

**INFLUENCE OF ARTIFICIAL INTELLIGENCE (AI) WRITING TOOLS ON ESSAY
WRITING SKILLS OF STUDENTS IN SENIOR SECONDARY SCHOOLS IN IGBO-
ETITI LOCAL GOVERNMENT AREA OF ENUGU STATE**

BY

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TITLE

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**A PROJECT PRESENTED TO THE DEPARTMENT OF ARTS EDUCATION,
FACULTY OF EDUCATION IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF BACHELOR OF
EDUCATION IN ENGLISH AND LITERARY STUDIES**

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JULY, 2026

APPROVAL PAGE

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CERTIFICATION

I, Ugwuanyi Julieth Tochukwu an undergraduate student in the Department of Arts Education, with the Registration number GOU/U24/ELE/147 has satisfactorily completed the requirements for the Degree of Bachelor of Arts in English and |Literary Studies Education (B,AED). The work embodied in this research project is original and has not been submitted in part or full for any other degree of this or any other university.

.....
Ugwuanyi Julieth Tochukwu

.....
Date

DEDICATION

This project is dedicated to God Almighty

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ABSTRACT

This study investigated the influence of artificial intelligence (AI) writing tools on essay writing skills of students in senior secondary schools in Igbo-Etiti Local Government Area of Enugu State. Three research questions were formulated to guide the study. Technology Acceptance Model (TAM) by Davis, Bagozzi, and Warshaw (1980) served as the theory of the study. This study adopted descriptive survey research design. The population of the study is 2067. The sample size was 200. The instrument used for the data collection were structured questionnaire. The reliability coefficient yielded 0.93 using Cronbach Alpha method. The data collected was analyzed using mean score and standard deviation. The finding of the study revealed that integrating AI into essay writing skill is a milestone in education, particularly for the many gains it yields, despite the challenges associated with this integration. The following recommendations were made: Institutions should develop comprehensive AI usage guidelines that delineate appropriate boundaries for AI assistance in academic writing. Regular professional development programs should be implemented to equip educators with the necessary skills for effective AI integration in writing instruction. Writing assessment criteria should be updated to acknowledge and account for AI tool usage while maintaining academic integrity standards.

CHAPTER ONE

INTRODUCTION

Background of the Study

The digital technology has transformed the education world. The most notable technological advancement of the past few years is Artificial Intelligence (AI) and its uses in the various facets of teaching and learning. Artificial Intelligence is the technology of computer systems that can execute tasks that are normally done by humans, including content generation, problem-solving, decision-making and language processing (Russell & Norvig, 2021). AI writing tools such as ChatGPT, Grammarly, QuillBot, Gemini, and Microsoft Copilot have gained widespread use in the education industry, where they help students brainstorm ideas, edit grammar, rephrase text, and even write entire essays within seconds (Kasneci, 2023).

Essay writing is an essential part of the language learning and academic development. It helps students to convey their ideas in a logical manner, to structure their ideas in a coherent way, to think critically, and to apply language conventions. In the senior secondary schools, essay writing, apart from continuous assessment, is an important component of external examinations like West African Senior School Certificate Examination (WASSCE) and National Examination Council (NECO) examinations. If students want to become effective writers, they need a good knowledge of grammar, vocabulary, sentence construction, organization of ideas, and creativity in expression (Graham, 2023). As a result, essay writing is an important skill that must be mastered in secondary school.

Students used to develop their writing skills by reading extensively and practising writing on a regular basis, receiving feedback from their teacher, peer editing and revision. With the arrival of

AI writing tools, though, the writing landscape has come into a new dimension. These tools provide immediate help, providing essay outlines, suggestions for the right words, grammar checking, sentence restructuring, and content ideas. AI writing tools have become appealing to students looking for quicker and more effective methods to finish their academic assignments (Dwivedi et al., 2023).

With the increasing availability of mobile devices, personal computers, and internet access, AI writing tools are becoming more commonplace for secondary school students. These tools are now used by many students for their assignments, reports and essay writing. The proponents believe that AI writing tools could help boost students' writing quality, language skills, and learning efficiency; however, critics have raised concerns about their potential negative impact on students' independent writing skills and critical thinking (Tlili, 2025). As students rely more on AI-generated content, they might be less motivated to invest in the mental effort required to build the skills of writing. Students may not be motivated to invest in the mental effort needed to build the skills of writing due to increased dependence on AI-generated content.

The challenges and opportunities of AI-aided writing have been brought to the fore in recent studies. According to Cotton, Cotton and Shipway (2024), AI tools are able to offer personalized feedback and boost students' confidence in writing tasks. Likewise, Zhai (2024) found that AI writing tools can assist learners in writing tasks, such as overcoming writer's block, brainstorming, and grammatical correctness. The advantages highlighted here indicate that when used properly, AI tools can be used as educational aids.

But, worries have also cropped up about the overuse of AI writing tools. Learners who depend too much on AI-generated writing can be passive recipients and might not gain the critical competencies needed to craft their own writing ideas, build arguments, analyze information, and

be creative (Farrokhnia et al., 2024). Students can be tempted to submit AI-generated content without knowing what they're submitting, as the AI will be able to write full essays with limited information. This may have a negative impact on the acquisition of real writing proficiency and academic honesty.

AI writing tools are now a vital topic in secondary education due to the importance of this stage of cognitive and language development within this age group. By senior secondary school, students should be able to develop more complex writing skills that will contribute to their success in college and in the workplace. However, the widespread adoption of AI tools in this growth stage can enhance or diminish these abilities as it is used. AI can be employed in an educational capacity to assist with skill acquisition, if used as learning aids, alongside classroom learning. On the other hand, when replacing independent writing practice, they can negatively affect the acquisition of the necessary writing skills (UNESCO, 2023).

Enhanced internet connectivity and increased digital literacy among students has led to the gradual increase in education application of AI technologies in Nigeria. Today, secondary school students can use AI-powered applications via their mobile phones and other internet-enabled devices. Today, secondary school students can access AI-powered applications on their mobile phones and other devices that are internet enabled. Notwithstanding the mounting acceptance of these AI writing apparatuses, the empirical research on how they affect students' writing abilities, especially in secondary schools, is scarce. There is a lack of studies that have focused on the effect of these technologies on the younger learners in the Nigerian context particularly in the educational environment (Ayanwale, Sanusi & Adetunji, 2024).

The situation is especially relevant in Enugu State where schools are becoming more digital with the adoption of digital learning materials. So many students in Igbo-Etiti Local Government Area

have access to mobile devices and Internet services that allow them to use AI writing applications. The school administrators and teachers have reacted in different ways as to the educational significance of these tools. Some believe that AI tools can be helpful tools to support the teaching and learning of writing, and may help improve student performance; others are concerned that a reliance on using AI-generated content may affect students' creativity, originality and writing skills.

In addition, the rise of the use of AI Writing Tools brings up essential policy, instructional and assessment issues. Having a grasp on how these tools may affect students' writing abilities could help teachers create effective plans to include AI in the classroom without any damaging effects. This knowledge can also help policy makers in creating policies and guidelines concerning the responsible use of AI technologies in schools. As the use of AI writing tools among secondary school students grows and opinions on their impact on education vary, empirical studies are needed to determine how they impact secondary school students' ability to write letters in essay marks. Specifically, it is crucial to see if the application of AI writing tools can improve students' writing skills in terms of grammar, vocabulary, organization and idea development or lead to dependence that hinders independent writing skills. It is against this background that this study seeks to examine the influence of ArtificialIntelligence(AI) writingtools on the essay writing skills of students.

Statement of the Problem

Essay writing plays a crucial role in helping students to communicate effectively, to think critically, and to do well on exams. Many students in senior secondary schools, however, still find it challenging to organise ideas in their essays, build coherent arguments and employ the correct grammatical, lexical and syntactical conventions of the language. With the rise of Artificial

Intelligence (AI) lettering tools like ChatGPT, Grammarly, and QuillBot, students have actually seen a transformation in writing essays. The advent of Artificial Intelligence (AI) writing tools like ChatGPT, Grammarly, and QuillBot has revolutionized the way students approach essay writing. The tools could be useful to enhance writing skills and to support learning, but there is a concern that heavy use of these tools may result in less independent writing and may be detrimental to learning important essay writing skills. Although these AI writing tools are gaining popularity among the students, there is little information about the real impact that these writing tools have on the essay writing ability students. The lack of information requires a study on how the AI writing tools affect students' skill of essay writing in the field.

Purpose of the Study

The main purpose of this study is to investigate the influence of Artificial Intelligence (AI) writing tools on the essay writing skills of students in senior secondary schools in Igbo-Etiti Local Government Area of Enugu State. Specifically, the study seeks to:

- i. determine the extent to which the use of AI writing tools improves students' essay writing skills.
- ii. ascertain the patterns of AI writing tool usage in the essay writing process among students.
- iii. identify the challenges associated with the use of AI writing tools for essay writing among students.

Research Questions

The following research questions will guide the study:

1. To what extent does the use of AI writing tools improve students' essay writing skills?

2. What are the patterns of AI writing tools usage in the essay writing process?
3. What are the challenges associated with the use of AI writing tools for essay writing?

Scope of the Study

The focus of this research is on how students' essay writing skills are affected by conventional (AI) writing tools. The research looks at how students' ability to write essays is impacted by the usage of AI writing tools, how these tools are used in essay writing processes, and what obstacles they face. The study's geographic scope is restricted to Enugu State's Igbo-Etiti Local Government Area Senior Secondary Schools. Students in the research area's senior secondary schools will serve as the study's responders. As a consequence, the study's findings will only apply to pupils who fall within its purview.

Significance of the Study

The study's findings have theoretical and practical ramifications. The Technology Acceptance Model (TAM) of Davis, Bagozzi, and Warshaw (1980) will serve as the theoretical foundation for this study. The ideas stress how important it is to watch, emulate, and model other people's behaviours, attitudes, and emotional responses. The idea has aided in the application of AI via observation by taking the form of a person orally expressing a task or physically displaying a behaviour. When it comes to improving pupils' essay writing, AI writing tools may be an excellent means of reproducing this experience.

.Practically, the results of the study will benefit the students' teachers, the governments and other researchers. The study will be of immense benefit to students as it will expose them to the educational implications of using AI writing tools for essay writing. It will guide them to know how far they can push the use of these tools without becoming too reliant on technology. The

results will also benefit teachers of the English Language and other related subjects regarding the students' pattern of using AI and difficulties encountered by them while using AI.

Teachers will gain this knowledge, which will help them create suitable learning approaches to promote the responsible and productive application of AI technologies in essay writing tasks. Moreover, the study will offer school administrators and educational authorities with important data to guide decision-making on the incorporation of AI writing tools into education and learning procedures in secondary schools. These insights can help ensure that AI technologies enhance learning goals while maintaining students' independence in learning.

The study will also be valuable for curriculum planners and educational policymakers because it would provide information that may be used for curriculum review and digitization of the use of AI in secondary school curriculum. Lastly, the study will provide a resource for researchers and scholars interested in conducting future studies on Artificial Intelligence, educational technology, and students' writing skills to draw on for future academic research.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

The following headings comprise the review of relevant literature for this investigation.

Conceptual Framework

- Artificial Intelligence (AI)
- Writing Skills and AI Integration
- Influence of AI Writing Tools on Students Essay Writing Skills
- Patterns of AI Writing Tools Usage in the Essay Writing Process
- Challenges of the Use of AI Writing Tools for Essay Writing Skills

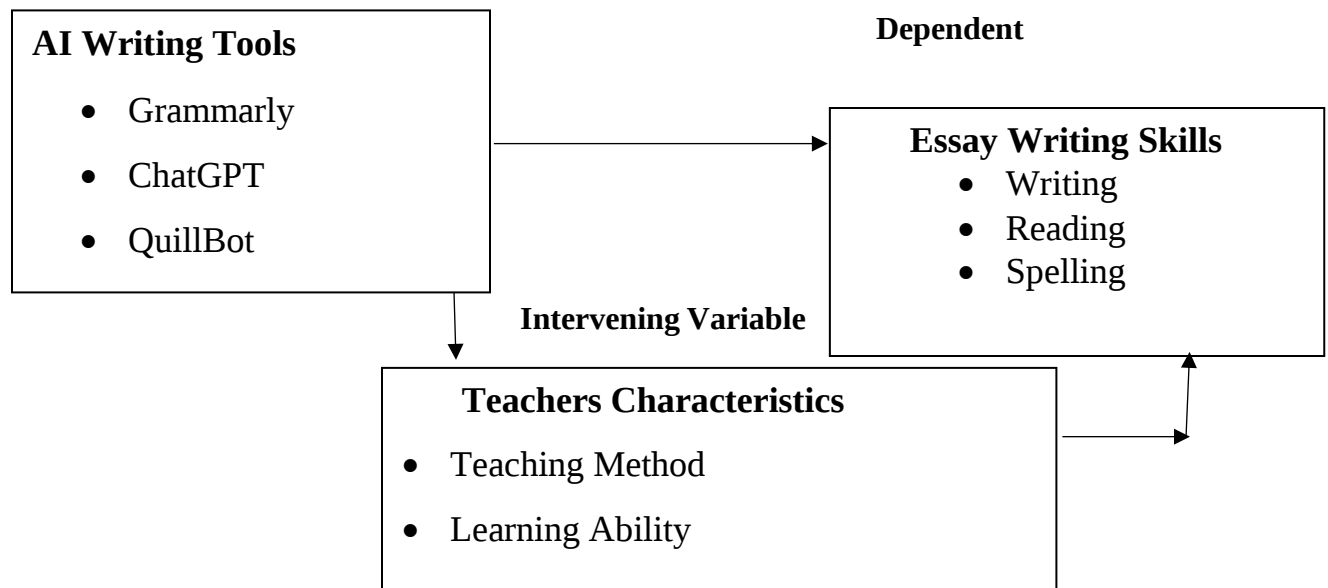
Theoretical Framework

- Technology Acceptance Model (TAM) by Davis, Bagozzi, and Warshaw (1980)

Empirical Studies

Summary of Review of Related Literature

Independent Variable



Schematic Structure

Conceptual Framework

Artificial Intelligence (AI)

In the digital age of the 21st century, Artificial Intelligence (AI) has become one of the most impactful and game-changing technologies ever developed. It involves a machine or computer system that can learn, reason, solve problems, understand language, make decisions, and produce content, which are typical human functions. AI systems are engineered to mimic the cognitive processes of human beings through solving problems that involve analyzing vast quantities of information, spotting patterns, and generating results that resemble the cognition and actions of human beings (Russell & Norvig, 2021).

The evolution of Artificial Intelligence has been driven by advancements in computer science, machine learning and natural language processing. UNESCO (2023) defines AI as a set of technologies that allow computers to carry out tasks in a manner that relies on human-like intelligence, such as speech recognition, language translation, image recognition, predictive analysis and text generation. As the technologies become more sophisticated, they are applied in a wider range of areas such as healthcare, finance, business, transportation and education.

AI has emerged as a powerful ally in the educational field, improving teaching and learning. The use of AI in education can individualize learning experiences, offer automated feedback, aid in assessment processes, and help make information available for learning. The application of AI in education has revolutionized the way teaching and learning are done, allowing students to get instant help and personalized support as per their learning requirements (Holmes & Tuomi, 2022).

AI writing tools are one of the most explicit and noticeable uses of AI in education. These tools use cutting-edge natural language processing algorithms to help the user create, edit, and enhance

written material. These tools will be able to create essays, recommend sentence structures, correct grammatical mistakes, enhance the usage of words, paraphrase text, and suggest writing advice within seconds (Kasneci et al., 2023).

AI authoring tools now have more capability thanks to generative AI. A kind of artificial intelligence known as "creative AI" creates new text, pictures, audio, and video material in response to human input. Instead of being a software that receives instructions, generative AI is made to learn from enormous volumes of data and provide pertinent answers that sometimes cannot be distinguished from material created by humans (Dwivedi et al., 2023). Because of this advancement, students seeking assistance with academic writing assignments are increasingly turning to AI writingtools. Students' use of writing programs powered by AI has increased dramatically because of their usability and accessibility. Many students utilise them for brainstorming, making outlines, modifying texts for grammar and spelling, and proofreading. The benefits of using AI technology for language development, increasing writing confidence, and improving learning efficiency are discussed. The advantages of using AI technology for enhancing language growth, writing confidence, and learning efficiency are examined. They contend that AI may act as a smart professor, providing prompt criticism and direction when writing (Zhai, 2024). Although these benefits are emphasised, there are still queries and worries about the use of AI in education. Students' critical thinking, imaginative thinking, originality, and self-learning abilities may be compromised by an over-reliance on AI-generated information. Concerns about academic integrity, plagiarism, and authenticity of student work are also raised when AI-generated textual compositions are turned in as original assignments (Cotton, Cotton, & Shipway, 2024). The use of AI in secondary education presents both potential and difficulties. AI may be a helpful teaching tool, but using it requires some expertise. Education experts emphasise how crucial it is

to use AI to enhance rather than replace the learning process. In order to enhance their writing skills, students should use AI technology and interact with the cognitive processes involved in writing (Tlili et al., 2025). Therefore, by implementing intelligent systems that will aid in the teaching and learning process, artificial intelligence may be seen as a technical invention that has significantly changed educational methods. AI writing tools are a relatively new teaching tool in the field of essay writing, and depending on how and how frequently they are utilised, they may have a beneficial or bad effect on students' writing abilities.

Writing Skills and AI Integration

Writing is considered one of the language abilities that students should acquire during their schooling. A complex mental activity in which ideas are formed, thoughts are organized, sentences are formed, and information is presented to an audience. Writing skills are a combination of grammar, vocabulary, spelling, coherence, cohesion, creativity and critical thinking. Essay writing is of particular importance in secondary education as it allows a child to express opinions, analyze issues, present arguments and show their understanding about academic concepts (Graham, 2023).

Writing is a critical component to academic achievement and lifelong learning. The students who have good writing skills do better in exams, they complete their assignments better and they communicate their idea in a better way. Hyland (2022) argues that writing is not just about the production of text, but a process of meaning-making which involves planning, drafting, revising and editing. Students' higher order thinking skills are developed in their regular writing practice, including analysis, evaluation, and problem solving.

Digital technologies have had a significant impact on teaching and learning of writing skills as they now increasingly permeate education. Of these technologies, Artificial Intelligence has

proven itself to be a valuable instrument in writing instruction and learning. AI Writing Integration: Using AI-powered tools and systems within the writing process as a support mechanism for students to produce, enhance, or polish written work. They offer services such as real-time feedback, grammar correction, vocabulary suggestions, content generation, and writing enhancement through the application of machine learning and natural language processing (Luckin & Cukurova, 2024).

One of the most common uses of AI writing tools like ChatGPT, Grammarly, QuillBot, Gemini, and Microsoft Copilot is to streamline language tasks for students. AI writing tools like ChatGPT, Grammarly, QuillBot, Gemini, and Microsoft Copilot are increasingly being used by students to simplify language tasks. Grammarly, for example, helps users correct their grammar and enhance sentence structure, while ChatGPT can provide essay suggestions, outlines, and even drafts based on user prompts. QuillBot can paraphrase and restructure sentences to enhance the clarity and readability of assignments for students (Chan & Hu, 2023). AI's incorporation into writing instruction has brought in a few potential advantages. An important benefit is that immediate feedback is provided. Students invariably waited for teachers to follow up and correct their written work.

With the help of AI, students can get instant feedback on their grammar, punctuation, vocabulary usage, and sentence construction, helping them to recognize and correct errors swiftly. This impromptu response can encourage independent learning and enhance writing skills in the long run (Kohnke, Moorhouse, & Zou, 2023).

A further advantage of the incorporation of AI is that it can assist students who have difficulty generating ideas and organizing their thoughts. Many students struggle to start an essay or build them out into logical arguments. AI writing aids can suggest topics, provide an outline, and offer

supporting ideas, which can help students overcome writer's block and participate more effectively in writing the text (Yan, 2024). This can boost students' self-confidence and motivation to write.

Moreover, AI technologies can play a part in individualized learning experiences. Students have different levels of writing proficiency; AI can offer personalized writing assistance according to their needs. If students need help with grammar, they can just concentrate on grammar corrections, and if they are working on content development, they can be given ideas to organize their thoughts and arguments (Crompton & Burke, 2023).

However, there are debates about the potential of using AI in writing education. Another worry is that students might rely on AI-generated texts instead of cultivating their own writing skills. Over-reliance on AI tools can limit opportunities for independent thinking, creativity, and problem-solving, all of which are essential to good writing (Susnjak, 2023). Students can also use AI to finish their homework without actually comprehending the topics under discussion.

Another difficulty is to do with academic integrity. There is a possibility that students may submit AI-generated content as their own work, given that AI tools can produce comprehensive essays that are similar to human-written writing. This practice can compromise the validity of assessment practices and challenging for teachers to judge students' authentic writing ability (Perkins, 2023).

However, the effectiveness of the use of AI in education largely rests on how it is used. AI can support students in their writing process and learning outcomes when it's used as an aid, not a replacement, for independent effort. Therefore, there is a rising emphasis on teaching students to responsibly and ethically use AI technologies while also cultivating their critical thinking, creativity and active participation in the writing process (Bozkurt et al., 2024).

The acceptance of AI poses both opportunities and challenges as students are still learning the basics of writing. Therefore, a comprehension of how AI writing tools affect students' writing development is vital to guarantee that these tools support education and improve essay writing.

Influence of AI Writing Tools on Students' Essay Writing Skills

Student essay writing has been significantly impacted by artificial intelligence (AI) writing tools. The way students write essays has changed thanks to AI writing tools. Every step of the writing process, including ideation, planning, drafting, rewriting, editing, and proofreading, is intended to be assisted by AI writing tools. As these technologies become more accessible to students, educational scholars are becoming more interested in how they affect the development of writing abilities.

The capacity to generate pertinent ideas, organise thoughts logically, construct grammatically sound sentences, use appropriate terminology, and effectively communicate in writing are all components of essay writing abilities. In the past, kids learned these abilities via practice, guidance, and instructor criticism. However, AI writing tools have made it possible to help students enhance their own writing and learning processes in new ways (Limna et al., 2024). The enhancement of grammatical precision is one of the main benefits of AI writing tools for essaywriting abilities. Grammar, punctuation, spelling, and sentence structure mistakes may all be detected by several AI-based programs. With the help of these real-time feedback and explanation tools, students may improve the quality of their writings and spot common writing errors. According to AlAfnan et al. (2023), pupils who utilise AI writing tools often produce essays that are more grammatically accurate than those who use conventional writing tools. AI writing tools can aid in expanding one's vocabulary. Students sometimes have trouble using appropriate words to express ideas properly. AI may provide additional terms, synonyms, and phrases that might

enhance writing's accuracy and clarity. Students may progressively expand their vocabulary and improve their language abilities when they are exposed to these recommendations on a regular basis (Huang & Tan, 2023).

The enhancement of content development and the formation of ideas are two other important effects. Many students often struggle to begin essays and organise their thoughts into arguments. AI writing resources may help students with the writing process by giving them essay ideas, outlines, thesis statements, and supporting information. This kind of support may help overcome writer's block and reduce anxiety related to writing projects. According to Lo (2023), AI concepts may assist authors organise their writing processes and stimulate their creativity. Additionally, AI writing resources provide chances for individualised education. AI systems can provide you with the assistance you need at all times, but a teacher in a regular classroom can only assist you when you come to them for one-on-one assistance. According to Moorhouse, Yeo, and Wan (2023), AI apps may provide students feedback so they can rework their works over time.

AI writing resources can also boost students' motivation and self-assurance in writing essays. When students get prompt help and feedback, they may feel more confident about being able to accomplish writing tasks successfully. Improved confidence can lead to a greater involvement in writing tasks and positive attitudes towards learning. Chiu (2024) reports that students who view AI as a learning partner are more likely to be actively involved in writing tasks and establish better writing practices.

While these advantages are compelling, doubts have been expressed about how AI writing resources may impact students' essay writing abilities. A large problem is the dependency development. Overuse of AI generated material can lead to a decrease in students' desire to think, plan, and write on their own. This over-dependence can hinder their capacity for creating their own

ideas and building arguments without the use of technology (Rudolph, Tan, & Tan, 2023). The other issue has to do with creativity and critical thinking. Essay writing is designed to enhance students' analytical and creative skills. As students become increasingly dependent on AI-generated text, however, they may not be able to understand the cognitive processes required for building the skills. This can constrain the possibilities for independent thought and intellectual development (Michel-Villarreal et al., 2023).

Lack of academic integrity also continues to be a major problem. Few students may use AI writing resources inappropriately by submitting essays that are generated by AI as their own. These practices can jeopardize the goals of education and make it challenging for teachers to judge the effectiveness of students' writing. Therefore, educators have begun to worry about the authenticity and fairness of student assessment (Bearman & Ajjawi, 2024).

However, some scholars argue that the impact of AI writing resources is more dependent on their application. AI tools can be valuable resources in the development of essay writing skills when used as tools for brainstorming, editing, and revision. However, they can be a distraction if used as a replacement for real learning and writing practice, and may be detrimental to the development of necessary writing skills. Students require appropriate guidance on the responsible use of AI technologies, to maximise the educational benefits, while minimising the potential drawbacks (Selwyn, 2024).

The use of AI writing resources presents several challenges for essay writings skills. The application of AI writing resources in essay writing skills comes with a few challenges.

While the use of Artificial Intelligence (AI) writing tools offers significant advantages in the educational context, it also has a number of challenges that could pose difficulties for student

writing development. These challenges are significant especially at secondary level of schooling as learners' basic literacy writing skills are still developing.

A significant problem is that people have become overly reliant on AI tools. Numerous students overuse tools like ChatGPT, Grammarly, and QuillBot to develop ideas, build sentences, and write essays with little of their own effort. This reliance lessens their independent thinking and writing practice; the latter is crucial to effective essay writing. Overreliance on generative AI could jeopardize students' capacity to write in a critical and independent manner, according to Perkins and Roe (2023).

Academic dishonesty and plagiarism is also a major problem. With AI writing tools, students will be able to produce entire papers that can look like original works, and you won't know if a student wrote them or if they were generated by an AI. In many cases, students hand in AI generated content without acknowledging it as such, thus compromising on academic integrity. Similarly, with the emergence of AI tools, Owan, Arop and Udofia (2024) noted that cheating and the reduction of authenticity in assessment is a concern in African educational institutions.

Another challenge is a decrease in creativity and critical thinking abilities. The purpose of essay writing is to encourage learners to think deeply, analyse and argue their views in an original way. But, with the reliance on AI outputs, students might not be fully engaged in these thinking skills. There is a worry that the unrestricted use of generative AI in education might take a toll on students' creativity and independent thinking, a concern shared by UNESCO (2023).

Furthermore, there's the concern of wrong or distorted content generation. While AI-powered tools are sophisticated, they're not always correct. They might generate false data, out-of-date facts or a biased answer based on what they were trained! They can give wrong information, out of date facts

or biased answers based on the facts they were given! Kasneci et al. (2023) also warn that generative AI systems can also generate misinformation or hallucinate, which can negatively impact students' learning of academic subjects.

Another challenge in the Nigerian context is access to digital tools and internet connectivity which is unequal. Smartphones and reliable internet connectivity are not guaranteed among all students, nor are data plans sufficient for them to enjoy the benefits of AI writing resources. The digital divide contributes to injustice in learning opportunities for pupils with varying socio-economic backgrounds. One of the key issues identified by Afolabi and Alade (2024) as impacting effective integration of educational technologies in secondary schools of Nigeria is digital inequality..

Moreover, the issue of teachers' limited competence in the use of AI is a challenge. It may be that many teachers at secondary schools are not fully trained with regard to how to facilitate the ethical and effective use of Artificial Intelligence in writing. Therefore, students may use the tools inappropriately if they are not supervised. Eze and Nwafor (2023) state that lack of digital literacy knowledge among teachers restricts effective teaching and learning with new tools.

This is another obstacle; it is a decrease in practice and skill development in writing. If students use AI tools to write their essays or automatically correct their work, they might not receive as much practice in writing skills like constructing sentences, writing paragraphs, and developing arguments. This over time lowers their own competence in writing without the use of technology (Rudolph, Tan, & Tan, 2023).

Last but not least is there the problem of moral ambiguity and no clear moral directive in many schools. There are no clear policies in place in many secondary schools in Nigeria that regulate the use of AI in academic activities. Such non-regulation makes it hard for teachers and students

to determine acceptable assistance from academic dishonesty. UNESCO (2023) has highlighted the importance of adopting clear institutional policies for responsible use of AI in education.

Theoretical Framework

Technology Acceptance Model (TAM)

This study is based on Davis' (1989) Technology Acceptance Model (TAM). This model is aimed at understanding how people adopt and adapt to a new technology. It is one of the most popular theories applied to the explanation of the spread of technological innovations across various areas including education.

According to TAM, there are two factors that are thought to influence a person's decision to adopt a technology: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Perceived usefulness is the degree to which the user thinks that he/she will be able to use a given technology to be more efficient or effective at work. As part of this research, it means that students believe that AI lettering forms like ChatGPT, Grammarly, and QuillBot can enhance the writing process, quality of writing, and speed of completing writing tasks.

The degree to which a person believes that using a certain technology will be simple is known as perceived ease of use. This research demonstrates how readily students may learn, access, and utilise AI writing resources when writing essays.

According to Davis (1989), people are more likely to have a favourable opinion of and really utilise a technology if they believe it to be practical and simple to use. This means that when students can use AI writing tools and find them helpful in writing essays, they will be more inclined to do so. TAM also introduces the idea of attitude toward use which is an intermediate construct between ideas and behaviour. It is anticipated that students' attitudes will either positively or negatively

affect how they use AI writing resources in this study; a positive attitude will show up as the use of AI writing resources as learning support tools, while a negative attitude will show up as the use of AI writing resources as substitutes for individual writing effort.

Peer pressure, teacher support, digital literacy, and access to internet-connected gadgets, in addition, could affect PUE and PEU. A student who is digitally savvy may find it simpler to use AI tools, while a student who has had instruction from a teacher may find the tools more beneficial to their writing skills. In the context of this research, TAM is useful for figuring out why senior secondary school students utilise AI writing resources and how their perceptions will influence their usage. Furthermore, it offers a guideline to understand if students are leveraging AI tools to improve their essay-writing or if they are relying too heavily on them and potentially stunting their development. The theoretical basis of this investigation was the Technology Acceptance Model, which offers good theoretical support for the research.

Empirical Studies

Research on the impact of machine learning, or artificial intelligence (AI), on the writing skills of students is extensive in current educational research – especially in higher education contexts.

Zhai (2023) explored the impact of AI writing resources on students' academic writing. The study is of a quasi-experimental and mixed method research design with the students of the University of Delhi who were introduced to AI writing tools such as ChatGPT and Grammarly. Writing activities were used to gather data and students' written products were assessed based on the grammar accuracy, coherence and organization items. The results indicated that the students who used AI tools significantly outperformed the others in terms of the quality of their writing. AI was demonstrated to enhance sentence structure, grammatical correctness, and the flow of sentences in

essay writing. The study was carried out with University students, however, this did not explain the applicability to senior secondary school as they are still developing their basic writing skills.

Similarly, Chan and Hu (2023) have designed a survey study of a qualitative nature to gain insight into students' perceptions and use of generative AI in academic writing. The data for the study were obtained from open-ended questionnaires given to undergraduate students. The results indicated that the primary application of AI tools by students was for brainstorming ideas, paraphrasing text, and correcting grammar. Respondents noted that AI was beneficial for enhancing writing productivity, but they also shared their fears of becoming too dependent on AI and losing originality. The final conclusion of the study is that AI should not replace, but rather support students' writing. The study was carried out at tertiary level, and is therefore not applicable in secondary school.

Another similar work was done by Kasneci et al. in 2023 which is a systematic literature review that touched on the use of Large Language Models in education. This study examined the literature, specifically journal articles published in peer-reviewed journals, over various databases to draw conclusions about trends, benefits and risk associated with the use of AI in learning environments. The findings demonstrated the benefits of AI in personalized learning, writing support, and feedback. They also have potential drawbacks like plagiarism, inaccuracies, and a lack of critical thinking. The authors pointed out that empirical research in real classroom with younger students should be conducted it is important. This is indicative of a methodological gap as the study was not based on primary data collection.

Furthermore, a quantitative survey was conducted by Limna et al. (2024) to explore the effects of AI writing assistants on students' writing products. The respondents for this sample were higher education students who frequently used AI technologies in their academic writing assignments.

The data collection methods adopted were structured questionnaires and the data analysis was descriptive and inferential statistics. The study revealed that using AI writing tools enhanced writing fluency, grammatical correctness, and confidence. It also discovered that excessive dependence on AI technologies was associated with a decrease in autonomous authoring. The research suggested a balanced approach of teaching. But this study has been conducted in the university environment, it is important to explore secondary school students.

Africa and Nigeria, research on digital tools has focused on academic writing of students, while there has been no investigation on the topic of AI writing tools. Owan, Arop and Udofia (2024) studied the effect of the use of digital learning tools on academic performance in secondary schools in Nigeria. This study used descriptive survey research approach. The population was all the senior secondary school pupils in some selected states and the sample was obtained using stratified random sampling technique. The data was gathered from a standardised questionnaire namely the Digital Learning and Academic Performance Questionnaire (DLAPQ), which was verified by experts, and a Cronbach Alpha reliability test. Analysis of data was done with the use of Mean and Standard Deviation. Pupils frequently used digital technologies to assist learning, including using a search engine, noting online and using a mobile. Unfortunately, a number of students attempted to make and duplicate tasks without comprehending them, which negatively affected learning. The survey found that not enough supervision and lack of digital literacy was responsible for the misuse of technology. The study did not examine the writing resources used by AI tools or the capacity of AI to be a writer of an essay, thus leaving a conceptual gap for the present investigation. Similarly, Afolabi and Alade (2024) used a descriptive survey approach to assess the availability and use of instructional technology in Nigerian secondary schools. The research was conducted at public secondary schools in Nigeria's Southwest area, with instructors and students recruited using

multistage sampling approaches. A validated questionnaire was used to gather data, which was then analysed using descriptive statistics. The findings found that although certain ICT digital tools were accessible in schools, they were underutilised due to a lack of ICT infrastructure, an internet connection, and instructors' lack of proficiency in utilising these tools. The research also discovered that students' usage of instructional technology was uneven, which led to inconsistent learning outcomes. However, the study was more generic and did not focus on AI writing resources or the impact of AI on essay writing.

Rudolph, Tan, and Tan (2023) also did a document-based analytical study on the implications of generative AI for academic integrity in another relevant study. Existing literature, policy and institutional reports on the use of AI in education were reviewed. The results indicated that generative AI tools like ChatGPT can generate human-like essays comparable to those written by students. This naturally puts serious questions to the plagiarism detection, fairness of assessment, and authenticity of academic work. The findings of the study were that AI is a technology that has the potential to improve productivity but also poses a risk to academic integrity if not properly regulated. The study was however theoretical and not empirical, as it lacked primary data of the students.

Perkins (2023) investigated the usage of AI writing resources in the academic setting through a mixed-methods research approach. Questionnaire and writing task analysis were used in the study with secondary and post-secondary students. Purposive sampling was used to choose the sample of the students. The findings revealed that AI tools were frequently employed by students for paraphrasing, grammar correction, and structuring essays. The tools helped to enhance the quality of the writing in its superficial aspects, but did not seem to have a meaningful effect on deep writing components like argument development and critical reasoning. The research also revealed

that students who were very dependent on AI tools exhibited lower levels of independent writing skills. The study, however, took place in an environment not African, hence, the results are not directly applicable to the secondary schools of Nigeria.

UNESCO (2023) presented an empirical study on the use of generative AI in education, from a policy perspective, based on mixed secondary data analysis from diverse countries. The report emphasized how AI tools can facilitate the development of writing through feedback, scaffolding, and language support. It added, however, that there are obstacles to inclusion, such as inequitable access, inadequately prepared teachers, and risk of dependence. The report called for providing students with guidelines for responsible use of AI in schools. The report is very relevant, however it was global, not specifically targeted at Nigerian secondary school students.

Chiu, Ismailov, Zhou, and Cheng (2024) studied the correlation between the use of Artificial Intelligence (AI) writing tools and students' writing performance in higher education institutions. This study used quantitative correlational. The population was undergraduate students from selected universities and the sample was 420 students who were selected through stratified random sampling method to ensure representation across the disciplines. The data were gathered using the AI writing resources and Academic Writing Performance Scale (AIWAP). The instrument assessed the frequency of use of AI, perceived usefulness, perceived ease of use, grammar accuracy, coherence, and writing speed in indicators. The instrument has been validated by experts in educational technology and the reliability was tested by Cronbach Alpha coefficient is 0.87. Pearson Product Moment correlation and regression analysis was used for data analysis. The findings demonstrated a significant beneficial relationship between writing efficiency and the usage of AI writing resources. Students who often used AI said that it improved their grammar, improved sentence structure, and accelerated their completion of writing projects. The research

also showed that a decline in autonomous writing abilities was linked to an excessive reliance on AI. The researchers discovered that although using AI writing resources might enhance surface-level writing abilities, overuse of them can worsen deep writing abilities. The study's drawback is that it was carried out in a university setting, which prevented it from accurately representing secondary school students who are still learning the fundamentals of essay writing.

A quasi-experimental research design was employed by Moorhouse, Yeo, and Wan (2023) to explore the impact of AI-generated feedback on the writing achievement of students. A total of 120 undergraduate students were selected for the study and split into two groups: experimental and control. The experimental group was given AI feedback (Grammarly and ChatGPT) and the control group was given traditional teacher feedback. The main instrument of data collection was writing test (pre-test and post-test). The essays were evaluated based on a set of criteria for writing that emphasized grammar, coherence, vocabulary usage, and organization. The instrument was evaluated by language experts and inter rater reliability was achieved. The t-test statistics were used for analysing the data. It was found that the experimental group obtained significantly higher scores in the post-test than the control group. Pupils who received AI feedback showed higher grammar accuracy, more coherent and better revision capabilities. The researchers found that AI-driven feedback can augment teacher teaching and enhance the results of writing. The study, however, was confined to the context of higher education students in a controlled setting and the results may not apply to the secondary school environment in which students' digital literacy is lower.

Lo (2023) used qualitative phenomenological research to examine the experiences of students with generative AI writing resources. The subjects were university students who actively engaged with AI tools in the context of academic writing. 25 people were selected using purposive sampling

method. Semi-structured interviews were conducted to gather data regarding students' experiences, patterns of using AI tools for writing, and their perceptions. Thematic analysis was used to transcribe and analyze the data. The results identified four key themes: AI as a brainstorming assistant, AI as a grammar correction tool, AI as a paraphrasing tool and AI as a writing replacement. Students said they were less anxious about writing and more productive with their ideas thanks to AI tools. But they also confessed to relying too heavily on AI, leading to a decline in their critical and independent writing skills at times. The study found that AI writing resources can be used as tools to enhance learning or learning inhibitors, depending on their use. The study was conducted with a small sample size with students in the higher education level, thus the findings may not be generalized to secondary school learners.

Summary of Review of Related Literature

The literature reviewed included the concept of Artificial Intelligence (AI), writing skills and integration of AI. It also reviewed the literature of the theoretical framework used for the study, the Technology Acceptance Model(TAM), and empirical studies related to the study.

Based on the conceptual review, AI writing software were recognized as emerging technologies to assist students in generating ideas, correcting grammar, enriching vocabulary, and organizing essays for language learning. Writing skills were also determined as essential academic skills that include organization, coherence, creativity, grammar accuracy, and critical thinking.

The review also revealed that the usage of AI writing resources has both true and negative effects on students' essay writing abilities. In a positive sense, they increase grammar accuracy, extend vocabulary and boost the ability to generate ideas and accelerate writing speed and confidence.

But negatively, they can create overdependence, decrease creativity, get a lack of critical thinking with problems in academic honesty if misused.

The findings of the patterns of use showed that students use AI tools throughout the writing process, ranging from brainstorming, drafting, paraphrasing, to editing. Some students might depend on AI to enhance their writing skills, while others might rely on it too heavily to write entire essays, potentially limiting their independent writing practice. Lack of teacher supervision, plagiarism risks, digital literacy among students, unequal access to digital resources and dependency are the challenges arising out of the use of AI writing resources. The issues are more stark when the academic context is one in which the ethical use of AI is not well understood. According to the theoretical framework, Technology Acceptance Model (TAM), the perceived usefulness and perceived ease of use are factors that affect students' use of AI writing resources. This suggests that ease of use and helpfulness of AI tools would motivate students to use them in their essay writing process.

A review of the empirical literature found that most current studies were undertaken in the setting of overseas and higher education institutions, with little research conducted on senior secondary school pupils, particularly in Nigeria. Several studies concluded that AI technologies were useful for writing, while others identified possible drawbacks like as dependency and a lack of creativity. Importantly, there is a significant lack in empirical research on the impact of artificial intelligence-powered writing instruments on students' essay writing abilities. Thus, this research is important because it intends to solve this shortcoming by providing empirical evidence of the effect, use, and challenges users of AI writing tools encounter among students in the study region.

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CHAPTER THREE

RESEARCH METHODOLOGY

Research Design

The study had a descriptive survey research design. The design was deemed suitable as it enabled the researcher to collect data from the respondents and explain their views on how Artificial Intelligence (AI) writing tools affect students' essay writing skills without changing any of the variables. A type of research technique that gathers information from a representative sample of a population to describe the conditions, opinions and behaviours that exist in the population as they are, is known as descriptive survey research (Nworgu, 2015). Similarly, Kothari (2004) said that survey research is appropriate when the goal of one's study is to gather factual information on people's attitudes, perceptions, and practices. Using the above positions, the design of this study was suitable as it investigated the use of the AI writing resources by students and the effect of such usage on their essay writing skills in any real school environment.

Area of the Study

The study was conducted in Igbo-Etiti Local Government Area of Enugu State, Nigeria. The headquarters of the Local Government Area is located in Ogbede and it is composed of major communities like Ukehe, Aku, Ozalla, Ikolo, Diogbe, Nkporogwu and others. Igbo-Etiti is predominantly rural/ semi-urban LGA and its level of exposure to digital technology is rising as educated young people and students have been able to own smartphones. People's primary livelihoods include farming, trading, as well as civil service jobs and various artisan activities. The LGA has some 18 public secondary schools that are managed by the Post Primary School Management Board (PPSMB) of Enugu State. Increased usage of internet connected devices for

academic work by senior secondary school students in the area has been observed, including the use of Artificial Intelligence (AI) writing tools, like ChatGPT, Grammarly, QuillBot and others. This created the area as suitable for the study.

Population of the Study

The population in the study was all the senior secondary school students (SS2 & SS3) of the public secondary schools in Igbo-Etiti local government area. There are approximately 18 public secondary schools in the area with a population of 3,120 SS2 and SS3 students as per the official estimates derived from school records within the PPSMB Igbo-Etiti Zone. The reason for selecting SS2 and SS3 is that they actively write essays as part of their English Language learning in the school while they are also engaged in external examinations like WAEC and NECO examinations, which require essay writing.

Sample Size and Sampling Technique

The sample size was determined using the Taro Yamane formula:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

$$N = 3,120$$

$$e = 0.05$$

$$n = \frac{3120}{1 + 3120(0.05)^2} = \frac{3120}{1 + 3120(0.0025)} + \frac{3120}{1 + 7.8} + \frac{3120}{8.8} = 354.5 \approx 355$$

Therefore, the sample was 355 students.

A stratified random sampling technique was used. The population was segmented by school and proportionate allocation was employed to represent the population equally at each school. Students of SS2 and SS3 were randomly selected from each school selected.

This guaranteed equal representation and minimised sampling bias.

Instrument for Data Collection

Data was collected using a structured questionnaire titled:

The questionnaire titled “Influence of Artificial Intelligence Writing Tools on Students' Essay Writing Skills Questionnaire (IAIWTS-EWSQ)” was devised. A questionnaire titled “Influence of Artificial Intelligence Writing Tools on Students' Essay Writing Skills Questionnaire (IAIWTS-EWSQ)” was designed.

In developing the questionnaire, the researcher has used literature and has determined the objectives of the study. It was broken up into four parts:

Demographic information (class and gender) contained in Section A.

Part B: How AI writing tools affect essay writing skills

Section C: Patterns of use of AI writing resources for essay writing

Section D: Difficulties with AI writing resources

The items were organized along a 4point likert scale as shown below:

Strongly Agree(4),Agree (3),Disagree (2),Strongly Disagree (1).

Validation of the Instrument

The instrument was validated by two experts in Educational Measurement and Evaluation and English Language Education of Godfrey Okoye University, Enugu, respectively. They analyzed clarity, relevance, adequacy and coverage of the research objectives from the questionnaire. They provided the instrument with corrections and suggestions for improvement which were used to improve the final instrument, thus ensuring face and content validity of the questionnaire prior to administration.

Reliability of the Instrument

The instrument's reliability was assessed in a pilot study carried out in a secondary school that was not included in the main study which i. The instrument was given to 30 students in senior secondary school, and the internal consistency of responses was determined by Cronbach Alpha method. The reliability coefficient obtained was 0.83 which meant that the instrument was reliable for the study.

Method of Data Collection

The researcher personally administered the questionnaire to the respondents and trained research assistants were also used. Questionnaires were hand-delivered to respondents in their school and collected straight after completion. This ensured a high response rate and minimized loss of data.

Method of Data Analysis

The analysis of the data obtained was carried out using mean and standard deviation to answer the research questions. The following decision rule was used: Items with mean scores of 2.50 or higher were accepted and items with mean scores below 2.50 were rejected. This was considered as the middle point of the 4 point Likert scale.

CHAPTER FOUR

PRESENTATION OF DATA AND RESULTS

This chapter discusses the analysis and interpretation of the data obtained for the study. The analysis was carried accordingly to the three research questions. Data analysis was done using mean and SD. A decision rule was thus chosen so that an item with a mean score of 2.50 or above would be accepted and an item with a mean score lower than 2.50 would be rejected.

Research Question One

To what extent do AI writing resources improve students' essay writing skills?

Table 4.1: Mean Ratings on Impact of AI Writing Tools on Essay Writing Skills

S/N	ITEM STATEMENT	MEAN (X)	STD	DECISION
1	AI writing resources help students arrange ideas and develop well-structured essays.	2.90	0.72	Accepted
2	AI tools provide instant corrections on grammar, sentence structure, and writing style.	2.80	0.70	Accepted
3	AI systems offer personalized guidance that helps students improve weak areas in writing.	3.10	0.77	Accepted
4	AI-based platforms provide practice exercises that enhance essay writing skills.	3.20	0.80	Accepted
5	Overuse of AI technologies may weaken students' writing critical thinking skills.	3.30	0.82	Accepted

Grand Mean = 2.96

As indicated by the data given in Table 4.1, all items had mean scores greater than the cut-off of 2.50. This means that the respondents agree that there are various ways AI writing resources impact students' essay writing skills. The results showed that AI tools help students plan ideas, correct their grammar and sentence structure and give them personalized writing feedback. Furthermore,

respondents stated that AI platforms provide practice tasks which contribute to enhance writing ability. It was also noted that over-dependence on AI tools could have a negative impact on critical thinking skills, highlighting both positive and negative influences.

Research Question Two

What are the patterns of AI writing tool usage in the essay writing process?

Table 4.2: Mean Ratings on Patterns of AI Writing Tool Usage

S/N	ITEM STATEMENT	MEAN (X)	STD	DECISION
1	Students use AI tools to generate essay ideas and create outlines before writing.	2.70	0.67	Accepted
2	AI tools are used to organize essay content in a logical sequence.	2.60	0.65	Accepted
3	Students use AI applications to check and correct grammar and sentence structure.	2.80	0.70	Accepted
4	AI tools are used to proofread essays and improve clarity and writing style.	3.00	0.75	Accepted
5	Students rely on AI tools to receive feedback during the writing process.	2.90	0.72	Accepted

Grand Mean = 2.80

The results in Table 4.2 indicated that all items had mean scores above 2.50, showing that AI writing resources are actively used by students in the essay writing process. The verdicts revealed that students commonly use AI tools for generating ideas, structuring essays, correcting grammar, proofreading, and receiving feedback. This suggests that AI tools are mainly used as supportive writing assistants rather than complete replacements for independent writing.

Research Question Three

What are the challenges associated with the use of AI writing resources for essay writing skills?

Table 4.3: Mean Ratings on Challenges of AI writing resources

S/N	ITEM STATEMENT	MEAN (X)	STD	DECISION
1	Many students depend too much on AI tools, weakening independent writing ability.	3.10	0.77	Accepted
2	AI-generated outputs are sometimes inconsistent in quality and accuracy.	2.90	0.72	Accepted
3	Overreliance on AI tools limits students' originality in writing.	2.80	0.70	Accepted
4	Technical issues such as poor internet connection disrupt writing activities.	2.90	0.72	Accepted
5	Teachers' lack of knowledge about AI tools affects effective classroom integration.	2.70	0.67	Accepted

Grand Mean = 2.88

The findings in Table 4.3 showed that respondents agreed that several challenges are associated with the use of AI writing resources in essay writing. These include overdependence on AI tools, inconsistency in AI-generated outputs, reduced originality in students' writing, technical difficulties such as internet challenges, and lack of teacher competence in AI integration. These challenges suggest that while AI tools are beneficial, they also pose limitations to effective writing development.

Summary of Findings

The findings of the study revealed that:

- AI-driven platforms provide interactive exercises to help students practice their writing skills.
- AI provides instant feedback, allowing students to learn and correct errors.
- Technical problems with AI tools can disrupt the writing process for students.

CHAPTER FIVE

DISCUSSION, CONCLUSION, EDUCATIONAL IMPLICATIONS, RECOMMENDATIONS AND SUMMARY OF THE STUDY

The discussion of findings, conclusion, educational implications, limitations of the study, recommendations and summary of the research are presented in this chapter in light of the analysed data presented in the Chapter Four.

Discussion of the Findings

The findings were presented throughout the debate, using the research questions that led the study.

Extent to Which AI Tools Improve Students' Essay Writing Skills

The results indicated that the use of Artificial Intelligence (AI) writing tools greatly improves students' essay writing abilities. In particular, the research revealed that AI tools help students to better organize their thoughts, to create effective essay structures, and to enhance grammar, syntax and writing style. The findings also showed that AI systems can deliver individualized feedback and assistance to aid students in recognizing and enhancing their areas of weakness in writing. Moreover, it was determined that interactive exercises were provided using the AI platform, which improved students' writing practice.

The results also indicated a possible limitation, as participants were willing to acknowledge that over-reliance on AI tools can detrimentally impact students' independent writing and critical thinking. The result aligns with the study conducted by Tambunan (2022) that AI tools like Grammarly can help students enhance their grammar, punctuation, and clarity in real-time. The

research highlighted the importance of AI systems in improving the quality of writing by supporting students in the writing process.

Patterns of AI Writing Tool Usage in Essay Writing

The results indicated that students apply AI writing resources in various parts of the essay writing process. These involve mind mapping, outlining, structuring text appropriately, editing and proofreading for grammatical mistakes, as well as style and appropriateness. The study also found that students use AI tools to provide them with immediate feedback so they can detect and fix mistakes when writing.

At the same time, it was noted that some students could also fall into the trap of relying too heavily on AI-generated material, potentially compromising the originality and the improvement of their writing skills. This discovery is in line with Nguyen (2024), who noted that the proper integration of AI tools in education is crucial. The study has maintained that the use of AI in writing can improve productivity, but it should also be employed in a manner that maintains the creative, original, and independent thinking of students.

Challenges Associated with the Use of AI writing resources

The research identified some difficulties in using AI writing resources when writing essays. These encompass overreliance on AI tools that can diminish your students' capacity to write independently, variability in the quality of the AI-generated writing, and decreased originality in your students' writing. Technical issues, including poor internet connection and system issues, were also identified as a hindrance to writing activities. Moreover, the study identified that teachers' limited knowledge of AI tools hinders their ability to effectively incorporate it into lessons. This is in line with the study conducted by Iskender (2023) on the effect of AI writing

resources on students' critical thinking and problem-solving skills, which found that overuse of these tools can undermine students' critical thinking and problem-solving skills. The study also pointed out that students might opt for solutions provided by AI rather than genuine learning and the acquisition of skills, which can impact their future writing capabilities.

Conclusion

The study concluded from the above results that Artificial Intelligence (AI) writing tools has a notable effect on the writing ability of the students. AI tools proved to boost students' writing improvement through organization, grammar accuracy, vocabulary usage, and feedback quality. Still, though, even with these advantages, the study has also found that overreliance on AI tools is a problem for students' writing independence, critical thinking and originality. Hence, AI writing resources must be used as learning tools, not as a replacement for students' intellectual labor in writing.

Educational Implications of the Study

The results of this research have implications for students, teachers and education stakeholders.

The first thing to note is that the usage of AI writing tools in learning places suggests a greater availability of technological assistance to students that can improve their writing abilities. Firstly, the use of AI writing resources in learning places implies that the students now have greater avenues for technology to support their writing abilities. This comes with a challenge of teaching digital literacy to students so responsible use of AI tools can be achieved.

Secondly, educators face the challenge of navigating the evolving landscape of educational technology, integrating AI tools into their pedagogical approaches while ensuring academic rigor and quality. Teachers need to adjust their teaching methods to align with the new educational

landscape, which includes incorporating AI tools while preserving the integrity and quality of academic work. This calls for ongoing professional development and training in educational technology.

Lastly, educators, curriculum designers, and policymakers need to establish guidelines for ethical and effective use of AI tools in secondary school learning to ensure that technology enhances, not substitutes for, learning.

Limitations of the Study

The researcher encountered some limitations during the course of the study. These include:

1. Difficulty in obtaining validation of the research instrument from experts due to time constraints and availability.
2. Reluctance of some respondents to complete the questionnaire on time.
3. Some respondents initially declined participation before eventually consenting after persuasion.

Despite these challenges, the researcher was able to successfully collect and analyze the required data for the study.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. To avoid abuse and over-reliance, educational organisations and schools should provide explicit standards for the proper use of AI writing resources in academic writing.
2. Professional development programs should provide teachers with ongoing training on how to successfully use AI writing resources into English language education.

3. While still honing their unique writing and critical thinking abilities, students should be assisted in using AI technologies.
4. Curriculum designers should update writing evaluation techniques to strike a balance between conventional writing abilities and new AI-assisted writing techniques.

Suggestions for Further Research

The researcher suggested that further studies should be carried out on:

1. How AI technologies affect students' academic achievement in other subjects in Enugu State.
2. The effectiveness of ICT-based instructional strategies in teaching English Language in secondary schools in Nigeria.
3. Comparative studies on AI-assisted writing and traditional writing methods in secondary school education.

Summary of the Study

This research looked at how students' essay writing abilities were affected by standardised (AI) writing tools. The study used a descriptive survey research approach, and the researcher's structured questionnaire was used to gather data. Three research questions, which looked at the degree of AI impact, use trends, and difficulties with AI writing resources, served as the study's compass. The results showed that by improving grammatical correctness, organization, vocabulary utilisation, and feedback mechanisms, AI writing resources greatly increase students' essay writing abilities. Additionally, the survey discovered that students utilise AI tools for idea generating, drafting, editing, and proofreading, among other writing processes. However, the research also acknowledged that important obstacles to successful utilisation include an over-reliance on AI

technologies, technological difficulties, and a lack of teacher readiness. The research found that although AI writing resources might be helpful when used properly, over usage of them may have a detrimental impact on autonomous writing abilities.

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