



**Application and Use of Artificial Intelligence to Research by Researchers at Benson  
Idahosa University in Edo State Nigeria**

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**Abstract**

Artificial Intelligence (AI) has emerged as a transformative tool in academic research, enhancing efficiency, accuracy, and innovation across disciplines. This study examined the application of Artificial Intelligence in research by researchers at Benson Idahosa University (BIU), Nigeria. A descriptive survey research design was adopted, involving academic staff, researchers, postgraduate students, and research-active undergraduates. Data were collected using a structured questionnaire and analyzed using descriptive statistics. The findings revealed a moderate level of awareness and utilization of AI tools among BIU researchers, with higher adoption in the Arts and Humanities and Social Sciences. Commonly used AI tools included ChatGPT, Copilot, and Perplexity, largely due to their accessibility and ease of use. Respondents indicated that AI significantly improved research efficiency, productivity, data analysis, accuracy of results, and accelerated research timelines. However, major challenges identified included limited access to AI tools, inadequate technical skills, insufficient training, infrastructural constraints, high costs, and resistance to change. The study concludes that although AI has positively influenced research practices at BIU, its adoption remains uneven and constrained. The study recommends increased institutional investment in AI infrastructure, capacity-building programs, ethical guidelines, and cross-disciplinary collaboration to promote effective and responsible integration of AI in academic research.

**Keywords:** Artificial Intelligence · AI Tools · Research Productivity · AI Adoption in Education, University Research Support



## **Introduction**

In recent years, the application of Artificial Intelligence to research has become an area of interest to researchers. Artificial intelligence has come to offer solutions in research providing researchers with feedback from queries, the application of artificial intelligence to research relates to many aspects, including personalized research, intelligent teaching systems, etc. We will be looking deeply to investigate the application of AI to research by researchers at Benson Idahosa University. This paper aims to provide a comprehensive understanding and reference for educational practitioners and researchers and to promote the further application of AI technology in the educational field. Through systematic bibliometric analysis, we will be able to better grasp the vein of AI application research in the educational field and provide guidance and enlightenment for future research. AI can transform research with innovative approaches the advancement in technologies applications in research have shown the acceptance level by researchers with growing interest for application in researches by researchers. Artificial intelligence is a set of technologies that enables machine that mimic human intelligence. (Okebukola , 2024) opined that it is the process of stimulating human intelligence by machines which enables them to perform human-like tasks.

Research is a systematic analysis contributing to awareness and understanding in a particular discipline. It contains gathering of information, data analyzing, and conclusions to interpretations on specific question, test a hypothesis and problem solving. Research can be in various forms such as empirical studies, theoretical inquiries, experimental investigations, and literature reviews. Its objective is to verify existing knowledge, bring about new understanding, verify existing knowledge, or develop new solutions that advance the understanding of the subject under study.

(AI, 2024) opined that application is a type of computer program designed to perform specific tasks for users. This can consist of multiple programs working together. According to (Britannica, 2024) application is a computer program that performs a particular task such as word processing this is in order to complete a task successfully. It also referred to as an application program, with specific task or function directly to an end user.

## **Benson Idahosa University as University**

Benson Idahosa University is a mission University for over twenty years ago. God gave Archbishop Benson Idahosa of Blessed memory the vision to build a Christian University that would train young men and women capable of affecting their world with Christ and produce



academically sound graduates with quality research along with Godliness. Benson Idahosa University operate two campuses; Heritage and Legacy campus. Benson Idahosa University acquires information resources, process, and disseminate the acquired information resources for its researchers needs. Due to the fact that research is a needed tool for nation building Benson Idahosa University is poised to assisting researchers with quality and up-to-date research materials either through traditional and electronics means that hard copies of book materials and database subscription with fees. In addition, the university explores different means of helping its researchers in the utilization of information resources through the yearly subscription of it databases.

### **Objective of the Study**

The main objective of this study is to investigate the application of Artificial Intelligence (AI) in research by researchers at Benson Idahosa University (BIU). Specifically, the study seeks to:

1. Examine the level of awareness and use of AI tools among faculty members, researchers, postgraduate, and undergraduate students at BIU.
2. Identify the types of AI tools and applications commonly used in conducting research within the university.
3. Assess the impact of AI on research productivity, efficiency, and quality among researchers at BIU.
4. Explore the benefits and opportunities associated with integrating AI technologies into academic research.
5. Identify the major challenges and limitations faced by researchers in adopting and applying AI in their research activities.

### **Statement of the Problem**

Artificial Intelligence has become a transformative tool in global research, offering enhanced data analysis, improved accuracy, automation of routine tasks, and support for new research methodologies. Despite these advancements, its integration into research activities across many Nigerian universities, including Benson Idahosa University, remains inconsistent and under-explored. While AI offers significant potential to strengthen research output, bridge knowledge gaps, and increase productivity, several factors may limit its adoption. These include



inadequate technical skills, limited access to AI tools, insufficient training opportunities, infrastructural challenges, ethical concerns, and resistance to new technologies.

Although researchers worldwide increasingly rely on AI-driven tools such as machine learning algorithms, natural language processing, and generative AI, little is known about how BIU researchers engage with these technologies, the extent of their usage, and the challenges they encounter. This gap in knowledge creates uncertainty about BIU's readiness to align with global research trends and leverage AI for enhanced academic performance.

Therefore, this study seeks to address the problem of limited empirical evidence on the adoption, use, impact, and challenges of AI in research at Benson Idahosa University. Understanding these issues is essential for informing institutional policies, capacity-building initiatives, and strategies that will support responsible and effective integration of AI into research practices.

### **Significance of the Study**



This study is significant because it provides valuable insights into how Artificial Intelligence (AI) is being adopted and applied in research at Benson Idahosa University (BIU). The findings will be beneficial to various stakeholders in the following ways:

#### **Researchers and Academic Staff**

The study will help researchers understand the opportunities AI offers in improving research quality, accuracy, and efficiency. By identifying the specific AI tools relevant to their disciplines, researchers can enhance data analysis, literature review, and knowledge creation.

#### **University Management**

The results will inform university leadership about the current level of AI adoption and the gaps that exist in training, infrastructure, and policy. This will support decision-making on investments in digital facilities, research technologies, and AI-driven academic innovations.

#### **University Library**

Since libraries play a central role in supporting research, the findings will enable librarians to design better AI literacy programs, training workshops, and resource guides that help researchers access and use AI tools responsibly and effectively.



### **Students (Undergraduate and Postgraduate)**

Students will benefit from improved access to AI tools that can support academic writing, data analysis, project development, and overall research skills. Understanding the challenges they face will help the university tailor support services to enhance student research output.

### **Policy Makers and Educational Stakeholders**

The study provides evidence-based information that can guide the development of institutional policies on AI ethics, responsible use, academic integrity, and capacity building. It will also help align BIU with global trends in AI-driven research.

### **Literature Review on Artificial Intelligent**

Artificial intelligence (AI) is set to transform the landscape of research in different works of life with innovative approaches to improve disease detection, clinical decision-making, and outcome prediction. The majority of medical research conducted throughout the 20th and early twenty-first centuries relied on well-established statistical methods for data analysis. However, increasingly sophisticated applications in engineering, business, and industrial sectors have shown the rapid technological advancement and maturity of Artificial intelligent, with a growing interest in implementation in research, and other sectors. Artificial intelligent “enables the machine to exhibit human intelligence, including the ability to perceive, reason, learn and interact”. Indeed, AI is shaping the future of humanity across nearly every industry research is not left out in this advancement in technology. According to (Ting , 2024) as artificial intelligent becomes integrated into learning platforms it may led to revolution in the educational system with better diverse education styles, Artificial intelligent therefore personalize learning experience. There is need for further research is needed on how to integrate Artificial intelligent technology with education and teaching to improve the quality and efficiency of education. Artificial intelligent has increasingly become an essential tool for researchers across various domains. Its application is transforming the research process by streamlining data analysis, enhancing predictive modeling, automating repetitive tasks, and even contributing to discoveries. Artificial intelligent has the potential to reform research from traditional practice to modern practice with the application and use of Artificial Intelligent.

### **Artificial intelligent Application to Research**

However, there have been several definitions on Artificial Intelligent John Marcathy (2007) defines it as the science of making intelligent machines to perform tasks using computers to understand human Intelligence. According to (Sidik, et al., 2024) Artificial Intelligent is the



ability of a computational system to replicate human intelligence in rational learning, decision-making, and control through the capability to comprehend language, apply comprehensibility, or analyze information and/or data with the application of various algorithms and cognitive computing mechanisms. Artificial Intelligent enables the machine to exhibit human intelligence, including the ability to perceive, reason, learn, and interact. Although there has been considerable progress in research there is still much to be done engaging with technological advancement and interference to address researchers' information needs. Artificial Intelligent (AI) has become one of the most significant technologies that has impacted several industries and has the potential to reform research. Artificial Intelligence consists of Machine Learning (ML), and deep learning (DL) that can cause extensive data input, output, and analyze data patterns of information understandable to humans. Models that are trained with data to make decisions designed for profound solutions to problems are machine learning which is been used by Artificial Intelligence. In comparison, Deep Learning is a learning algorithm with machine learning that comprises features with sophisticated neural networks as a computer system that can recognize, create, and learn hierarchical data.

The application of AI to research by researchers is fast evolving with encouraging impacts in welcoming and improving research overall. Artificial Intelligent driven tools and algorithms are being unified into various aspects of research as the application of Artificial Intelligent in research grows there is a need to address some ethical principles and risks ensuring integrity and legal ethical guidelines to mitigate against copyright violation in the application of Artificial Intelligent to research using Artificial Intelligent responsibly is necessary despite the need for high-quality research it must be used ethically. According to (Akinola, 2024) Artificial Intelligent research tool are becoming increasingly important in research and academic environments as they offer various benefits. One significant advantage is the ability to access relevant repositories and analysis complex datasets easily. It allows researcher to gather necessary information efficiently. The integration of Artificial Intelligent technologies to academic environment leads to streamlined process, improved research outcomes and fosters innovation. Data analysis is a key area where Artificial Intelligent is transforming academic research. Researchers can utilize Artificial Intelligent algorithm to quickly and efficiently analyze large amount of data. This is thereby offering researchers valuable tools to enhance their work and ensure integrity. Researchers can harness it advantages to drive innovation and elevate the quality of the research and it also provide researchers with various tools which



enable researchers to research grants, write books and even compose article for scientific journals. Additionally, it also helps researchers in editing their articles thereby ensuring grammatical accuracy in their writing. (Ikenna, 2024) Opined that Artificial Intelligent has the potential to significantly impact education, research and development in Nigeria, thereby creating opportunities and challenges. That accounting researchers, educators and lecturers should ensure that Artificial Intelligent and disruptive innovation are inculcated into the accounting curriculum. Else they will be out of the market if they don't take innovative seriously. Artificial Intelligent has come to stay and as a result of that, accountants and accounting student should explore transformative ideas that come with it and utilize it to shape the curriculum of accounting education and practice given the potential of the innovation. Accounting lecturers should not continue to rely on the traditional accounting based curriculum if they do so their students would be out of the market. According to (Ijaiya, p. 2024) Artificial Intelligent is not just a buzzword; it is a transformative force reshaping education worldwide. Artificial Intelligent is revolutionizing classrooms, personalizing learning, automating administrative tasks and bridging knowledge gaps. For Nigeria where resource constraints, large class sizes and disparities in access to quality education remain persistent challenges, Artificial Intelligent offers a golden opportunity to level the playing field. (Ijaiya, p. 2024) also stated that there is transformative potential of Artificial Intelligent in legal education in the United State of America with platforms such as LexisNexis, Westlaw, Ross intelligence revolutionized approaches to legal research, tailoring search result to specific case focus and academic needs. It thereby enhanced the research process by offering precise, on-point resources and analysis. Writing traditionally labour intensive task, were made more efficient with tools like Grammarly, and ChatGPT ensuring clarity in complex briefs. The integration of Artificial Intelligent in research inspired researchers to envisioned how similar advancement could reshape Nigeria's educational system, bridging gaps and empowering future generation. Artificial Intelligent can change the narrative of Nigeria educational system by democratizing learning and making quality education accessible to all. Artificial Intelligent driven platforms can tailor instruction to individual students, recognizing their strengths and weaknesses and artificial intelligent can play in transforming education.

### **Impact on the Use of Artificial Intelligent on Research**

(Arranz D. , et al., 2023) opined that the application of AI particularly in research and Innovation, the volume of science produced with the aid of Artificial Intelligent is growing at



a rapid pace. It is reasonable to anticipate that the rate and impact of these discoveries will accelerate in the future.

However the deployment of this technology also poses questions and challenges for researchers and innovators. These include the risk of misuse of such a powerful technology, threats to research integrity, and the need for researchers to adapt to new tools, to name a few of the main challenges. According to (Weigel, Caldas, & Meyer, 2022) complex datasets have made artificial intelligence an invaluable tool for discovery across research. Artificial Intelligent makes possible a fraction of time, allowing researchers to subsequently analyze the data to answer their questions of interest. The real excitement that Artificial Intelligent brings to the field of research however, is not just speeding up time-consuming human tasks but revealing questions we as researcher didn't even know to ask. He further stated that Artificial Intelligent can categorize feature in image to predict a function. And Key features used for classification can even be visualized using explainable Artificial Intelligent. According to Artificial Intelligent helps researchers to access and identify relevant studies more swiftly. with regards to ChatGPT and also saves researchers time by synthesizing and analysis relevant content thereby identifying genuine research gaps. As the application of AI to research grows there is a need to analyze the impact of the technological advancements. With this, it will guide future research direction and its application to research by researchers. In as much as AI tools can be effective tools to research in universities by researchers in transforming the outlook of academic needs of researchers, this technology will improve the process of research leading to skillfulness, enhanced analysis of data, and new methodologies.

According to (Sidik, et al., 2024) as research on Artificial intelligent role grows it is important to analyze trends patterns and the impact of this technological advancement which will guide future research directions and its application in the field of research. (Pengtao , Wanshu , Qiaoli, Ruizhi , & Keyu , 2024) Opined that despite the rapid development of artificial intelligence thereby providing rich opportunities for development and social progress with an expectation of shaping commercial value, promoting efficiency and improving versatility, Artificial intelligent technology is now increasingly applied into online retailing, customer service, digital innovation, and providing management support. Note that the success of Artificial intelligent implementation relies on users' acceptance to use the technological process.



Notwithstanding, (Pengtao , Wanshu , Qiaoli, Ruizhi , & Keyu , 2024) opined differences in attributions, perception and acceptant criteria exist among these different AI application forms. Research has indicated that user acceptance of AI system, which is designed to deliver improved services, is associated with perceptions of algorithmic credibility, usefulness, convenience and trust while users' attitudes towards AI systems, which replace users in completing tasks, may result from a perceived threat, performance risk, and inertia. This indicates that some differences are present between different forms of AI applications related to user acceptance, in particular, in whether users treat AI as a service provider or task substitute. AI task substitutes are AI applications that replace users to complete certain tasks such as AI-generated diagnostic systems, AI-based substitute decision-making systems, and AI teammates the role of technology is an important tool to research.

### **Brief History of Artificial Intelligent**

(Okebukola , 2024) stated that AI is as far back as 86 years ago that is 1956 by John Mearthy the development of AI into eight stages that is, Greek myth of artificial intelligence beings 1<sup>st</sup> to 10<sup>th</sup> was sacred mechanical objects in Africa, and other civilization believed to be capable of intelligent actions and emotions, 1<sup>st</sup> century AD Hero of Alexandra created mechanical men and other automatons-the world first practical machines programmed machines. In 1795-1805 this was the simplest kind of artificial neuron network produced, in 2950 Alan Turing published computing machinery and intelligence which proposes the turning test as a measure of machine intelligence and answered all of the most common objects to the proposal machines can think Isaac Asimov published hid three laws of robotics. In 1956 Dartmouth college summer conference is organized by John McCarthy, Marvin Minsky, Nathan Rochester of IBM , Claude Shannon, McCarthy coins the term artificial intelligence for the conference. In 1965, Joseph weizenbaum (MIT) built Eliza an interactive program that carries on a dialogue in English language on any topic it was a popular toy at AI centres on the ARPANET when a version that simulated the dialogue of a psychotherapist was programmed and in the 1990s was the revival and emergence of machine learning (ML), major advances in all areas of AI, with significant demonstration with machine learning, intelligent tutoring, case based reasoning, muliti-agent planning, and in 1994, the passengers on board the twin robot cars VaMP, AND VITA-2 of ERNST-2 Dickmann and Daimler-Benz drive more than one thousand kilometers on a Paris three lane in standard heavy traffic at speed up to 13kilometre per an hour they demonstrated an autonomous in free lane while in 2000s the genesis of AI, 2010 the rise of AI



2011-2014 apple series, google now (2012) and Microsoft cortiana 2014, and smart phones apps that uses natural languages to answer questions, 2020s generative AI reach new horizons, 2022 ChatGPT and AI chatbots 2023 OpenAI GPT 4 model released in march 29 2023, and in November 2023 the first global AI Summit was held.

### **Types of Artificial Intelligence**

(Okebukola , 2024) Stated that there are two types of classification of AI which are Capabilities and Functionalities and under the capabilities we have the;

Narrow AI: this is when machine perform specific task that is narrowly perform tasks

General AI: this thus where machine possess the ability and takes decision like humans

Super AI: this is when computer system may transcend human being which is currently in use.

Under the functionalities we have;

Reactive machine: this function only on a current data



Limited memory: this comes with a temporary memory which could be used to store earlier experiences for future actions.

Theory of mind: This is a more complex kind of AI that plays an important role in psychological intervention by targeting only emotional intelligence.

Self-Awareness: this is when AI becomes self-aware reaching a stage of possible super-intelligence

### **Currents of Artificial Intelligent to Research**

According to Okebukola there is current development of Artificial intelligent to education which includes:

1. Predictive learning analytics and educational data mining
2. Assisted teaching and learning
3. Adaptive Learning
4. Automated graded assessments
5. Augmented reality and virtual reality in Education
6. Natural Language Processing for language Learning
7. Intelligent tutoring system Driving by Artificial intelligent
8. Artificial intelligent in Gamification Learning



### **Benefits of Artificial intelligent**

The introduction of artificial intelligent into research is evolving this enhance analyzing data, peers collaboration irrespective of geographical distance, knowledge discovery is not left out and also boast research productivity for researchers which may expand research landscape with better opportunities for researcher. Below are some benefits of AI

1. Artificial intelligent can aid researchers by recommending relevant literature to ease their research work.
2. Artificial intelligent can aid researchers by facilitating their search for information within a short period
3. It can also help to improve the efficiency of research project
4. It can help in collaboration among researchers in their research drive
5. It can also help researcher on potential funders as regards grants writing
6. It can help researchers to personalized educational content

### **Challenges of Artificial Intelligent in Research**

According to Perplexity Researchers face several significant challenges when integrating artificial intelligence (AI) into their work. These challenges can hinder the effective use of artificial intelligent (AI) technologies across various fields. According to (Ines, 2024) there are lack of frameworks and capacity for the application of AI that is appropriate within local contexts. This development pose unique challenges regarding internet penetration, electricity connection, copyrights violation ere are the main obstacles identified:

1. High cost that cost of installation is high in terms of infrastructure and installation
2. Data Complexity in terms of security and data privacy
3. Lack of Tools and Platforms: Many researchers struggle with the absence of user-friendly tools and platforms that facilitate the development and deployment of AI models.
4. Trust and Transparency Issues: The complexity of AI algorithms can lead to skepticism among researchers regarding their reliability and decision-making processes. Building trust in AI systems is essential for their adoption in research settings.
5. Skill Shortages: lack of necessary professional expertise in the application of AI in research hinders the ability and utilization of AI in research.



### **Potential Research Impact of Artificial Intelligent to Researchers**

1. Artificial Intelligent has the potential to facilitate growth economically thereby encouraging innovation. If researchers are equip with AI skills it will make them better ready for the technological advancement driven economy therefore reducing unemployment.
2. When there is democratizing access to education through the use of AI it will help bridge the gap in resources and knowledge thereby providing access to advanced learning technologies through AI.
3. By imploring AI tools in research in addressing specific challenges it can play a crucial role in improving living along with driving social change.
4. Artificial intelligent been introduce into various sectors may influence cultural practice on how individual interact with technology in this era of technological advancement.

### **Methodology**

This study adopted a descriptive survey research design, which allowed the researcher to systematically collect data from a broad group of respondents in order to examine the awareness, use, benefits, and challenges associated with the application of Artificial Intelligence (AI) in research at Benson Idahosa University. The population of the study comprised all academic staff, researchers, postgraduate students, and research-active undergraduate students in the university, as these groups are directly involved in research activities and are most likely to engage with AI tools. A stratified random sampling technique was used to ensure fair representation of each category of respondents. The population was divided into strata such as academic staff, postgraduate students, and undergraduate research students, and a proportionate sample was drawn from each stratum to reflect the size of the groups within the university.

Data for the study were collected using a structured questionnaire titled “Artificial Intelligence Application in Research Questionnaire (AIAIRQ),” which was designed to capture demographic information, awareness and knowledge of AI tools, extent of use, as well as the benefits and challenges encountered in applying AI for research purposes.

The questionnaires were administered both physically and electronically through Google Forms to ensure wider reach and higher response rates. Respondents were given sufficient time to complete the instrument, and assistance was sought from departmental secretaries and



research coordinators to facilitate distribution. Data collected were analyzed using descriptive statistics such as frequency counts; percentages, mean, and standard deviation were used to answer the research questions.

**Analysis**

**Section A:**

**Table 1-Question 1- Academic Discipline**

<b>Item</b>	<b>Frequency</b>	<b>Percentage%</b>
Science	1	
Engineering	-	
Social Science	27	25
Arts and Humanities	51	48
Health Sciences	-	
Others	18	17

Results show that the highest number of respondents came from Arts and Humanities (48%), followed by Social Sciences (25%), and Others (17%). This indicates that responses were dominated by the humanities-based disciplines.

**Section A:**

**Table 2- Question 2- Current Role**

<b>Item</b>	<b>Frequency</b>	<b>Percentage</b>
Faculty Member	33	31
Postgraduate Student	1	2
Researcher	27	25
Undergraduate	15	14
Other	24	22

Table 2 shows that most of the respondents are faculty member with frequencies score of 33 and 31%, while 27 of the respondents are researcher with 25% and 24 of the respondents are others.



**Section B:**

**Table 3- AI Application and Tools Currently Use in Research**

Item	Frequency	Percentage %
Machine Learning Algorithm	24	22
Natural Language Processing	15	14
Image Recognition and Analysis	15	14
Predictive Analytics	9	8
Data Mining	12	11
Robotics	6	5
AI-driven Simulations	24	22
Others		

Table 3 shows that the AI application and tools that are mostly use for research by researchers in Benson Idahosa University is Machine Learning Algorithm and AI-driven Simulations with frequency score of 24 (22%) . while Natural Language Processing and Image Recognition and Analysis is 15(14%).



**Table 4- Frequency of use of AI Tools**

Item	Frequency	Percentage
Daily	24	22
Weekly	15	14
Monthly	-	
Occasionally	54	51
Never	6	5

Summary of squared deviations:

Category	Code	f	(x-mean)	(x-mean) <sup>2</sup>	f × (x-mean) <sup>2</sup>
Daily	5	24	2.03	4.12	98.88
Weekly	4	15	1.03	1.06	15.90
Monthly	3	0	0.03	0.00	0
Occasionally	2	54	-0.97	0.94	50.76
Never	1	6	-1.97	3.88	23.28

Total = \*\*188.\*\*82

$$SD = \sqrt{\frac{188.82}{99}} = \sqrt{1.91} = 1.38$$



The average frequency of AI use falls between occasional and weekly use, with a moderate spread of responses (SD = 1.38).

This confirms that AI adoption is not yet routine or daily among many researchers.

**Table 5 -AI Tools and Software used**

Item	Frequency	Percentage %
Tensor Flow	15	14
Pytorch,	-	-
IBM Watson	9	8
Chatgpt	33	31
Perplexity	24	22
Copilot	27	25

Table 5 shows that ChatGPT, Copilot and Perplexity are the AI tools and software mostly used in Benson Idahosa University with frequency score of 33(31%), 27 (25%) and 24 (22%).



**Section C:**

**Table 6- Impact of AI on Research**

Item	Frequency	Percentage
Significantly Improved	51	48
Moderately Improved	24	22
Slightly Improved	15	14
No Change	-	-
Decreased Efficiency	-	-

Table 6 shows that AI has significantly improved research efficiency with response rate of 51(48%) , while other respondents state that it has moderately improved research efficiency with response rate of 24 (22%) and slightly improved research efficiency with response rate of 15(14%).

**Table 7 -AI Impact on Research Productivity**

Item	Frequency	Percentage
Increased significantly	45	42
Increased moderately	57	54
Increased Slightly	9	8
No Change	9	8
Decreased Productivity	-	-

Table 7 shows that AI impact on research productivity has increased moderately with response rate of 57(54%) and significantly with response rate of 45(42%)

**Table 8 Ways AI has influenced research outcomes**

Item	Frequency	Percentage
Enhanced Data Analysis	27	25
Improved Accuracy of Result	36	34
Enabled New Research Questions	15	14
Facilitated large-scale studies	48	45
Accelerated Research Timelines	18	17
Others	6	5

Table 8 shows that AI has influenced research outcomes in many ways- Facilitated large-scale studies, Improved Accuracy of Result, Enhanced Data Analysis and Accelerated Research Timelines with response rate of 48 (45%), 36 (34%), 27 (25%) and 18(17%).

#### Section D



**Table 9- Challenges in Integrating AI**

Item	Frequency	Percentage
Lack of Technical skills	33	31
Limited Access to AI Tools	39	37
Insufficient Training and Support	36	34
High Cost of AI Solutions	21	20
Resistance to Change	30	28
Others	6	5

Table 9 shows that most challenges faced by researchers in Benson Idahosa University are – limited access to AI tools, Insufficient training and support, lack of technical skills, resistance to change and high cost of AI solutions with response rate of 39 (37%), 36 (34%), 33(31%), 30 (28%).

#### **Question 10- Addressing challenges in research?**

It creates a thorough search strategy, adequately browse large digital databases and extract useful, high-quality information.

Facilities and Technical Training Provision Benson Idahosa University must make investments in cutting-edge research facilities and guarantee that staff members are properly trained in technical abilities, particularly in developing technologies.



Give research more time in order to improve the breadth and significance of their work, researchers should set out specific time to investigate and incorporate new technology.

The ethical implications of AI such as data privacy, algorithmic bias, and transparency must be carefully examined.

BIU should promote responsible AI practices and integrate ethics into research training.

Researchers should seek assistance from IT personnel to effectively integrate AI tools alongside traditional research methods.

Platforms like Google Scholar and other AI-powered tools can significantly aid in literature review, data analysis, and information retrieval.

Partnering with AI experts and fellow researchers fosters innovation and opens new avenues for problem-solving which helps to bridge knowledge gaps and enhance research outcomes.

Access to e-journals, e-books, and other internet-based scholarly materials is vital for staying current and expanding the scope of research.

Developers of AI and machine learning technologies must be held accountable for the ethical design and deployment of their tools. Issues related to privacy, fairness, and bias should be addressed proactively.

While AI offers significant advantages in many disciplines, it's important to acknowledge that some researchers may find limited applicability in their specific areas.

While some other said AI is not useful in his area of research, there is need for consideration on ethical issues associated with AI use and need for consultation of IT personnel for assistance along with other research methods.

Goggle support tools is also an useful in addressing challenges in research by collaborating with other researchers and experts in AI fields, and application of other internet sources e.g. e-journals, and e-books.

As regards privacy and bias developers of AI machine learning should be accountable of AI power tools.

### **Question 11- Support or resources that would help you better integrate AI into your research**

Resources that would enable researchers to more effectively incorporate AI into their studies; we should have access to a big database of specialize AI tools, training, researchers, and paper guides and Scispace.



Financial assistance as well as better internet access at work.

The administration should guarantee that researchers have access to AI tools.

Better financial standing would make it easier to pay for subscriptions to various and relevant AI technologies.

Using prominent and well-known resources like ChatGPT and having free and inexpensive access to AI tools to further my study.

### **Question 12-Additional Comments**

The institution should prioritize comprehensive staff development programs focused on enhancing research productivity through the effective use of Artificial Intelligence (AI). A clear framework should be established to guide both students and staff in the responsible and innovative application of AI within academic research.

Adequate infrastructure must be provided to support the efficient integration of AI tools and technologies in research activities. This includes access to relevant software, hardware, and connectivity resources that enable seamless AI adoption.

Benson Idahosa University (BIU) should organize regular training sessions and workshops to build capacity in AI literacy and practical application. These initiatives will empower the university community to stay abreast of emerging trends and technological advancements.

To align with global modernization and evolving academic standards, the university should formally implement AI-driven methodologies in research. Furthermore, ethical considerations surrounding AI use must be embedded into the research curriculum to ensure responsible and informed engagement with these technologies.

### **Discussion**

The study shows that AI is positively perceived at BIU, with respondents reporting significant gains in efficiency, accuracy, and productivity. However, adoption is concentrated in the Arts and Humanities and Social Sciences, suggesting that STEM fields, where advanced AI applications could be transformative, remain underrepresented. The reliance on user-friendly tools such as ChatGPT, Copilot, and Perplexity highlights accessibility as a driver of adoption, but also reflects a skills gap in using more advanced AI platforms.

Challenges including limited access to tools, training gaps, and infrastructural deficits echo broader barriers reported across African higher education (Mhlanga, 2023; Onyema et al.,



2020). Addressing these will require strategic interventions to ensure sustainable AI integration.

The findings reveal that the adoption of Artificial Intelligence (AI) in research at Benson Idahosa University (BIU) is positively perceived but uneven across disciplines. Most respondents were from the Arts and Humanities (48%) and Social Sciences (25%), suggesting underrepresentation of STEM fields where advanced AI applications could be more prevalent. Faculty members and researchers dominated the sample, indicating that AI is primarily used as a research productivity tool rather than a student learning aid.

AI tools such as ChatGPT (31%), Copilot (25%), and Perplexity (22%) are the most widely used, reflecting a preference for user-friendly platforms over technical frameworks like TensorFlow or IBM Watson. This indicates accessibility drives adoption, though it also highlights a skills gap. Respondents reported that AI significantly improves research efficiency (48%) and productivity (42%), particularly through facilitating large-scale studies, enhancing accuracy, and accelerating timelines.

However, challenges persist, including limited access to AI tools (37%), insufficient training (34%), lack of technical skills (31%), and resistance to change (28%). These findings underscore the need for institutional investment in capacity building, infrastructure, and ethical guidelines. To fully realize AI's potential, BIU must expand access, provide structured training, and promote cross-disciplinary collaboration for sustainable and responsible integration.

### **Recommendations**

To maximize the benefits of Artificial Intelligence (AI) in research at Benson Idahosa University (BIU), several strategic actions are necessary. First, the university should expand training and capacity-building programs to address gaps in technical skills and AI literacy. Regular workshops, seminars, and hands-on sessions will equip both faculty and students to use advanced AI tools effectively.

Second, BIU must improve infrastructure and access by investing in reliable internet connectivity, high-performance computing resources, and subscriptions to specialized AI platforms. Affordable or institutional access to widely used tools such as ChatGPT, Copilot, and Perplexity would remove financial barriers to adoption.

Third, the university should embed ethical guidelines into research training. Issues of privacy, transparency, and algorithmic bias must be carefully managed to ensure responsible AI use.



Partnering with IT experts and AI specialists will also foster innovation and bridge existing knowledge gaps.

Finally, BIU should promote cross-disciplinary collaborations between STEM and non-STEM faculties to broaden AI applications and enhance research outcomes. By combining technical expertise with diverse research needs, the institution can position itself as a leader in AI-driven scholarship.

### **Conclusion**

This study demonstrates that Artificial Intelligence (AI) is already reshaping research practices at Benson Idahosa University (BIU) by improving efficiency, accuracy, and productivity. Researchers reported significant benefits, particularly in facilitating large-scale studies, enhancing data analysis, and accelerating research timelines. However, AI adoption remains uneven across disciplines, with greater use in the Arts and Humanities and Social Sciences, and relatively limited integration in STEM fields. The predominance of accessible tools such as ChatGPT, Copilot, and Perplexity further highlights a reliance on user-friendly platforms rather than advanced technical frameworks.

Despite these gains, challenges including limited access to tools, insufficient training, lack of technical skills, and infrastructural constraints continue to hinder deeper integration. Addressing these barriers through capacity building, ethical frameworks, and improved infrastructure will be vital. With targeted investment and cross-disciplinary collaboration, BIU can fully harness AI's transformative potential and strengthen its position in global academic research.

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