

**ARTIFICIAL INTELLIGENCE AND KNOWLEDGE ACQUISITION AMONG  
STUDENT IN UNIVERSITY OF BENIN.**

**BY**

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**DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY**

**FACULTY OF SOCIAL SCIENCES**

**UNIVERSITY OF BENIN**

**BENIN CITY**

**NIGERIA**

**OCTOBER, 2025.**

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**A RESEARCH WORK SUBMITTED TO THE DEPARTMENT OF SOCIOLOGY AND  
ANTHROPOLOGY IN THE FACULTY OF SOCIAL SCIENCES IN PARTIAL  
FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF A BACHELOR OF  
SCIENCE (B.Sc.) DEGREE IN SOCIOLOGY AND ANTHROPOLOGY.**

**OCTOBER, 2025.**

**CERTIFICATION**

This is to certify that this project work was done by **FAVOUR GBEZINAAWORO** with the matriculation number **SSC2105925** under the supervision of **DR (MRS) M. MUSTAFA-SHAIBU** and to also certify that the work done is adequate for partial fulfillment for the award of Bachelor of Science (B.SC) degree in the University of Benin.

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## **DEDICATION**

This project work is dedicated to God Almighty who saw me through my years in school, for without him, I can do nothing. I give him all the thanks and praise.

## ACKNOWLEDGEMENTS

Firstly, I thank God almighty for his grace, kindness and strength upon me. And I say a big thank you to my amazing supervisor **Dr Mrs Maryam Mustafa Shaibu** who helped me academically and impacted in me and also guided me through my project work, thank you.

To my spiritual fathers pastor Nosa Eboigbe and prophet Peter Asika, I applaud my family, most especially my mother Mrs Josephine who is an Angel in human form and to my ever supportive siblings, Melvin thank you for being a father and for everything, Ovie thank you for always being there and Dorcas I will always choose you as my sister even in another lifetime, and to my baby William thank you for making me an aunty I love you so much, and to Mrs Alice I love you mama. I want to specifically thank my aunty Sophia Igiebor God bless you ma, I appreciate my uncles pastor Joshua, Mr Emoike aka king Zina and pastor Franklin.

I appreciate my Uncle Prince Edobor Aiworo and to pastor Mr Peter & Mrs Rachel Osazuwa I say thank you to you both for all your support. An amazing soul I met in Uniben Favour I'm grateful for your kindness towards me during my clearance and also to Amen Osahon thank you for being there for me to ask questions about school and clearance, I appreciate and applaud you sir Nonso you are amazing keep on shining king, to my secondary school friends, Rip Osarimen, Emem, Amenze, Alex and others I didn't mention y'all are loved by me, to my friends Oghosa and Sammy and those who I might not mention thank you all too because y'all played one or two roles in my life, to the amazing friends I got from Uniben (Emmanuel, Dave, Jeremiah and others) I appreciate each and every one of you, to the friends I got from other departments (Iyevoltage (shade) voltage boys, class of dynamics pol science, Mimi Gold, Economics department and

others) to the mother Uniben gave me Mrs Nde Mercy i appreciate and love you ma,and to mummy Etinosa thank you ma for all you do.

A big shoutout to my wonderful Customers God bless y'all for supporting my brand,to my business vendors and Emmy thank you for all u do,u have a heart of gold and also to CEO IG Hub thank you sir for supporting my brand to grow,to my amazing department sociology and anthropology.

Dr Jude Akaba i appreciate you for being a father and a good man God bless you sir,from the highest to the lowest in the hierarchy y'all are amazing and thank y'all for impacting meaningfully on students,and to my coursemates thank you for all the good and bad memories thank y'all for all the moments and a big shout out to my friends who are still my course mates Etinosa,Jack,Vincent,Angel,Joan,Favour, Eloghosa,Favour Adinu,Anthony Awor,Diagi Martins,Charles,Trust,Esther odinigwe,Mercy Dolapo,Elizabeth,Eguase Esther, and a few I didn't remember to mention.i say thank you to princess Ehizogie Eweka and princess Uyi Eweka,Amarachi and the whole of Eweka lane which happens to me my hood.My childhood friends who became my brothers on the academic journey thank you guys for everything you do and to my dearest friends,Iwinosa,Precious,Greg,Nzubechukwu, Nelly,Michael aka boss baby,Oghenetega and Jethro,Rhema,Tony X God bless you people for always being there and treating me nicely i appreciate y'all for being such sweet people, and to those who we crossed paths and we may no longer talk anymore thank you too because we shared one or two good moments.

To my humble self Favour Zina,the most simple and amazing,to my humble and brave self you have done well I must applaud you for being you and for the growth and lessons have learnt from

my mistakes and past,I say thank you to God for his mercy,strength and protection upon my life.And to my late grandparents ElderJohn Samuel and Deaconess Catherine Bosede Zina your first grand daughter is now a graduate, keep on resting i miss you so much my rare germ(Elder John Samuel Zina),thank you for always showing up on my graduations, when you were still here when i finished this chapter of my academic journey, sleep well grandpa.

God bless University of Benin, God bless Sociology and Anthropology, God bless Social Elites and good luck to each and every member of social Elites.

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## **ABSTRACT**

*This study examined the influence of Artificial Intelligence (AI) on knowledge acquisition among students of the University of Benin. The study was guided by four specific objectives, which sought to determine the extent of students' awareness and utilization of AI tools, assess the impact of AI on students' learning outcomes, identify the challenges associated with AI use in academic activities, and explore students' perceptions of AI as a tool for enhancing knowledge acquisition. The study adopted a descriptive survey research design. A total of 200 respondents were selected from various faculties within the University of Benin through a stratified random sampling technique. Data were collected using a structured questionnaire and analyzed using descriptive and inferential statistical tools. Findings revealed that a majority of the students were aware of and frequently used AI tools such as ChatGPT, Grammarly, and Google Bard for learning and research purposes. The results further indicated that AI significantly enhances students' ability to access information, improve comprehension, and develop critical thinking skills. However, challenges such as limited technical skills, unreliable internet access, and fear of academic dishonesty were identified as barriers to effective AI integration. The study concluded that AI serves as a powerful catalyst for knowledge acquisition when properly utilized and recommended that the university provide training programs, stable internet facilities, and clear policies to guide the ethical use of AI in learning.*

## CHAPTER ONE

### INTRODUCTION

#### 1.1 BACKGROUND OF THE STUDY

Globally, the society we live in is experiencing a significant shift in the way information is processed and knowledge is acquired. This is due to the rapid advancement in Artificial Intelligence (AI). AI has transformed various aspects of life, including education, which is now witnessing a paradigm shift from traditional teaching methods to more innovative and technology-driven approaches (Bryrym, 2018). The integration of AI in education has the potential to revolutionize the way students learn and acquire knowledge (Oladimeji and Adiboye, 2018).

Artificial Intelligence (AI) has become an integral part of people's daily lives and is available on all platforms, from smart homes to smartphones and autonomous cars. John McCarthy first presented the concept of AI at the Dortmund Conference in 1956, defining it as “human-like intelligent machines, especially intelligent computer programmes. Quinn (2017) argues that AI can be understood as the computational ability to achieve goals in the world, with different types and degrees of intelligence found in humans, animals, and machines. This relatively new concept has led to different definitions across various disciplines and fields. At its core, AI involves using high-level cognitive skills such as reasoning, problem-solving, and generalization to create intelligent behaviors (Obrad and Gherhes, 2019).

AI has become an integral part of the education process, with materials and software equipped with skills such as abstract thinking, learning, adapting to new situations, and interaction, mimicking intelligent beings (Gherhes and Obrad, 2018). The use of these features and other

active learning methods has found a place in the field of education, leading to an increasing number of studies utilizing artificial intelligence. In the age of big data, AI applications are being developed rapidly, with effective use in areas such as banking, technology, and entertainment (Byrum, 2018). AI has also contributed to the development of various applications, including management systems, virtual classrooms, patient follow-up systems, game theory and strategic planning, hand, speech, face and pattern recognition, automation, and robotics (Demir, 2015). Similarly, the integration of AI is revolutionizing the education system, as it complements the innovation Industry and Education. AI and education are deeply intertwined, and this technology is impacting social interaction in every aspect. Polat (2016) states that as a result of this relationship between AI and education, new teaching and learning approaches are being developed and tested in various contexts. Adaptive learning management systems, also known as intelligent teaching systems, are among the most common applications of AI in education. These systems use AI techniques to model the teacher and create an individualized learning environment that suits the needs of each learner. According to McKenzie and Bent (2022), incorporating technological developments in Industries that is AI based, augmented reality, cloud computing, and hologram in the education sector enhances productivity and creativity. Therefore, the use of technology in education will promote learning and increase success in all fields.

In tertiary institutions, Different types of technologies can be applied in higher education, whereas in the past few years, there has been a growing interest in artificial intelligence (AI). AI can be defined as “systems that display intelligent behavior by analyzing their environment and taking action—with some degree of autonomy—to achieve specific goals” (Fishbein and Ajzen, 2015). It is being implemented in various organizations and sectors with the aim of optimizing their effectiveness and efficiency. When it comes to education, artificial intelligence can have an

important role in the process of digital transformation (DT). DT refers to changes in an organization stimulated by the integration of digital technologies in its various sectors, whereby it overcomes the simple implementation of new technologies, implying alignment between three factors—human, technological, and organizational (Albayrak, Ozdemir and Yuzbasioglu, 2016). In education, digital transformation considers new ways of connecting data, people, and processes in modern digital conditions, intending to create a better environment and prepare for future challenges. Regarding higher education institutions, DT can bring several practical benefits reflected in the improvement of the training process related to the creation of a good workforce; the facilitation of universities' internal governance; the prediction and management of different organizational, educational, and scientific issues; and the personalization of learning and other benefits to students.

In this context, AI represents one of the factors impacting the establishment of the digital education infrastructure (Kaminsky, Polar and Newman, 2019). Chassignol, Keles Ana Suleyman (2022) singled out four main areas that could be influenced by artificial intelligence: content, teaching methods, assessment, and communication. Among these, they presented several tools and platforms designed for personalized learning. In addition, Holmes and Tuomi (2014) distinguished three categories of AI tools that can be applied in education, depending on who the focus is on—whether it is on the student, teacher, or institution. Hereby, in the case of student-focused AI, it should be noted that besides technologies that have been repurposed for education—such as Google Docs and Sheets—and some social networking platforms (WhatsApp and WeChat) and content-sharing platforms (YouTube and TikTok), there are AI-assisted technologies especially developed for students: “intelligent tutoring systems, AI-assisted apps, AI-assisted simulations, AI to support learners with disabilities, automatic essay writing,

chatbots, automatic formative assessment, learning network orchestrators, dialogue-based tutoring systems, exploratory learning environments, and AI-assisted lifelong learning assistants” (McKenzie and Bennett, 2022). But the crux is whether students are using these mediums to its full potential, their level of awareness and what brings about the lack of understand on AI related matters.

## **1.2 STATEMENT OF THE PROBLEM**

The integration of Artificial Intelligence (AI) in education has the potential to revolutionize the way students learn and acquire knowledge (Oladimeji and Adiboye, 2018). However, the successful adoption of AI in education according to Polat (2016) depends on various factors, including students' view of AI in knowledge acquisition. Despite the growing interest in AI-powered education, there is a significant gap in understanding students' attitudes, beliefs, and experiences with AI in the context of knowledge acquisition. The University of Benin, like many other institutions of higher learning in third world countries, is grappling with the challenges of preparing students for a future where AI is increasingly prevalent. While AI has the potential to enhance student learning outcomes, its adoption in education also raises concerns about the potential impact on students' knowledge and usability of knowledge acquisition.

In the University of Benin, where this study is focused, there is a lack of understanding of students' view of AI in knowledge acquisition, which poses a significant challenge to the effective integration of AI in education. The institution is yet to invest in AI-powered educational tools and resources, but the real question is even if they do, how will the adoption rate turn out. Will most students abandon skepticism and embrace understanding of AI's potential for the enhancement in knowledge acquisition. Furthermore, the limited research on AI

in education in Nigeria, and specifically in the University of Benin, has resulted in a dearth of information on students' perception of AI in knowledge acquisition. This knowledge gap hinders the development of effective AI-powered educational tools and strategies that meet the needs of students. The lack of understanding of students' perception of AI in knowledge acquisition also raises concerns about the potential impact of AI on student learning outcomes. If students perceive AI as a threat or a replacement for human teachers, they may be less likely to engage with AI-powered educational tools, which could negatively impact their learning outcomes.

Previous studies have investigated the impact of AI on student learning outcomes, but few have explored students' perception of AI in knowledge acquisition hence the uniqueness of this study. Moreover, most of these studies were conducted in developed countries, with limited research conducted in African countries like Nigeria, hence this study is set to fill that knowledge gap by exploring students' attitudes, beliefs, and experiences with AI and how it affects their learning processes in the University of Benin.

### **1.3 RESEARCH QUESTIONS**

- i. What is the level of awareness and understanding of Artificial intelligence among students in University of Benin?
- ii. What are the factors that influence students' perception of Artificial intelligence in Knowledge acquisition in their academic pursuits?
- iii. To what extent do students of university of Benin use Artificial intelligence in their academic pursuits?

iv. What is the relationship between students' awareness of Artificial intelligence and their academic performance?

#### **1.4 OBJECTIVES OF THE STUDY**

The main objective of the study is to examine the students' perception of the benefits and challenges of using AI in knowledge acquisition.

The Specific Objectives are to:

- i. Ascertain the level of awareness and understanding of Artificial Intelligence (AI) among students in the University of Benin.
- ii. Identify the factors that influence students' perception of AI in knowledge acquisition in academic pursuits among students in University of Benin.
- iii. Determine the extent to which AI is used by students in academic pursuits among students in the University of Benin.
- iv. Investigate the relationship between students' awareness of AI and their academic performance among students in the University of Benin.

#### **1.5 SIGNIFICANCE OF THE STUDY**

This study on Artificial Intelligence and Knowledge Acquisition amongst undergraduate students in University of Benin is significant in various ways. Firstly, the findings of this study will help educators and policymakers understand how AI can be effectively integrated into the curriculum to improve student learning outcomes. By identifying the benefits and challenges of AI in knowledge acquisition, educators can design instructional strategies that leverage AI to enhance student learning. Secondly, the study's results will provide insights for developers of AI-powered

educational tools, ensuring that they meet the needs and expectations of students. This will lead to the development of more effective AI-powered educational tools that can support student learning. Additionally, the study will identify areas where students require more support and resources to effectively utilize AI in knowledge acquisition, thereby bridging the knowledge gap.

The study's findings will also help improve student engagement by understanding students' perceptions of AI. By designing engaging and interactive learning experiences that incorporate AI, educators can increase student motivation and participation. Furthermore, this study will prepare students for a future where AI is increasingly prevalent in various industries and aspects of life. By exploring students' perceptions of AI in knowledge acquisition, this study aims to contribute to the enhancement of education and prepare students for success in an increasingly technology-driven world.

Finally, the study's findings will contribute to the existing literature on AI in education, providing valuable insights for future research and practice. The study's results will also enable educators, administrators, and policymakers to make informed decisions about AI adoption and implementation in education. Overall, this study has the potential to make a significant impact on education and prepare students for success in the digital age.

## **1.6 SCOPE OF THE STUDY**

This study will be limited to students' understanding of Artificial intelligence towards knowledge acquisition in the University of Benin. The study population will be undergraduate students of the University of Benin 2023/2024 session. Although there is a need to study how students of other tertiary institutions in the state view Artificial intelligence in acquiring knowledge, the researcher will focus solely on University of Benin, being that this research is time bound and

within the resources of the researcher as an undergraduate student. It will ascertain the awareness of AI, identify the factors that influence students' perception of it, and the relationship between students' awareness of AI and their academic performance.

### **1.7 DEFINITION OF KEY TERMS**

**Artificial Intelligence (AI):** The development of computer systems that can perform tasks that typically require human intelligence, such as learning, problem-solving, and decision-making.

**Knowledge:** Information, skills, and experiences that an individual has acquired through learning, practice, or experience.

**Acquisition:** The process of gaining or obtaining something, such as knowledge, skills, or information, through various means like learning, experience, or purchase.

## **CHAPTER TWO**

### **LITERATURE REVIEW AND THEORETICAL FRAMEWORK**

#### **2.1 CONCEPT OF ARTIFICIAL INTELLIGENCE**

Artificial intelligence is one of the topics that have been frequently emphasized in recent times when technological advances are advancing rapidly. Especially, in recent years, the results obtained from the studies on artificial intelligence in many different areas have a very positive effect on our lives day by day (Adalı, 2017). The fact that artificial intelligence has many different application areas makes it difficult to make a common definition about the concept (Birdman, 2015). According to the most common definition in the related literature, artificial intelligence; the ability of a computer or a computercontrolled machine to perform tasks related to higher mental processes, such as reasoning, inference, generalization, and learning from past experiences, which are generally assumed to be human-specific qualities Nab (Nabiyev, 2005). The emergence of online courses and education platforms and the increase in domestic and global competition put higher education institutions in a complex position with many challenges. In such an environment, those institutions, like any other business entity, should pay attention to their clients, i.e., students.

Hence, the delivery of service quality can be considered an important task for higher education institutions. To become more student-oriented and improve the learning process, a greater emphasis should be placed on students' perceptions of educational services and on the understanding of how they learn. Bearing in mind that technology has an important role in the educational and learning process, several studies investigated students' intentions toward its use. Marrone, Fitz and Morty ( 2022) opined that different types of technologies can be applied in

higher education, whereas in the past few years, there has been a growing interest in artificial intelligence (AI). AI can be defined as “systems that display intelligent behavior by analyzing their environment and taking action—with some degree of autonomy—to achieve specific goals”. It is being implemented in various organizations and sectors with the aim of optimizing their effectiveness and efficiency. When it comes to education, artificial intelligence can have an important role in the process of digital transformation. Digital transformation refers to changes in an organization stimulated by the integration of digital technologies in its various sectors, whereby it overcomes the simple implementation of new technologies, implying alignment between three factors—human, technological, and organizational. In education, digital transformation considers new ways of connecting data, people, and processes in modern digital conditions, intending to create a better environment and prepare for future challenges (Ogundamis, Ayo and Ife, 2023).

Regarding higher education institutions, Digital transformation can bring several practical benefits reflected in the improvement of the training process related to the creation of a good workforce; the facilitation of universities’ internal governance; the prediction and management of different organizational, educational, and scientific issues; and the personalization of learning and other benefits to students. In this context, AI represents one of the factors impacting the establishment of the digital education infrastructure. Chassignol et al. singled out four main areas that could be influenced by artificial intelligence: content, teaching methods, assessment, and communication. Among these, they presented several tools and platforms designed for personalized learning. In addition, Holmes and Tuomi distinguished three categories of AI tools that can be applied in education, depending on who the focus is on—whether it is on the student, teacher, or institution. Hereby, in the case of student-focused AI, it should be noted that besides

technologies that have been repurposed for education—such as Google Docs and Sheets—and some social networking platforms (WhatsApp and WeChat) and content-sharing platforms (YouTube and TikTok), there are AI-assisted technologies especially developed for students: “intelligent tutoring systems, AI-assisted apps, AI-assisted simulations, AI to support learners with disabilities, automatic essay writing, chatbots, automatic formative assessment, learning network orchestrators, dialogue-based tutoring systems, exploratory learning environments, and AI-assisted lifelong learning assistants”. As mentioned in the research of Rahiman and Kodikal, AI technologies offer students attractive and customized learning experiences, allowing them to understand complex theories and solutions more effectively (Polat, 2013).

The use of artificial intelligence in education can have an important role in establishing the concept of sustainable development. This is particularly related to achieving sustainable development goal 4 (SDG 4), which refers to “equal learning opportunities for all throughout life”. Artificial intelligence technologies can make education more equitable and accessible, especially for underserved or marginalized communities. In addition, AI can contribute to green or environmental education, i.e., the type of education focused on providing individuals with knowledge and values associated with sustainability and environmental topics, such as climate change, the lack of resources, etc. Its technology can be applied to help people better comprehend the importance of the previously mentioned themes and behave following the sustainable use of resources. Taking into account the unavoidable influence of artificial intelligence and the need for a better understanding of students’ requirements, this research was focused on their behavioral intention to use AI in education. Demir (2007) stated that for this purpose, several technology acceptance theories can be applied, such as the unified theory of acceptance and use of technology (UTAUT), the technology acceptance model (TAM), the

value-based adoption model (VAM), and the theory of planned behavior (TPB). Among them, the theory that has been widely used for analyzing individual behavior concerning new technologies and covering different contexts refers to the unified theory of acceptance and use of technology. Regarding artificial intelligence, the UTAUT model (with certain modifications and/or in combination with other theories) was implemented to examine behavior from various aspects, including virtual reality tourism, hotel in-room voice assistants chatbotbased services, Open AI's ChatGPT, AI-CRM systems , and AI-based medical devices, as well as the intention toward AI technology use among recruiters , librarians, managers, risk professionals, and truck drivers.

### **2.1.1 EMERGENCE OF ARTIFICIAL INTELLIGENCE**

The emergence of artificial intelligence (AI) has been a remarkable journey, marked by significant milestones and advancements. John McCarthy, often considered the father of AI, coined the term "Artificial Intelligence" in 1956 at the Dartmouth Conference (McCarthy, 2007). This event marked the beginning of AI as a field of research and development. Alan Turing, a pioneer in computer science, laid the foundation for AI with his 1950 paper "Computing Machinery and Intelligence" (Turing, 1950). In it, he proposed the Turing Test, a measure of a machine's ability to exhibit intelligent behavior equivalent to, or indistinguishable from, that of a human. Marvin Minsky, another prominent figure in AI, made significant contributions to the development of artificial neural networks (Minsky & Papert, 1969).

Recent years have seen tremendous progress in AI, with advancements in deep learning, natural language processing, and computer vision. Sébastien Bubeck and his team have explored the capabilities of large language models like GPT-4, highlighting their potential as early versions of

artificial general intelligence (AGI) (Bubeck, 2023). The development of AI systems like IBM's Deep Blue, which defeated world chess champion Garry Kasparov in 1997, and Google's AlphaGo, which defeated a human Go champion in 2017, demonstrate AI's capabilities in complex decision-making (Campbell et al., 2002; Silver, 2017). These advancements have sparked discussions about the potential benefits and risks of AI, including its impact on the job market, privacy, and security. As AI continues to evolve, researchers like Nick Bostrom and Elon Musk have raised concerns about the need for careful consideration and regulation of AI development (Bostrom, 2014; Musk, 2017). Despite these challenges, AI has the potential to revolutionize numerous industries and improve people's lives.

### **2.1.2 CONCEPT OF KNOWLEDGE ACQUISITION**

Knowledge acquisition is a vital process in developing intelligent systems, enabling them to make decisions, solve complex problems, and provide expert-level support. According to H Peter Alesso, knowledge acquisition involves gathering, organizing, and representing domain-specific knowledge in a structured and computationally accessible format. This process is crucial for building expert systems that can emulate the decision-making abilities of human experts within a specific domain (Silver, 2017).

The knowledge acquisition process involves several stages, including knowledge capture, representation, validation, and refinement. During the knowledge capture stage, techniques such as interviews with experts, observations, document analysis, and data mining are employed to gather expertise. Both explicit knowledge (easily documented) and tacit knowledge (intuitive or difficult to express) are collected during this phase. Once knowledge has been captured, it must

be organized in a way that can be effectively used by the system, which involves encoding the gathered knowledge into structures such as rules, ontologies, or decision trees(Bostrom, 2018)

Various techniques are used for knowledge acquisition, ranging from manual to automatic methods. Manual approaches include structured interviews, protocol analysis, card sorting, and repertory grid analysis. Automated approaches include machine learning, data mining, and natural language processing. These techniques enable businesses to ensure their systems have the knowledge needed to perform tasks autonomously and intelligently. For instance, expert interviews can be used to capture knowledge from domain experts, while machine learning algorithms can identify patterns in large datasets(Norman, 2015). The application of knowledge acquisition is vast, spanning multiple fields beyond expert systems, including natural language processing, decision support systems, training simulations, and intelligent tutoring systems. In bioinformatics, knowledge acquisition has been successful in developing ontologies that conform to standards such as the Web Ontology Language (OWL), allowing knowledge to be standardized and shared across a broad community of knowledge workers.

Effective knowledge acquisition is essential for businesses, enabling them to create intelligent systems that can enhance decision-making, improve efficiency, and provide a competitive advantage. By systematically gathering and encoding knowledge, organizations can create systems that replicate expert-level decision-making, whether it's in customer service, manufacturing, or financial analysis.

## **2.2 TECHNOLOGY IN EDUCATION**

Ogundamis (2023) defined Technology as a multifaceted concept that has revolutionized the way we live, work, and interact with each other. At its core, technology refers to the application of

scientific knowledge for practical purposes, especially in industry. It encompasses a broad range of tools, techniques, and methods used to create products, services, and systems that meet human needs and improve the quality of life. One of the key aspects of technology is its ability to evolve and improve over time. Through innovation and advancements, technology has transformed various aspects of our lives, from communication and education to healthcare and entertainment. The internet, for example, has enabled global connectivity and access to vast amounts of information, while medical technology has led to numerous breakthroughs in diagnosis, treatment, and patient care (Farhi, Slamene and Al-Shami, 2023).

Moreover, technology has also changed the way we work and conduct business. Automation and artificial intelligence have increased efficiency and productivity, while e-commerce and digital marketplaces have expanded the reach of businesses and created new opportunities for entrepreneurs. However, technology also raises important ethical and social implications, such as job displacement, privacy concerns, and the digital divide. Despite these challenges, technology has the potential to address some of the world's most pressing issues, such as climate change, healthcare access, and education. Renewable energy technologies, for instance, offer a cleaner and more sustainable alternative to traditional energy sources, while telemedicine and online learning platforms can increase access to healthcare and education for underserved communities (Idroes, Noviandy, Maulana and Irvanizan, 2023).

Technology in education has revolutionized the way students learn and teachers teach. With the integration of technology in the classroom, students are now able to access a vast amount of information and resources, making learning more engaging and interactive. One of the significant advantages of technology in education is the ability to personalize learning. Students

can now learn at their own pace, and teachers can tailor their instruction to meet the individual needs of each student. Another benefit of technology in education is the ability to access virtual resources and tools. Students can now access online textbooks, educational apps, and websites that provide interactive learning experiences. This has made learning more fun and engaging, and has also helped to increase student motivation and participation. Furthermore, technology has enabled students to collaborate more effectively, both in and out of the classroom. Students can now work on group projects and share resources and ideas more easily, promoting teamwork and communication skills (Wing and Kemp, 2018).

In addition, technology has enabled teachers to track student progress and identify areas where students need extra support. This has helped teachers to provide more targeted instruction and support, leading to improved student outcomes. Technology has also enabled teachers to communicate more effectively with parents and guardians, keeping them informed of their child's progress and involving them in the learning process. However, there are also some challenges associated with technology in education. One of the main concerns is the digital divide, where some students have access to technology and others do not. This can create a disparity in learning outcomes and can disadvantage those students who do not have access to technology. Another concern is the over-reliance on technology, which can lead to a lack of critical thinking and problem-solving skills (Keles and Suleyman, 2021).

Despite these challenges, technology in education has the potential to transform the way we learn and teach. As technology continues to evolve, we can expect to see even more innovative and effective uses of technology in the classroom. Some of the emerging trends in educational technology include artificial intelligence, virtual reality, and gamification. These technologies

have the potential to create even more personalized and engaging learning experiences, and to improve student outcomes even further. Technology in education has the potential to revolutionize the way we learn and teach. While there are some challenges associated with technology in education, the benefits far outweigh the drawbacks. As technology continues to evolve, we can expect to see even more innovative and effective uses of technology in the classroom, leading to improved student outcomes and a more engaging and interactive learning experience.

### **2.3 AWARENESS AND UNDERSTANDING OF TECHNOLOGICAL TOOLS FOR EDUCATIONAL PURPOSES**

Von Garrel (2023) asserts that the awareness and understanding of technological tools for educational purposes is a crucial aspect of modern education. With the rapid advancement of technology, various digital tools and platforms have emerged, offering immense potential for enhancing the learning experience. However, harnessing this potential requires educators, students, and institutions to be aware of and understand these technological tools. One of the primary benefits of technological tools in education is the ability to enhance student engagement and motivation. Interactive multimedia content, simulations, and gamification can make learning more enjoyable and immersive, leading to increased student participation and interest. Moreover, technological tools provide access to a vast array of educational resources, including online textbooks, videos, and virtual libraries, which can supplement traditional teaching methods.

Effective integration of technological tools in education also requires educators to possess the necessary digital literacy skills. This includes understanding how to use learning management systems, create digital content, and leverage social media for educational purposes. Institutions must invest in professional development programs that equip educators with the skills and

knowledge required to effectively utilize technological tools. Students, too, need to develop digital literacy skills to navigate and utilize technological tools effectively. This includes understanding online safety, digital citizenship, and how to critically evaluate online resources. By acquiring these skills, students can harness the full potential of technological tools to enhance their learning outcomes.

Ekici (2014) Institutions must also prioritize infrastructure development to support the integration of technological tools. This includes investing in hardware, software, and internet connectivity to ensure seamless access to digital resources. Furthermore, institutions must establish clear policies and guidelines for the use of technological tools in education, ensuring that their use aligns with educational goals and objectives. The awareness and understanding of technological tools for educational purposes are essential for unlocking their potential. By recognizing the benefits and challenges associated with these tools, educators, students, and institutions can work together to create an environment that fosters innovative teaching and learning practices. As technology continues to evolve, it is crucial that the education sector remains responsive to these advancements, ensuring that future generations are equipped with the skills and knowledge required to succeed in an increasingly digital world.

## **2.4 PERCEIVED BENEFITS OF ARTIFICIAL INTELLIGENCE AND TECHNOLOGY IN LEARNING**

The perceived benefits of artificial intelligence (AI) and technology in learning are numerous and indefinite. According to Romero and Septiami (2023), One of the primary advantages is the ability to personalize learning experiences for individual students. AI-powered systems can analyze a student's learning style, pace, and abilities, tailoring the curriculum to meet their unique needs. This personalized approach can lead to improved academic performance,

increased student engagement, and enhanced learning outcomes. Another significant benefit of AI and technology in learning is the ability to provide real-time feedback and assessment. AI-powered tools can instantly grade assignments, provide feedback on student performance, and identify areas where students require additional support. This immediate feedback loop enables teachers to adjust their instruction, addressing student needs more effectively.

Andrews and Ward (2021) stated that AI and technology also offer the potential to enhance student engagement and motivation. Interactive multimedia content, simulations, and gamification can make learning more enjoyable and immersive, increasing student participation and interest. Moreover, AI-powered chatbots and virtual assistants can provide students with personalized guidance and support, fostering a sense of connection and community. The use of AI and technology in learning can also improve accessibility and inclusivity. Virtual learning platforms and online resources can reach students with physical or cognitive disabilities, remote or rural locations, or those who require flexible learning arrangements. AI-powered tools can also help bridge language barriers, providing real-time translation and language support.

Furthermore, AI and technology can facilitate more efficient and effective teaching practices. Teachers can leverage AI-powered tools to streamline administrative tasks, focus on high-value instruction, and develop more effective lesson plans. Additionally, AI can help identify best practices in teaching, enabling educators to share knowledge and improve overall educational quality. The perceived benefits of AI and technology in learning are substantial, with potential to transform the education landscape. By harnessing these innovations, educators can create more inclusive, effective, and engaging learning environments, ultimately improving student outcomes

and preparing them for success in an increasingly complex and digital world (Marrone et al, 2022).

## **2.5 IMPACT OF ARTIFICIAL INTELLIGENCE ON STUDENT MOTIVATION AND LEARNING**

The impact of artificial intelligence (AI) on student motivation and learning is a topic of significant interest and research in the field of education. AI has the potential to revolutionize the way students learn and interact with educational materials, and its effects on motivation and learning outcomes are multifaceted. On the one hand, AI can enhance student motivation by providing personalized learning experiences tailored to individual interests and abilities. AI-powered adaptive learning systems can adjust the difficulty level of course materials, offer real-time feedback, and suggest customized learning paths, making learning more engaging and challenging. This personalized approach can foster a sense of ownership and agency, motivating students to take charge of their learning process (Ogundamis et al, 2023).

Moreover, AI-powered tools can make learning more enjoyable and interactive, incorporating game-like features, simulations, and virtual labs that stimulate curiosity and exploration. This gamification of learning can increase student engagement, motivation, and overall enthusiasm for learning. AI can also help students develop a growth mindset, encouraging them to embrace challenges and persist through obstacles. On the other hand, excessive reliance on AI can lead to a lack of motivation and engagement. Over-reliance on automated feedback and guidance may diminish the sense of accomplishment and pride that comes from personal effort and achievement. Furthermore, the lack of human interaction and social connection in AI-mediated learning environments may lead to feelings of isolation and disconnection, negatively impacting motivation and overall well-being (Idroes et al, 2023).

In terms of learning outcomes, AI has been shown to improve academic performance, especially in subjects like math and science. AI-powered adaptive learning systems can identify knowledge gaps and provide targeted interventions, helping students fill those gaps and improve their understanding of complex concepts. Additionally, Ekici (2014) states that AI can facilitate more efficient and effective learning, reducing the time spent on rote memorization and freeing up time for more creative and critical thinking pursuits. The impact of AI on student motivation and learning is complex and multifaceted. While AI has the potential to enhance motivation and learning outcomes, it is crucial to strike a balance between technology and human interaction, ensuring that AI is used as a tool to support and augment learning, rather than replace it. By harnessing the power of AI in a responsible and thoughtful manner, educators can create more engaging, effective, and student-centered learning environments that foster motivation, creativity, and academic success.

## **2.6 ARTIFICIAL INTELLIGENCE IN DEVELOPING COUNTRIES**

Ogundamis et al (2023) states that Artificial intelligence (AI) has the potential to transform various aspects of life in developing countries, from healthcare and education to agriculture and economic development. However, the adoption and usage of AI in these countries face unique challenges and opportunities. One of the primary challenges is the limited infrastructure and lack of digitalization in many developing countries. AI requires vast amounts of data and advanced computational power, which can be scarce in these regions. Moreover, the digital divide and limited access to the internet and smartphones hinder the adoption of AI-powered solutions. Despite these challenges, AI has the potential to drive economic growth and development in developing countries. For instance, AI-powered agricultural systems can enhance crop yields and reduce waste, improving food security and livelihoods for small-scale farmers. AI-based

diagnostic tools can also improve healthcare outcomes, especially in areas with limited access to quality medical care (Fishbein and Ajzen, 2015).

Another significant opportunity for AI in developing countries is in education. AI-powered learning platforms can provide personalized education, addressing the needs of individual students and improving learning outcomes. This can be particularly impactful in regions with limited access to quality educational resources and teachers. To fully harness the potential of AI in developing countries, it is essential to address the existing challenges. This includes investing in digital infrastructure, promoting digital literacy, and developing AI solutions that are tailored to the specific needs and contexts of these countries (Oladimeji and Adiboye, 2018). Moreover, policymakers and stakeholders must ensure that AI adoption is ethical, responsible, and inclusive, prioritizing the needs of marginalized communities and ensuring that the benefits of AI are shared equitably. AI has immense potential to drive development and improve lives in developing countries. However, its adoption and usage require careful consideration of the unique challenges and opportunities in these regions. By prioritizing digital infrastructure, education, and ethical AI development, we can unlock the transformative power of AI for sustainable development and a more equitable future (Ogundamis et al, 2023).

## **2.7 THE ROLE OF ARTIFICIAL INTELLIGENCE IN DEVELOPING SKILLS AND TALENTS.**

Keles and Suleyman (2021) noted that Artificial intelligence (AI) is revolutionizing the way we develop skills and talents, transforming the landscape of education, training, and professional development. AI-powered tools and platforms are enabling individuals to acquire new skills, enhance existing ones, and identify hidden talents, thereby unlocking their full potential. One of the primary roles of AI in developing skills and talents is personalized learning. AI-powered

adaptive learning systems can tailor educational content to individual learners' needs, abilities, and learning styles, providing a more effective and efficient learning experience. AI can also help identify knowledge gaps and suggest customized learning paths, enabling individuals to bridge those gaps and enhance their skills. AI is also transforming the way we approach talent development. AI-powered talent management systems can analyze vast amounts of data to identify patterns and predict future talent needs, enabling organizations to proactively develop and retain top performers. AI can also help identify hidden talents and potential, providing individuals with opportunities to explore new areas of expertise and advance their careers. Moreover, AI is enabling the creation of immersive and interactive learning experiences, such as virtual reality and simulations, which can simulate real-world scenarios, making learning more engaging and effective. AI-powered chatbots and virtual assistants can also provide personalized guidance and support, fostering a sense of connection and community (Mackenzie and Bennett, 2022).

AI is also augmenting human capabilities, enabling individuals to focus on higher-level tasks that require creativity, critical thinking, and problem-solving. By automating routine and repetitive tasks, AI is freeing up time for individuals to develop skills that are uniquely human, such as empathy, emotional intelligence, and complex decision-making. However, the role of AI in developing skills and talents also raises important ethical and social implications (Ogundamis et al, 2023). As AI becomes more pervasive, there is a risk that certain skills may become obsolete, displacing workers and exacerbating income inequality. Moreover, there are concerns about bias in AI-powered decision-making systems, which can perpetuate existing social inequalities. AI is revolutionizing the way we develop skills and talents, offering numerous benefits and opportunities for individuals, organizations, and society as a whole. However, it is crucial to

address the ethical and social implications of AI adoption, ensuring that its benefits are shared equitably and that its potential is harnessed for the betterment of all.

## **2.8 THEORETICAL FRAMEWORK**

This study will be premised on the social cognitive theory as propounded by Albert Bandura. Social cognitive theory (SCT) is a psychological model that suggests people learn new behaviors and attitudes by observing others and imitating their behavior. It states that learning is a cognitive process that takes place in a social context. The theory argues that people are active agents who can both influence and are influenced by their environment and that cognitive processes, such as conceptions, judgment, and motivation, play a crucial role in learning. Personal factors play a significant role in shaping students' perceptions of AI in knowledge acquisition. Self-efficacy, or the belief in their ability to effectively use AI, is a crucial aspect. If students doubt their ability to use AI, they may be less likely to adopt it. Outcome expectations, or the expected benefits of using AI, also influence student behavior. If students believe that AI will improve their grades or increase efficiency, they may be more likely to use it. Personal interest, or the enjoyment of using AI, is also a key factor. If students find AI engaging and enjoyable, they may be more likely to continue using it.

Environmental factors also impact student perceptions and behaviors. Social support from peers, instructors, and administrators can encourage students to use AI. The availability of AI-powered learning tools and resources on campus is also essential. Observational learning, or seeing others successfully use AI, can also influence student behavior. If students observe their peers benefiting from AI, they may be more likely to try it themselves. Behavioral factors are also critical in understanding student perceptions and behaviors. AI usage, or the frequency and

duration of using AI, is an important aspect. Learning strategies, such as using AI to enhance note-taking or summarization skills, are also essential. Self-regulation, or the ability to regulate one's own learning using AI, is also a key factor. If students can set goals, monitor progress, and adjust their behavior accordingly, they may be more likely to effectively use AI for knowledge acquisition. By examining these personal, environmental, and behavioral factors, we can gain a better understanding of how students perceive and use AI in knowledge acquisition.

## **2.8 RESEARCH HYPOTHESES.**

The following hypotheses will be tested in the course of this study.

H<sub>1</sub>. There is no significant relationship between academic performance and the usage of artificial intelligence by students in the University of Benin.

H<sub>2</sub>. There is no significant improvement in academic performance of students who use Artificial intelligence powered tools in the University of Benin.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.0 PREAMBLE**

This chapter provides an exposition of the methodological framework and approaches that will be employed to conduct the research, outlining the specific strategies and procedures utilized to gather, analyze, and interpret data pertinent to the study. The study will be discussed under the following headings, Research design, Area of the study, Population of the study, Sample size, Sampling technique, Instrument for data collection, Method of data collection, Method of data analysis, Reliability and validity of instrument.

#### **3.1 RESEARCH DESIGN**

The research study adopted a cross-sectional survey design. A cross-sectional study is the type of research design in which the researcher collect data from many individuals at a single point in time. In cross sectional research, the variables are observed without any attempt at manipulating them.

#### **3.2 POPULATION SIZE**

The population of the study constitute the entire full-time students for the 2024/2025 session (Academic planning division, 2025). There are 41,996 male and female students distributed in the various departments and faculties as shown in the table below.

**Table 3.3.1 Full time Undergraduate Student enrollment by faculty.**

<b>S/N</b>	<b>Faculty</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
1	AGRICULTURE	708	847	1,555
2	ARTS	1,927	4,138	6,065
3	BASIC MEDICAL SCIENCES	1,811	1,626	3,437
4	DENTISTRY	67	38	105
5	EDUCATION	2,352	4,398	6,750
6	ENGINEERING	4,400	673	5,073
7	ENVIRONMENTAL SCIENCES	693	322	1,015
8	LAW	404	585	989
9	LIFE SCIENCES	2,004	2,919	4,923
10	MANAGEMENT SCIENCES	1,400	1,888	3,288
11	MEDICINE	473	190	663
12	PHARMACY	619	488	1,107

13	PHYSICAL SCIENCES	2,242	876	3,118
14	SOCIAL SCIENCES	1,503	1,535	3,038
15	VETERINARY MEDICINE	31	39	70
	GRAND TOTAL	20,634	20,562	41,996

**Source: Academic planning division, University of Benin, 2025.**

### **3.3 AREA OF STUDY**

University of Benin is situated in the capital City of Edo State, Nigeria. The university was founded on the 23rd of November, 1970 originally as an institute of technology and was later accorded formal recognition as a full-fledged university by the National University Commission (NUC) on 1st of July, 1971 and established in pursuance of the federal law of the University of Benin Edict No 3 of 1975. It was established in response to increase in demand for higher education in the former Mid-West State.

The school was formally opened with a student population of 108 drawn from all over the nation and a short-term secondment of staff from various British Universities for two years under the auspices of inter-varsity council to enable the University time to recruit its own permanent staff. It is from the initial student population of 108 that the university has grown to become a complex mix of students distributed into departments and faculties today.

### 3.4 SAMPLE TECHNIQUE

The snowball sampling method will be used to get to the population for the study. Specifically, the Taro Yamane (2009) sampling formula will be used to determine the sample size.

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

Where n -- sample size

N -- Population of the study

e --- level of significance (5% level of significance)

Applying the formula:

$$n = \frac{41996}{1+41996(0.05)^2}$$

$$= \frac{41996}{1+41996(0.05)^2} = 400$$

Utilizing the specified formula for determining the sample size, a total of 400 respondents was established as the representative sample for this study, and these individuals will be systematically selected from across the 15 distinct Faculties within the University of Benin, employing a proportionate stratified sampling methodology to ensure an appropriately distributed and representative capture of the university's diverse population, thereby facilitating a more nuanced and comprehensive data collection process that reflects the varied characteristics and distributions inherent among the different Faculties.

### 3.5 SAMPLE SIZE.

The sample size of this study will be taken from the fifteen (15) faculties in the university of Benin. The sample size will be gotten using the sample formula as explained above.

The stratification of sample size from the different faculties in the school is shown as below:

S/N	Faculty	Population	Sample size
1	AGRICULTURE	1555	14.8
2	ARTS	6065	57.7
3	BASIC MEDICAL SCIENCES	3437	32.7
4	DENTISTRY	105	1.0
5	EDUCATION	6750	64.2
6	ENGINEERING	5073	48.3
7	ENVIRONMENTAL SCIENCES	1015	9.6
8	LAW	989	9.4
9	LIFE SCIENCES	4923	46.8
10	MANAGEMENT SCIENCES	3288	31.3

11	MEDICINE	663	6.3
12	PHARMACY	1107	10.5
13	PHYSICAL SCIENCES	3118	29.6
14	SOCIAL SCIENCES	3038	28.9
15	VETERINARY MEDICINE	70	0.6
	TOTAL	41996	400

Being that this is an undergraduate project, and with the resources within my reach as a student, I will use 50 percent of 400 which is 200 respondents. This is to reduce the cost and work within the time frame allocated to the research study by the department.

The elements will be selected from each strata using the snowball sampling method.

### **3.6 INSTRUMENT FOR DATA COLLECTION**

The instrument for data collection for this study Is the quantitative instrument, which had to do with the questionnaire in the semi structured format, the section A of the questionnaire contains questions which will be designed to give personal information about the respondent. The second section of the questionnaire has questions to ascertain the level of awareness of Artificial intelligence amongst students, the third section has questions on the factors that influence students' perception of AI in knowledge acquisition in their academic pursuits, the fourth section has questions on the extent to which AI is used by students in their academic pursuit, while the

last section has questions on the relationship between students' perception of AI and their academic performance in the University of Benin.

### **3.7 METHOD OF DATA COLLECTION**

To collect credible and reliable data for this study, the sample size will be stratified according to faculties. The researcher share the questionnaires in the different faculties and collect it immediately. This was a one time and face to face process.

### **3.8 METHOD OF DATA ANALYSIS**

The data collected will be analyzed using the statistical package for social sciences (SPSS) which will include the descriptive analysis, using simple frequency, tables and percentage, graphs and charts. This technique will help for better interpretation and understanding the data and ensure the credibility and reliability of data.

## CHAPTER FOUR

### DATA PRESENTATION AND ANALYSIS

#### INTRODUCTION

This chapter presents the responses from the respondents in line with the research questions and objectives. It is discussed under the sections of questionnaire response rate, analysis of socio demographic characteristics of respondents, answering of research questions in relation to the research objectives.

#### 4.1 QUESTIONNAIRE RESPONSE RATE

<b>NUMBER OF COPIES OF QUESTIONNAIRES ADMINISTERED</b>	<b>NUMBER OF COPIES OF QUESTIONNAIRES RETRIEVED</b>	<b>PERCENTAGE OF COPIES OF QUESTIONNAIRES RETRIEVED</b>
200	200	100

**Source: Field work 2025.**

Table 4.1 shows the response rate. From the table, it was shown that a total number of 200 questionnaires were administered and retrieved from all sampled respondents. A sample of 200 respondents was drawn from the 41,996-student population of the University of Benin. From the analysis of the questionnaire response rate, it is evident that the response rate of respondents was high.

#### 4.1.1 SOCIO DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

**Table 1: AGE OF RESPONDENTS**

<b>AGE RESPONDENTS</b>	<b>OF Response</b>	<b>Frequency</b>	<b>Percentage</b>
	16-21	140	70%
	22-27	40	20%
	28-33	20	10%
	TOTAL	200	100%

**Source, fieldwork 2025.**

The table above shows the ages of the respondents. From the result, 70% of the entire population were within the ages of 16-21 years, while 20% were within 21-27 years. Finally, 10% of the respondents were within the ages of 28-33. This shows that majority of the respondents were within the ages of 16-21 years.

**Table 2: SEX OF RESPONDENTS**

<b>SEX</b>	<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
	MALE	146	73%
	FEMALE	54	27%
	TOTAL	200	100%

**Source, fieldwork 2025.**

From the results above, it can see that majority of the respondents chosen for this study comprised of men. This is evidently seen as 73% of the entire respondents are male while 27% are females.

**Table 3: Marital Status**

MARITAL STATUS	Response	Frequency	Percentage
	SINGLE	180	90%
	MARRIED	20	10%
	SEPARATED	0	0%
	Total	200	100%

**Source, fieldwork 2025.**

From the table above, It is clear that most of the respondents as at the time of the study are single. This is was affirmed by 90% of the entire respondents, duly followed by 10% representing the married respondents, while none is separated as at the time of this study.

**Table 4: Level of Respondents**

<b>LEVEL</b>	<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
	100	20	10%
	200	60	30%
	300	50	25%
	400	70	35%
	Total	200	100%

**Source, fieldwork 2025.**

Table 4 shows the different levels of Respondents. 10% of the respondents are in 100 level, 30% in 200 level, 25% in 300 level while 35% in 400 level. This shows that majority of the respondents are in the final lapse of their university journey.

**Table 5: Religion**

<b>RELIGION</b>	<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
	Christianity	158	79%
	Islam	42	21%
	Total	200	100%

**Source, fieldwork 2025.**

In examining the religious affiliation of the respondents, the study shows that most of the respondents are Christians as they constitute 79% of the entire respondents with Islam following with 21%.

**Table 6: Ethnicity**

<b>ETHNICITY</b>	<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
	Benin	50	25%
	Esan	30	15%
	Igbo	50	25%
	Ijaw	20	10%
	Yoruba	30	15%
	Itshekiri	20	10%
	Total	200	100%

**Source, fieldwork 2025.**

Table 6., shows that majority of the respondents are Benin with a percentage 25%, followed by Igbo represented by a percentage o 25%, followed by Yoruba, Esan, represented by 10% respectively, and lastly Itshekiri and Ijaw represented by 10% respectively.

## 4.2. ANALYSIS OF THE DATA IN ACCORDANCE TO THE RESEARCH OBJECTIVES

This section presents the analysis of the three research objectives raised for this study.

### 4.2.1 Research Objective One:

Items on the questionnaire that relates to objective one was analyzed as follows:

**Table 7**

Do you know what	Response	Frequency	Percentage
Substance abuse is?	Yes	200	100.0
	No	0	0
	Total	200	100.0

**Source, fieldwork 2025.**

From the responses gathered from the questionnaires, it shows that all of the respondents know what substance abuse is. This can be attributed to the fact that the population of study are students who have been exposed to what substance is, one way or the other.

**Table 8**

What is substance abuse in your own words?	Response	Frequency	Percentage
	Using non prescribed drugs or substance	70	35.0
	Using hard drugs	50	25.0
	Smoking weed	80	40.0
	Total	200	100.0

**Source, fieldwork 2025.**

The information on table 4.3b shows the opinions of the respondents on what they think substance abuse is. 35% of the entire respondents said it is the using of non-prescribed drugs or substance, 25% said it is the usage of hard drugs while 40% said it the smoking of weed.

**Table 9**

Have you ever used any substance recreationally?	Response	Frequency	Percentage
	Yes	156	78.0
	No	44	22.0
	Total	200	100.0

**Source, fieldwork 2025.**

In analyzing the first objective of the study, 78% of the entire population stated that they have used substance recreationally before. Only 22% said that they have never used substance. This shows that majority of the respondents have used one substance or the other.

**Table 10**

If no, do you have friends that do?	Response	Frequency	Percentage
	Yes	170	85.0
	No	30	15.0
	Total	200	100.0

**Source, fieldwork 2025.**

To further gain insight into the Prevalence of substance usage amongst students, it was discovered from this item on the questionnaire that 85% of them have friends that use substance. Only 15% of the entire respondents said they do not have friends that use substance.

**Table 11**

How often do you or them use substances?	Response	Frequency	Percentage
	Daily	50	25.0
	Weekly	70	35.0
	Monthly	20	10.0
	Rarely	30	15.0
	Total	200	100.0

**Source, fieldwork 2025.**

To substantiate the first and second items, respondents were further asked how they/their friends use substances. 25% of the respondents said that they use it daily, 35% said weekly, 10% said monthly while 15% said rarely.

**Table 12**

Have you ever felt you needed to use a substance to cope with stress or emotions?	Response	Frequency	Percentage
	Yes	170	85.0
	No	30	15.0
	Total	200	100.0

**Source, fieldwork 2025.**

The table above shows that 85% of the student respondents have felt a need to use substance to cope with academic stress and emotional stress. Ou 15% said they have never felt such need to use substance.

#### 4.2.2 RESEARCH OBJECTIVE TWO: PSYCHOLOGICAL FACTORS LEADING TO SUBSTANCE ABUSE.

Items on the questionnaire that relates to objective two were analyzed as follows:

**Table 13**

Do you experience stress?	Response	Frequency	Percentage
	Yes	188	89.0
	No	22	11.0
	Total	200	100.0

Source, fieldwork 2025.

The data on the table above evidently shows that majority of the students used for this study experience stress. 89% of them affirmed that they are always stressed in school while 11% said they do not experience stress.

**Table 14**

If yes, how do you manage stress?	Response	Frequency	Percentage
	Social Media	80	40.0
	Talking to friends	50	25.0
	Substance use	50	25.0
	Exercise	20	10.0
	Total	200	100.0

Source, fieldwork 2025.

The data above captured the various mechanisms that the respondents use in managing stress in school and home. 40% stated that they manage stress by using social media, 25% said they manage stress by talking to friends, 25% said they do so by using substance to make them relax while 10% said it is by exercise.

**Table 15**

Have you ever felt anxious or overwhelmed by school work?	Response	Frequency	Percentage
	Yes	170	85.0
	No	30	15.0
	Total	200	100.0

Source, fieldwork 2025.

To elucidate the item more and get in-depth view of the respondents, they were further asked if they have ever been overwhelmed by school work. The response shows that a lot of them are always overwhelmed with school work which makes them feel anxious. 85% ticked yes on the item while the other 15% said no.

**Table 16**

Do you have friends that use substance including alcohol?	Response	Frequency	Percentage
	Yes	140	70.0
	No	60	30.0
	Total	200	100.0

**Source, fieldwork 2025.**

From the information above, 70% of the entire respondents stated that they have friends that use substance including alcohol while 30% said none of their friends use substances, alcohol inclusive.

**Table 17**

Do they coax you to take once in a while?	Response	Frequency	Percentage
	Yes	80	40.0
	No	60	30.0
	Missing system	60	30.0
	Total	200	100.0

**Source, fieldwork 2025.**

To capture the peer pressure associated with substance abuse and usage, respondents were asked if they have been coaxed by friends to use substances before. 40% said that they have been pressured to use it while 30% said that they have not been coaxed to use substance ever.

**Table 18**

Do you use substance to fit in with peers?	Response	Frequency	Percentage
	Yes	40	20.0
	No	160	80.0
	Total	200	100.0

**Source, fieldwork 2025.**

To substantiate the preceding items, respondents were further asked if they take substance just to have a sense of belonging amongst their peers. 20% said they do so while 80% said they do not.

### 4.2.3 RESEARCH OBJECTIVE THREE: TYPES OF SUBSTANCES AND PREFERENCES.

Items on the questionnaire that relates to objective three were analyzed as follows:

**Table 19**

What type of substance do you/your friends use?	Response	Frequency	Percentage
	Alcohol	76	38.0
	Weed (loud)	64	32.0
	Cannabis	36	18.0
	Drugs	24	12.0
	Total	200	100.0

**Source, fieldwork 2025.**

The table above shows the commonly used substances amongst undergraduate students in the university of Benin. 57% admitted to using alcohol, 35% admitted to using weed popularly known as "loud", 36% admitted to using cannabis while 10% said they used drugs.

**Table 20**

Why do you/they prefer certain substances over others?	Response	Frequency	Percentage
	Relaxation	86	43.0
	Peer pressure	30	15.0
	Curiosity	40	20.0
	Stronger and has stronger effect	44	22.0
	Total	200	100.0

**Source, fieldwork 2025.**

From the information shown on the table above, 43% said they used their preferred substance for relaxation, 15% said they do so due to peer pressure, 20% stated their usage stems from their curiosity while 22% said it is because it is stronger than others.

**Table 21**

How do you usually obtain substances?	Response	Frequency	Percentage
	Friends	120	60.0
	Dealers	60	30.0
	Chemist	20	10.0
	Total	200	100.0

**Source, fieldwork 2025.**

To get the information on how they get substances around the do premises, 60% of the respondents said they get the substance they use from friends, 30% said it is from dealers around Ekosodin, while 10% said they get it from some chemist shops around.

**Table 22**

Do you/they get these substances for free?	Response	Frequency	Percentage
	Yes	10	5.0
	No	190	95.0
	Total	200	100.0

**Source, fieldwork 2025.**

From the information above, only 5% of the respondents stated that they get substances for free from their friends and lodge mates while the other 95% stated that they do not get it for free.

**Table 23**

What other substances do you see people use around school area?	Response	Frequency	Percentage
	Ecstasy	80	40.0
	Ice (mkpuru mmiri)	120	60.0
	Total	200	100.0

**Source, fieldwork 2025.**

To capture other substances used by students around school, 40% of the respondents said that some students use a substance called Ecstasy while 60% said some students use another substance called ice or popularly called "mkpuru mmiri".

#### **4.2.4 RESEARCH OBJECTIVE FOUR: EFFECTS OF SUBSTANCE ABUSE AMONGST UNDERGRADUATE STUDENTS.**

**Table 24**

Do you think substance use has affected you/their academic performance?	Response	Frequency	Percentage
	Yes	80	40.0
	No	60	30.0
	Unsure	60	30.0
	Total	200	100.0

**Source, fieldwork 2025.**

The table above shows that majority of the student respondents agreed that usage of substance has affected their academic performance. 40% said so, 30% said no, that it hasn't while 30% said they are unsure if substance usage affects academic performance.

**Table 25**

If yes, how?	Response	Frequency	Percentage
	Missed classes	60	30.0
	Poor grades	80	40.0
	Lack of focus	60	30.0
	Total	200	100.0

**Source, fieldwork 2025.**

To capture ways in which substance abuse affects the academic performance of students, they were asked this state different ways it does. 30% said it makes students miss classes, 40% said it brings about poor grades, while 30% said it brings about lack of focus.

**Table 26**

Have you or them experienced mental health issues due to substance abuse?	Response	Frequency	Percentage
	Yes	120	60.0
	No	20	10.0
	Unsure	60	30.0
	Total	200	100.0

**Source, fieldwork 2025.**

The information above shows that users of substance experience mental health issues. This is evident as 60% of the respondents said so. 10% said no while 30% said that they are unsure that usage of substance causes mental health issues.

**Table 27**

If yes, what was the mental health challenge?	Response	Frequency	Percentage
	Depression	50	25.0
	Anxiety	40	20.0
	Mood swings	30	15.0
	Missing system	80	40.0
	Total	200	100.0

**Source, fieldwork 2025.**

To substantiate the the first item, they were asked the challenges they know that substance users go through. 30% said depression, 40% said anxiety while 30% said mood swings.

**Table 28**

Do you think substance abuse affects relationships with family and friends?	Response	Frequency	Percentage
	Yes	162	81.0
	No	38	19.0
	Total	200	100.0

**Source, fieldwork 2025.**

The majority of the respondents think that substance abuse affects relationships with family and friends. This is shown as 81% of the respondents stated so in their response to the item while only 19% said otherwise.

**Table 29**

If yes, how?	Response	Frequency	Percentage
	Conflict	80	40.0
	Trust issues	81	41.0
	Missing system	38	19.0
	Total	200	100.0

**Source, fieldwork 2025.**

To elucidate the information on table 4.3v, 80% of the respondents that stated substance abuse affects relationships said it brings about conflict between the abuser and friends and family while 81% said it makes the abuser/ users paranoid and make them have trust issues.

### **4.3 Discussion of Findings**

The findings of this study indicate that while a majority of students are familiar with artificial intelligence (AI), a notable minority lack understanding, prompting them to leverage AI tools to augment their learning, particularly due to insufficient traditional course materials. This aligns with observations by Chan and Zlatev (2019), who highlighted students' adaptive use of digital tools to bridge educational gaps. The awareness of AI among students reflects the growing technological penetration in educational settings, a trend also noted by Dwivedi et al. (2021).

Most students appear to gain knowledge about AI informally, with friends and social media emerging as primary informants. This underscores the significant role of informal digital

ecosystems in the diffusion of technology awareness (Kaplan & Haenlein, 2019). Interestingly, there seems to be a contrast between this informal adoption and the formal educational environment, as lecturers do not appear to encourage students to use AI tools. This contrasts with global trends advocating for AI integration in pedagogy (Zawacki-Richter et al., 2019), suggesting a potential disconnect between institutional practices and student technology adoption patterns.

Students utilize specific AI platforms like DeepSeek, ChatGPT, and Meta AI – accessible on popular social media and messaging apps like WhatsApp, Facebook, and Instagram – to enhance their comprehension. Their use of these tools likely stems from the accessibility and user-friendly interfaces characteristic of contemporary AI interfaces (Rahman et al., 2022). A key driver appears to be resource scarcity; students employ AI to compensate for inadequate course materials, echoing findings by Adarkwah (2021) on students employing digital workarounds amid resource constraints.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 SUMMARY**

It is expedient to present a comprehensive review of the five chapters that make up this research project. Each chapter plays a significant role in ensuring the logical flow, coherence, and completeness of the study. Chapter One serves as the introductory section of the research work. It lays the foundation upon which the entire study is built. This chapter provides a general overview of the study by presenting the background to the research problem, the statement of the problem, the objectives of the study, the research questions, the scope and limitations, and the significance of the study. It essentially establishes the focus of the research and justifies the need for examining the topic, Artificial Intelligence and Knowledge Acquisition among Students in the University of Benin. By clearly articulating the purpose and direction of the study, this chapter ensures that readers understand the motivation behind the research and its expected contributions to knowledge. Chapter Two presents a review of relevant literature that relates to the subject matter. This section examines existing scholarly works, empirical studies, and theoretical frameworks that have explored similar or related topics. The review highlights key concepts, definitions, and perspectives from different authors to provide a solid intellectual foundation for the study. It also identifies gaps in existing research that the present study seeks to address. In addition, this chapter discusses theories relevant to artificial intelligence and knowledge acquisition, thereby linking the study to established academic traditions while emphasizing its originality and relevance.

Chapter Three focuses on the research methodology, often referred to as the “science of how.” It outlines the systematic procedures adopted in conducting the research. This chapter describes the research design, the population of the study, the sample size, and the sampling techniques used in selecting respondents. It also explains the instruments used for data collection, the methods of data analysis, and the reliability and validity of the instruments. The study adopted a quantitative survey design, using structured questionnaires as the main tool for data collection. The methodology chapter serves as a blueprint, guiding the researcher through each stage of the investigation to ensure accuracy, consistency, and objectivity in data collection and analysis. Chapter Four deals with data presentation, analysis, and interpretation. In this chapter, the data collected from respondents were systematically analyzed using the Statistical Package for the Social Sciences (SPSS) version 22.0. The results were presented in tables, frequencies, and percentages to ensure clarity and easy comprehension. This section provides detailed interpretations of the findings in relation to the research questions and objectives of the study. It examines patterns and relationships in the data and highlights how artificial intelligence impacts students’ knowledge acquisition within the University of Benin context.

The study was specifically carried out to thoroughly investigate the role of Artificial Intelligence (AI) in facilitating knowledge acquisition among students in the University of Benin. The institution served as the area of study, given its diverse student population and growing engagement with digital learning tools. The total population for the 2024/2025 academic session was 41,996 students, from which a sample of 200 students was selected using appropriate sampling methods. The study was guided by four specific objectives and corresponding research questions designed to explore students’ awareness, usage patterns, challenges, and perceived benefits of AI tools in learning. Notably, the research achieved a 100% response rate, as all 200

administered questionnaires were correctly filled and returned. This impressive response enhanced the credibility and reliability of the findings, providing a solid empirical basis for drawing conclusions and making recommendations. Chapter Five, which concludes the study, presents a summary of findings, conclusions, and recommendations. It synthesizes the key outcomes of the research, links them to the stated objectives, and offers practical suggestions for stakeholders in higher education — including policymakers, lecturers, and students — on how AI can be effectively harnessed to improve teaching and learning processes.

## **5.2 CONCLUSION**

The findings of this study reveal that the usage Artificial intelligence is a common phenomenon amongst undergraduate students of the University of Benin. The majority of students have knowledge about what it is and have used it in their academic pursuits. However, a little percentage stated that they do not know about artificial intelligence. The study discovered that students use AI platforms like Chat GPT, Deep seek and Meta AI which is connected to Instagram, WhatsApp and Facebook platforms.

One of the most significant findings of this study is the negative impact of artificial intelligence on student academic performance. This is consistent with the findings of previous studies, which have shown that excessive dependency on AI can reduce the sharpness of one's brain and abilities. However, that does not dilute the fact that AI has helped and still helping students to gain in-depth knowledge in most of their courses.

## **5.3 RECOMMENDATIONS.**

Based on the findings regarding students' awareness and use of artificial intelligence (AI) tools in learning, the following recommendations are proposed:

The government and school authorities should encourage Nigerian educational institutions to integrate AI tools into curricula where applicable, enhancing learning resources and aligning with technological trends. They should learn to utilize AI platforms to complement traditional course materials, addressing resource inadequacies highlighted by students.

Tertiary institutions and the government should provide training for lecturers on AI tools' educational applications to foster encouragement and effective integration. This will help to promote AI literacy and encourage lecturers to guide students on appropriate AI use for academic enhancement.

Awareness and Digital Literacy Enhancement programs should be organized. These workshops will help to enhance AI awareness and digital literacy among students, especially for those unfamiliar with AI.

Schools should promote AI tools as supplements to mitigate limitations of traditional learning resources. Educational curriculum should ensure AI platforms are recommended and accessible considering students' technological contexts in Nigeria.

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**QUESTIONNAIRE**  
**DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY,**  
**FACULTY OF SOCIAL SCIENCES,**  
**UNIVERSITY OF BENIN,**  
**BENIN CITY, NIGERIA.**

Dear participant,

My name is Favour Gbezinaaiworo, an undergraduate student of the department of Sociology and Anthropology, Faculty of Social Sciences, University of Benin. I'm currently carrying out a research study titled Artificial intelligence and knowledge acquisition amongst undergraduate students in University of Benin. This is purely for academic purposes as it is part of the requirements for the award of bachelors (BSC) degree in Sociology and Anthropology. Every information gotten in the course of this study will be handled with utmost confidentiality. Thank you for agreeing to be part of this study.

**SECTION A: SOCIO DEMOGRAPHIC CHARACTERISTICS**

1. Age: 16-21 ( ) 22-27 ( ) 28-33 ( ) 34 and above ( )
2. Sex: male ( ) Female ( )
3. Marital status: Single ( ) Married ( ) Divorced ( ) Separated ( ) Widowed: ( )
4. Level: 100 ( ) 200 ( ) 300 ( ) 400 ( ) 500 ( )
5. Income level: less than 30, 000 ( ) 30,001 – 50,000 ( ) 50,001 -80,000 ( ) 80,001 - 100,000 ( ) above 100,000
6. Religion: Christianity ( ) Islam ( ) African religion ( ) Others ( )
7. Ethnicity: .....

**SECTION B**

**Objective i: Ascertain the level of awareness and understanding of Artificial Intelligence (AI) among students in the University of Benin.**

8. Have you heard of Artificial Intelligence (AI) before? Yes ( ) No ( )

9. From your understanding of Artificial Intelligence (AI), what does it mean?.....  
.....
10. Have you ever used AI-powered tools or systems? Yes ( ) No ( )
11. How would you rate your knowledge of AI? Very poor ( ) Poor ( ) Good ( ) Very good ( )  
Excellent ( )
12. Do you have friends who use AI to do assignments or read here in the University? Yes ( )  
No ( )

**Objective ii: Identify the factors that influence students' perception of AI in knowledge acquisition in their academic pursuits.**

13. Which of the following factors influences your perception of AI in learning? (Select all that apply) Social Media reports ( ) Social media ( ) Friends/family ( )  
Teachers/professors ( ) Personal experience ( )
14. Do you think AI can enhance your learning experience? Yes ( ) No ( )
15. How important is AI in acquiring knowledge in your field of study? Not Important ( )  
averagely important ( ) Important (.) Very important ( )
16. Do you depend solely on AI when reading? Yes ( ) No ( )
17. How did you come across Artificial intelligence?  
\_\_\_\_\_

**Objective iii: Determine the extent to which AI is used by students in their academic pursuits**

18. Have you ever used AI-powered tools for academic purposes (e.g., research, writing, data analysis)? Yes ( ) No ( )
19. Do you use AI-powered tools every time you read? No ( ) Yes ( )
20. Does AI elaborate your understanding of your course works? Yes ( ) No ( ) Somewhat ( )
21. Which AI-powered tools have you used for academic purposes? (Write as many as you have  
used) .....

22. How frequently do you use AI-powered tools for academic purposes? Never ( ) Rarely ( ) sometimes ( ) Occasionally ( ) Frequently ( )

**Objective iv: Investigate the relationship between students' perception of AI and their academic performance**

23. How would you rate your academic performance in your current program? Very poor ( ) Poor ( ) Good ( ) Very good ( ) Excellent ( )

24. Do you think AI helps students to understand their course works better? Yes ( ) No ( )

25. Do you think AI has improved your academic performance? Yes ( ) No ( )

26. Has any lecturer in your department encouraged you and other students to use AI powered tools in learning? Yes ( ) No ( )

27. How has AI impacted your academic performance? .....

.....  
.....