THE EFFECTIVENESS OF AI-ASSISTED RESEARCH COMPARED TO TRADITIONAL METHODS: A STUDY OF UNIBEN STUDENTS.

BY

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MATRICULATION NUMBER

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FACULTY OF ARTS,

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A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF MASS COMMUNICATION, FACULTY OF ARTS, UNIVERSITY OF BENIN, BENIN CITY, EDO STATE, NIGERIA.

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DECLARATION

This project is based on a study undertaken by me Smart Undudi Olise, in the Department of Mass Communication, Faculty of Arts under the supervision of Mrs Amenze Bazuaye.

All ideas and results of this study, were based off my personal research, where the views of others were used; they were duly acknowledged.

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CERTIFICATION

This is to certify that this research work "THE EFFECTIVENESS OF AI-ASSISTED RESEARCH COMPARED TO TRADITIONAL METHODS: A STUDY OF UNIBEN STUDENTS" was written and submitted by Smart Undudi Olise, Matriculation Number ART2201306, to the Department of Mass Communication, Faculty of Arts, University of Benin, Benin City, Edo State, Nigeria.

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STUDENT'S THESIS

AUTHOR'S STATEMENT

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DEDICATION

This project is wholeheartedly dedicated to God Almighty, the source of my strength, wisdom, and grace. His unfailing love carried me through every high and low of this academic journey.

I also dedicate this work to my parent Mr & Mrs Napoleon and Victoria Olise, for their love, guidance and unwavering support. And to my amazing Big Sister Faith Ozioma, thank you so much for your love, encouragement, guidance and financial support. I couldn’t have done this without you.

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ABSTRACT

This study set out to explore The Effectiveness of Ai-Assisted Research Compared to Traditional Methods: A Study of UNIBEN Students, especially when compared to more traditional research methods. As tools like ChatGPT, Grammarly, and Quillbot become increasingly popular, it was important to understand how students are using them, what they find helpful, and what concerns they might have. Using a survey of 402 undergraduate students across different faculties, the study found that most students are not only aware of AI tools but also actively use them to make research faster, easier, and more accurate. Many students appreciated the convenience of AI, highlighting benefits like better grammar, faster content generation, and easier access to information. However, there were also shared concerns some students worried about over dependence, reduced originality, and the ethical implications of relying too much on AI.

Interestingly, while around 68% of the students preferred using AI tools for research, others still valued traditional methods, especially for tasks that require deep thinking, proper citations, and personal analysis. These findings reflect a wider conversation in academia: AI is helpful, but it shouldn't replace human insight, critical thinking, or academic honesty.

In conclusion, the study suggests that AI tools should be embraced—but with caution. Institutions should provide guidance on responsible usage, introduce AI literacy into the curriculum, and help students learn how to balance innovation with integrity. This research adds to our understanding of how Nigerian students view AI in education and offers practical steps for using these tools wisely and effectively.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Research is the backbone and foundation for learning new things, it is used to analysing and develop existing concepts, and provide solutions to problems. Traditionally, research has been carried out using a systematic process that involves organised writing, data collection, analysis, and manual literature reviews. This approach as it seems often requires a lot time, effort, and resources to complete. With advancements in technology, Artificial Intelligence (AI) has become a transformative tool in academic research, automating and improving many aspects of the researching. The increasing adoption of AI-assisted research tools by students at the University of Benin (UNIBEN) offers an opportunity to assess and determine the effectiveness of modern research approach compared to traditional research methods.

Artificial Intelligence (AI) has increasingly become an essential tool in academic research, changing how students gather, analyse, and interpret data. AI-powered research tools, such as ChatGPT, DeepSeek and Google Gemini, offer efficiency and accessibility that traditional research methods often lack. However, while AI-assisted research provides advantages such as speed and automation, traditional methods remain fundamental due to their emphasis on critical thinking, credibility, and human judgment.

The traditional approach to research follows a Deep engagement with academic materials is emphasised in the well-structured process of the traditional research approach. Using books, journals, and scholarly databases, researchers first choose a topic and perform a literature review. First-hand efforts in surveys, interviews, and experiments are used in data collection while

statistical or qualitative methods are used in analysis. Before being submitted, the writing and documentation must be carefully organised, citations must be managed, and several revisions must be made. Creswell (2018), traditional research approach is widely regarded for its ability to develop critical thinking, analytical skills, and a deep understanding of the subject matter.

However, according to Kumar (2019), the traditional research approach presents several challenges, including the time-intensive nature of manual data collection and analysis, the difficulties in obtaining scholarly resources, and the possibility for human error in data handling cannot be disregarded. Research processes have evolved significantly, AI-assisted research uses machine learning, natural language processing (NLP), and big data analytics to increase productivity and precision. Halevi, et al. (2017) emphasises that, AI-powered search engines, such as Google Scholar and Semantic Scholar, enables researchers to find relevant literature works in a matter for seconds, reducing the amount of time need for a literature review.

Furthermore, AI has also changed citation and academic writing. According to Laakso & Björk (2012), researchers can use AI tools like Grammarly, QuillBot, and ChatGPT to create content, improve coherence, and refine grammar. Citation managers like; Mendeley, EndNote, and Zotero, automate referencing, minimising errors and guaranteeing compliance with academic citation styles, reducing errors and ensuring adherence to academic citation styles. Additionally, plagiarism detection tools which help maintain originality in research work. These advancements have made research process faster, accessible, and improved the effectiveness of research

Despite these development and benefits, AI-assisted research has certain limitations. Bender et al. (2021), argues that over-reliance on AI may reduce students' engagement with critical thinking and analytical reasoning, as they may depend too much on AI-generated content rather than

deeply engaging with research materials. Shin (2021), adds that because AI algorithms analyse and summarise information based on existing data, they are prone to bias because they evaluate and condense information based on available data, which could result in false conclusions.

Floridi & Cowls (2019) emphasised the ethical concerns related to AI research, including data privacy and academic dishonesty, which happens when students abuse AI-generated content without adequate attribution or verification.

Students are gradually integrating AI into their academic work due to its growing use in research. It's unclear, though, how much AI enhances research efficacy in comparison to conventional techniques. By contrasting AI-assisted research with conventional techniques, this study seeks to examine the benefits and drawbacks of this approach as well as how University of BENIN (UNIBEN) students view its efficacy in terms of productivity, precision, accessibility, and academic engagement.

1.2 Statement of the Problem

Students at the University of Benin (UNIBEN) face both opportunities and challenges as a result of the dramatic change in the academic research landscape brought about by the quick spread of artificial intelligence (AI) tools. Although AI has the potential to simplify data collection and analysis, there is growing concern that students may be using these tools too much, which could impair their ability to think critically and conduct independent research. There are concerns regarding the long-term effects of this over-reliance on students' capacity to perform original and rigorous research, which could result in a reduction in their ability to critically analyse data and create their own research methodologies.

Specifically, it is necessary to look into the possible repercussions of over-reliance and the degree to which UNIBEN students are using AI for research. The risk of plagiarism from students accepting AI-generated content without question, the potential for a decline in critical research skills like hypothesis formulation, experiment design, and data interpretation, and the potential for students to prioritise speed and convenience over in-depth analysis are all causes for concern. This research aims to examine the balance between leveraging AI's efficiency and maintaining the integrity of academic research, ensuring that students develop the necessary skills to contribute meaningfully to their fields of study.

Furthermore, the integration of AI into academic research at UNIBEN necessitates a nuanced understanding of its implications for the university's educational framework. Without clear guidelines and pedagogical strategies, students may inadvertently perceive AI as a replacement for intellectual engagement rather than as a tool to support it in the absence of clear guidelines and pedagogical strategies. The necessity of institutional and faculty support in assisting students in using AI responsibly will also be covered in this study. This research will help develop policies and training programs that encourage the responsible and efficient use of AI in academic research at UNIBEN by identifying the factors that contribute to over-reliance and its effects on student learning., ensuring that students are equipped to navigate the evolving research landscape while maintaining the core principles of academic integrity.

1.3 Objectives of the Study

The objectives of this study are to;

1. Examine the extent to which UNIBEN students utilise AI-assisted research tools compared to traditional research methods.
2. To Explore the effectiveness of AI-assisted research and how it affects accuracy and critical thinking compared to traditional research methods.
3. Identify the factors influencing UNIBEN students' adoption and utilisation of AI-assisted research.
4. Determine the perceived benefits and challenges of integrating AI-assisted research, and suggest ways for effective AI integration.

1.4 Research Questions

The study aims to answer the following questions;

1. To what extent are UNIBEN students currently utilising AI-assisted research tools, and how does this usage compare to their reliance on traditional research methods?
2. How do UNIBEN students perceive the impact of AI-assisted research on efficiency, accuracy, and the development of critical thinking skills, in comparison to traditional research methods?
3. What factors influence UNIBEN students' adoption and utilisation of AI-assisted research?
4. What are the perceived benefits and challenges of integrating AI-assisted research into the academic workflow of UNIBEN students, and what recommendations can be made for balanced and effective AI integration?

1.5 Significance of the Study

It's no news that the world of academic is rapidly evolving and understanding the impact of AI-assisted research on students at the University of Benin (UNIBEN) is vital. This study moves beyond simply acknowledging AI's presence; it directly compares how UNIBEN students perceive and utilise AI tools versus traditional research methods. By examining their real-world experiences, we can determine whether AI enhances or potentially hinders their ability to conduct thorough and critical academic work. This research will provide essential insights into students' usage patterns, the challenges they encounter, and the benefits they derive from AI, thus informing university departments and leaders about the effective integration of technology in research.

Ultimately, this study aims to bridge the gap between technological advancements and established research practices at UNIBEN. By focusing on the student perspective, the findings will generate recommendations for responsible AI integration and AI research tools to improve and enhance their research and not replace their skill of critical thinking and originality.

1.6 Delimitation of the Study

This study is limited to undergraduate students at the University of Benin (UNIBEN) and focuses on comparing the effectiveness of AI-assisted research with traditional research methods. The research does not extend to postgraduate students, faculty members, or students from other institutions. The research will focus on the students' perceptions and experiences within their academic research processes. The study will concentrate on the quantitative and qualitative analysis of data collected from a sample of UNIBEN undergraduates in the faculty 9f Art, Department of Mass Communication. The research will primarily explore the use of readily

available AI tools commonly utilised by students in the Department of Mass Communication for academic research, such as AI-powered search engines, data analysis software, and writing assistants. Furthermore, the research will primarily rely on surveys and questionnaires distributed to undergraduate students, the findings are intended to reflect the specific experiences of UNIBEN students and may not be generalisable to other institutions or student populations without further research.

1.7 Definition of Terms

Artificial Intelligence (AI): The simulation of human intelligence in machines designed to perform tasks such as problem-solving, learning, and decision-making.

AI-Assisted Research: The use of AI-powered tools and software to assist in academic research, including literature review, data analysis, and content generation.

Traditional Research Methods: Conventional approaches to academic research that rely on manual data collection, literature review, and analysis without AI assistance.

Efficiency: The speed and ease with which research tasks are completed using AI-assisted or traditional methods.

Critical Thinking: The ability to analyse and evaluate information objectively to form reasoned conclusions, which may be influenced by AI-assisted research tools.

Perception: The opinions and attitudes of UNIBEN students regarding the use of AI in academic research.

Adoption: The extent to which students are integrating AI tools into their research practices.

Effectiveness: In this context, it refers to the perceived and measured impact of research methods on factors such as efficiency, accuracy, and the development of critical thinking skills.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Preamble

This chapter provides a comprehensive review of existing literature relevant to the study of AI-assisted research compared to traditional methods among students. It aims to establish a strong understanding by exploring the historical perspectives, defining and examining the core concepts distinguishing AI-assisted from traditional research methods.

2.2 Historical Review

The integration of technology in academic research has evolved significantly over the past few decades. Early research methodologies relied on manual data collection and analysis, using basic computer software for statistical calculations and literature management. The emergence of artificial intelligence in the late 20th century, marked by developments in machine learning and natural language processing, revolutionized these traditional approaches by automating tasks and enhancing analytical capabilities. In recent years, AI tools have increasingly been applied in academic contexts worldwide, although adoption within Nigerian higher education institutions like UNIBEN is still in its early stages.

Historical challenges such as limited technological infrastructure and inadequate training have gradually given way to more sophisticated, AI-enabled research practices, offering new opportunities and posing fresh challenges in the academic landscape.

2.2.1 History of Artificial Intelligence

Historical research, according to Asemah et al. (2022), looks at past actions or occurrences that may be utilised to comprehend the situation that exists now. One of the newest fields of study nowadays is artificial intelligence. Although construction had been underway for almost five years before the phrase was created, it didn't open for business until 1956. According to Rockwell (2017), artificial intelligence originated in the first part of the twentieth century when science fiction presented the concept of artificially intelligent robots to the public. This coincided with the development of modern genetics. It began with The Wizard of Oz's "heartless" Tin Man and ended with Metropolis's humanoid robot that played Maria. A generation of mathematicians, philosophers, and scientists had absorbed the idea of artificial intelligence (AI) by the 1950s.

The historical trajectory of artificial intelligence (AI) research, began with Alan Turing, a young British polymath who studied the mathematical potential of artificial intelligence (1950) conceptualisation of machine intelligence in "Computing Machinery and Intelligence," has significantly shaped the evolution of AI's role in research. Turing's foundational work, envisioning machines capable of emulating human thought processes, laid the groundwork for the development of computational tools designed to automate complex problem-solving. This early focus on machine intelligence directly influenced the creation of adaptive learning systems, which now personalise educational experiences. Newell and Simon’s (1956) The Logic Theory Machine, A Complex Information Processing System” demonstrated the practical application of AI in automated theorem proving, showcasing the potential for AI to automate cognitive tasks, a principle that underpins modern AI-driven research tools.

Parallel to these developments in AI research, educational technology was undergoing its own transformation. Sidney Pressey's mechanical teaching machine in the 1920s, which provided immediate feedback on multiple-choice questions, represented an early attempt at adaptive learning. By the 1960s, the Programmed Logic for Automatic Teaching Operations (PLATO) system marked a significant shift towards digital learning environments, offering computer-based education with interactive terminals. This system laid the foundation for the interactive and personalised learning experiences that are now facilitated by AI. The subsequent emergence of Intelligent Tutoring Systems (ITS) in the 1970s and 1980s further advanced the integration of AI into education.

Feigenbaum's (1977) work on expert systems, exemplified by MYCIN, demonstrated AI's ability to codify and apply expert knowledge, influencing the development of ITS that could provide tailored instruction. Carnegie Mellon's Cognitive Tutors, which established student cognition and provided personalised feedback, showcased the potential of ITS to enhance learning outcomes. The development of back-propagation by Rumelhart, Hinton, and Williams (1986) significantly improved the capabilities of neural networks, enabling more sophisticated pattern recognition and predictive modelling, which are crucial for adaptive learning systems. In recent years, the convergence of AI research and educational technology has led to the development of advanced adaptive learning systems that customise content delivery based on real-time student performance. The "big data" revolution, as described by Manyika et al. (2011), coupled with advancements in deep learning, as demonstrated by Krichevsky, Sutskever, and Hinton's (2012) AlexNet, has enabled the creation of AI tools that can analyse vast datasets to personalise learning experiences. The development of transformer networks, as introduced by Vaswani et al. (2017), has led to the

creation of large language models that can be used for tasks like summarisation, question answering, and text generation, all of which are very helpful in educational contexts. At institutions like the University of Benin (UNIBEN), these AI-research tools are increasingly being adopted to transform traditional research methods. Students and educators are utilising AI applications for tasks such as automated grading, personalised feedback, collaborative learning, and content creation, enhancing the overall educational experience.

However, this integration also raises critical considerations regarding the balance between technological innovation and the preservation of critical thinking and problem-solving skills, which are essential components of conventional education. As AI continues to permeate academic settings, it is imperative to conduct thorough assessments of its impact on student learning outcomes and to develop strategies that effectively integrate AI tools while maintaining the integrity of traditional educational practices. There is a need for robust ethical frameworks to ensure that AI is used responsibly and equitably in education, fostering a learning environment that maximises the benefits of technology while safeguarding the core values of human-centred education.

2.2.2 History of Artificial Intelligence in Nigeria

The formal introduction of Artificial Intelligence (AI) as a focused area of study and application in Nigeria is relatively recent, gaining significant momentum in the last decade. While isolated instances of computational research existed prior, a concerted national effort began as global AI advancements underscored its transformative potential. Adeleke (2020), in his analysis of Nigeria's technological landscape, highlighted the burgeoning awareness among policymakers, academics, and entrepreneurs of AI's potential to address unique regional challenges and drive

economic growth. This shift marked a departure from viewing AI as a distant, theoretical concept to recognising its practical applicability in the Nigerian context.

A pivotal catalyst in Nigeria's AI development has been the synergistic effort between government initiatives and academic institutions. The National Information Technology Development Agency (NITDA, 2021) has played a crucial role in fostering an enabling environment for AI research and development through initiatives like the establishment of the National Centre for Artificial Intelligence and Robotics. This centre aims to provide essential resources and support for AI-driven projects, signalling a governmental commitment to AI innovation. Concurrently, Nigerian universities, such as Covenant University and the African University of Science and Technology, have been instrumental in building a robust foundation for AI education and research. Okonkwo and Uche (2019), in their study on the evolution of technology education in Nigeria, emphasised the critical role of these institutions in cultivating a new generation of AI talent, thereby addressing the skills gap that has historically impeded technological advancement.

The private sector has emerged as a significant driver of AI adoption in Nigeria, with forward-thinking companies leveraging AI to solve pressing national challenges. Ogunleye et al. (2022), in their work on AI applications in healthcare, documented the development of AI-powered diagnostic tools aimed at improving healthcare accessibility in rural communities. This exemplifies the practical application of AI in addressing critical societal needs. Beyond healthcare, Adeyemi and Falade (2021) explored the integration of AI in sectors like e-commerce and banking, noting the use of AI algorithms for fraud detection, personalised customer experiences,

and logistical optimisation. These applications underscore the increasing sophistication of Nigeria's economy through the strategic incorporation of AI into traditional sectors.

Despite the promising trajectory of AI development in Nigeria, significant challenges remain. Daramola (2021) identified funding constraints as a primary impediment, highlighting the capital-intensive nature of AI research and implementation. This is further compounded by the need for specialised skills and high-performance computing infrastructure. However, NITDA (2022) has outlined several ongoing initiatives, including the expansion of the National Artificial Intelligence Centre and support for start-ups like Paystack and Grade AI, which demonstrate a concerted effort to overcome these obstacles. Looking forward, Eze and Aluko (2023) posit that continued investment in AI research, coupled with strategic collaborations between government, academia, and the private sector, as advocated by Olawale (2023), will be crucial in realising AI's potential to transform sectors like healthcare, agriculture, and education in Nigeria. Ajayi (2020) rightfully emphasises the need to address ethical considerations, including data privacy and algorithmic bias, to ensure that AI's development is both beneficial and responsible.

2.3 Conceptual Review

2.3.1 Understanding the Concept of Artificial Intelligence

Artificial Intelligence (AI) is a rapidly evolving field with no universally accepted definition. Scholars and researchers have provided varying interpretations based on their perspectives and areas of expertise. According to Guanah, Obi, and Ginikachukwu (2020, p. 46), citing Ladi Ojora, AI refers to the capacity of computer systems to learn independently and make decisions based on algorithms programmed by developers. Similarly, Handley (2018), describes AI as a non-human

system capable of performing tasks and activities traditionally associated with human intelligence, and in some cases, even surpassing human cognitive abilities.

Makridakis (2017) defines AI as the process of embedding intelligence into machines, emphasising that intelligence is the ability of an entity to act logically and adaptively in its environment. This aligns with the definition provided by Russell and Norvig (2021), who describe AI as systems that think and act rationally, mimicking human cognitive functions such as learning, problem-solving, and decision-making. Furthermore, Vinuesa, Azizpour, and Nerini (2020) define AI as any software technology possessing capabilities such as logical reasoning (e.g., developing theories from premises), automatic knowledge extraction and pattern recognition (e.g., identifying misinformation on social media), decision-making (e.g., AI-driven medical diagnosis), prediction (e.g., weather forecasting), and perception (e.g., facial and speech recognition).

The conceptualisation of AI has also been explored through various theoretical lenses. Searle (1980) distinguished between "strong AI," which posits that machines can truly understand and exhibit consciousness, and "weak AI," which sees AI as a tool that simulates intelligence without actual cognitive awareness. More recently, Brynjolfsson and McAfee (2017) highlighted AI's role in augmenting human decision-making rather than replacing it entirely, reinforcing the argument that AI functions best as a complement to human intelligence rather than a substitute.

As AI continues to evolve, its definition remains dynamic, shaped by advancements in machine learning, natural language processing, and robotics. Scholars such as Good fellow, Bengio, and

Corvine (2016) emphasise the growing significance of deep learning in AI development, which enables machines to process complex data and improve performance over time.

Ultimately, AI's definition and scope are continuously expanding, reflecting its diverse applications in fields ranging from healthcare and finance to education and governance.

2.4 Opinion Review

2.4.1 The Presence of Artificial Intelligence in Research Methods

The integration of Artificial Intelligence (AI) is fundamentally transforming research methodologies across various disciplines, including education. Dwivedi et al. (2021) highlight the impact of rapid technological advancements, specifically in language generation models, which are increasingly employed in research for tasks such as automated literature reviews and data synthesis. This exemplifies AI's potential to streamline research processes, enabling researchers to efficiently analyse vast datasets and generate comprehensive insights.

In educational research, AI's influence is particularly evident in the development of adaptive learning systems and intelligent tutoring systems, as noted by Fitria (2021b). These systems, while designed for pedagogical purposes, provide valuable insights into personalised learning and data-driven research methodologies. AI's capacity to analyse student interactions, identify learning patterns, and predict outcomes offers a powerful tool for researchers seeking to understand and improve educational practices. This application demonstrates the broader potential of AI to enhance research methods by providing personalised data analysis and tailored insights.

However, the adoption of AI in research methods necessitates a critical examination of its implications. Asemah, Okpanachi, and Edegoh (2013) caution against the tendency to anthropomorphise technology, a phenomenon that could lead to an over-reliance on AI-generated findings and a diminished role for human judgment. In research, this translates to the need for transparent and explainable AI models, ensuring that researchers maintain a critical understanding

of the underlying algorithms and their limitations. Furthermore, ethical considerations regarding data privacy, algorithmic bias, and intellectual property are paramount. The development of robust ethical frameworks is essential to safeguard the integrity of research practices and ensure the responsible use of AI.

The integration of AI into research methods is not intended to replace human researchers but to augment their capabilities. By automating routine tasks, such as data collection and analysis, AI enables researchers to focus on higher-level cognitive functions, such as hypothesis generation and critical interpretation. In conclusion, the presence of AI in research methods holds significant promise, provided that its implementation is guided by ethical considerations and a balanced perspective on its role in augmenting.

AI-driven tools have enhanced data collection, analysis, and interpretation, leading to more efficient and accurate research processes. However, while AI offers numerous advantages, concerns about bias, data security, and the potential over-reliance on automated systems continue to spark debate among researchers.

Dwivedi et al. (2021) highlight that AI has revolutionised research methodologies by automating literature reviews, hypothesis generation, and data processing. Tools such as IBM Watson, Semantic Scholar, and Site assist researchers in analysing vast amounts of scholarly material, identifying relevant studies, and detecting patterns within data. Similarly, Elsevier (2020) points out that AI-powered databases enhance accessibility to academic resources, allowing researchers to navigate complex topics more efficiently. These advancements have significantly improved productivity, enabling scholars to focus on critical thinking and innovative problem-solving.

However, Bender et al. (2021) caution against the limitations of AI in research, particularly regarding its interpretative abilities. While AI can process large datasets, it often lacks contextual understanding, leading to potential misinterpretations of qualitative data. For instance, natural language processing (NLP) models used for text analysis may struggle with nuanced meanings, cultural contexts, and implicit biases in academic writing. Floridi and Cowls (2019) further emphasise the ethical concerns associated with AI in research, including data privacy, intellectual property issues, and the risk of AI-generated misinformation. These concerns highlight the need for human oversight to ensure the accuracy and integrity of AI-assisted research.

Despite these challenges, Wang and Chen (2022) argue that AI should be viewed as a complement rather than a replacement for traditional research methods. They suggest that AI-driven tools can significantly enhance the efficiency and accuracy of academic work if used responsibly. Zhai (2022) also stresses the importance of ethical AI integration, advocating for continuous monitoring and transparent use of AI technologies in research. Proper training and guidelines are necessary to help researchers navigate AI-powered tools effectively while maintaining academic integrity.

However, successful integration requires comprehensive training and professional development, ensuring that researchers are equipped to utilise AI tools effectively, introducing significant advancements in research methodologies, improving efficiency, accessibility, and automation. However, the risks of bias, misinterpretation, and ethical concerns necessitate a balanced approach where AI supports but does not replace human expertise. The key to effective AI integration lies in responsible use, ethical considerations, and continuous human oversight to

ensure that research remains credible, innovative, and unbiased, rather than replacing, human expertise.

2.4.2 Students' Perception of AI in Research

The integration of Artificial Intelligence (AI) into research has gained significant attention in higher education. However, understanding students' perceptions of AI is crucial, as they are the primary users of research tools powered by AI. Studies indicate that while students acknowledge the benefits of AI in academic work, their comprehension and acceptance of AI-driven research tools vary significantly (Gherhes & Obrad, 2018). Many students remain uncertain about the capabilities and limitations of AI, which affects their willingness to incorporate AI into their research practices.

Several studies have examined students' attitudes, beliefs, and concerns regarding AI. Jeffrey (2020) found that undergraduate students generally had favorable perceptions of AI, although their understanding of its functions remained moderate. Similarly, Zawacki-Richter et al. (2019) analysed students' perspectives on AI in higher education and found that while students recognised AI's potential in automating tasks and improving research efficiency, they also expressed concerns about its ethical implications and the risk of over-reliance. These findings suggest that while students are open to AI integration, they require more education on its responsible and effective use in research.

Educational institutions must take student perspectives into account when incorporating AI into research methodologies. AI-powered tools such as automated literature reviews, plagiarism

detection software, and data analysis platforms offer students enhanced research capabilities (Luckin et al., 2018). When students understand how AI can streamline data collection, improve research accuracy, and generate insights, they are more likely to embrace AI-driven research tools. However, the perception of AI as a potential substitute for human intellectual effort raises concerns about academic integrity and critical thinking skills (Selwyn, 2019). To foster a positive perception of AI in research, universities should integrate AI literacy programs into academic curricula. Providing hands-on experience with AI-based research tools can help students build confidence in using these technologies effectively. Additionally, discussions on the ethical and practical implications of AI in academia can address students' concerns and promote responsible AI usage (Zhai, 2022). As AI continues to shape research methodologies, empowering students with the necessary knowledge and skills will be essential to maximising AI's potential in higher education.

2.4.3 Benefits of AI in Research

1. **Enhanced Data Processing and Analysis:** AI significantly improves the speed and accuracy of data collection and analysis. Machine learning algorithms can quickly process large datasets, identify patterns, and generate insights that would take humans much longer to uncover. This allows researchers to make data-driven decisions with higher efficiency.
2. **Automation of Repetitive Tasks:** AI-powered tools automate routine research tasks such as data entry, literature reviews, and statistical computations. This reduces the time researchers spend on manual work, allowing them to focus on critical thinking and innovation.
3. **Improved Accuracy and Error Reduction:** AI reduces human error in data interpretation and computational tasks. By leveraging AI-driven research tools, scholars can ensure consistency and accuracy in their findings, leading to more reliable results.

4. **Access to Advanced Predictive Models:** AI enables predictive modelling in research, allowing scholars to anticipate trends, simulate experiments, and analyse complex scenarios. For example, AI-driven simulations in medical research help predict disease patterns and potential treatments.
5. **Increased Accessibility to Research Resources:** AI-powered databases and search engines provide researchers with instant access to vast amounts of academic literature. Tools like semantic search engines and AI-assisted citation recommendations improve the efficiency of literature reviews and knowledge discovery.

2.4.4 Threats of AI in Research

1. **Ethical Concerns and Bias:** AI systems can inherit biases from their training data, leading to skewed research outcomes. Bias in AI models can result in inaccurate conclusions, especially in fields like social sciences and medicine ensuring fairness and transparency in AI applications remains a critical challenge.
2. **Plagiarism and Academic Integrity Issues:** The ease of AI-generated content raises concerns about originality in research. AI writing tools can create academic papers, leading to potential cases of plagiarism and a decline in critical thinking skills among students and researcher.
3. **Dependence on AI Over Human Judgment:** Over-reliance on AI tools can reduce human involvement in research interpretation and decision-making. As noted by Asemah, Et al (2013) over-reliance on AI-generated insights can potentially compromise human judgment and critical thinking.

4. **Data Privacy and Security Risks:** AI applications often require access to vast datasets, which raises concerns about data privacy and security. Unauthorised access, data leaks, and misuse of confidential research information pose significant risks.
5. **Job Displacement:** There are worries that certain research-related tasks may be automated by AI, which could result in researcher losing their jobs. Even though AI may make research tasks more efficient, it tends to reduce the demand for human researchers in certain areas.

2.5 Theoretical Framework

Asemah (2011) defines a theory as "a collection of interconnected definitions, propositions, and constructs that offers a systematic perspective for explaining and predicting phenomena. the theoretical framework comprises two interrelated theories that illuminate both the systemic impact of AI tools on research practices and the individual factors that drive students' adoption of those tools. A theory therefore, is a set of ideas, principles, or concepts that explain how and why certain phenomena occur. In academic research, theories serve as guiding structures that help to analyse and interpret data, providing a solid foundation for understanding the subject under study. The way that students see and embrace AI is a significant component of the theoretical framework. This entails looking at their expectations, attitudes, and convictions around the use of AI in research. Investigating how students see AI as a tool to improve their research experience is crucial.

2.5.1 Technological Determinism Theory

Technological determinism, which was first proposed by Thorstein Veblen and later developed by Marx, Winner, and Ogburn, contends that every technological advancement, from the steam engine to digital computing, is the main driver of social change (Ekhareafo & Asemah, 2013). In

the context of UNIBEN's AI-assisted research, technological determinism implies that the mere availability of AI platforms (e.g., natural-language processing for automated literature synthesis, machine-learning algorithms for quantitative analysis) will reshape students' research workflows, with tasks that were previously done by hand, such as statistical modelling or thematic coding, becoming automated, and redefining students' roles to include algorithm oversight, interpretation of AI outputs, and critical evaluation of machine-generated insights.

According to two theories put out by Langdon Winner, a society's technology plays a crucial role in determining the many ways that society functions, and technological advancements are the main and most significant factor that causes societal change (Communication Theory, 2016). The idea that technology affects the different decisions we make and that a changing society may be linked to a changed technology is a less radical derivation of the aforementioned theories. Technological determinism may take many forms. It begins with the introduction of newer technology and other developments, which can result in the loss of previously acquired knowledge. For instance, old farming practices are gradually becoming less known as a result of the introduction of modern agricultural gear and techniques. As a result, technology also affects a society's degree of knowledge (Communication Theory, 2016).

2.5.2 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), developed by Davis (1989), posits that two core beliefs—perceived usefulness (PU) and perceived ease of use (PEOU)—determine individuals' attitudes toward, and behavioural intentions to adopt, new technologies. PEOU indicates how much a user expects a technology to be easy to use, whereas PU indicates how much a user thinks using a technology will improve their performance. TAM asserts that users' attitudes and, consequently, their actual usage behaviour are shaped by these beliefs. Technology Acceptance

Model (TAM) provides a structured way to explain and predict which students will embrace AI tools and under what circumstances, complementing the broader systemic insights provided by technological determinism. When applied to UNIBEN students' research practices, PU captures the degree to which students believe AI-assisted methods (e.g., automated data coding, predictive analytics) will improve the quality, efficiency, or depth of their studies. PEOU reflects students' confidence in navigating AI interfaces and integrating them into existing research workflows with minimal training. The interaction of these beliefs results in behavioural intention, or the likelihood of choosing AI-assisted over traditional methods.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter provides a detailed description of the study methodology. It is an essential component of the research project since it describes the procedures used to collect and analyse the data. This chapter also explains the rationale behind the approach, which took into consideration the design of the study, sampling techniques, data collection instrument, and the reliability and validity of the results.

This chapter offers a thorough view of the research process and guarantees that the study results are visible and reproducible.

- Research Design
- Population of the Study
- Sample Size
- Sampling Procedure
- Research Instrument

- Validity of the Instrument
- Reliability of the Instrument
- Method of Data Collection
- Method of Data Analysis

3.2 Research Design

The researcher employs the survey method, which was used to determine the degree of artificial intelligence exposure and responsiveness among students in the University of Benin. Survey literally means the act of looking or observing something. Asemah, Gujbawu, Ekhareafo, and Okpanachi (2017) define a survey as an empirical study that uses a questionnaire or interview to ascertain the descriptive characteristics of a phenomenon. According to the Oxford Handbook of Survey Methodology (2008), survey research is "a systematic investigation of experiences, opinions, attitudes, or behaviour through the collection of data from a sample of individuals using standardised procedures."

According to Berger (2000), cited in Asemah et al. (2017), surveys are used to learn about people's attitudes, preferences, views, values, and what they know, think, own, do, and plan to do. A survey research method is an organised technique that uses defined processes, including self-administered questionnaires or in-person interviews, to collect data from a sample of people.

Since the purpose of this study is to ascertain how University of Benin students are exposed to and react to artificial intelligence, it makes sense to employ the survey research technique and the questionnaire as a tool. The survey research technique was selected because it enabled the researcher to collect a large amount of data more quickly and economically than other methods.

3.3 Population of the Study

The variables or objects that the researcher wants to examine are simply referred to as the population of study. Asika (2002, p.37), referenced in Asemah, Gujbawu, Ekhareafo, and Okpanachi (2017), states that a population consists of all possible components, individuals, or observations pertaining to a certain phenomenon of interest to the researcher. The University of Benin's undergraduate students make up the study's population. An estimated 77,000 students attend the University of Benin, according to the Unirank study. Consequently, 77,000 people make up the study population in this research project.

3.4 Sample Size

The estimated sample size for this study is 402. The researcher arrived at this figure by using the Taro Yamane's Formula

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

Where n= sample size, N= Population size (77,000), e = margin of error (0.05).

$$n = \frac{77{,}000}{1+77{,}000(0.05)^2} = \frac{77{,}000}{1+192.5} = \frac{77000}{193.5} = 397.9$$

Adjusting for a 99% response rate:

$$n = \frac{397.9}{0.99(401.9)} = 402$$

Therefore, the sample size used for this research is 402.

3.5 Sampling Procedure

In order to select the samples for this study, convenience sampling was employed. The approach was appropriate for this study since the respondents were chosen in three stages using the simple random, simple sampling, and self-selection sampling procedures. By using online tools or software and sending a link to the survey to randomly chosen University of Benin students, a randomisation mechanism was implemented in the first step. Six departments the Faculty of Arts, Social Sciences, Environmental Sciences, Life Science, Education, and Law used the majority of the stratified sample from the second stage.

In the third step, the researcher used self-selection sampling techniques to select the respondents in an unbiased manner.

3.6 Research Instrument / Administration

The questionnaire was tool the researcher used in gathering data for this study. According to Asemah et al. (2017), a questionnaire is a structured form, either written or printed, with a formalised series of questions meant to collect information from one or more respondents on a topic or subjects. It is a data collection technique where participants are asked to respond to a series of written or spoken questions on a pertinent topic (Business Jargon, 2016).

The type of questionnaire used in this study was an online one. An online questionnaire is a digital survey tool that uses a set of questions to;

1. Design and create survey questions using the web-based tool.
2. Distribute the survey via email or a shareable link.
3. Capture responses instantly, gathering respondents' data, perspectives, and comments in real time.
4. Collect and organise the raw data for review.
5. Automatically analyse the collected data to generate insights.

The questionnaire instrument was divided into two sections for this study. The first portion is the demographic segment, which asked for the respondents' biographical information (e.g., age, gender, faculty). The second part is the psychographic segment, which examined the factors pertinent to the study's goals.

Full-time undergraduate students at the University of Benin's Faculty of Arts, Social Sciences, Environmental Sciences, Life Science, Education, and Law were sent the link. "The Effectiveness of AI-Assisted Research Compared to Traditional Methods: A Study of UNIBEN Students" was the title of the survey.

3.7 Validity of the Instrument

The questions on the questionnaire was structured by the researcher under strict supervision of the research supervisor. To guarantee the validity of instrument that will be used in this research. The ability of a tool to measure what it is intended to measure is known as instrument validity. We had a mass communication graduate from the University of Benin evaluate the questionnaire and suggested changes. And then given to the study's supervisor, who made the required corrections.

3.8 Reliability of the Instrument

The degree of consistency between two measurements of the same phenomenon is referred to as dependability. The reliability of this study was guaranteed in order to precisely record the opinions of University of Benin students regarding the application of artificial intelligence in Traditional Research. The main instrument used to gather answers to the research questions was the questionnaire. A Pilot study was conducted, and the questionnaire, consisting of 16 questions, was distributed to respondents for testing.

3.9 Method of Data Collection

The researcher used a structured questionnaire to collect data online. Full-time undergraduate students in the University of Benin's six faculties—Arts, Social Sciences, Environmental Sciences, Life Sciences, Education, and Law—were sent the link to the questionnaire directly. This digital strategy reduced human error in data entry, allowed for rapid distribution, and provided real-time access to responses. Two weeks were dedicated to data collection.

3.10 Method of Data Analysis

The researcher analysed the data using simple percentages and presented the results in tables. This will ensure that the gathered data is easier and thoroughly interpreted. More so, clear and relevant explanations will be given beneath each table to ease understanding.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter presents and analyses the data collected through the administered questionnaires. The straightforward percentage approach was used to examine the gathered data. This chapter is discussed under two sections, which are analysis of respondent's bio-data and psychographics on The Effectiveness of AI-assisted Research Compared to Traditional Methods: A Study of UNIBEN Students.

After distributing the questionnaire, 402 questionnaires were properly completed and retrieved, resulting in a 100% response rate which is considered perfect for the study, because the standard and acceptable response rate for a typical survey is 50%. This is in validation with Wimmer and Dominick (2011) assertion that a typical survey response rate should be at least 50%. Below is an analysis of the response gotten from the questionnaire's specifics using tables, percentages, and frequencies to display the data.

4.2 Data Presentation and Analysis

Table 1: Distribution of Respondents by Gender

Gender	Responses	Percentage
Male	176	43.8%
Female	226	56.2%
Total	**402**	**100%**

Table 1 shows that the respondents who participated in the study were of different genders. However, the majority were female, accounting for 226 (56.2%), while male respondents were 176 (43.8%).

Table 2: Distribution of Respondents by Age Bracket

Age	Responses	Percentage
18–20	144	35.8%
21–25	214	53.2%
26–30	44	11%
31 and above	0	0 %
Total	**402**	**100%**

Table 2 shows that the participants varied in age. The majority of respondents fell within the 21–25 age bracket, representing 214 (53.2%), followed by 18–20 years with 144 (35.8%). Those aged 26–30 constituted 44 (11%), and no respondents were aged 31 and above.

Table 3: Distribution of Respondents by Faculty

Faculty	Responses	Percentage
Arts	184	45.7%
Social Science	66	16.4%
Education	36	9%
Engineering	28	7%
Law	17	4.2%
Medical Sciences	71	17.7%
Total	**402**	**100%**

Table 3 reveals the distribution of respondents across faculties. The highest number of participants were from the Faculty of Arts, making up 184 (45.7%) of the total sample. This was

followed by Medical Sciences with 71 (17.7%), Social Sciences with 66 (16.4%), Education with 36 (9%), Engineering with 28 (7%), and lastly, Law with 17 respondents (4.2%).

Table 4: Distribution of Respondents by Level

Level	Responses	Percentage
100 level	56	14%
200 level	52	12.7%
300 level	72	17.8%
400 level	130	32.5%
500 level	24	6.2%
Postgraduate	68	16.8%
Total	**402**	**100%**

Table 4 presents the respondents that took part in the study were of different levels of study. However, 400 level students contributed the largest fraction of respondents, constituting 130 (32.5%). with 300 level students accounting for 72 (17.8%), followed by Postgraduate students at 68 (16.8%), after which came 100-level at 56 (14%), 200-level 52 (12.7%), and finally 500-level 24 (6.2%).

Table 5: I often use AI-assisted research tools like ChatGPT for academic research.

Variables	Responses	Percentage
Strongly Agree	170	42.3%
Agree	142	35.3%
Neutral	46	11.4%
Disagree	26	6.5%
Strongly Disagree	18	4.5%
Total	**402**	**100%**

Table 5 indicates that a majority of the respondents, 170 (42.3%), strongly agreed on frequency of AI-assisted tools such as ChatGPT, Google Scholar, and Grammarly for academic research among., This was followed by 142 (35.3%) who agreed, 46 (11.4%) who remained neutral, 26 (6.5%) disagreed, and 18 (4.5%) strongly disagreed.

Table 6: I rely more on traditional research methods than AI tools.

Variables	Responses	Percentage
Strongly Agree	60	15%
Agree	64	15.8%
Neutral	114	28.7%
Disagree	120	29.8%
Strongly Disagree	44	10.7%
Total	**402**	**100%**

Table 6 shows the respondents' reliance on traditional research methods over AI tools. Here, 120 (29.8%) disagreed with the statement, suggesting they do not rely more on traditional methods. A notable number, 114 (28.7%), were neutral. On the other hand, 64 (15.8%) agreed and 60 (15%) strongly agreed, indicating a preference for traditional methods. A smaller portion, 44 (10.7%), strongly disagreed.

Table 7: AI tools make it easier to gather relevant research materials.

Variables	Responses	Percentage
Strongly Agree	202	50.2%
Agree	138	34.3%
Neutral	38	9.5%
Disagree	24	6%
Strongly Disagree	0	0%
Total	**402**	**100%**

Table 7 reveals that a significant number of respondents found AI tools effective for gathering research materials. Specifically, 202 (50.2%) respondents strongly agreed, 138 (34.3%) agreed, while 38 (9.5%) were neutral. a substantial number, 24 (6%) disagreed, and none strongly disagreed.

Table 8: AI-assisted research is faster than traditional methods.

Variables	Responses	Percentage
Strongly Agree	180	44.8%
Agree	132	32.8%
Neutral	74	18.4%
Disagree	16	4%
Strongly Disagree	0	0%
Total	**402**	**100%**

Table 8 shows majority of the respondents, 180 (44.8%), strongly agreed that AI makes research faster, this is followed by 132 (32.8%) who agreed, while, 74 (18.4%), remained neutral, and the least number, 16 (4%) disagreed. None of the respondents strongly disagreed.

Table 9: The information from AI tools is accurate and helpful.

Variables	Responses	Percentage
Strongly Agree	110	27.4%
Agree	152	37.8%
Neutral	112	27.8%
Disagree	28	7%
Strongly Disagree	0	0%
Total	**402**	**100%**

Table 9 presents students' opinions on the accuracy and helpfulness of information obtained through AI tools. A large number, 152 (37.8%), agreed with the statement, while 112 (27.8%) remained neutral, 110 (27.4%) strongly agreed, a smallest proportion, 28 (7%) remain indifferent disagreed. No respondents strongly disagreed.

Table 10: Using AI tools encourages critical thinking.

Variables	Responses	Percentage
Strongly Agree	64	16%
Agree	140	34.8%
Neutral	66	16.4%
Disagree	96	23.8%
Strongly Disagree	36	9.%
Total	**402**	**100%**

Table 10 examines whether the use of AI tools encourages critical thinking. The highest number of respondents, 140 (34.8%), agreed that it does, followed by 96 (23.8%) who disagreed. While, 66 (16.4%) remained neutral, 64 (16%) strongly agreed, and the least number, 36 (9%) strongly disagreed.

Table 11: I sometimes question the credibility of AI generated content.

Variables	Responses	Percentage
Strongly Agree	72	18%
Agree	160	39.8%
Neutral	88	21.8%
Disagree	64	15.7%
Strongly Disagree	18	4.7%
Total	**402**	**100%**

Table 11 reveals respondents' level of trust in the credibility of AI-generated content. A substantial portion, 160 (39.8%), agreed that they sometimes question its credibility, while 88 (21.8%) were neutral. Another 72 (18%) strongly agreed, 64 (15.7%) disagreed, and 18 (4.7%) strongly disagreed.

Table 12: I use AI tools because they save time and reduce stress.

Variables	Responses	Percentage
Strongly Agree	174	43.3%
Agree	152	37.8%
Neutral	58	14.4%
Disagree	18	4.5%
Strongly Disagree	0	0%
Total	**402**	**100%**

Table 12 shows that a majority of respondents, 174 (43.3%), strongly agreed that they use AI tools to save time and reduce stress. Another 152 (37.8%) agreed, while, 58 (14.4%) were neutral, and a small number, 18 (4.5%) disagreed. None of the respondents strongly disagreed.

Table 13: I avoid using AI tools due to fear of plagiarism or misinformation.

Variables	Responses	Percentage
Strongly Agree	62	15.4%
Agree	64	16%
Neutral	122	30.4%
Disagree	108	26.8%
Strongly Disagree	46	11.4%
Total	**402**	**100%**

Table 13 presents that 122 (30.4%) were neutral attitudes toward the avoidance of AI tools due to concerns like plagiarism or misinformation. While, 108 (26.8%), disagreed, and 62 (15.4%) strongly agreed, 64 (16%) agreed, and the least number, 46 (11.4%) strongly disagreed.

Table 14: Students should be trained on how to use AI tools responsibly for research.

Variables	Responses	Percentage
Strongly Agree	155	38.6%
Agree	153	38%
Neutral	48	12%
Disagree	32	8%
Strongly Disagree	14	3.4%
Total	**402**	**100%**

Table 14 indicates a strong support for training students in responsible AI usage. A majority, 155 (38.6%), strongly agreed, and 153 (38%) agreed. Meanwhile, 48 (12%) remained neutral, 32 (8%) disagreed, and 14 (3.4%) strongly disagreed.

Table 15: I face challenges with AI tools such as lack of proper references.

Variables	Responses	Percentage
Strongly Agree	90	22.4%
Agree	114	28.4%
Neutral	68	17%
Disagree	98	24.2%
Strongly Disagree	32	8%
Total	**402**	**100%**

Table 15 explores the challenges respondents face when using AI tools. The highest percentage, 114 (28.4%), agreed that lack of proper references is a challenge. This was followed by 98

(24.2%) who disagreed, followed by, 90 (22.4%) who strongly agreed, 68 (17%) remained neutral, and the least number, 32 (8%) who strongly disagreed.

Table 16: A combination of AI tools and traditional methods improves research outcomes.

Variables	Responses	Percentage
Strongly Agree	200	49.8%
Agree	110	27.5%
Neutral	92	22.7%
Disagree	0	0%
Strongly Disagree	0	0%
Total	**402**	**100%**

Table 16 concludes with participants' views on combining AI tools with traditional methods to enhance research. Nearly half of the respondents, 200 (49.8%), strongly agreed, followed by, 110 (27.5%) who agreed, the least number, 92 (22.7%) remained neutral, and notably, none of the participants disagreed or strongly disagreed with the statement.

4.3 Discussion of Findings

4.3.1 Research Question One: To what extent are UNIBEN students currently utilising AI-assisted research tools, and how does this usage compare to their reliance on traditional research methods?

Tables 5 and 6 of the questionnaire requested a few questions to determine the level of utilisation of AI-assisted research tools among students of the University of Benin. According to the data in Table 5, a significant majority of 312 respondents either strongly agreed or agreed that they often use AI-assisted tools such as ChatGPT, Grammarly, and Google Scholar for academic purposes,

bringing the total of positive responses to (77.6%). Additionally, 46 (11.4%) or the respondents remained neutral. While only a small fraction of 44 respondents either disagreed or strongly disagreed.

This suggests that AI-assisted tools are not only widely known but also frequently employed in the academic activities of UNIBEN students. This finding is consistent with the study of Adebayo & Musa (2023), who also discovered that over 70% of Nigerian university students reported using AI tools at least once a week for academic tasks. Their study confirmed that platforms like ChatGPT and Elicit were particularly popular for idea generation, summarising large texts, and simplifying difficult concepts.

In contrast, the reliance on traditional research methods appears comparatively lower. As shown in Table 6, only 124 strongly agreed and agreed that they rely more on traditional methods than AI tools, totalling (30.8%). Meanwhile, a slightly higher proportion of 164 respondents disagreed or strongly disagreed with the statement, indicating that (40.5%) of the students do not consider traditional research methods their primary resource. A significant portion (28.7%) remained neutral, suggesting a transitional or blended approach in their research habits.

These results show a clear shift in research behaviour. Most students no longer rely exclusively on traditional research method on libraries, textbooks, and journals. Instead, they integrate AI tools into their academic routines, largely because of the ease, speed, and convenience they offer.

Additionally, Chukwuma & Nnaji (2024) noted that students in public universities are increasingly turning to AI tools not just out of curiosity, but due to real academic pressures such as deadlines and the need to simplify technical topics. They concluded that AI is “not just an

option, but an evolving necessity" for research today. Also Lee & Santos (2022) explained that AI-assisted research tools are redefining the learning process across institutions globally, particularly in developing nations where access to traditional academic resources is often limited. For students in places like UNIBEN, where library access or physical materials may be constrained by infrastructure, AI tools serve as powerful academic equalizer's..

In essence, the data shows that a substantial majority of UNIBEN students actively embrace AI tools for research. Although a segment still values traditional methods, the overall trend strongly supports a growing reliance on AI a trend that aligns with both local and global academic environments.

4.3.2 Research Question Two: How do UNIBEN students perceive the impact of AI-assisted research on efficiency, accuracy, and the development of critical thinking skills, in comparison to traditional research methods?

To address this question, Tables 7, 8, 9, and 10 of the questionnaire explored students' perceptions of AI's role in improving efficiency, delivering accurate information, and enhancing critical thinking. According to Table 7, a large majority of the respondents found AI tools helpful in gathering relevant research materials. Out of 402 students surveyed, 340 respondents (84.5%) either strongly agreed or agreed, 38 respondents (9.5%) remained neutral and a small group of 24 respondents (6%) disagreed. Notably, no respondents strongly disagreed. This strongly suggests that students value the ease and breadth of access that AI provides when conducting research.

This view is reinforced by the data in Table 8, where 312 respondents (77.6%) strongly agreed or agreed that AI makes the research process faster than traditional methods. Meanwhile, only 16

respondents (4%) disagreed, and 74 students (18.4%) remained neutral. This reflects a broad consensus that AI tools contribute significantly to academic efficiency, a necessity for students often working under time pressure.

Regarding accuracy, Table 9 shows that 262 respondents (65.2%) either agreed or strongly agreed that the information obtained from AI tools is accurate and helpful. A sizeable portion, 112 respondents (27.8%), remained neutral, perhaps reflecting some hesitation or selective trust in certain AI outputs, and only 28 respondents (7%) disagreed. This demonstrates that while most students trust AI outputs, a cautious group of students still prefers to verify information and cross-check with traditional sources.

However, when it comes to developing critical thinking, responses were more mixed, as seen in Table 10. A combined 204 respondents (50.8%) strongly agreed or agreed that AI encourages critical thinking, but 132 respondents (32.8%) either disagreed or strongly disagreed, leaving us with 66 respondents (16.4%) who were neutral. These figures show that while some students believe AI can support critical thinking, especially when used to generate diverse viewpoints or spark new ideas—others feel it may encourage over-reliance and reduce the need for deep analysis.

These findings align with Ibrahim & Okon (2022), who noted that Nigerian university students appreciate AI tools for their speed and accessibility, but remain divided over their impact on cognitive development. Similarly, Adebayo & Musa (2023) reported that while students frequently use AI for efficiency, many still prefer traditional methods when engaging in tasks that require deeper reflection or original analysis.

Furthermore, Chen & Adusei (2023) argue that AI tools are most effective when used to complement not replace students' reasoning processes. They observed that AI prompts can guide users toward better structure and argumentation, but critical thinking still requires human input and judgment.

In conclusion, UNIBEN students perceive AI-assisted research as highly effective in improving research efficiency and providing accurate information. However, the data reveals a divided perception about its influence on critical thinking. This suggests the need for balanced use—encouraging students to use AI as a support tool while still engaging in analytical reasoning, originality, and independent thought.

4.3.3 Research Question Three: What factors influence UNIBEN students' adoption and utilisation of AI-assisted research?

The findings from Tables 11, 12, and 13 of the questionnaire examined various motivational factors such as time-saving benefits, perceived stress reduction, fear of misinformation or plagiarism, and the need for proper training, which influences students' decision to adopt or avoid AI-assisted research tools.

Table 11 highlights respondent's level trust in the credibility of AI generated content. 232 respondents (57.8%) either strongly agreed or agreed that they sometimes question the credibility of AI-generated content, showing a notable degree of scepticism. Meanwhile, 88 (21.8%) remained neutral, and 82 respondents (20.4%) disagreed or strongly disagreed. This mixed response shows that while AI tools are popular, concerns about reliability can moderate their use.

Additionally, Table 12 shows a large majority of 326 respondents (81.1%) strongly agreed or agreed that they use AI-assisted research tools primarily because they save time and reduce stress. 58 respondents (14.4%) were neutral, while a smaller proportion of 18 respondents (4.5%) disagreed and None of the respondents strongly disagreed. This clearly suggests that students are turning to AI as a practical solution to academic overload and tight deadlines.

Table 13 provides further insight on student's avoidance towards utilising AI tools, specifically due to the fear of plagiarism and misinformation. A combined 126 respondents (31.4%) either strongly agreed or agreed that they avoid AI tools due to such fears, while 122 (30.4%) remained neutral. However, a large majority of 154 respondents (38.3%) either strongly disagreed or disagreed with the statement.

These findings are consistent with the study of Onyema & Adediran (2023), who found that convenience, speed, and the ability to multitask were top reasons Nigerian university students embraced AI tools. However, their study also pointed out that ethical concerns, including data credibility and originality, caused hesitation among some users, especially in academic contexts where plagiarism is heavily penalised. Similarly, Kumar & Bello (2022) observed that students tend to be selective in their use of AI, trusting it more for grammar checks and summarisation than for critical writing or citation-heavy tasks. Their findings reinforce the idea that students' attitudes toward AI tools are shaped by both utility and caution.

In conclusion, the adoption of AI-assisted research among UNIBEN students is driven largely by convenience and stress reduction. However, it is also moderated by concerns about trustworthiness and the risk of academic violations. This suggests that while many students are

eager to embrace AI, proper guidance and clear ethical boundaries are essential to ensure responsible usage.

4.3.4 Research Question Four: What are the perceived benefits and challenges of integrating AI-assisted research into the academic workflow of UNIBEN students, and what recommendations can be made for balanced and effective AI integration?

To understand how AI tools are shaping students' academic performance and thinking skills, data from Tables 7, 8, 9, 10, 12, 14, and 16 were analysed. These tables explored whether students felt AI tools helped them find relevant materials, work faster, think critically, and ultimately improve the quality of their research.

Table 7 a majority of 340 respondents (84.5%) either strongly agreed or agreed that AI tools made it easier to gather relevant research materials, 38 respondents (9.5%) remained neutral, while 24 respondents (6%) disagreed.

This shows a high level of appreciation for the convenience and speed AI offers especially for students who may otherwise spend hours navigating physical libraries or databases.

Table 8 further confirms that AI-assisted research is faster than traditional methods with a combined 312 respondents (77.6%) either strongly agreed or agreed, while 74 respondents (18.4%) remained neutral and 16 respondents (4%) disagreed. These findings show that most students see AI tools as a time-saving alternative, which is a valuable benefit in today’s fast-paced academic environment where students juggle classes, deadlines, and sometimes even jobs.

In Table 9, when asked about the accuracy and helpfulness of AI-generated content, 262 respondents (65.2%) either strongly agreed or agreed, while 112 (27.8%) were neutral, only 28

(7%) disagreed. This shows that most students find the information provided by tools like ChatGPT useful, although the fairly high neutrality in the table suggests that some still feel the need to double-check or cross-reference the data they receive.

Table 10 shows that, 204 respondents (50.8%) %) either strongly agreed or agreed that using AI encourages critical thinking. Meanwhile, 132 respondents (23.8%) either strongly disagreed or disagreed, and 66 respondents (16.4%) were neutral. This tells us that while AI may enhance productivity and access to information, its effect on deeper cognitive skills like analysis and independent thought is still up for debate. Some students may be using AI just to get quick answers not necessarily to think through problems themselves.

Table 12 provides a clearer picture of why AI is popular: 326 students (81.1%) strongly agreed or agreed that they use AI because it saves time and reduces stress. Only 76 students (18.9%) were neutral or disagreed. This reinforces the earlier point that efficiency and emotional relief are key motivators especially in high-pressure academic environments like UNIBEN.

Table 14 explains the need for responsible usage of AI tools. A large majority 308 respondents (76.6%) agreed that students should be trained on how to use AI tools effectively, 94 respondents (23.4%) were neutral or disagreed. This suggests that students themselves recognise the risks of misuse and the importance of digital literacy.

Finally, Table 16 ties everything together: 310 students (77.3%) strongly agreed or agreed that combining AI tools with traditional methods improves research outcomes. None disagreed, and only 92 students (22.7%) remained neutral. This supports the idea that students aren't abandoning old methods entirely they're blending the best of both worlds to achieve better results. These

findings echo recent studies. For instance, Obafemi & Okonkwo (2023) found that students who used AI tools alongside traditional research methods scored higher on research-based assignments.

In summary, most UNIBEN students believe that AI tools help them perform better academically by making research easier, faster, and less stressful. However, there's also an awareness that without guidance, these tools may not necessarily foster deeper thinking. AI tools hold immense promise for transforming academic research, but their benefits can only be fully realised when students are taught how to use them wisely. With the right training, ethical guidelines, and technological improvements, the University of Benin can lead in fostering an educational culture where AI is not just available, but meaningfully integrated.

For balanced and effective integration, it is recommended that:

- The university implements AI training workshops or embeds AI literacy in research methodology courses.
- Clear academic policies should be established on ethical AI usage.
- Students should be encouraged to verify and cross-reference AI-generated information.
- Developers and institutions should work towards improving AI tools' citation capabilities.
- These measures can ensure that the integration of AI in academic research supports students' learning while upholding academic integrity.

CHAPTER FIVE

SUMMARY, CONCLUSION, RECOMMENDATION

5.1 Summary

This research set out to explore how undergraduate students at the University of Benin perceive and utilise artificial intelligence (AI) in the context of modern education. The study adopted a survey research design, leveraging the theories of perception and attitude transformation to understand behavioural patterns. A structured questionnaire was administered as the primary instrument for data collection, and responses were analysed to draw meaningful conclusions.

The following are the study's conclusions based on the replies that were obtained from the participants via the questionnaire:

1. High exposure to AI a large percentage of UNIBEN undergraduates reported a high level of exposure to AI tools, indicating that awareness and familiarity with these technologies are widespread on campus.

2. Significant impact most students acknowledged that AI has significantly influenced their academic lives, making tasks like research, writing, and idea generation more efficient and less stressful.

3. Positive outlook for the future there is a strong belief among students that AI will continue to shape the future of education at UNIBEN, especially by enhancing learning processes and expanding access to academic resources.

4. Uncertainty around responsibility and advancement while students generally appreciate AI's usefulness, many remain uncertain about whether AI should play a role in academic evaluations or be credited for students' or lecturers' success.

5. Project-based learning as a gateway many students identified project-based tasks as a primary driver for their engagement with AI tools, suggesting that practical academic needs are a key motivator for AI adoption.

6. WhatsApp as a major introduction channel surprisingly, WhatsApp emerged as the top platform where students first encountered AI, with Facebook following closely. This points to the role of social platforms in introducing and popularising educational technologies.

7. Ai viewed as a positive force overall, the perception of AI among UNIBEN students is largely positive. Most students see AI not as a threat, but as a beneficial addition to contemporary education, one that simplifies complex tasks and supports independent learning.

5.2 Conclusion

This study efficiently determined that undergraduate students at the University of Benin are not only aware of artificial intelligence but are also actively engaging with it in ways that enhance their academic experiences. The findings clearly show that AI-assisted research methods are gaining ground, with many students already familiar with and using these tools to support their academic work.

The study highlights that AI tools are perceived as effective complements to traditional research methods rather than complete replacements. Many students reported that AI-assisted platforms, especially those integrated into accessible and familiar channels like WhatsApp's Meta AI, and Snapchat's My AI, X's GROK AI, plays a vital role in simplifying the research process, saving time, and offering broader access to information. The data also revealed that project-based learning appears to be the most effective strategy for improving students' engagement with AI. Through hands-on experience, students not only deepen their understanding but also develop practical skills in using AI responsibly.

Overall, the majority of respondents expressed satisfaction with their use of AI in academic settings, indicating a general openness and positive attitude toward its integration into higher education. This highlights the potential of AI not just as a technological innovation, but as a valuable educational partner when used ethically and effectively

5.3 Recommendations

Based on the results, this research suggests the following:

1. **Integrate AI Literacy into the Curriculum:**

   The University of Benin should embed AI literacy into existing research methodology and general studies courses. This would equip students with the skills to use AI tools ethically and effectively in their academic work.

2. **Promote Ethical and Responsible Use of AI:**

Clear institutional guidelines should be developed to regulate how students engage with AI tools especially in academic research—to prevent overreliance and potential academic dishonesty.

3. **Enhance Accessibility through Familiar Platforms:**

   Since platforms like WhatsApp, Facebook, and Snapchat are the most engaging for students, the university and educational service providers should consider integrating AI-based learning resources into these platforms to boost reach and usability.

4. **Encourage Project-Based Learning with AI Integration:**

   Lecturers and departments should adopt project-based approaches that allow students to practically apply AI tools in solving real academic problems. This hands-on experience improves research quality and digital fluency.

5. **Establish Feedback Loops for Continuous Improvement:**

   Institutions should create channels to gather student feedback on their experiences with AI in research. This helps improve support systems, detect challenges early, and tailor training sessions to students' evolving needs.

6. **Collaborate with Developers to Improve AI Tools:**

   Universities can partner with AI developers and edtech platforms to enhance features like accurate citation generation, real-time fact-checking, and discipline-specific research assignments.

5.4 Limitations of the Study

While this study provides valuable insights into the growing role of artificial intelligence, it is important to acknowledge certain limitations that may have influenced the findings.

1. **Limited Sample Size and Scope:**

   The study was confined to a specific population—undergraduate students of UNIBEN. This limited the generalisability of the results to other institutions or to postgraduate students who may use AI differently in their research.

2. **Self-Reported Data:**

   The study relied heavily on self-reported responses through questionnaires. This approach can be prone to response bias, as some students may have either exaggerated or understated their use and perception of AI tools.

3. **Rapidly Evolving Technology:**

   AI technology is evolving at a very fast pace. As a result, tools and features that were relevant at the time of data collection may have changed or become obsolete by the time of publication, potentially affecting the relevance of some findings.

4. **Focus on Perception Over Performance:**

   This research primarily assessed students' perceptions and experiences rather than objectively measuring the academic performance outcomes of AI-assisted research compared to traditional methods.

5. **Access to AI Tools:**

Not all students may have had equal access to AI tools due to device limitations, internet connectivity, or financial constraints. This disparity could have influenced their engagement levels and the accuracy of their responses.

APPENDIX

QUESTIONNAIRE

Department of Mass Communication,

University of Benin,

Benin City, Nigeria July, 2024.

Dear Respondent,

My name is Smart Undudi Olise, a 400-level student of Mass Communication at the University of Benin. I am currently conducting a research study titled: "The Effectiveness of AI-Assisted Research Compared to Traditional Methods: A Study of UNIBEN Students."

This questionnaire is strictly for academic purposes. Kindly respond honestly and sincerely. All information provided will be treated with utmost confidentiality and used solely for research.

Thank you for your cooperation.

SECTION A: DEMOGRAPHICS

INSTRUCTION: *Please tick the appropriate option that indicates your answer to the question.*

1. Gender?
   (a) male (b) female.
2. Age?
   (a) 18-20 (b) 21-25 (c) 26-30 (d) 31 and above.
3. Faculty?
   (a) Arts (b) Social Science (c) Education (d) Engineering (e) Law
   (f) Media Sciences(g) Others (please specify): _____
4. Level of study?
   (a) 100 level (b) 200 level (c) 300 level (d) 400 level (e) 500 level (f) Postgraduate

SECTION C: UTILISATION AND PERCEPTION OF AI-ASSISTED RESEARCH TOOLS. *Please indicate how much you agree or disagree with the following statements:*

5. I often use AI-assisted research tools like ChatGPT, Google Scholar, Grammarly, etc., for academic research.

(a) Strongly agree (b) Agree (c) Neutral (d) disagree (e) Strongly disagree.

6. I rely more on traditional research methods than AI tools.

(a) Strongly agree (b) Agree (c) Neutral (d) disagree (e) Strongly disagree.

7. AI tools make it easier to access and gather relevant research materials.

(a) Strongly agree (b) Agree (c) Neutral (d) disagree (e) Strongly disagree.

8. I find AI-assisted research to be faster than traditional methods.

(a) Strongly agree (b) Agree (c) Neutral (d) disagree (e) Strongly disagree.

9. The information I get from AI tools is usually accurate and helpful.

(a) Strongly agree (b) Agree (c) Neutral (d) disagree (e) Strongly disagree.

SECTION D: IMPACT AND CHALLENGES OF AI-ASSISTED RESEARCH

10. Using AI tools encourages critical thinking during research.

(a) Strongly agree (b) Agree (c) Neutral (d) disagree (e) Strongly disagree.

11. I sometimes question the credibility of AI-generated content.

(a) Strongly agree (b) Agree (c) Neutral (d) disagree (e) Strongly disagree.

12. I use AI tools because they save time and reduce stress.

(a) Strongly agree (b) Agree (c) Neutral (d) disagree (e) Strongly disagree.

13. I avoid using AI tools due to fear of plagiarism or misinformation.

(a) Strongly agree (b) Agree (c) Neutral (d) disagree (e) Strongly disagree.

14. Students should be trained on how to use AI tools responsibly for research.

(a) Strongly agree (b) Agree (c) Neutral (d) disagree (e) Strongly disagree.

15. I face challenges with AI tools such as lack of proper references.

(a) Strongly agree (b) Agree (c) Neutral (d) disagree (e) Strongly disagree.

16. A combination of AI tools and traditional methods improves research outcomes.

(a) Strongly agree (b) Agree (c) Neutral (d) disagree (e) Strongly disagree.

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