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# The Relationship Between Artificial Intelligence And Digital Counselling In Public Universities In Benue State, Nigeria

**[1]Lucy Kwaghseer Viashima PhD & [2]Bemsen Benjamin Ge**

**[1]Patrick Foley College Alu Abwa Mbagen, Nigeria**
**lviashima@yahoo.co.uk**

**[2]Department of Educational Management,**
**Faculty of Educational Foundation Studies,**
**University of Calabar, Calabar, Nigeria**
**gebemsen@unical.edu.ng**

**ABSTRACT**
This study examined the relationship between artificial intelligence and digital counselling in public universities in Benue State, Nigeria. Specifically, it investigated the relationship between artificial intelligence-driven counselling tools and the accessibility of digital counselling services, as well as the relationship between artificial intelligence applications and the responsiveness of digital counselling services. The study adopted a correlational survey research design. The population comprised 67,000 undergraduate students from the three public universities in Benue State: Benue State University, Makurdi; Joseph Sarwuan Tarka University, Makurdi; and Federal University of Health Sciences, Otukpo. A sample of 346 respondents was determined using Taro Yamane's formula and selected through a multistage sampling procedure. Data were collected using a researcher-developed questionnaire titled "Artificial Intelligence Questionnaire (AIQ) and Digital Counselling Questionnaire (DCQ)." AIQ contained 10 items, and DCQ contained five items, structured on a four-point Likert scale. The instrument was validated by two experts in the Faculty of Education, Rev. Fr. Moses Orshio Adasu University, Makurdi. A reliability test conducted on 30 students yielded coefficients of 0.86 for AIQ and 0.91 for DCQ. Pearson Product Moment Correlation was used to answer the research questions and test hypotheses at a 0.05 level of significance. Results revealed a significant strong positive relationship between artificial intelligence-driven counselling tools and accessibility of digital counselling services, and between artificial intelligence applications and responsiveness of digital counselling services. The study concluded that artificial intelligence has a significantly strong positive relationship with digital counselling. It is recommended that counsellors and administrators integrate artificial intelligence with professional human counselling through training and ethical guidelines to enhance service responsiveness while preserving empathy and ethical judgment.
**Keywords:** Artificial Intelligence, Digital Counselling, Accessibility, Responsiveness

## INTRODUCTION

Counselling has traditionally been practiced as a face-to-face helping relationship that depends largely on effective communication and interpersonal interaction between the counsellor and the client. According to Amos (2022), counselling is a one-to-one helping relationship that focuses on an individual's growth,

achievement, problem-solving, and decision-making needs. However, the increasing patronage of Information and Communication Technology (ICT) and the growing number of individuals seeking assistance through online platforms have influenced counsellors to adopt digital technologies in service delivery. Such technologies include smartphone applications, emails, professional websites, messaging platforms, video conferencing tools, cloud storage systems, and digital recorders, thereby creating new opportunities for counselling practice.

Digitalization has been defined differently by scholars but generally refers to the transformation of conventional activities into digital formats. Ogunode and Ndayebom (2023) describe digitization as the use of electronic platforms to convert teaching and learning into digital forms such as online courses, assessments, and web-based seminars or workshops. This transformation enables educational resources to be stored, manipulated, and deployed through computer systems for teaching and learning. Similarly, Bejinaru (2019) explains that digitalization involves converting text, audio, images, and videos into digital formats using technological devices such as laptops, mobile phones, scanners, and internet facilities. Extending this perspective, Adegboyega, Asemota, and Edinoh (2025) identify platforms such as Zoom, WhatsApp, Google Meet, Skype, Microsoft Teams, and FaceTime as essential tools supporting synchronous and asynchronous interactions in education. Consequently, digitalization in education signifies a transition from conventional physical methods to technology-driven and virtual systems.

In the counselling profession, this digital transformation has led to the emergence of digital counselling, which involves providing counselling services through online and technology-based platforms. Adegboyega, Asemota, and Edinoh (2025) describe digital therapy, also known as online counselling, e-therapy, or e-counselling, as the delivery of mental health services through internet-enabled devices and platforms, such as video conferencing, text messaging, telephonic interactions, and email. The growing adoption of these platforms has coincided with rapid advancements in artificial intelligence (AI), which increasingly influence digital counselling practices by enabling more personalized and responsive interventions (Popoola, Ibraheem, & Yusuf, 2023).

Artificial intelligence is a branch of computer science concerned with developing intelligent systems capable of perceiving, analysing, and responding appropriately to inputs (Kamble & Shah, 2018). According to Singh (2019), AI consists of computer programs designed to solve complex problems through processes that resemble human cognition. Similarly, Mangai, Tsoho, and Samuel-Alewa (2026) define AI as computer-based systems capable of performing tasks associated with human intelligence, including learning, reasoning, problem-solving, and language processing. Within counselling settings, AI applications analyse user inputs, recognize emotional patterns, and generate responses that simulate human interaction, thereby expanding the possibilities of digital counselling.

Artificial Intelligence (AI) in counselling within Nigerian schools can be conceptually understood as a complementary framework that integrates digital innovation with human expertise to meet students' counselling needs (Abdulkadir & Usman, 2025). AI-driven tools such as chatbots, predictive analytics, and intelligent systems provide scalability, accessibility, and efficiency by automating assessments, offering psychoeducational support, and identifying vulnerable students early (Shum, Heffernan, & Ferguson, 2022; Obi, Okeke, & Adegbite, 2022). These developments are especially relevant in Nigerian public universities where inadequate counsellor–student ratios and limited resources constrain the provision of comprehensive counselling services (Ajiboye & Bakare, 2019). Nonetheless, scholars argue that while AI enhances efficiency and access, it cannot replace the empathy, ethical sensitivity, and cultural understanding that human counsellors provide (Lattie et al., 2019).

Conceptually, therefore, the integration of AI into counselling practice represents a hybrid framework that combines technological innovation with human-centred counselling approaches. This model positions AI as an enabler rather than a substitute, providing innovative and cost-effective avenues for strengthening counselling services while preserving essential human values (Eze, Chinedu-Eze, & Bello, 2021; Luckin et al., 2018). According to Abdulkadir and Usman (2025), successful implementation in Nigerian schools requires balancing technological advancement with human intervention and ensuring that AI applications are culturally relevant, ethically regulated, and aligned with national educational priorities. Despite these potential benefits, observations indicate that many public universities in Benue State still face challenges

related to inadequate digital counselling infrastructure, limited AI integration, and insufficient empirical evidence on how AI relates to digital counselling practices. This raises concerns about whether artificial intelligence is significantly related to the effectiveness, accessibility, and responsiveness of digital counselling services in public universities in Benue State, Nigeria. It is this gap that necessitates the present study.

Several empirical studies have examined the role of artificial intelligence in digital counselling and related educational support services, particularly regarding accessibility and responsiveness, which are central to the present study. A study by Ofem et al. (2024) investigated the acceptance and awareness of artificial intelligence applications in counselling practice among counselling professionals in Nigeria. Using a multigroup survey design, the researchers found that counsellors generally held positive attitudes toward AI integration due to its potential to improve service delivery, broaden access to counselling support, and enhance efficiency in handling counselling-related tasks. The study further revealed that awareness and acceptance of AI significantly influenced counsellors' willingness to adopt digital counselling practices. Similarly, Park, Lee, and Chung (2023) examined whether anthropomorphic chatbots influence counselling satisfaction and clients' intention to reuse digital counselling services. Employing an experimental design, the study found that chatbot features that mimic human interaction improved users' social rapport, counselling satisfaction, and willingness to continue using AI-assisted counselling systems.

In another related study, Kiuchi et al. (2024) explored the potential of online counselling using a human-operated avatar counsellor among university students. The exploratory study revealed that students considered avatar-based counselling accessible, less intimidating, and convenient, particularly for discussing sensitive psychological concerns. The researchers reported that digital and AI-supported counselling environments encouraged help-seeking behaviour among students who might avoid traditional face-to-face counselling. Furthermore, Ijale, Wakeh, and Fatimoh (2025) investigated the perceived impact of artificial intelligence on the teaching and learning of guidance and counselling among lecturers and undergraduate students in a Nigerian university. Using a survey research design, the study found that respondents perceived AI as enhancing communication, providing immediate feedback, and improving interaction within guidance and counselling activities. However, the researchers also noted concerns about overreliance on technology and AI's inability to fully replicate human empathy and ethical judgment. The study is relevant to the present research because it highlights how AI may enhance responsiveness while still requiring human counsellor involvement to achieve effective counselling outcomes.

**Statement of the Problem**

In Nigerian public universities, particularly in Benue State, the demand for counselling services continues to increase due to academic pressure, emotional challenges, career uncertainty, and other student-related concerns. Unfortunately, many universities face challenges such as inadequate counsellor–student ratios, limited counselling facilities, and insufficient resources, which often hinder effective service delivery. Artificial intelligence appears to offer opportunities to improve digital counselling by increasing accessibility, providing timely responses, and supporting personalized interventions. Nevertheless, concerns remain regarding the extent to which AI can effectively relate to and enhance digital counselling practices without compromising the human qualities of empathy, ethical judgment, and cultural sensitivity that are central to counselling.

Despite the growing relevance of AI and digital technologies in educational and counselling settings, empirical evidence on the relationship between artificial intelligence and digital counselling in public universities in Benue State remains limited. Most existing studies focus broadly on educational technology or digital learning, with little attention given to how AI relates specifically to digital counselling services in Nigerian universities. This lack of sufficient evidence creates uncertainty about the role and influence of AI in the delivery of counselling. Against this background, this study seeks to examine the relationship between artificial intelligence and digital counselling in public universities in Benue State, Nigeria.

**Purpose of the Study**

The purpose of the study was to examine the relationship between artificial intelligence and digital counselling in public universities in Benue State, Nigeria. Specifically, the study aims to:

1. Determine the relationship between artificial intelligence-driven counselling tools and the accessibility of digital counselling services in public universities in Benue State, Nigeria.
2. Examine the relationship between artificial intelligence applications and the responsiveness of digital counselling services in public universities in Benue State, Nigeria.

**Research Questions**

The following research guided the study:

1. What relationship exists between artificial intelligence-driven counselling tools and the accessibility of digital counselling services in public universities in Benue State, Nigeria?
2. What relationship exists between artificial intelligence applications and the responsiveness of digital counselling services in public universities in Benue State, Nigeria?

## METHODOLOGY

**Design**

The design adopted for the study was a correlational research design. The population for this study was 67,000 students in the three public universities in Benue State, Nigeria (Registry Department of Public Universities in Benue State, 2025). The sample size of 346 respondents was determined using Yamane's (1967) formula at approximately a 5.4% level of precision. A multistage sampling technique was adopted. First, proportionate sampling was used to allocate respondents among the three universities in proportion to their student populations. Thereafter, simple random sampling technique was employed to select respondents from each institution, giving every student an equal chance of participation.

**Instrumentation**

Data were collected using a researcher-developed questionnaire titled "Artificial Intelligence Questionnaire (AIQ)" and "Digital Counselling Questionnaire (DCQ)". AIQ contained 10 items, while DCQ contained five items. The questionnaire was structured on a four-point Likert scale with response options of Strongly Agree (SA) = 4; Agree (A) = 3; Disagree (D) = 2; and Strongly Disagree (SD) = 1, and was used to elicit responses from respondents in the study. The instrument was validated by two experts in the Faculty of Education at Rev. Fr. Adasu University, Makurdi. A reliability test was conducted on 30 students at a public university using Cronbach's Alpha. The test results yielded reliability coefficients of 0.86 for AIQ and 0.91 for DCQ.

**Data analysis**

The data collected for the study were analysed using Pearson Product Moment Correlation (PPMC) to answer the research questions and test the null hypotheses at 0.05 level of significance. The decision rule for answering research questions, according to Emaikwu (2018), is: 0.1 to 0.29 (or -0.1 to -0.29) = Weak correlation; 0.3 to 0.49 (or -0.3 to -0.49) = Moderate correlation; and 0.5 to 1.0 (-0.5 to -1.0) = Strong correlation. The decision rule for rejecting the null hypothesis was based on the comparison between the p-value (the probability that the observed correlation occurred by chance) and the level of significance ($\alpha$). When the p-value is $\leq \alpha$, the null hypothesis (H0) is rejected. Meaning there was enough evidence to conclude that a significant correlation existed between the two variables. Where the p-value was $> \alpha$, the null hypothesis (H0) was not rejected. Meaning there was not enough evidence to conclude that a significant correlation existed between the two variables.

**RESULTS**

**Research Question 1:** *What is the relationship between artificial intelligence-driven counselling tools and the accessibility of digital counselling services in public universities in Benue State, Nigeria?*

**Table 1:** Relationship between Artificial Intelligence-Driven Counselling Tools and the Accessibility of Digital Counselling Services in Public Universities in Benue State

| Variables | N | X | SD | *r* | Decision |
|---|---|---|---|---|---|
| Artificial Intelligence-Driven Tools | 346 | 2.76 | 0.65 | | |
| | | | | 0.86 | Strong Positive Relationship |
| Accessibility of Digital Counselling Services in Public Universities | 346 | 2.84 | 0.81 | | |

**Source:** Field Survey Results 2026

The results in Table 1 show the relationship between artificial intelligence-driven counselling tools and the accessibility of digital counselling services in public universities in Benue State, Nigeria. The result reveals that r = 0.86, which indicates a strong positive relationship. This implies a strong positive relationship between artificial intelligence-driven counselling tools and the accessibility of digital counselling services in public universities in Benue State, Nigeria.

**Research Question 2:** *What is the relationship between artificial intelligence applications and the responsiveness of digital counselling services in public universities in Benue State, Nigeria?*

**Table 2:** Relationship between Artificial Intelligence Applications and the Responsiveness of Digital Counselling Services in Public Universities in Benue State, Nigeria

| Variables | N | X | SD | *r* | Decision |
|---|---|---|---|---|---|
| Artificial Intelligence Applications | 346 | 2.89 | 0.72 | | |
| | | | | 0.85 | Strong Positive Relationship |
| Responsiveness of Digital Counselling Services in Public Universities | 346 | 2.84 | 0.41 | | |

**Source:** Field Survey Results 2026

The results in Table 2 show the relationship between artificial intelligence applications and the responsiveness of digital counselling services in public universities in Benue State, Nigeria. The result reveals that r = 0.85, which indicates a strong positive relationship. This implies a strong positive relationship between artificial intelligence applications and the responsiveness of digital counselling services in public universities in Benue State, Nigeria.

**Test of Hypotheses**

**Hypothesis 1:** There is no significant relationship between artificial intelligence-driven counselling tools and the accessibility of digital counselling services in public universities in Benue State, Nigeria.

**Table 3:** Significant Relationship between Artificial Intelligence-Driven Counselling Tools and the Accessibility of Digital Counselling Services in Public Universities in Benue State

| Variables | N | X | SD | *r* | *P* | Decision |
|---|---|---|---|---|---|---|
| Artificial Intelligence-Driven Tools | 346 | 2.76 | 0.65 | | | |
| | | | | 0.86 | 0.000 | Significant Strong Positive Relationship |
| Accessibility of Digital Counselling Services in Public Universities | 346 | 2.84 | 0.81 | | | |

Correlation coefficient is significant at $p < 0.05$; level (2-tailed)

**Source:** Field Survey Results 2026

The results in Table 3 show a significant relationship between artificial intelligence-driven counselling tools and the accessibility of digital counselling services in public universities in Benue State, Nigeria. The result reveals that r = 0.86 and p-value = 0.000 < 0.05. Since the p-value was less than 0.05, the null hypothesis, which states that there is no significant relationship between artificial intelligence-driven counselling tools and the accessibility of digital counselling services in public universities in Benue State, Nigeria, was rejected. This implies a strong positive relationship between artificial intelligence-driven counselling tools and the accessibility of digital counselling services in public universities in Benue State, Nigeria.

**Hypothesis 2:** There is no significant relationship between artificial intelligence applications and the responsiveness of digital counselling services in public universities in Benue State, Nigeria.

**Table 4:** Significant Relationship between Artificial Intelligence Applications and the Responsiveness of Digital Counselling Services in Public Universities in Benue State, Nigeria

| Variables | N | X | SD | *r* | *P* | Decision |
|---|---|---|---|---|---|---|
| Artificial Intelligence Applications | 346 | 2.89 | 0.72 | | | |
| | | | | 0.85 | 0.000 | Significant Strong Positive Relationship |
| Responsiveness of Digital Counselling Services in Public Universities | 346 | 2.84 | 0.41 | | | |

Correlation coefficient is significant at p < 0.05; level (2-tailed)

**Source:** Field Survey Results 2026

The results in Table 4 show a significant relationship between artificial intelligence applications and the responsiveness of digital counselling services in public universities in Benue State, Nigeria. The result reveals that r = 0.85 and p-value = 0.000 < 0.05. Since the p-value was less than 0.05, the null hypothesis, which states that there is no significant relationship between artificial intelligence applications and the responsiveness of digital counselling services in public universities in Benue State, Nigeria, was rejected. This implies that there is a strong positive relationship between artificial intelligence applications and the responsiveness of digital counselling services in public universities in Benue State, Nigeria.

## DISCUSSION OF FINDINGS

The first finding of this study revealed a significant strong positive relationship between artificial intelligence-driven counselling tools and the accessibility of digital counselling services in public universities in Benue State, Nigeria. This implies that increased use of AI technologies in counselling is associated with improved access to counselling services among students.

This finding aligns with the study by Ofem et al. (2024), which found that counsellors maintained favourable attitudes toward AI integration due to its ability to improve service delivery, increase counselling accessibility, and enhance operational efficiency. The finding is also supported by Kiuchi et al. (2024), who revealed that students considered AI-supported and avatar-based counselling services more accessible, less threatening, and more convenient, especially when discussing personal or sensitive issues.

The second finding of the study found a significant strong positive relationship between artificial intelligence applications and the responsiveness of digital counselling services in public universities in Benue State, Nigeria. This means that the use of AI improves the speed, efficiency, and quality of responses delivered through digital counselling platforms.

This finding aligns with the work of Park, Lee, and Chung (2023), whose findings revealed that chatbots designed with human-like interaction features improved social rapport, counselling satisfaction, and users' willingness to reuse AI-assisted counselling platforms. The agreement between their study and the present research indicates that AI-supported responsiveness is a critical factor influencing students' acceptance

and satisfaction with digital counselling services. Similarly, the finding corroborates the study by Ijale, Wakeh, and Fatimoh (2025), who found that AI-enhanced communication promoted immediate feedback and improved interactions in counselling-related activities.

## CONCLUSION

Based on the findings of this study, it was concluded that artificial intelligence has a significant and positive relationship with digital counselling in public universities in Benue State, Nigeria. The study established that artificial intelligence-driven counselling tools meaningfully improve the accessibility of digital counselling services by making counselling support more available, flexible, and convenient for students. The findings further showed that artificial intelligence applications enhance the responsiveness of digital counselling services through timely feedback, continuous interaction, and efficient communication.

## RECOMMENDATIONS

1. University management and counselling units in public universities in Benue State should invest in and promote AI-driven digital counselling platforms such as chatbots, online counselling portals, and mobile-based counselling applications to improve the accessibility of counselling services. This will enable students to obtain counselling support conveniently regardless of time, location, or counsellor availability.
2. Counsellors and university administrators should integrate artificial intelligence applications with professional human counselling practices through adequate training and ethical guidelines to enhance the responsiveness of digital counselling services. This approach will ensure timely feedback and continuous support for students while preserving the empathy and ethical judgment essential in counselling relationships.

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