

## ARTIFICIAL INTELLIGENCE AS A TOOL FOR STUDYING NEW TESTAMENT TEXTS IN NIGERIAN TERTIARY INSTITUTIONS

Chigbo, Chiamaka Nkemdilim\*

### Abstract

Nigeria, as a nation, has leveraged artificial intelligence and the numerous opportunities of the digital world. The pace of this assimilation, particularly in the education sector, is relatively slow. It is one of the reasons for the poor academic performance of many Nigerian students. The interest in biblical studies among many students of religious studies in Nigeria is considerably low. The challenges of mastering the language aspect of these specialisations (Old and New Testament) usually discourage a significant number of students from furthering in these areas. The *Divino Afflante Spiritus* of Pope Pius XII remains the foremost in the quest for a critical study of Scripture. This critical study must be continued, especially in the digital age. This paper aims to critically explore the possibility of integrating AI in the modern teaching and learning of the New Testament. The paper adopts connectivism learning theory as the theoretical framework for this study. The research, therefore, adopts expository and content analysis methods of inquiry. It is the submission of this paper that motivating students to pursue the New Testament as an academic discipline in Nigeria, where expertise and language mastery are deficits, requires furnishing them with an aid to study efficiently, as provided by AI in modern times.

### Introduction

Artificial intelligence and its various applications in the digital world are a novel and game-changing innovation. Its effect extends across various sectors and organs of society. Developed and developing societies are judiciously integrating Artificial Intelligence into the operation of their various units. Ukpe (2024) indicates that the Federal Government of Nigeria has secured a N2.8 billion grant from Google for the development of AI talent in the country. African countries are obviously not left out in this quest for technological development. Work, learning, and, in fact, total approaches to living have undergone this change. The crux of the numerous uses of Artificial Intelligence is its ability to perform tasks previously appropriated to humans only. That ability to process a large amount of information speedily and accurately marks it out from other technological designs. According to Efebah, Orishede, and Igoh (2024), AI is a dynamic field that includes Natural Language Processing (NLP), Deep Learning (DL), and Machine Learning (ML). These aspects of AI support its super independent capacity to perform initiated commands. These complex tasks are mainly carried out with minimal or no human intervention or aid. These features and functions embedded in them, although artificial intelligence could produce new results and propositions not known to humans before. Since the optimal usage of AI, there has been a significant change in many domains, especially in the areas of science and education.

Tracing the history of AI as a technology is extensive because it is closely tied to the earliest inventions of tools and techniques. The fabrication of machines and automation, which is a mechanical instrument that moves independently of human intervention, ultimately led to the invention of AI. However, the groundwork for AI started in the 1900s, but the breakthrough into the technology was only achieved in the 1950s. The early works of modern scientists, such as Alan Turing and Arthur Samuel, laid the groundwork for intelligent machines. John McCarthy, during this period, was the first to use the term "Artificial Intelligence." McCarthy views this new machine as one that can display mental or reasoning abilities, a function previously reserved for humans. The algorithm enables it to function properly in fields such as learning, perception, problem solving, language understanding, and logical reasoning. AI, as a machine, is programmed to learn from previous data it has processed and to apply the results in subsequent uses. It possesses these abilities to the extent that it can interact with people. Indeed, from agriculture to banking, education to healthcare, the reach and usefulness of AI are still unfolding (Arakpogun, Elshan, Olan, and Elshan, 2024).

Currently, many AI tools and programmes are easily accessible, and some are even free, up to monthly limits on Google Cloud. These AI assistant tools offer individuals and organizations the

opportunity to access digital support with numerous options to choose from. Stapleton (2024) lists at least twelve free AI tools for academic research and researchers. Examples of them are: heuristic, open read, explain paper, paper brain, Einblack, Tavily, power drill, type set, Next Net, Chat GPT, perplexity, and Bang. The last three mentioned here are not as efficient as the first nine because they do not always give comprehensive results.

### **Meaning of Artificial Intelligence (AI)**

Artificial Intelligence is a broad term that has no singularly accepted definition. This difficulty stems from the lack of a general consensus on the meaning of the word "intelligence". Anderson (2024) notes that it is used to describe intelligent systems that are comparable to humans. The aim/goal is for machines to think and act like humans do, but this may not be exactly the same way. The AI training data are made possible through machine learning. This machine covers the ability of the machine to think, act, and modify its future reactions. Deep learning, on the other hand, handles complex data input and output. Deep learning (DL) is a subset of machine learning (ML). It is the ML that gives the AI the ability to learn new things or from experiences that have not been explicitly designed into its algorithms. With machine learning, the AI goes beyond the original programme contained therein to carry out new tasks. Robinson (2018) views deep learning as a subset of machine learning that ensures that these multi-layered complex computations surrounding the neural networks are possible. A deep learning of AI is often made possible by the principles of Artificial Neural Networks (ANN), which imitate neurons and brain cells.

Since the harvest time of AI from the 1980s, when it took a new dimension and interest around the subject leaped globally, there has been further division and specialization of AI. Anderson further divides this into the:

- ANI (Artificial Narrow Intelligence): The artificial narrow intelligence performs specific functions, which are limited to such tasks only. It makes decisions that will outperform people who specialize in that field.
- AGI (Artificial General Intelligence): This is a machine that thinks independently as a human would. The AGI has the capacity to solve a number of problems without human input, adapt, and evolve autonomously. Research has been made into the AGI, but it is yet to be realized, and such remains an envisaged future of AI.
- ASI (Artificial Super Intelligence): The super intelligence opposes human intelligence and the behavior mimicking AI. The machine at this stage will become self-aware and outperform human intelligence and capability. It is likely, however, that the ASI may not successfully exhibit core human emotions. This difference will mostly mark human qualities different from whatever nature of intelligence the ASI may possess, whenever it is achieved. Essentially, what all these categories of AI do is to simulate human intelligence and then, using language, form abstractions and concepts to solve these problems. Anderson (2024) opines that a task that was previously reserved for humans is now performed by machines and even more efficiently.

### **Impact and Influence of AI on Learning**

The 2020 COVID-19 crisis, more than any other event, reinforced the global commitment towards AI and its reach in all strata of society, but more especially, in the field of education. Technology has compelled many countries to implement the use of technology in the educational sector. Ahmad et al. (2021) affirm that "The future of education is tied to technologies and their various levels of advancement" (p. 129). More advanced machines will open new opportunities for the education sector. According to Pedro, Subosa, Rivas, and Valverde (2024), "AI can provide access to appropriate and better learning opportunities for excluded people and communities, people with disabilities, refugees, people out of school, and those living in isolated communities" (p. 106). The AI can make provision for an individual's needs. Lessons based on a singular or class need can be tailored to suit them and ensure a positive learning experience. By this, AI can facilitate a more personal learning platform for the learners. Automated instructors' routine tasks and assessments are very helpful in internalizing the modules and lessons for each topic. This is to say that, be it physical or online learning, the learner-instructor

interaction through the aid of AI will maximize consumer/students' satisfaction. The end prospect of AI in education will significantly motivate and encourage active engagement from learners. Seo, Tang, Roll, Fels, and Yoon (2021) aver that there are three vital models where AI improves the learning process, including the following: communication, support, and presence. There are other areas, such as guidance and support at personal learning sessions, which are one of the ways AI remains impactful. The application of AI in education analytics, adaptive learning systems, automated student-instructor communication, early warning systems, and automated periodic assessments will greatly enhance wholesome education in Nigeria.

### **The Theory of Connectivism Learning**

Connectivism learning theory is a technology-inclined theory that is aimed at bridging the gap in the earlier learning theories. This theory supposes that the contemporary technology wave is a valid source of information that could be utilized to improve the learning experience. The end point of connectivism when applied in the education system is the rebranding and revisiting of the education curriculum in order to accommodate technological advancement. For Mampota, Mokhets' engoane, and Kurata (2023), Siemens and Downes lead and champion this theory; both understand the crucial role of technology and the promising impacts it holds for the learning process in the 21<sup>st</sup> century. Connectivism is the process of connecting special nodes. The learners here are expected to create connections to information sources, which include: people, peers, experts, and technology devices.

The primary or traditional sources of information may not fulfill the information needs of the people. Alam (2023) believes that connectivism is the knowledge distributed across networks and that learning involves the ability to recognize and navigate these networks. In the connectivism learning procedure, the learners are also in charge of knowledge creation. They are actively not just consumers of knowledge but authorities that replicate related knowledge using technology. In this instance, the teacher is more of a facilitator of learning. It is important to mention here that the skills to create these connections between field ideas and concepts are vital in fabricating the web of knowledge. This is achievable only when the learners have critically evaluated the information they encounter in order to discern what is reliable and credible. Suffice it to say that the behaviourist theory of learning and the several derivations of cognitivist theory may not be sufficient in the current learning system. There is therefore a need for a digital compliant theory (Mampota, Mokhets' engoane and Kurata 23: 36). Connectivism learning is a possible theory that blends technological innovation and information with education.

### **Teaching and Learning of New Testament Texts as an Academic Discipline: The Nigerian Students' Experience so Far.**

So far, studies have shown that in Nigerian tertiary institutions where students are undertaking foreign languages as a third language, they are often faced with serious anxiety or apprehension towards the new language. This obstruction could appear because of a pre-conceived and misconceived difficulty of the proposed language. This is even worse when the language is learnt as an academic discipline. This has deprived many of the opportunity to put in their best in learning the language. Duolingo and other language learning platforms in places where they are available have helped learners to improve their mastery of the language. This, albeit introductory, opportunity provided by the app has reduced the apprehension faced by many new language learners. The Duolingo app is an excellent example of mobile learning because it is available in a variety of mobile formats. Hazar (2022) observes that Duolingo provides translation to help beginners learn a language and to help students become independent language learners.

Further, Akuneme and Nwosu (2023) recognize this communication apprehension for the learners of the French, Chinese, and German languages in Nigeria. Another challenge of learning a foreign language as a third language is phonological or speech-related difficulty. Indigenous accents could hinder proficiency and accuracy while resulting in sound interference, articulatory, and fluency disorders. Observably, Odinye (2018) maintains that the lack of training centers, shortage of qualified teachers, lack of teaching materials, lack of ICT for teaching and learning, lack of language laboratories and linguistic

environment, etc., tend to frustrate the attempts to embrace or master the rudiments of the language thoroughly.

Undoubtedly, teaching and learning of New Testament Greek in Nigeria is affected by these myriad of aforementioned challenges. The general noticeable decline in the quality of learning and studying habits of many Nigerian students must also be reckoned as part of this very challenge. The indifference and disinterest of some learners for the language, in this case, New Testament Greek, is aggravated further because they fail to see any gain in learning the language. This absence of motivation has tremendously affected the entire learning process. Apparently, many of these students pay slight attention to the language and other New Testament courses for the purpose of passing examinations.

Their low interest in New Testament studies shows in the poor interest in taking up analytical and proper critical assessment of New Testament passages as a project and areas of research. The majority of the students, therefore, shy away from the language aspect of the subject and other critical components of the study. Only a few of the learners show enthusiasm to specialize in the New Testament as a prospect for future post-graduate studies. It is not unusual for teachers to notice the weary and disconcerted looks of their students during classes. Some of them equate New Testament studies with an extension of Church activities. This feeling of lesser status has negatively affected their self-esteem as they see it as a less important area of specialization.

#### **Some of the Identifiable Challenges of learning New Testament Greek:**

- New Testament Greek has become perplexing as there is a lack of teaching aides and relevant textbooks, necessary materials, language laboratories, and learning centers.
- Compacted academic calendar cum short period of classes at the various institutions;
- A lack of qualified biblical Greek experts and experienced scholars of the New Testament.
- Poor funding of the various institutions;
- Disillusionment of some students with the Department of Religious Studies;
- Numerous grammatical rules of the language itself; the tones, accents, breathings, various complicated forms of the verb, and tenses are not easily assimilated by these beginners. This factor, on many occasions, dissuades the learners even more.
- Pronunciation and poor eloquence in reading the texts.

#### **Integrating AI as a Teaching Learning Interface**

This research is dedicated to championing diligent study of the New Testament texts. It is essential that the texts be read and understood within the cultural experiences of the people of God. The events, histories, and circumstances, both past and present, must be considered in this endeavour. For this reason, the present scholars and Christians must take advantage of the vast technological innovation in the teaching and studying of the NT. Most especially in Nigerian tertiary institutions where students do not see prospects in the field of biblical studies, the tools of AI can ease the stress and general difficulty associated with the discipline.

The survival and continuation of NT biblical scholarship are paramount in Nigeria. This is because Christianity in Nigeria is already laden with false teachings. The concomitant effect of this is abundant religiosity without complementary religion and morality. The menace of mercenary preachers that often focus on prosperity and the outright shrewd ones that expertly twist the truth for personal gain is a call to action. All hands must be put to the deck through replicating pure theological education and critical study of New Testament texts. Here, one must recall that such a call by Pope Pius XII for scholarly enquiry into the Scriptures birthed historical criticism of the Bible. Hence, a similar method and earnest investigation into the NT, even though in an African way, will help in combating the declining morality and budding syncretism in Nigeria.

Developing AI applications that are easily accessible on mobile phones and computers in the direction of NT studies will go a long way here. Related materials and directories, as well as audio and video teachings of elementary and advanced Greek language lessons, can be obtained from these apps. There are just a few YouTube channels on Greek language lessons for beginners, and they are barely

scratching the surface. Again, many of them are basically centered on Modern Greek, which may not be so helpful for a student/reader of the NT texts. Concisely, it is expedient that these basic and advanced AI apps be methodologically assembled for easier access for the Nigerian learners of the New Testament. Ideally, they are still to be manned in line with the curricula of the Nigerian tertiary institutions. It is expedient, therefore, that course contents should be amended where necessary to assimilate the AI model into the class activities. Cultivating a vast interest in online, especially specific YouTube pages for the teaching of these subjects, will be helpful. This adventure is better taken up by qualified hands or professionals in the field to further guarantee qualitative teaching.

## Conclusion

The study delved into the meaning and history of AI. It also looked at technology, precisely AI, and its impact on the learning experience and the advancement of human knowledge. Further, the research investigated the challenges of learning third foreign languages for Nigerian students. Correspondingly, the research examined the problems of teaching and learning NT studies in the Nigerian higher institutions. The NT texts and the opportunities for improved learning conditions, particularly in the tertiary institutions, were further highlighted. A meticulous and diligent study of the word of truth/scripture is the key to accurate interpretation, understanding, and explanation of the word of truth. In line with the advancement of time and technology, NT studies in Nigeria must take a firm stand in collaboratively integrating AI as an aid to learning. It is the belief of the researcher that effective development and utilization of a prospective student and learning friendly AI strictly for NT studies will be beneficial. This will enhance academic and personal or non-academic study of the NT. The crux of this research is to encourage accurate and diligent enquiry and understanding of the NT texts. In the case of this study, the interest is primarily in the academic circle.

## \*Chigbo, Chiamaka Nkemdilim

Department of Religion and Human Relations  
 Nnamdi Azikiwe University, Awka  
[cn.chigbo@unizik.edu.ng](mailto:cn.chigbo@unizik.edu.ng)

## References

- Ahmad, S., Mohd, R., Mubarak, M., Alam, M. & Hyder, S. (2021). Artificial intelligence and its role in education. *Sustainability* 13, 2, 8-14.
- Akuneme, C., Nwosu, K. (2023). Understanding the third language learners' communication apprehension by employing their socio-demographic profiles, academic motivation, and self-efficacy as predictors. *Electronic Journal of Research in Educational Psychology*, 21, 1, 195-218.
- Alam, A. (2023). Connectivism learning theory and connectivist approach in teaching and learning: A review of literature. *Bhartiyam International Journal of Education and Research*, 12, 2, 1-7.
- Anderson, P. (2024). *Artificial Intelligence: The impact it has on American society*. A Masters degree thesis submitted to Governors State University. Accessed on September 29, 2024, from <https://opus.govst.edu/thesis/131>
- Arakpogun, E., Elshan, Z., Olan, F., & Elshan, F. (2024). *Artificial Intelligence in Africa: Challenges and opportunities*. Accessed September 28, 2024, from <https://researchportal.northumbria.ac.uk.org>.
- Efebah, V., Orishede, F. & Igoh, J. (2024). Artificial Intelligence and academic research in contemporary society: Evidence from university academics. *Journal of Interdisciplinary Studies*, 6, 3, 33-44.
- Hazar, E. (2022). Learning a brand-new language through Duolingo: A case study of a gifted student. *African Educational Research Journal*, 10, 4, 448-461.

- Mampota, S., Mokhets'engoane, S. & Kurata, L. (2023). Connectivism theory: Exploring its relevance in informing Lesotho's integrated curriculum for effective learning in the digital era. *European Journal of Education and Pedagogy*, 4, 3, 6-12.
- Odinye S. I. (2018). Problems facing the teaching and learning of Chinese language in Nigeria. *The Quint: An Interdisciplinary Quarterly from the North*, 10, 4.
- Pedro, F., Subosa, M., Rivas, A., & Valverde, P. (2024). *Artificial intelligence in education: Challenges and opportunities for sustainable development*. Accessed on October 12, 2024, <https://unsedco.unesco.org/ark:/48223/pf0000366994>
- Robison, N. R. (2018). Artificial intelligence: Its importance, challenges and applications in Nigeria. *Direct research of Journal of Engineering and Information Technology*, 5, 5, 36-41.
- Seo, J., Tang, J., Roll, I., Fels, S. and Yoon, D. (2021). The impact of artificial intelligence on learner-instructor interaction in online learning. *Journal of Educational Technology in Higher Learning*, 18, 3, 18-29.
- Stapleton, A. (2024). *2024 twelve best AI tools for academic research and researchers*. Accessed October 7, 2024, <https://youtu.be/qB4HGMvrhwE?si=TJB88MGSu6iTHb>
- Ukpe, Philip, "FG gets N2.8bn grant from Google for AI development" , November 1<sup>st</sup>, 2024.