adjusting tone and style for their audience, while 34 percent said they did so sometimes. Post-intervention, 28 percent were now in the "always" category, and no student remained in the "rarely" group. This demonstrates clearer awareness of rhetorical contexts and adaptability. Studies from African contexts emphasize that tailored feedback helps students better align their writing with audience expectations and communicative purpose (Venter, 2025). It suggests that Studiosity supported greater stylistic control. At entry, 59 percent of students rated themselves as confident, 28 percent somewhat confident and 6 percent very confident; 6 percent were not confident. After the intervention, the "very confident" group grew to 25 percent, the "confident" category remained high at 50 percent, and no student was in the "not confident" category. This upward shift in self-assurance reflects improvements not just in mechanics but also in clarity and precision. Feedback-enhanced writing interventions have been shown to improve learner autonomy across sub-Saharan African contexts (Hojeij & Ayber, 2022).

Across all four language dimensions, students showed notable progress following their engagement with Studiosity. They reported richer vocabulary, more complex sentence construction, improved tone/style awareness, and stronger confidence in clarity. These improvements reflect both linguistic competence and rhetorical adaptability. The findings align with recent research on the efficacy of targeted feedback, especially in African and EFL contexts (Hojeij & Ayber, 2022; Venter, 2025). The results underscore the role of digital platforms in elevating language performance in academic writing.

7.4. Spelling and Grammar in Academic Writing: Accuracy, Correction, and Confidence

***Student Reflection**: "I upload my work for review, and I get reviews for structure, language, tone, grammar, and spelling. The better part of it is that I can use it as many times as possible—even 30 times—until I am satisfied."*

Spelling and grammar form the backbone of written communication in academia, shaping how arguments are received and interpreted by readers. Mistakes in these areas can diminish the credibility of student work, while accuracy signals mastery and professionalism. This study examined four aspects of accuracy: reviewing work for errors, comfort in identifying mistakes, the use of correction tools, and confidence in writing grammatically correct sentences. These measures help explain how learners develop both the habits and the assurance needed to sustain long-term writing competence. Research shows that technology-mediated feedback improves grammatical accuracy while encouraging greater independence in editing practices. Evidence from African higher education further supports the view that digital tools like Grammarly foster accuracy and self-efficacy in postgraduate writing.

Figure 8:Dimensions of Spelling and Grammar in Academic Writing

At the beginning of the study, just 13 percent of students reported always reviewing their work for errors, while 38 percent admitted to doing so only sometimes and 13 percent rarely. After using Studiosity, the “always" group more than doubled to 28 percent, and 69 percent reported often reviewing, leaving no students in the rare category. This shift indicates a meaningful strengthening of revision habits, showing that students became more disciplined in checking their work for accuracy. Such progress suggests that feedback exposure encouraged students to view writing as an interative process rather than a one-time exercise. These results reflect research showing that

corrective feedback encourages learners to develop stronger revision strategies that reduce recurring errors.

By reinforcing regular self-checking, Studiosity appears to have helped students build an essential foundation for accuracy. Students also reported notable growth in their ability to recognize and correct grammatical mistakes. At baseline, half of the participants (50 percent) felt only somewhat confident, and just 6 percent described themselves as very confident. Post-intervention, 22 percent reported feeling very confident, 56 percent confident, and none were not confident, showing a strong shift in self-perception. This improvement highlights that consistent feedback gave students the tools and assurance to address errors more effectively. Findings from South African universities similarly show that digital writing aids boost student confidence in grammar by providing immediate and targeted feedback (van Wyk, 2025). The increase in comfort levels here demonstrates how Studiosity contributed to enhancing both accuracy and confidence in grammar correction.

Another significant development was students' increased use of digital tools such as spell checkers and grammar checkers. At entry, only 6 percent of students always used such tools, while 38 percent did so sometimes and 9 percent rarely. After using Studiosity, 31 percent reported always using tools, 41 percent often, and none rarely, indicating widespread adoption of technology for error detection. This result suggests that Studiosity encouraged students to integrate supportive digital resources into their writing process. Such a shift aligns with broader findings that tool-based corrective feedback fosters autonomy, as students become less reliant on teachers and more responsible for their own writing improvement (Norouzi et al., 2025). By promoting tool use, Studiosity not only improved accuracy but also nurtured students' digital literacy skills. Confidence in producing grammatically correct sentences improved steadily across the study.

Initially, just 9 percent of students were very confident and 31 percent confident, while over half (53 percent) were only somewhat confident and 6 percent not confident. Following the intervention, 19 percent described themselves as very confident and 44 percent confident, with none not confident. These results reflect not only improved grammatical accuracy but also increased self-belief in students' ability to communicate clearly and correctly. Confidence of this kind is important because it shapes how learners approach complex writing tasks and their willingness to take intellectual risks. Evidence shows that when learners believe in their ability to write accurately, they engage more actively with feedback and improve their performance over time (van Wyk, 2025). Thus, Studiosity's feedback seems to have supported both competence and confidence in grammar.

The results demonstrate substantial progress in spelling and grammar after students engaged with Studiosity. They developed stronger revision habits, felt more comfortable identifying and correcting mistakes, adopted supportive tools more consistently, and expressed greater confidence in their ability to write accurately. These outcomes suggest that Studiosity not only addressed technical weaknesses but also fostered positive learning behaviors that sustain long-term writing development. The findings echo recent evidence showing that technology-mediated feedback can improve grammatical accuracy and promote learner independence in editing (Norouzi et al., 2025). Similarly, research from Africa underscores that digital writing aids support both competence and self-efficacy in academic writing (van Wyk, 2025). Overall, Studiosity contributed to enhancing both accuracy and assurance, equipping students with the skills necessary for effective scholarly communication.

7.5 Use of Sources in Academic Writing: Integration, Citation, Credibility, and Paraphrasing

***Student Reflection**: "At times we are worried about artificial intelligence in terms of academics, its ethical use. But then Studiosity, as we realized, is a tool that only guides students on the corrections they have to make on the work they have already worked on.""*

Using sources effectively is central to academic writing because it strengthens arguments, demonstrates scholarly engagement, and safeguards academic integrity. Students must be able to integrate sources to support their claims, cite them correctly, evaluate their credibility, and paraphrase without plagiarism. Weaknesses in any of these areas can lead to poorly supported arguments or even academic misconduct. Digital learning platforms have been shown to support source-related skills by offering targeted feedback and real-time checks (Fithriani, 2021). In Kenya, research confirms that instructional feedback and guidance improve students' abilities to cite and reference correctly, thereby reducing plagiarism risks (Ngure, 2020). The results presented here highlight how Studiosity influenced students' practices across these four dimensions.

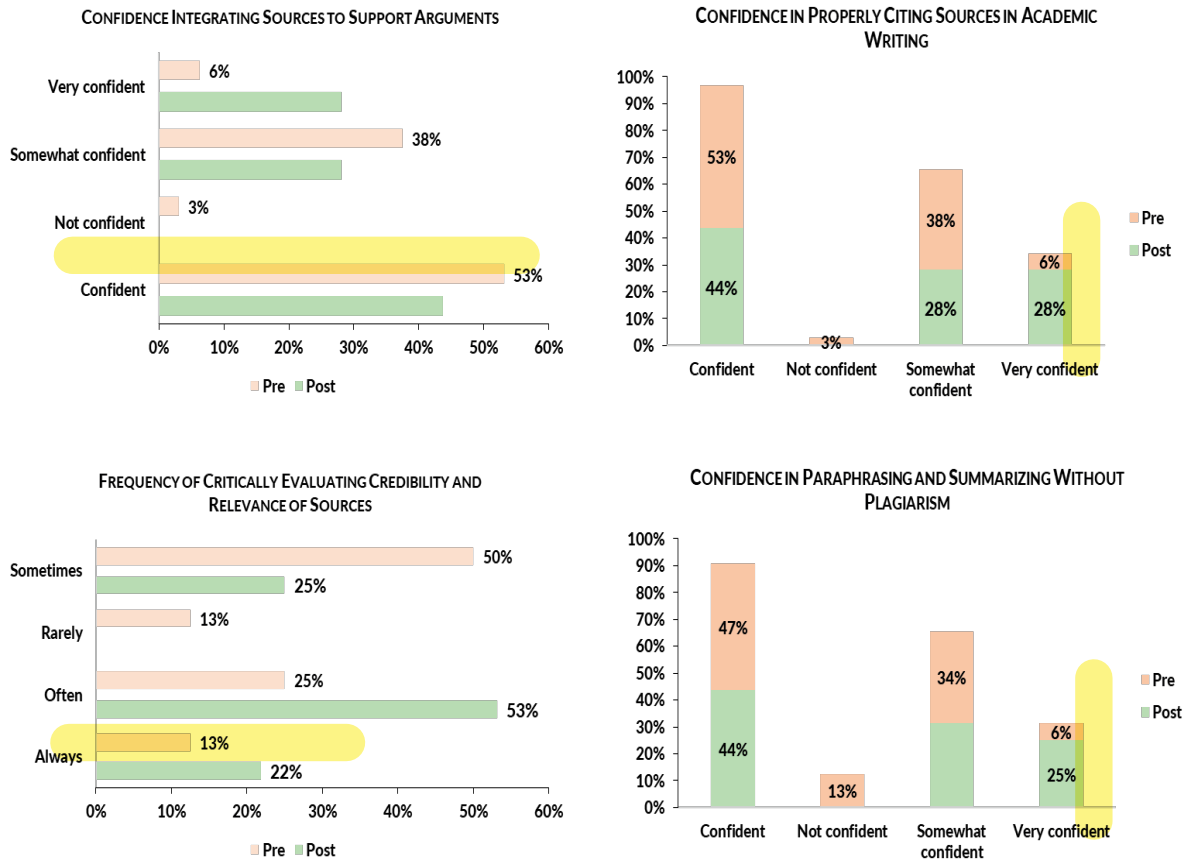

Figure 9:Dimensions of Use of Sources in Academic Writing

At the start, a very small number (6 percent) of students felt very confident in consistently integrating sources, while 53 percent felt confident and 3 percent were not confident. After using Studiosity, the very confident group rose to 28 percent, while the confident group remained substantial at 44 percent, with no students weren't confident. This suggests that students grew more adept at weaving evidence into their writing rather than treating sources as standalone citations. Studies confirm that targeted feedback helps learners move beyond token references toward more purposeful integration to support their reasoning (Schiller et al, 2024). This upward shift indicates that Studiosity likely fostered more deliberate and effective use of sources.

Citation competence is central to academic credibility, yet many students struggle without clear guidance. Initially, only 6 percent of students were very confident in citing sources correctly; 38 percent were confident, and a small portion were not confident. After the intervention, 28 percent described themselves as very confident, 44 percent as confident, with no one lacking confidence. This improvement suggests that the tool helped students internalize citation principles as a standard part of writing. Kenyan research underscores that formal training in citation skills supports the maintenance of academic integrity among postgraduate students (Wanene et al., 2025). Thus, Studiosity appears to have contributed to bolstering both awareness and routine adherence to proper citation practices.

Critical appraisal of sources is vital for academic rigor. At baseline, only 13 percent of students said they always evaluated source credibility, while 50 percent did so only sometimes and 13 percent rarely. Following the intervention, the “always-evaluated" group increased to 22 percent, the "often" category rose to 53 percent, and no students remained in the rare group. This shift indicates growing discernment regarding source selection and a higher threshold for inclusion. Literature highlights that training focused on evaluating digital information strengthens learners' ability to discern credible information from unreliable sources (Odongo, Njoroge, & Njoroge, 2025). These results suggest Studiosity may have encouraged more reflective and critical engagement with evidence.

Paraphrasing accurately requires both linguistic skill and ethical understanding. Initially, only 6 percent of students were very confident, whereas 34 percent were somewhat confident and 13 percent were not confident. After using Studiosity, 25 percent said they felt very confident, 44 percent confident, and none remained not confident. This suggests that students gained both the ability and conviction to restate ideas in their own words responsibly. Techniques such as reflective

feedback and model paraphrasing exercises have been found to improve paraphrasing skills and reduce patchwriting in postgraduate contexts (Odongo et al., 2025). The pattern here implies that Studiosity helped students develop both the skill sets and ethical awareness for effective paraphrasing.

The findings demonstrated students showed meaningful growth in how they used and engaged with sources: they integrated evidence more strategically, cited confidently, evaluated credibility more rigorously, and paraphrased with greater assurance. These patterns correlate with global evidence that digital platforms offering detailed source-related feedback improve academic writing practices (Schiller et al, 2024). The findings also align with Kenyan research on the need and impact of structured instruction in citation and referencing (Wanene et al., 2025), and broader African studies highlighting the importance of critical source evaluation (Odongo et al., 2025). Together, the evidence suggests that Studiosity not only improved technical use of sources but also advanced students' scholarly judgment and integrity.

7.7 Essay Structure and Organization in Academic Writing: Outlining, Logic, Transitions, and Cohesion

***Lecturer Reflection**: "Studiosity helps our students to counter check their work in terms of organizing their ideas logically, and also for grammatical corrections and construction."*

Essay structure is central to academic writing because it determines how ideas are sequenced, connected, and presented for maximum clarity. A well-organized essay enables readers to follow arguments easily, while weak structure undermines even strong content. This section assessed students' habits of outlining, confidence in organizing ideas logically, use of transitions, and overall ability to produce cohesive essays. These skills combine technical organization with

rhetorical awareness, reflecting both planning and execution. Research shows that structured feedback and pre-writing activities significantly enhance coherence and logical flow in student texts (Samsudin et al, 2025). In the Kenyan context, evidence also emphasizes that guided instruction on outlining and paragraphing improves writing outcomes in higher education (Ouma, 2021).

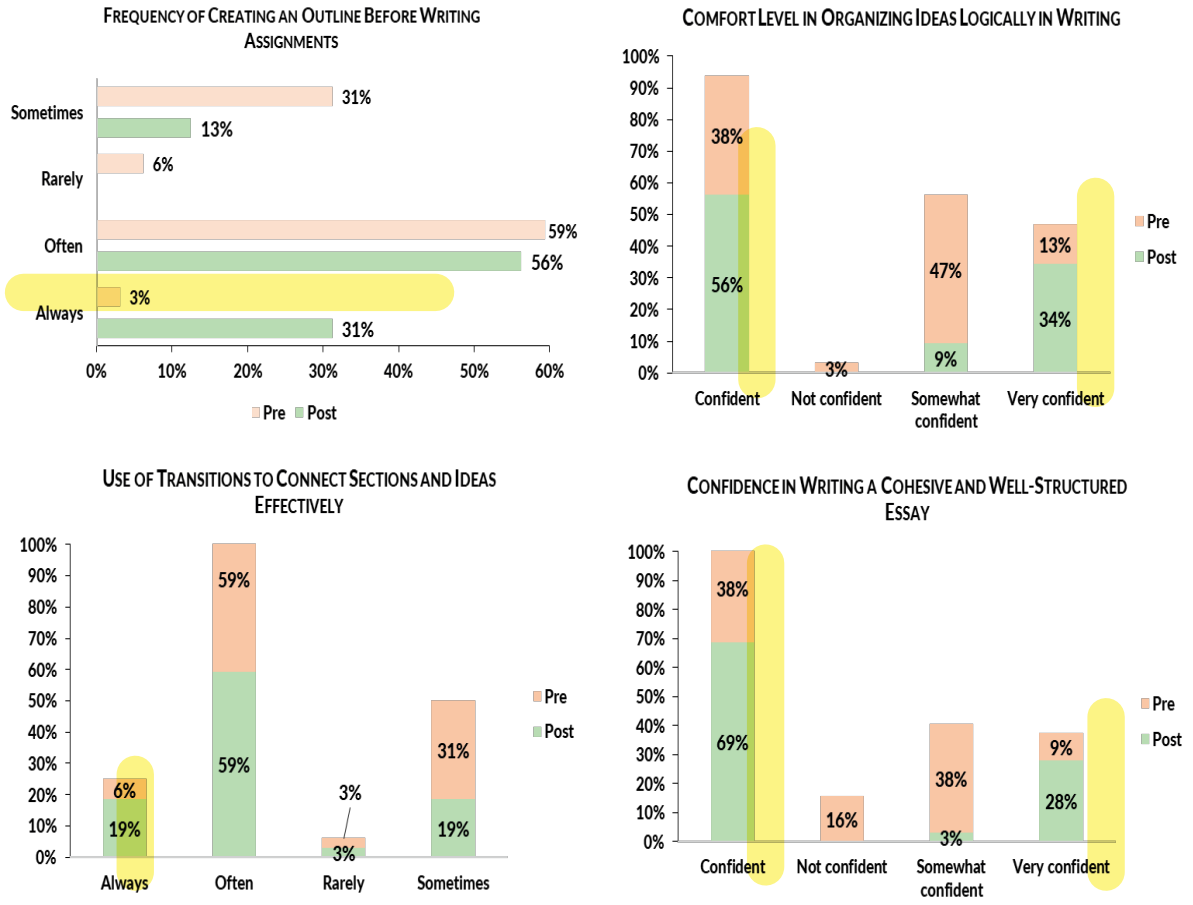

Figure 10:Dimensions of Use of Sources in Academic Writing

The results showed a clear improvement in students' pre-writing practices and their ability to organize ideas logically. At baseline, only 3% of students reported that they always created an outline, while nearly one-third (31%) did so sometimes and 6% rarely. After using Studiosity, the percentage of students who always outlined rose sharply to 31%, and none remained in the rare group. A similar upward trend was observed in confidence with organizing ideas logically, where the proportion of students who were very confident increased from 13% to 34%, and those somewhat confident declined from 47% to 9%. These findings suggest that Studiosity encouraged greater use of planning as a strategy and improved students' ability to sequence arguments in a logical order. This aligns with global evidence showing that pre-writing strategies, particularly outlining, enhance the overall coherence of essays (Malik et al, 2023), and with analysis from Kenya emphasizing that explicit instruction in organizing ideas improves students' academic writing competence (Chege & Ndethiu, 2018).

Similar patterns were observed in the use of transitions and in overall confidence with essay cohesion. At entry, only 6% of students reported always using transitions effectively, while 31% did so sometimes and 3% rarely. Post-intervention, the always category increased to 19%, and the sometimes category dropped to 19%, indicating improved attention to cohesion markers. Confidence in writing cohesive essays also rose significantly, with 28% reporting themselves as very confident and 69% as confident, compared to just 9% and 38% respectively at baseline. Importantly, no student remained in the not confident category, which had previously stood at 16%. These findings suggest that Studiosity helped students become more deliberate in linking ideas and more assured in producing well-structured assignments. This is consistent with research showing that targeted feedback can improve students' sensitivity to cohesion devices, leading to better readability and flow (Rahimi & Zhang, 2021).

The results establish that students made measurable progress in the structural aspects of academic writing after engaging with Studiosity. They became more consistent in outlining, more confident in logical sequencing, more attentive to transitions, and more assured in producing cohesive essays. This progress resonates with findings that digital platforms, when combined with human feedback, foster both technical organization and learner self-efficacy in academic writing (Schiller et al, 2024). In the Kenyan context, where writing instruction has historically lacked sufficient emphasis on planning and structural skills, these results highlight the potential of supplemental feedback platforms to address such gaps (Chege & Ndethiu, 2018). Overall, Studiosity appears to have provided students with both the skills and confidence needed to structure essays in ways that meet academic standards.

8. Summary of Findings

The findings of this study demonstrate that Studiosity made a measurable and positive contribution to students' academic writing performance in the Faculty of Arts and Social Sciences at the University of Nairobi. Across the five domains of assessment—critical thinking, language use, spelling and grammar, use of sources, and essay structure—students reported significant improvement after engaging with the platform. In critical thinking, for example, more students reported frequently evaluating arguments, analyzing multiple perspectives, validating sources, and confidently developing independent arguments compared to baseline levels. These findings are consistent with international research that highlights the role of structured, timely feedback in cultivating higher-order reasoning and reflective engagement with academic tasks (Suraworachet, Zhou, & Cukurova, 2023; Busby & Malone, 2023). The results therefore affirm that digital feedback tools such as Studiosity can support students in moving beyond descriptive forms of writing towards more analytical and evaluative approaches.

Language use and expression also showed considerable gains. At baseline, many students described their vocabulary as limited and their sentence structures as simple, while few reported adapting tone and style to suit different academic audiences. After the intervention, however, most students indicated confidence in using varied vocabulary, constructing complex sentences, and adjusting stylistic features to fit the purpose of their assignments. Confidence in clarity and conciseness also improved, with more students reporting they could now express ideas effectively. These findings align with wider studies on technology-enhanced learning, which show that targeted digital feedback enables students to expand their lexical range and rhetorical adaptability (Hojeij & Ayber, 2022; Venter, Coetzee, & Schmulian, 2025). Within the Kenyan context, this is significant because it demonstrates how structured feedback can help address linguistic barriers that arise in multilingual learning environments (Chege & Ndethiu, 2018).

Technical accuracy in spelling and grammar was another area of notable progress. Initially, many students admitted to rarely reviewing their work for errors, and a significant proportion described themselves as only somewhat confident in grammatical correctness. After engaging with Studiosity, there was a marked shift towards consistent reviewing practices, greater use of grammar-support tools, and higher comfort in identifying and correcting mistakes. Confidence in grammatical accuracy rose substantially, with very few students reporting uncertainty at exit. These outcomes are in line with findings from studies in Africa and elsewhere that emphasize how AI-enabled platforms can foster habits of revision, self-correction, and independent learning (van Wyk, 2025). Given the constraints of large class sizes and limited individual lecturer feedback, these results suggest that Studiosity filled an important support gap in technical writing skills.

The study also showed improvement in the responsible use of sources and the structural coherence of essays. Students became more confident in integrating evidence, citing sources correctly,

paraphrasing without plagiarizing, and critically evaluating the credibility of references. These outcomes echo Kenyan studies that stress the importance of structured interventions for strengthening referencing skills and reducing plagiarism (Mugera, Gichuhi, & Njoroge, 2025; Odongo, Njoroge, & Njoroge, 2025). In terms of essay organization, there was a substantial rise in students who reported outlining their work before writing, sequencing ideas logically, and employing transitions effectively. Confidence in producing cohesive essays also grew, with most students describing themselves as confident or very confident at exit. These findings support broader evidence that guided pre-writing strategies and targeted feedback interventions enhance both cohesion and coherence in student texts (Rahimi & Zhang, 2022; Malik et al., 2023). Collectively, these results demonstrate that Studiosity contributed not only to technical skill enhancement but also to the development of higher-order academic competencies.

9. Conclusions

This study concludes that Studiosity had a demonstrable positive impact on academic writing competencies among students in the Faculty of Arts and Social Sciences at the University of Nairobi. The platform contributed to improvements in critical thinking, language use, grammatical accuracy, referencing practices, and essay structure. The results confirm that AI-driven feedback, when carefully implemented, can bridge persistent gaps in writing instruction, particularly in contexts where lecturer-to-student ratios limit opportunities for individualized guidance. By fostering both competence and confidence, Studiosity empowered students to approach academic writing tasks with greater assurance and rigor, reinforcing the value of blended support mechanisms that integrate technology with conventional teaching and learning.

The findings also carry broader pedagogical and policy implications. Studiosity's effectiveness highlights the potential of AI-enhanced platforms to support national higher education objectives

such as those outlined in the Commission for University Education's standards and Kenya's Digital Master Plan (2022–2032). Globally, the results align with UNESCO's (2023) call for responsible adoption of digital learning technologies that improve quality, inclusivity, and academic integrity. Importantly, the study also demonstrated that successful integration requires contextual adaptation and active support from both students and faculty. The evidence therefore suggests that Studiosity is best positioned as a complementary rather than substitutive tool, where its capacity to deliver timely, individualized feedback enhances but does not replace the role of human instructors.

10. Recommendations

The study recommends that the University of Nairobi and other higher education institutions in Kenya adopt Studiosity or similar AI-based platforms more broadly to strengthen academic writing support. However, such adoption should be integrated into existing teaching and learning systems through structured orientations, ongoing technical support, and alignment with specific course objectives. A blended approach is strongly encouraged, where automated feedback is complemented by lecturer and peer engagement to maximize both the immediacy and the depth of feedback. This dual strategy would enable institutions to manage resource constraints while ensuring that students still benefit from the critical insights that only human evaluators can provide.

At a policy level, universities should develop frameworks to guide the integration of AI tools within academic support systems. These frameworks should address infrastructural barriers such as internet access and device availability, as well as capacity-building needs for students and faculty. At the national level, leveraging AI-enabled feedback systems aligns with Kenya's digital transformation agenda and contributes to Sustainable Development Goal 4, which emphasizes inclusive and equitable quality education. Continuous monitoring and evaluation would be

essential to refine the use of Studiosity, ensuring that it remains responsive to the unique needs of Kenyan students and contributes to the broader global discourse on ethical and effective digital learning adoption.

References

Alqahtani, N., & Wafula, Z. (2025). Artificial intelligence integration: Pedagogical strategies and policies at leading universities. *Innovative Higher Education*, *50*(2), 665-684.

Busby, D., & Malone, C. (2023). Writing Circles: Developing Learner Self-Efficacy and Agency through Peer Review Activities. *Journal of Learning Development in Higher Education*, 27, 1-23.

Carter, H., Abbott, J., & Wright, K. L. (2022). Preservice teachers' preparedness to teach writing: Looking closely at a semester of structured literacy tutoring. *Journal of Writing Research*, *14*(1), 77-111.

Chege, A. M., & Njengere, D. (2018). The state of academic writing in Kenyan universities: Making a case for Kenyan universities to re-conceptualize their approach to teaching academic writing. *The Journal for Research and Practice in College Teaching*, *3*(1), 10-46.

Cosgrove, S. (2018). Size matters: class numbers and the creative writing workshop. *TEXT*, *22*(Special 51), 1-10.

Dawson, P., & Bearman, M. (2020). Concluding Comments: Reimagining University Assessment in a Digital World. In M. Bearman, P. Dawson, R. Ajjawi, J. Tai, & D. Boud (Eds.), Re-imagining University Assessment in a Digital World (pp. 291–296). Springer International Publishing. https://doi.org/10.1007/978-3-030-41956-1_20

Deep, P. D., & Chen, Y. (2025). The Role of AI in Academic Writing: Impacts on Writing Skills, Critical Thinking, and Integrity in Higher Education. *Societies*, *15*(9), 247.

Delaney, T. (2013). Academic Writing in a Second or Foreign Language: Issues and Challenges facing ESL/EFL Academic Writers in Higher Education Contexts. Ramona Tang (Ed.). London: Continuum, 2012. Pp. xii+ 250. *Studies in Second Language Acquisition*, *35*(3), 570-570.

Diaz-Garcia, V., Montero-Navarro, A., Rodríguez-Sánchez, J. L., & Gallego-Losada, R. (2022). Digitalization and digital transformation in higher education: A bibliometric analysis. *Frontiers in psychology*, *13*, 1081595.

Hojeij, Z., & Ayber, P. O. (2022). Effectiveness of using digital feedback on EFL student writing skills. *International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT)*, *12*(1), 1-18.

Hyland, K. (2019). *Second language writing*. Cambridge University Press.

Kariuki, T. N., Ruto, P., Gichanga, R. W., & Wainaina, H. (2025). A Comparative Analysis of Artificial Intelligence Learning and In-Class Learning in Kenyan Universities. *African Multidisciplinary Journal of Research*, *1*(1), 443-460.

Kenya Digital Master plan (2022-2032). https://www.icta.go.ke/page?q=12&type=business

Kimanzi, P. R., Bwire, A., & Miima, F. (2018). Influence of teacher feedback techniques on students' essay writing skills in english language in secondary schools in Nairobi County,

Kenya. *Kenya School of Education. Department of Educational Communication and Technology*.

Kothari, C. R. (2004). Research methodology: Methods and techniques. New Age International.

Langat, A. K. (2025). Transition from analogue to digital technology: Examining teaching, learning, and assessment in higher education in Kenya. In *Artificial Intelligence, Digital Learning, and Leadership: Redefining Higher Education* (pp. 89-118). IGI Global.

Lea, M. R., & Street, B. V. (1998). Student writing in higher education: An academic literacies approach. *Studies in higher education*, *23*(2), 157-172.

Luckin, R., Cukurova, M., Kent, C., & Du Boulay, B. (2022). Empowering educators to be AI-ready. *Computers and Education: Artificial Intelligence*, *3*, 100076.

Malik, A. R., Pratiwi, Y., Andajani, K., Numertayasa, I. W., Suharti, S., & Darwis, A. (2023). Exploring artificial intelligence in academic essay: higher education student's perspective. *International Journal of Educational Research Open*, *5*, 100296.

Mbangeleli, N., & Funda, V. (2024, November). Mapping the evidence around the use of ai-powered tools in south african universities: A systematic review. In *International Conference on Education Research*.

Means, B., & Neisler, J. (2021). Teaching and learning in the time of COVID: The student perspective. *Online Learning*, *25*(1).

Mugera, L. W., Gichuhi, Z. W., & Njoroge, G. G. (2025). Proficiency in Citation and Referencing by Postgraduate Students and its Effects on Academic Reputation in Selected Public Universities in Kenya. *Regional Journal of Information and Knowledge Management*, *10*(1), 201-217.

Mugera, L. W., Gichuhi, Z. W., & Njoroge, G. G. (2025). Proficiency in Citation and Referencing by Postgraduate Students and its Effects on Academic Reputation in Selected Public Universities in Kenya. *Regional Journal of Information and Knowledge Management*, *10*(1), 201-217.

Muthanga, B. N., Maku, P. G., & Ogalo, J. O. (2024). Promoting digital literacy: The uptake of OER by members of faculty in teaching and research for a technological transition in institutions of higher learning. *Journal of Information and Knowledge*, 53-62.

Norouzi, R., Zeinodin, S. Y., & Rahimi, M. (2025). Enhancing writing skills in L2 learners through technology-mediated written corrective feedback: A scoping review of articles published between 2015 and 2025. *Interdisciplinary Studies in English Language Teaching*, (Articles in Press).

Obura, E. A., & Emoit, P. I. (2024). Artificial Intelligence in Academic Writing and Research Skills in Kenyan Universities: Opportunities and Challenges. *Africa Education Review*, *20*(6), 58-80.

Ochieng, D. O. O. (2021). Beyond English: Multilingualism and Education in Kenya. *Africa Education Review*, *18*(3-4), 1-30.

Odongo, S., Njoroge, G., & Njoroge, R. (2025). Navigating Academic Integrity: Postgraduate Students' Awareness of Plagiarism and the Library's Preventive Role. *Eastern Africa Journal of Contemporary Research*, *5*(1), 95-106.

Odongo, S., Njoroge, R., & Njoroge, G. G. (2025). Plagiarism awareness and practice by postgraduate students in public universities in Kenya: From an academic integrity standpoint. *Regional Journal of Information and Knowledge Management*, *10*(1), 167-181.

Ouma, D. S. (2021). Theory versus pragmatism: Quest of achieving academic objectives in Kenyan universities. *International Journal of Social Sciences & Educational Studies*, *8*(1), 18-36.

Rahimi, M., & Zhang, L. J. (2022). Effects of an engaging process-genre approach on student engagement and writing achievements. *Reading & Writing Quarterly*, *38*(5), 487-503.

Rahimi, M., & Zhang, L. J. (2022). Effects of an engaging process-genre approach on student engagement and writing achievements. *Reading & Writing Quarterly*, *38*(5), 487-503.

Resnik, D. B. (2020). Ethics of research with human subjects. Springer.

Samsudin, N., Wan Mohd Rosly, W. N. S., Syed Abdullah, S. S., & Ahmad Shukri, F. N. (2025). The importance of lecturers' feedback in enhancing students' academic performance. *Beyond Boundaries: The Multidimensional Horizons of E-Learning*, *9*, 115-120.

Schiller, R., Fleckenstein, J., Mertens, U., Horbach, A., & Meyer, J. (2024). Understanding the effectiveness of automated feedback: Using process data to uncover the role of behavioral engagement. *Computers & Education*, *223*, 105163.

Selwyn, N. (2024). Digital degrowth: Toward radically sustainable education technology. *Learning, Media and Technology*, *49*(2), 186-199.

Smith, J. (2022). Grammar teaching practices of ESOL school teachers. *TESOL Journal*, *13*(1), e611.

Suraworachet, W., Zhou, Q., & Cukurova, M. (2023). Impact of combining human and analytics feedback on students' engagement with, and performance in, reflective writing tasks. *International Journal of Educational Technology in Higher Education*, *20*(1), 1-24.

UNESCO. (2023). *Guidance for generative AI in education and research*. Unesco Publishing.

van Wyk, M. M. (2025). AI-Smart Technologies Digitally Transformed Higher Education Institutions: A Systematic Literature Review. *AI Smart-Enabled Architecture and Infrastructure for Higher Education*, 75-100.

Venter, J., Coetzee, S. A., & Schmulian, A. (2025). Exploring the use of artificial intelligence (AI) in the delivery of effective feedback. *Assessment & Evaluation in Higher Education*, *50*(4), 516-536.

Wanene, L., Gichuhi, Z. W., & Njoroge, G. G. (2025). Proficiency in Citation and Referencing by Postgraduate Students and its Effects on Academic Reputation in Selected Public Universities in Kenya.

Wingate, U. (2006). Doing away with ‘study skills’. *Teaching in higher education*, *11*(4), 457-469.

Yuan, B., & Hu, J. (2024). Generative AI as a tool for enhancing reflective learning in students. *arXiv preprint arXiv:2412.02603*.