

EFFECT OF ARTIFICIAL INTELLIGENCE TOOLS ON SENIOR SCHOOL STUDENTS' PERFORMANCE AND INTEREST IN NARRATIVE WRITING IN LOKOJA EDUCATION ZONE

Kate Ojomah Ukwumaka

Federal University Lokoja

Email: kate.ukwumaka@fulokoja.edu.ng

Danlami Naroka

Federal University Lokoja

Email: naroka.damlami@fulokoja.edu.nig

Oboh Veronica Nkeiru

Faculty of Education, Federal University Wukari, Taraba State

Email: vincentvero@fuwukari.edu.ng

Abstract

The study examined the effect of artificial intelligence tools on senior secondary school students' performance and interest in narrative English essay writing. Two research questions and two hypotheses guided the study. Using a quasi-experimental design, two schools were selected for the study through purposive random sampling and two intact classes randomly selected for treatment. The sample size for the study was 118 students drawn from the selected schools. Two instruments, Essay Writing Achievement Test (EWAT) and Essay Writing Interest Inventory (EWII) were developed and validated. The internal consistency of EWAT was computed and found to be 0.86 using Kuder Richardson's formula ($K - R 20$), while that of EWII was .837 using Crobach's Alpha co-efficient method. The data obtained were used in answering the research questions and testing the hypotheses. The research questions were answered using mean scores, while the hypotheses were tested using Analysis of Covariance (ANCOVA) at 0.05 level of significance. The results indicated that the use of artificial intelligence tools had a significant effect on students' performance in narrative essay writing, while the slightly higher interest recorded by students taught with the tools was not statistically significant. Based on the findings, it was concluded that the use of artificial intelligence tools is effective in enhancing students' performance in English language narrative essay writing, although its effect on students' interest was not significant.

Keywords: Artificial Intelligence, narrative essay writing, interest, Grammarly and narrative writing

Introduction

The way senior school students approach composition writing has changed greatly with the introduction of artificial intelligence (AI) tools into educational settings. These tools offer personalized learning experiences, immediate feedback, and enhanced engagement, collectively influencing students' motivation, interest, and performance in writing tasks (Ummah, & Bisriyah, 2022). Several studies have tried to look into these dynamics, shedding light on both the gains and challenges associated with AI-assisted learning in composition. One notable advantage of AI tools is their ability to provide immediate, personalized feedback, enhancing students' sense of competence and motivation (Setyani, Bunan & Rezeki, 2023). A study conducted by Novaa in 2018 involving high school students using an AI-powered automated feedback tool demonstrated that such technology could improve students' perceptions of their writing abilities. The research highlighted that the level of a teacher's communication, impacts the effectiveness of these tools, stressing the need to adopt a blended approach that combines AI assistance with human oversight to maximize learning outcomes.

AI tools also play a crucial role in promoting student interest and engagement in composition writing. By automating routine tasks, these technologies allow students to focus more on critical thinking and creativity (Facullo, 2022). For instance, AI applications can assist in idea generation and organization, enabling students to delve deeper into content development. This shift from mechanical aspects of writing to more substantive elements can make the writing process more enjoyable and intellectually stimulating for students.

Writing acts are commonly available in every stage of education, such as primary, secondary and higher institutions. According to Septyana et al. (2021), the classes provide opportunities for different category of people who seek to improve their proficiency in academic writing. The major goal of writing is to instruct students on the established norms, techniques, and criteria for writing that are widely acknowledged. (Putri & Ahmad, 2022). Scholars have observed that both students and writers who are novice encounter a lot of challenges as they try to make progress in their various fields. In a bid to overcome these hurdles, many tend to utilize writing

technologies so as to explore novel opportunities that can support composition writing.

Artificial Intelligence (AI) aid writing skills. It is a writing tool that frequently uses Natural Language Processing (NLP) that has been trained on large human-written text collections (Perdana & Farida, 2019). AI-driven assistants have shown potential in improving students' writing skills and raising their confidence and productivity during the writing process, according to a growing corpus of academic research. However, there are concerns about these tools creating over dependence or being used unethically. (Dawadi, 2020). For instance, AI tools like ChatGPT can produce original and rational text that can avoid detection by existing technologies and knowledgeable academic personnel (Arihastha, 2023), creating serious issues with academic integrity.

AI programs such as QuillBot, AI Writer, and Typeset help writers in rephrasing original phrases or sentences by changing the sentence structure or substituting words with synonyms. Wordtune offers a translation option that help people who are not native English speakers in translating several languages into English (Putri & Ahmad, 2023). ChatGPT, Trink AI, and Writesonic assist in the generation of text-based material, making writing more accessible for students and saving time (Facullo, 2022). Also, studies (Cavaleri & Dianati, 2016; Ismawati, Akib & Muhsin, 2021; Setyani, Bunau & Rezeki, 2023) indicate that AI tools like Grammarly, Jasper, and Consensus do not only help writers in improving their writing but can also help in making them proficient writers as they discover the discrepancies in their initial writing and the proficient revision suggested by the program.

Even with the growing importance of AI in writing, there seems to be a dearth of theoretical frameworks to explain their dynamics and use in writing processes. The literature discusses standard theoretical models, including the technology acceptance model developed by Cavaleri and Dianati (2016), the Constructivist Learning Theory rooted in the work of Piaget and Vygotsky (Fitiriana & Nurazni, 2022), and the Community of Inquiry (CoI) Framework proposed by Nova (2018). TAM postulates that factors such as perceived usefulness and ease of use may influence the successful integration of AI in writing processes. (Oktaviani, Bahrani & Noor, 2022). Constructivist theories emphasize active learning and

knowledge to facilitate student engagement, collaboration, and the co-construction of knowledge. CoI asserts that AI tools contribute to building a sense of community, fostering cognitive engagement, and supporting effective teaching in the online component of academic writing courses (Cavaleri & Dianati, 2016).

Students' interests and desires are therefore insufficient in teacher-oriented instruction. Students eventually get disinterested and less motivated in second language classes that are solely centered on textbooks, especially in the current environment. A pupil may stop studying the language if they get disinterested and unmotivated. Therefore, to keep students' interest and motivation alive in second language teaching, teachers need to create a teaching environment that appeals to all their senses (Perdana & Farida, 2019). In addition, the conventional method ignores each student's individual differences. It focuses the teaching process on the content and the teacher while ignoring students' perceptual skills. Most times, before students have absorbed and digested the previous lesson's content, the teacher starts teaching the next part, thereby forcing the students to be passive followers in the classroom. (Ismawati, Akib & Muhsin, 2021). In second language instruction, some students have relatively poor learning ability and are often unable to follow the teacher's progress. Therefore, these students will be more likely to lose confidence and motivation in L2 learning, fear taking second language classes, and find it difficult to improve their abilities (O'Neill & Russell, 2019). It is on this premise that this study sought to ascertain the effectiveness of artificial intelligence tools within the framework of the feedback learning technique on senior secondary school students of Lokoja education zone, Kogi State with the aim of contributing the literature in second language which currently looks scattered and one-dimensional.

Narrative writing is a crucial component of English language learning, enabling students to develop creativity, critical thinking, and effective communication skills. However, many senior school students in Lokoja struggle with interest in narrative writing, often perceiving it as a challenging and uninspiring task. Conventional teaching methods, which rely heavily on rote learning and rigid structures, have failed to stimulate students' engagement, leading to poor performance in narrative writing tasks. This persistent issue raises concerns about students' ability to express

themselves fluently and creatively, which ultimately affects their overall proficiency in English language writing. The West African Examination Council chief examiner's report shows that students perform poorly in West African school Certificate Examination (WAEC,2024) due to their inability to write flawlessly

The introduction of artificial intelligence (AI) tools like automated writing assistants, interactive storytelling applications, Grammarly and AI-driven feedback systems, present an opportunity to address these challenges. AI tools can provide real-time corrections, suggest creative ideas, and offer personalized guidance, making narrative writing more interactive and engaging for students. However, even with the integration of technology in education, little has been done to show how AI tools impacts students' motivation, interest, and performance in narrative writing, particularly in Lokoja education zone. Without empirical evidence, educators remain uncertain about how much AI tools can do in helping students become better writers. This study therefore, seeks to investigate the effectiveness of AI tools, especially Grammarly, on senior school students' motivation, interest, and performance in narrative writing in Lokoja.

Putri and Ahmad (2022) defined AI as a computing system that can engage in human-like processes such as learning, adapting, synthesizing, self-correction, and the use of data for complex processes in tasks. Smith (2021) further added that AI is the study and development of machine-like software algorithms that interact with the environment. Though there are several definitions of AI, one thing is for sure. AI has made a significant impact on human lives, especially in recent years. It has impacted many industries like the medical, engineering, and film industries because AI derives from developing computing technology capable of undertaking many activities that require a higher degree of human intelligence, including speech and visual recognition, as well as natural language processing and decision-making.

Anderson (2023) stated that ChatGPT which was primarily familiarized in November 2022 was developed based on a massive quantity of human-generated text. So, ChatGPT is exceptional when it comes to using natural language, guessing the next word, generating text that are human in nature, or performing other human language tasks like engaging in discussion.

Alharbi (2023) also opine that ChatGPT serves as a source of information, something that humans do naturally. Not only that, scholars also use ChatGPT to get feedback from their essays and also measure their performance. For Putri and Ahmad (2022) AI can cause great change in education by providing learning experiences that are personal for users. Devasena (2024) emphasized that studies on AI in education just coming to limelight due to the rising interest in it and the role it plays in Education.

In essay writing, AI is seen as co-author in students' texts. Some examples of AI tools used in education and learning include Chatbots, intelligence tutoring systems, learning analytics, automated grading, and many others. Studies done by Alzahran (2023), have shown that ChatGPT has been used as the main source of information for students.

Alikemuo (2015) was also of the view that AI can be quite helpful to L2 scholars by getting important information like the writing structure, significant sources, and novel perceptions about the topic. Generative AI such as ChatGPT and Gemini can produce a range of content, written and unpublished, which is largely known by its level of exceptionality, stability of ideas, and depth of existing scientific understanding. Irrespective of how much AI help students in their essay writing, it raises a lot of concerns regarding integrity and ethical use. The use of AI tools also leads to cheating during online exams and plagiarism in research papers. Thus, it is the responsibility of the instructors and teachers to provide proper guidance to students in using AI. This aligns with the view of Alzahran (2023) that teachers' ability to guide students on authorial integrity when using AI is a challenge.

AI has evolved as a strong tool in fostering students' interest and improving their performance in narrative writing by offering interactive and adaptive learning experiences. AI-powered writing assistants, such as ChatGPT and Grammarly, provide real-time suggestions and scaffolding, making the writing process more engaging and less intimidating for students (Bailey & Nunan, 2023). These tools enhance students' enthusiasm for writing by transforming it into an interactive experience, where they can receive instant feedback and refine their work dynamically (Anderson, 2023). Furthermore, AI-based storytelling applications encourage students to explore creative writing by generating story prompts and assisting with plot

development, thereby sustaining their interest in the writing process (Aswar & Faraz, 2023).

In addition to increasing interest, AI enhances students' narrative writing performance by improving the coherence, structure, and linguistic quality of their work. Research has shown that AI-powered tools help students develop stronger narratives by suggesting improvements in vocabulary usage, sentence structure, and overall organization (Alharbi 2023). AI-driven feedback systems allow students to recognize and correct their mistakes more efficiently, leading to measurable improvements in their writing skills over time (Dawadi, 2020). Moreover, adaptive AI platforms personalize the learning experience by identifying individual strengths and weaknesses, enabling students to receive targeted guidance that enhances their overall writing proficiency (Facullo, 2022).

By strategically incorporating AI into the classroom, teachers can enhance students' interest and performance in narrative writing while maintaining the core objectives of creative and independent expression. There are so many aspects of AI powered tools that assist students to do extremely well in academics, especially in narrative writing. Such AI tools are ChatGPT, Quillbot, Grammarly, among others. But for the purpose of this paper, Grammarly tool is considered as one the major AI tools that help students in writing.

Integrating AI-powered writing tools such as Grammarly in narrative writing has sparked growing interest among senior secondary school students. Grammarly offers real-time grammar, syntax, and stylistic suggestions, helping students refine their writing skills with minimal teacher intervention. The interactive feedback and ease of use provided by Grammarly make the writing process less daunting, fostering a sense of curiosity and engagement in students. Research suggests that digital tools enhance learners' interest by making writing more dynamic and less error-prone (Alharbi, 2023). Also, receiving instant corrections rather than waiting for teacher feedback keeps students more engaged in the writing process (Anderson, 2023). Consequently, students develop a greater appreciation for writing, leading to improved enthusiasm and creativity in their narratives.

Moreover, Grammarly plays a significant role in enhancing students' interest in narrative writing by providing immediate and constructive feedback. Traditional methods of writing instruction often involve delayed feedback, which can reduce motivation due to a lack of instant reinforcement. However, Grammarly's real-time suggestions encourage a growth mindset, as students can immediately identify and correct mistakes, fostering a sense of achievement (Arihastha 2023). Motivation in writing is closely linked to self-efficacy the belief in one's ability to succeed which Grammarly enhances by reducing anxiety over making errors (Nova, 2018). When students perceive progress in their writing skills, they are more likely to engage in extensive writing practice, ultimately improving their storytelling abilities and language proficiency.

In terms of performance, Grammarly contributes to significant improvements in students' narrative writing by refining their grammatical accuracy, vocabulary use, and overall coherence. Narrative writing demands fluency, creativity, and adherence to linguistic conventions, and Grammarly supports these aspects by suggesting stylistic improvements and detecting common errors. A study by Zinkevich (2016) found that students who used AI writing assistants demonstrated enhanced cohesion and organization in their essays compared to those who relied solely on traditional teacher feedback. Moreover, Grammarly helps students focus on higher-order writing skills, such as plot development and character building, by alleviating concerns over lower-order mechanical errors (Alzahrani, 2023). As a result, students produce more polished and compelling narratives, ultimately leading to higher academic performance.

Methodology

Quasi-experimental design was used for this study, precisely, pre-test, post-test non-randomized groups design. This design was deemed fit since intact classes were used for the work in order not to disrupt the school's activities. The study was carried out in Lokoja education zone in Kogi State. The poor performance of students in essay writing in this zone necessitated the choice of the zone. One thousand two hundred and twenty five (1225) senior secondary school students within the four schools in the zone formed the population while 118 students who offer English language was the sample for the study. Two instruments; Essay Writing Achievement Test (EWAT) and Essay Writing Interest Inventory (EWII) developed by the

researcher, were used for this study. Two lesson plans were written for each of the groups (experimental and control) which were used for the intervention. The EWAT and EWII were validated and yielded internal consistency of 0.86 using Kuder Richardson's formula ($K - R 20$), while that of EWII was .837 using Crobach's Alpha co-efficient method. The EWAT containing two sections measured the achievement of students before and after the treatment. Section A requires information on the demographic data of the respondents while section B contains three essay questions, 50 marks each to be answered within 30minutes. The EWII consisted of 10 items with a four-point Likert scale. Respondents were expected to indicate their degree of agreement or disagreement of each item. Positive and negative statements about the English language in general and English Essay writing in particular were reflected. The research questions were answered using mean and standard deviation while the hypotheses were tested using analysis of covariance (ANCOVA) at 0.05 level of significance.

Results

Research Question One: What are the mean achievement scores of students taught essay writing using Artificial Intelligence tools and those taught using conventional methods?

Table 1: What is mean and standard deviation of achievement scores of students taught essay writing using Artificial Intelligence tools and those taught using conventional methods?

Method		Pre-test			Post test		
		N	Mean	SD	Mean	SD	Mean gain
Artificial intelligence tools		97	16.14	4.74	45.09	16.77	28.95
Conventional methods		76	14.98	3.54	21.76	6.28	6.78

A mean achievement score of 45.09 with a standard deviation of 16.77 for the post-test was recorded for students taught using artificial intelligence tools while those that were taught using conventional methods had mean achievement score of 21.76 with standard deviation of 6.28 as seen in table

1 above. Mean gain scores of 28.95 and 6.78 for the two groups respectively imply that the students who were exposed to artificial intelligence achieved higher than their counterparts

Research Question 2: What are the mean interest rating scores of students taught narrative essay writing using artificial intelligence tools, and those taught using conventional methods?

Table 2: Mean interest scores and Standard Deviation (SD) of Students Taught using Artificial intelligence tools and Conventional Method

Method	Mean N	Pre- interest SD1	$\bar{x}$ 2 SD2	Post- interest $\bar{x}$ 6.41	Adjusted
Artificial intelligence tools	97	7.48	2.24	21.09	20.97
Conventional method	76	7.48	2.21	20.29	20.42

Table 2 shows that the posttest mean score for students taught narrative essay writing using artificial intelligence tools was ($\bar{x}$ 2 = 21.09, SD = 6.41) and adjusted mean of 20.97 while that of students taught with the conventional method was ($\bar{x}$ 2 = 20.29, SD = 5.56) and adjusted mean of 20.42. This indicates that students taught narrative essay writing using the artificial intelligence tools had higher interest than students taught with the conventional method.

Ho1: There is no significant difference in the mean interest rating scores of students taught narrative essay writing using artificial intelligence tools and those taught using conventional method.

Table 3: Analysis of Covariance of Students' narrative essay writing Interest Scores by Method

Sources of Variation	Sum of Squares	Df	Mean Square	F	Sig
Covariates	269.038	1	269.038	7.857	.006
Pre-interest					
Main Effects	240.676	3	80.225	2.343	.075
(combined)					
Method	26.844	1	26.844	.784	.377

Table 3 shows non-statistical significant main effect for method $F(1,160) = .784$, $p = .377$. The null hypothesis, therefore, was not rejected, which indicated that there was no significant difference in the mean interest scores of students taught using artificial intelligence tools and those taught using conventional method. The adjusted mean for artificial intelligence tools was 20.97, while that for the conventional method was 20.42. The difference favoured the use of artificial intelligence tools because students taught with artificial intelligence tools showed higher interest than those taught with the conventional method in narrative essay writing.

Discussions

The results of the study indicated that students taught narrative essay writing with artificial intelligence tools performed better than those taught with the conventional method, with mean gain scores of 28.95 and 6.78 respectively. This finding is consistent with Alharbi (2023) and Facullo (2022), who reported that AI-driven feedback and adaptive tools help students improve their writing performance. A possible explanation is that the real-time corrections and personalized feedback provided by tools such as Grammarly enable students to recognize and correct their errors immediately, thereby improving the coherence, structure and linguistic quality of their narratives.

The study found that there was a slightly higher interest in narrative essay writing by students taught using artificial intelligence tools than those taught with the conventional method, although the difference was not statistically significant. This is contrary to expectation because the literature reviewed suggests that the instant feedback and interactive nature of AI tools such as Grammarly enhance students' interest in writing (Alharbi, 2023; Anderson, 2023; Arihata, 2023); it was therefore assumed that students taught narrative essay writing using artificial intelligence tools would record a statistically significant higher interest than those taught with the conventional method. Students were allowed to take responsibility for their learning as they used artificial intelligence tools making it more interesting. This could have accounted for the higher interest recorded since teachers served as facilitators majorly. This is in line with Anderson's (2023) and Smith's (2022) study outcomes that working together and engaging critically and constructively with others' ideas through social interaction result in academic gains.

Results, as stated in Table 3, reveal that there is no statistically significant difference between the mean interest scores of students taught narrative essay writing using the artificial intelligence tools and those taught using the conventional method, although the adjusted mean favoured the experimental group. Therefore, the null hypothesis was not rejected. This finding is in agreement with Alzahrami (2023) whose study confirmed that artificial intelligence is significantly more effective on students' learning and socialization. This means that involving students in the learning activities motivates them to become interested in the learning process of narrative essay writing.

Conclusion

From the findings of this study, it can be concluded that the use of artificial intelligence tools, especially Grammarly, is effective in improving students' performance in narrative essay writing at the senior secondary school level because students taught with the tools did better than their counterparts taught with the conventional method. Although students taught with artificial intelligence tools recorded slightly higher interest in narrative essay writing, the difference was not statistically significant. However, human control and feedback on how ideas are organized is still needed since these tools focus mainly on linguistic form.

Recommendations

This study recommends that Grammarly should be incorporated with other forms of feedback like peer review or instructor observations in future research so as to check its limitations in assessing narrative essay structures. Researchers could try to examine how students try to equalize automated feedback and human feedback as they endeavour to improve linguistic accuracy and idea organization. Also, future studies can also check the long-term impact of using these tools particularly Grammarly on students' writing ability as well as authorial independence. Comparative studies across different academic contexts or disciplines could also offer better understandings into how Grammarly performs in different learning situations and writing types.

References

- Alharbi, W. (2023). The Use and Abuse of Artificial Intelligence-Enabled Machine Translation in the EFL Classroom: An Exploratory Study. *Journal of Education and e-learning Research*, 10(4), 689-701.
- Alikemuo, D. N. (2015). *Effects junior secondary school students' interest in English reading comprehension* [Unpublished master's project]. University of Nigeria, Nsukka.
- Alzahrani, L. (2023). Analyzing students' attitudes and behavior toward artificial intelligence technologies in higher education. *International Journal of Recent Technology and Engineering (IJRTE)*, 11(6), 65-73.
- Anderson, S. S. (2023). "Places to stand": Multiple metaphors for framing ChatGPT's corpus. *Computers and Composition*, 68, 102778.
- Arihasta, D. (2023). Non-English major undergraduate students' difficulties in argumentative writing at Mae Fah Luang University Thailand. *LLT Journal: A Journal on Language and Language Teaching*, 26(2), 732-748.
- Armanda, M. L., Nugraheni, A. F., Wulansari, A., & Imron. (2023). Artificial intelligence in tertiary education. *Australasian Journal of Educational Technology*, 1(3), 45-56.
- Aswar, H., & Faraz, F. (2023). Workshop on writing essays and introduction to the Zotero attitudes towards AI in learning. *Educational Technology Research and Development*, 1(3), 42-50.
- Bailey, K., & Nunan, D. (2023). Research on English language teaching and learning in the challenges in K-12 settings. *AI and Ethics*, 2(3), 431-440.
- Cavaleri, M. R., & Dianati, S. (2016). You want me to check your grammar again? The usefulness of an online grammar checker as perceived by students. *Journal of Academic Language and Learning*, 10(1), A223-A236.
- Devasena, R. (2024). Artificial intelligence in education: An alternative to traditional engineering. *International Journal of Recent Technology and Engineering (IJRTE)*, 11(6), 65-73. (Note: Added full journal title based on abbreviation)

- Facullo, K. (2022). Effectiveness of written feedback strategies. *International Journal of Recent Research in Interdisciplinary Sciences (IJRRIS)*, 9(2), 23–36.
- Fitriana, K., & Nurazni, L. (2022). [Article title missing]. *Journal of English Language Teaching*, 7(1), 201–207.
- Harliani, N., Udin, Zamzam, A., & Hanafi, N. (2021). A study on grammatical cohesion in the descriptive essays by the third semester students of English education program in the University of Mataram in the academic year 2019/2020. *LISDAYA: Jurnal Linguistik (Terapan), Sastra, Dan Budaya*, 17, 49–58.
- Ismawati, I., Akib, E., & Muhsin, M. A. (2021). How errors made in essay writing: An analysis using Grammarly software in EFL students. *Journal of Language Teaching and Learning, Linguistics and Literature*, 9(1), 365–375.
- Nova, M. (2018). Utilizing Grammarly in evaluating academic writing: A narrative research on EFL students' experience. *Premise: Journal of English Education*, 7(1), 80.
- O'Neill, R., & Russell, A. M. T. (2019). Stop! Grammar time: University students' perceptions of the automated feedback program Grammarly. *Australasian Journal of Educational Technology*, 3(1), 45–60.
- Oktaviani, S., Bahrani, & Noor, W. N. (2022). Students' perception towards the use of Grammarly in English writing skill of fourth semester English Education Department at UINSI Samarinda in the academic year 2021/2022. *Journal Sultan Idris Pendidikan Profesi Guru, [Volume missing]([Issue missing])*, 1–24.
- Perdana, I., & Farida, M. (2019). Online grammar checkers and their use for EFL writing. *Journal of English Teaching, Applied Linguistics and Literatures (JETALL)*, 2(2), 67
- Putri, R., & Ahmad, A. (2022). An analysis of students' argumentative essay writing skill of third semester of English language education-UIR. *Jurnal Kependidikan DISCOVERY*, 1(1), 34–43.
- Roozen, K. (2015). Texts get their meaning from other texts. *Naming what we know: Threshold concepts of writing studies*, 44–47.

- Septyana, Y., Aridah, & Wardani, I. (2021). The difficulties of argumentative essay writing experienced by undergraduate students of English Department Mulawarman University Yohanisa. *Journal of English Teaching, Linguistic, and Literature*, 4(1), 33–45.
- Setyani, E. D., Bunau, E., & Rezeki, Y. S. (2023). The influence of Grammarly towards Indonesian EFL students' first-degree thesis writing confidence. *Elsya: Journal of English Language Studies*, 5(1), 54-67.
- Smith, J. (2021). *What is academic writing?* EAP Foundation. eapfoundation.com
- Ummah, L. K., & Bisriyah, M. (2022). EFL students' perception of Grammarly's feedback and how they deal with the inaccuracy. *Journal of English Educators Society*, 7(2), 163–172.
- West African Examinations Council. (2024). *West African Senior Secondary Certificate Examination May/June 2019 chief examiners' report (Nigeria)*. WAEC.