

EXPLORING THE INTEGRATION OF ARTIFICIAL INTELLIGENCE (AI) IN COUNSELLING SERVICES IN PUBLIC UNIVERSITIES IN ANAMBRA STATE: CHALLENGES AND IMPROVEMENT STRATEGIES

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ABSTRACT: This study explored the integration of Artificial
Intelligence (AI) in counselling services in public universities
in Anambra State: challenges and improvement strategies.
Three research questions guided the study and a descriptive
survey research design employed in the study. Population for
the study comprised all the 34 counsellors in two (Federal and
State government-owned) public universities in Anambra
State. Sample size for the study constituted 34 counsellors
from the two public universities selected using the purposive
sampling technique. A 31-item researcher self-developed
questionnaire, structured on a 4-point rating scale and titled:
“Integration of Artificial Intelligence in Counselling Services
Questionnaire (IAICSQ)”, served as instrument for data
collection. This research instrument was validated by three
experts; two from the Department of Guidance and
Counselling and one Measurement and Evaluation expert from
the Department of Educational Foundations, Faculty of
Education, Nnamdi Azikiwe University, Anambra State.

Reliability of the research instrument was determined through a pilot test carried out by selecting 15 counsellors from one of the public universities in Enugu State, and the scores obtained after collation from the questionnaire were computed using Cronbach Alpha statistics which gave internal consistency reliability value of 0.86, 0.83 and 0.92 which were added up to yield an overall reliability value of 0.87, showing that the instrument was reliable to conduct the study. Data were analyzed using the mean statistics rated at 2.50 and standard deviation statistics. The findings of the study revealed among others that the current state of integration of Artificial Intelligence (AI) in counselling services in public universities in Anambra State was non-existence, meaning that AI was not integrated in counselling services in the public universities. From the findings of this study, recommendations were proffered and among them include that the public universities through the support of the National Universities Commission (NUC) should ensure effective integration of AI in counselling services in public universities in Anambra State, by initiating/establishing digital platforms which provides automated counselling support, organizing continuous capacity building training for university counsellors, student affairs officers, and ICT staff through workshops and certification programmes to enhance their digital literacy and AI readiness. This will increase their competence and confidence in using AI-powered platforms for student support services likewise improve the current state of AI integration in counselling services.

Keywords: *Artificial Intelligence (AI), Challenges, Counselling, Improvement, Integration, Services, Strategies.*

Introduction

In this 21st century, the global shift towards digitalization has transformed the entire processes in educational administration, patterns of teaching and learning experiences, including the provision of counselling services, especially in higher institutions. One of the most revolutionary technologies shaping this transformation in counselling services at the universities, is the integration of Artificial Intelligence (AI), a system that mimics human cognitive functions such as learning, reasoning and problem-solving to perform tasks efficiently (Kaplan & Haenlein, 2019). AI as further described by some scholars such as Kaplan and Haenlein can be seen as the

simulation of human intelligence by machines, especially, computer systems, to perform tasks such as learning, reasoning and problem-solving. According to Nilsson (2014), AI encompasses various techniques such as machine learning, natural language processing, and computer vision to analyze data, make decisions, and solve instructional problems autonomously. In education, AI encompasses various technologies, including machine learning, natural language processing, expert systems and intelligent tutoring systems, which are increasingly being used to enhance teaching, learning and support services (Holmes et al., 2021). Few examples of AI tools used in counselling include the Woebot which a chatbot that delivers Cognitive Behavioural Therapy (CBT) to users dealing with stress, anxiety and depression (Fitzpatrick et al., 2017). Wysais an AI-powered mental health chatbot offering daily emotional support and self-help tools (Inkster et al., 2018). Tess is a psychological AI chatbot that delivers real-time support to users in educational and clinical settings. Globally, the use of AI in mental health and education is gaining traction, with tools like Woebot and Tess being adopted in developed contexts to support therapy and counselling (Fitzpatrick et al., 2017). AI is thus, applicable in all the fields of education, including counselling services. In counselling services, AI tools can provide psychological support, mental health assessments, academic advising and career guidance using automated systems such as chatbots, virtual assistants, and predictive algorithms (Holmes & Tuomi, 2022). These tools can simulate therapeutic conversations, provide decision-making support, and predict psychological needs using large datasets (UNESCO, 2021). In the context of higher education, counselling services are integral to students' academic, emotional and career development.

Counselling as defined by Chaudhary (2018) entails the process in which the counsellor has a broad discussion related to counsellee's interest, planning and adjustment. According to the Nalanda International School, Vadodara (2020), counselling is the process which helps the students to know their values, skills, interests, and personality that will help students in further career selection. It is concerned with helping students towards addressing and resolving specific value, behavioural, vocational, social and educational problems, making decisions, coping with crisis, improving relationships and developing personal awareness. It also

involves working with feelings, thoughts, perceptions and conflicts. The counsellors who are experts have wide knowledge about current trends and developments, available streams and factors that have a major influence on students' decision-making and academic planning. Counsellors provide counselling to students' emotional, personal and career problems and update them with current trends and developments. Counselling therefore, is very instrumental in re-engineering the values of education and in ensuring that educational course content of each subject or course is actualized through the facilitative role of the manager of counselling programmes, that is, "the counsellor" (Abisola, 2013). The benefits of quality counselling services as observed by the Nalanda International School, Vadodara (2020), is that they give proper counselling on how to deal with psychological problems which can badly impact students' studies. Through these counselling sessions, students will become able to develop certain problem-solving skills which to an extent help them deal with particular issues surrounding their lives. Students are advised on how to cope with different situations they tend to face in their academics and life. This advice will give them perspective on how they should behave in certain scenarios. Counselling services helps to shape students' behaviour and also instill enough discipline in them. Proper guidance helps them achieve their goals, well guided and counselled students know what to do and how to do things in the best possible way. Students learn how-to live-in peace and harmony with others in the university community. Thereby, they also learn to appreciate other colleagues in the university environment (Nalanda International School, Vadodara, 2020). The counselling services as further indicated by (Abisola, 2013) are also meant to help individuals understand self and apply educational principles to life situations and adapt favourably to their environment. These activities of the counsellors are indicative in such ways that the counselling services assist in the modification of individual behaviour. Examples of these counselling services include academic or educational, social or personal, vocational or career guidance and counselling services. Others include individual and group counselling, referral counselling, directive and indirective counselling, eclectic counselling, interviewing, and among other psychotherapy, provided to solve students' problems (Lovely Professional University, 2012). These counselling services are useful for solving undergraduate

students' personal, academic, social, emotional and career problems and challenges. Traditionally, university counselling practices in Nigeria have relied heavily on face-to-face interaction between counsellors and students. However, with the increasing complexity of students' needs and rising student populations, the integration of digitalized technology, particularly AI, presents a promising solution to enhance the efficiency, accessibility and responsiveness of these services (Eze et al., 2021). In Nigeria, where public universities grapple with overstretched counsellors, insufficient funding and increasing mental health challenges among students, AI offers a promising innovation. AI-powered chatbots, virtual mental health assistants, and predictive analytics tools can bridge gaps in access to support services by offering personalized support and 24/7 assistance to students, bridging the gap where human resources are limited, risk detection through sentiment analysis, and referrals to human professionals when necessary (Eze et al., 2021).

AI has been increasingly used to support student mental health, predict academic risks, and provide real-time counselling services (Luxton, 2016). AI-driven systems are now used for triaging student concerns, detecting emotional distress through language analysis, and improving the reach and efficiency of human counsellors (Cheng, 2022). These developments point to the growing potential of AI to address challenges of scalability, timeliness, and inclusiveness in university counselling systems. The Artificial Intelligence (AI) has thus, become an essential tool in enhancing educational services, including academic advising, mental health counselling, career guidance, and student behaviour tracking (Miao & Holmes, 2021). Despite its potential, the integration of AI into counselling services in Nigerian universities, especially, public institutions which is owned by either the Federal or State government in Anambra State, remains at a formative stage. This is due to several constraints or challenges such as: inadequate or limited infrastructure, low digital literacy among staff, insufficient funding, poor digital literacy, skepticism among education stakeholders and ethical concerns related to data privacy and confidentiality (Aina, 2020; Adetunji & Olowookere, 2022). Adetunji and Olowookere (2022) study further emphasized the need for awareness creation and institutional policies to support AI adoption across different sectors of the university system. Moreover, cultural perceptions of counselling and limited institutional

support for technological innovation further hinder the adoption of AI tools in student support services. In Anambra State, public universities such as Nnamdi Azikiwe University and Chukwuemeka Odumegwu Ojukwu University face growing pressure to improve student services, including counselling, in line with global standards. There is a critical need to assess how these institutions are embracing technological advancements, particularly AI, in delivering counselling services. Currently, the integration of AI into university counselling services in Nigeria is nascent. Most counselling centers in public universities operate through traditional face-to-face interactions, with limited adoption of digital platforms. A study by Adetunji and Olowookere (2022) found that while some institutions have moved toward e-counselling or virtual student support, full AI integration is rare and typically limited to administrative automation (e.g., chatbots for admissions or complaints). In Anambra State, public universities like Nnamdi Azikiwe University (NAU) and Chukwuemeka Odumegwu Ojukwu University (COOU) have adopted some ICT tools in student services, but AI usage in counselling remains underdeveloped. There is limited evidence of tools that use Natural Language Processing (NLP), predictive modeling, or sentiment analysis in student engagement and counselling (Aina, 2020). As such, the extent of AI integration can be described as incipient, with promising interest but little implementation. Furthermore, there may be some challenges confronting effective integration of AI technology in counselling services in the public universities. AI systems require robust digital infrastructure, high-speed internet, data storage, computing power and maintenance capacity. Many Nigerian public universities seem to lack the necessary infrastructure, resulting in a digital divide that makes AI integration difficult (Adeoye et al., 2020).

Another major constraint is the digital literacy level of university counsellors. Most counselling professionals have limited exposure to emerging technologies and may lack the training required to interact with or manage AI-powered tools (Oyelere et al., 2021). AI systems collect and process sensitive personal data. Inadequate data protection laws and poor awareness of ethical issues around digital surveillance pose risks to student confidentiality and trust (UNESCO, 2021). There is often skepticism among staff about the reliability of AI for emotional and psychological interventions.

Some view AI as impersonal and incapable of offering the empathy needed in counselling relationships (Holmes & Tuomi, 2022). There is also no clear national or institutional policy framework supporting the integration of AI in education-related services in Nigeria. Public universities are also heavily dependent on government funding, which is often insufficient and not allocated towards AI development. Given all these challenges, there is need for improvement and institutional reform to improve the integration of AI into counselling services. This according to scholars like Eze et al. (2021) requires that public universities invest in regular training for counsellors on digital tools and AI applications. Collaborative partnerships with edtech firms and international organizations can provide access to resources and expertise. Again, the success of AI integration depends on functional ICT infrastructure. Institutions need to prioritize investments in high-speed internet, cloud-based systems, and AI software integration tools, possibly through public-private partnerships (PPP) (Adetunji & Olowookere, 2022). Government agencies like the National Universities Commission (NUC) and university senates should develop frameworks and ethical guidelines for AI use in student services. These policies should address data privacy, consent, accountability, and quality assurance. Universities in Anambra State can begin with pilot projects, e.g. integrating chatbots for career counselling or psychological check-ins. Locally relevant AI tools, designed to reflect the cultural and linguistic diversity of the region, will improve adoption and effectiveness. There is need for cross-sectoral collaboration which enables public institutions to collaborate with psychologists, software developers, data scientists and counselling professionals to co-create hybrid systems where AI supports but does not replace human judgement. This would promote ethical, efficient, and empathetic counselling services. The integration of AI into counselling services holds significant promise for addressing some of the systemic challenges faced by public universities in Anambra State. However, meaningful adoption will require infrastructural investment, policy reforms, stakeholder training, and cultural change within institutions. A strategic and phased approach to AI integration can promote more responsive, inclusive, and effective counselling services for students in the digital age. Understanding the current level of AI integration, the challenges involved, and identifying strategies for effective implementation of AI in public

universities in Anambra State, therefore, becomes very crucial and will also provide insights for policymakers, university administrators, and educational technologists aiming to improve undergraduate and postgraduate students' well-being through innovation. Therefore, this study is aimed at exploring the integration of Artificial Intelligence in counselling services in public universities in Anambra State, also looking at the challenges and improvement strategies. The study is anchored in the Technology Acceptance Model (TAM) by Davis (1989), which explains how users come to accept and use technology. The model identifies perceived usefulness and perceived ease of use as primary factors influencing adoption. Applied to AI in counselling, TAM suggests that counsellors and administrators will be more likely to embrace AI when they perceive it as beneficial and user-friendly.

Statement of the Problem

In recent years, the increasing complexities of students' academic, psychological and career-related needs have intensified the demand for effective counselling services in Nigerian public universities. Traditionally, counselling in these institutions relies heavily on face-to-face interactions with limited technological support. However, with the rapid evolution of digital technologies and the global shift towards automation, Artificial Intelligence (AI) presents a transformative opportunity for enhancing counselling practices. AI tools such as chatbots, virtual assistants, and predictive analytics have the potential to offer personalized, efficient, and accessible support to large student populations. Despite this potential, there seem to be limited evidence of structured AI integration into counselling services in Nigerian public universities, particularly in Anambra State. This is evident in the current practices of rendering counselling services which is usually done using the traditional method or old conventional way with less or no digital support. Counsellors often seem to lack the digital literacy and institutional support needed to adopt AI solutions. Infrastructural deficits, resistance to change, ethical concerns about data privacy, and the absence of policy frameworks further constrain the process. As a result, many students continue to experience delayed, inadequate, or inaccessible counselling services, which negatively affects their academic performance, emotional well-being and career decision-making. Although, a few studies have explored the general use of

ICT in education and the potentials of AI in administrative services, there is a scarcity of empirical research that specifically investigates the extent to which AI is being integrated into university counselling services in Anambra State. This insufficient empirical data on the current status of AI integration in counselling services within public universities in Anambra State requires that the present study provide data-driven insights on the extent of AI utilization. Again, since many of the existing literature often focused on general ICT use in education or AI in administrative functions, neglecting the specific context of counselling services, this study focused precisely on AI use in student counselling a critical but underexplored aspect. More so, there is a critical gap regarding specific challenges impeding AI adoption in this context to promote its integration within counselling units, in which this study sought to propose locally relevant and actionable strategies for effective adoption. Besides, there is also limited research outlining practical and context-specific improvement strategies that could be effectively employed for overcoming the challenges to AI integration in counselling in Nigerian higher education, hence, necessitating this present study in order to fill both the knowledge and theoretical gaps. Thus, the present study sought to address this problem by investigating the integration of Artificial Intelligence (AI) in counselling services in public universities in Anambra State, looking at the challenges and improvement strategies.

Purpose of the Study

The purpose of this study was to explore the integration of Artificial Intelligence (AI) in counselling services in public universities in Anambra State, focusing on the challenges and improvement strategies. Specifically, the objectives of this study aimed at:

1. Examining the current state of integration of Artificial Intelligence (AI) in counselling services in public universities in Anambra State.
2. Identifying the challenges confronting integration of AI in counselling services in public universities in Anambra State.
3. Exploring the strategies which can be adopted to enhance effective integration of AI in counselling services in public universities in Anambra State.

Research Questions

The following three research questions guided the study:

1. What is the current state of integration of Artificial Intelligence (AI) in counselling services in public universities in Anambra State?
2. What are the challenges confronting integration of AI in counselling services in public universities in Anambra State?
3. What are the strategies which can be adopted to enhance effective integration of AI in counselling services in public universities in Anambra State?

Methods

This study adopted a descriptive survey research design. The design was deemed appropriate as it enables the researcher to gather quantifiable data from a defined population of public university counsellors to describe the current state of AI integration in counselling services, identify challenges, and suggest improvement strategies. It is suitable for capturing the views and experiences of a large group of participants within their natural educational settings without manipulating variables (Creswell & Creswell, 2018). Population for the study comprised all the 34 counsellors in two public universities (that is, Federal government-owned – 27 counsellors and State government-owned – 7 counsellors) in Anambra State. Sample size for the study constituted 34 counsellors from the two public universities selected using the purposive sampling technique based on the researcher's discretion. It was convenient for the researcher to sample all the respondents given their small sample size. A 31-item researcher self-developed questionnaire titled: "Integration of Artificial Intelligence in Counselling Services Questionnaire (IAICSQ)", served as instrument for data collection. The questionnaire was structured on a 4-point rating scale of Strongly Agree (SA) - 4, Agree (A) - 3, Disagree (D) – 2 and Strongly Disagree (SD)– 1, in order to answer the research questions. This research instrument was face and content validated by three professionals; two from the Department of Guidance and Counselling and one Measurement and Evaluation expert from the Department of Educational Foundations, Faculty of Education, Nnamdi Azikiwe

University, Anambra State. These experts' corrections and suggestions were incorporated to improve the clarity, relevance and structure of the instrument before its final print out. Reliability of the research instrument was determined through a pilot test carried out by selecting 15 counsellors from one public university in Enugu State, and the scores obtained after collation from the questionnaire were computed using Cronbach Alpha statistics which gave internal consistency reliability value of 0.86, 0.83 and 0.92 for each of the clusters respectively, and were added up to yield an overall reliability value of 0.87, indicating a high level of internal consistency; also showcasing that the instrument was reliable and trustworthy to conduct the study.

The researcher personally administered the questionnaire to the respondents with the assistance of two research assistants, who were counsellors from the two public universities that assisted to distribute copies of the questionnaire among their colleagues. An on-the-spot and personal method was employed for data collection. This method enabled both the researcher and the two research assistants to have a face-to-face and direct contact with the respondents, that is, in order to meet the respondents (counsellors) in their respective university and waited for them to fill the questionnaire distributed to them and collect the necessary information from them immediately on the spot. The research assistants were also briefed about the importance and purpose of the study. The exercise for distribution of the research instrument lasted for one week. The respondents were assured of confidentiality, voluntary participation, and the academic purpose of the study to encourage honest and objective responses. The data collected were analyzed using descriptive statistics. Mean statistics and standard deviation statistics were used to answer the three research questions. A mean score of 2.50 and above was considered as agreement (positive response), while a mean score below 2.50 was regarded as disagreement (negative response). The analysis was conducted using Statistical Package for Social Sciences (SPSS), Version 25.0.

Results

Research Question 1: What is the current state of integration of Artificial Intelligence (AI) in counselling services in public universities in Anambra State?

Table 1: Mean Score Rating and SD of Counsellors on the Current State of Integration of AI in Counselling Services in Public Universities in Anambra State
N = 34 Counsellors

S/N	Please share your agreement concerning the current state of AI integration in counselling services in your university	SA	A	D	SD	Mean	SD	Decision
1.	My university currently has a digital platform for providing automated counselling support	2	3	12	17	1.71	0.86	Disagree
2.	AI tools (e.g., chatbots or virtual assistants) are currently used in counselling	3	5	11	15	1.88	0.96	Disagree
3.	AI tools are currently used to predict academic risks likewise support educational counselling services including academic advising in the university	3	4	16	11	1.97	0.89	Disagree
4.	Students currently access AI-based career or vocational guidance in my institution	2	6	13	13	1.91	0.89	Disagree
5.	AI-based socio-personal guidance has been incorporated into the counselling services for student behaviour tracking, likewise solving students social and emotional challenges in my institution	3	4	14	13	1.91	0.92	Disagree
6.	AI is integrated into the student affairs or counselling management systems for triaging student concerns likewise detecting emotional distress through language analysis in my institution	2	5	15	12	1.91	0.85	Disagree
7.	There is institutional awareness of the role of AI in improving counselling services for its smooth integration	2	8	14	10	2.06	0.87	Disagree
8.	My university has plans or policies toward adopting AI in counselling services	4	6	13	11	2.09	0.98	Disagree
9.	AI predictive analytics tools which offer personalized support likewise provide 24/7 assistance to students in order to bridge gaps in access to	3	5	10	16	1.85	0.97	Disagree

	support counselling services is currently used in my institution							
10.	AI is increasingly been integrated to provide real-time counselling services that supports student mental health challenges in my institution	2	7	15	10	2.03	0.86	Disagree
Grand Mean Score & SD		=				1.93	0.91	Disagree

Analysis of data from Table 1 indicated that none of the items were rated above 2.50 of the acceptable mean scores by the universities counsellors in order to show that they agreed with these statements. All the other items from 1 to 10 were rated below 2.50 of the acceptable mean scores by the universities counsellors in order to show that they disagreed with these statements. The grand mean score and standard deviation scores are 1.93 and 0.91, showing that there was no wide spread deviation in the respondents' negative responses respectively. The result therefore, revealed that the current state of integration of Artificial Intelligence (AI) in counselling services in public universities in Anambra State was non-existence. This means that AI was not integrated in counselling services in public universities in Anambra State.

Research Question 2: What are the challenges confronting integration of AI in counselling services in public universities in Anambra State?

Table 2: Mean Score Rating and SD of Counsellors on the Challenges Confronting Integration of AI in Counselling Services in Public Universities in Anambra State
N = 34 Counsellors

S/N	Please share your agreement concerning the challenges confronting AI integration in counselling services in your university	SA	A	D	SD	Mean	SD	Decision
11.	Lack of digital infrastructure limits AI integration in counselling in my institution	11	13	7	3	2.94	0.94	Agree
12.	Low digital literacy in AI tools usage among counsellors affect its integration in counselling services in my institution	10	15	4	5	2.88	0.99	Agree
13.	Resistance to using/keying into technological innovations due to	13	11	6	4	2.97	1.01	

	cultural perceptions of counselling, is common among counsellors in my institution							Agree
14.	There is no institutional policy supporting AI use in counselling services in the institution	14	12	4	4	3.06	1.00	Agree
15.	Issues in connection to data privacy, confidentiality including ethical concerns, hinder AI adoption in student counselling in my institution	9	16	4	5	2.85	0.97	Agree
16.	Insufficient funding preventing the procurement of AI-based systems including tools inhibit the institution from integrating AI into counselling	12	15	3	4	3.03	0.95	Agree
17.	Internet connectivity challenges affect the functionality of AI tools in counselling in the institution	13	18	0	3	3.21	0.83	Agree
18.	There is limited awareness of AI's potential in student support services in counselling services in my institution	15	12	5	2	3.18	0.89	Agree
19.	Counsellors have limited exposure to emerging technologies likewise lack the necessary training required to interact with or manage AI-powered tools	11	17	3	3	3.06	0.87	Agree
20.	Skepticism among counsellors about the reliability of AI for emotional and psychological interventions hindering its adoption in the institution	10	18	2	4	3.00	0.91	Agree
Grand Mean Score & SD		=				3.02	0.95	Agree

Analysis of data from Table 2 indicated that all the items were rated above 2.50 of the acceptable mean scores by the universities counsellors in order to show that they agreed with these statements. None of the items from 10 to 20 were rated below 2.50 of the acceptable mean scores by the universities counsellors in order to show that they disagreed with these statements. The grand mean score and standard deviation scores are 3.02 and 0.95, showing that there was no wide spread deviation in the respondents' positive responses respectively. The result therefore, revealed the challenges confronting integration of AI in counselling services in public universities in Anambra State.

Research Question 3: What are the strategies which can be adopted to enhance effective integration of AI in counselling services in public universities in Anambra State?

Table 3: Mean Score Rating and SD of Counsellors on the Strategies which can be Adopted to Enhance Effective Integration of AI in Counselling Services in Public Universities in Anambra State
N = 34 Counsellors

S/N	Please share your agreement concerning the strategies to be adopted to enhance effective AI integration in counselling services in your university	SA	A	D	SD	Mean	SD	Decision
21.	The university should engage in regular training and retraining for counsellors' capacity building in AI and digital counselling tools	15	17	1	1	3.35	0.68	Agree
22.	The university should invest in digital infrastructure to support effective AI integration in counselling services	12	15	3	4	3.03	0.95	Agree
23.	Policies likewise data protection laws should be developed to guide ethical AI use and confidentiality in counselling services	11	16	5	2	3.06	0.84	Agree
24.	Collaboration with edtech firms or international organizations to provide access to resources and expertise in order to improve AI adoption in the university	14	15	2	3	3.18	0.89	Agree
25.	AI tools should be culturally adapted to suit the Nigerian university context including counselling services	13	18	1	2	3.24	0.77	Agree
26.	Adequate government funding should be constantly available to support innovation in student support services in counselling in the university	10	20	1	3	3.09	0.82	Agree
27.	Pilot programmes should be organized to help test likewise improve AI integration before full-scale adoption in the university	9	17	4	4	2.91	0.92	Agree

28.	Encouraging cross-sectoral collaboration which enables public institutions to collaborate with psychologists, software developers, data scientists and counselling professionals to co-create hybrid systems where AI supports should be used to complement not replace human counsellors for effective integration in the university	13	11	5	5	2.94	1.06	Agree
29.	Mobilization of robust digital infrastructure, high-speed internet, data storage, computing power, likewise functionality and maintenance capacity of ICT infrastructure for effective integration of AI in counselling services in the university	12	14	5	3	3.03	0.92	Agree
30.	Locally relevant AI tools should be designed to reflect the cultural and linguistic diversity of the region to improve adoption and effectiveness of AI in counselling services	15	10	7	2	3.12	0.93	Agree
31.	The university need to prioritize investments in cloud-based systems, likewise AI software integration tools, possibly through public-private partnerships (PPP) for effective integration in counselling services	9	13	5	7	2.71	1.07	Agree
Grand Mean Score & SD		=				3.06	0.92	Agree

Analysis of data from Table 3 indicated that all the items were rated above 2.50 of the acceptable mean scores by the universities counsellors in order to show that they agreed with these statements. None of the items from 21 to 31 were rated below 2.50 of the acceptable mean scores by the universities counsellors in order to show that they disagreed with these statements. The grand mean score and standard deviation scores are 3.06 and 0.92, showing that there was no wide spread deviation in the respondents' positive responses respectively. The result therefore, revealed the strategies which can be adopted to enhance effective integration of AI in counselling services in public universities in Anambra State.

Discussion of Findings

Findings of the study revealed that the current state of integration of Artificial Intelligence (AI) in counselling services in public universities in Anambra State was non-existence. Also, certain challenges confronted the integration of AI in counselling services in public universities in Anambra State. However, there are strategies which can be adopted to enhance effective integration of AI in counselling services in public universities in Anambra State. It was found out that the Artificial Intelligence (AI) was not integrated in counselling services in public universities in Anambra State. This finding further implied that AI was non-existence in counselling services in public universities in Anambra State and this was so because the universities currently did not have a digital platform for providing automated counselling support, AI tools (e.g., chatbots or virtual assistants) were not currently used in counselling, AI tools were not currently used to predict academic risks likewise support educational counselling services including academic advising in the universities, students did not currently access AI-based career or vocational guidance in their institutions, AI-based socio-personal guidance has not been incorporated into the counselling services for student behaviour tracking, likewise solving students social and emotional challenges in the institutions, and AI was not integrated into the student affairs or counselling management systems for triaging student concerns likewise detecting emotional distress through language analysis in the institutions.

It was further discovered that there was no institutional awareness of the role of AI in improving counselling services for its smooth integration, the universities had no plans or policies toward adopting AI in counselling services, AI predictive analytics tools which offer personalized support likewise provide 24/7 assistance to students in order to bridge gaps in access to support counselling services was not currently used in the institutions, and AI was not increasingly been integrated to provide real-time counselling services that supports student mental health challenges in the institutions. This finding corroborates and aligns with the findings of Adetunji and Olowookere (2022) study which indicated that most Nigerian universities were yet to fully incorporate AI in their student support systems due to infrastructural and strategic limitations. Similarly, Eze et al. (2021) study found out that although AI was

increasingly used for administrative tasks, its use in psychosocial and academic support functions remained underdeveloped. Moreover, UNESCO (2021) emphasized that in most developing countries, including Nigeria, the adoption and integration of AI in education was uneven and faces significant structural and cultural barriers.

The finding of this study revealed the challenges confronting integration of AI in counselling services in public universities in Anambra State. This included lack of digital infrastructure limited AI integration in counselling in the institutions, low digital literacy in AI tools usage among counsellors affected its integration in counselling services in the institutions, resistance to using/keying into technological innovations due to cultural perceptions of counselling, was common among counsellors in the institutions, there was no institutional policy supporting AI use in counselling services in the institutions, issues in connection to data privacy, confidentiality including ethical concerns, hindered AI adoption in student counselling in the institutions, insufficient funding preventing the procurement of AI-based systems including tools inhibited the institutions from integrating AI into counselling, Internet connectivity challenges affected the functionality of AI tools in counselling in the institutions, there was limited awareness of AI's potential in student support services in counselling services in the institutions, counsellors had limited exposure to emerging technologies likewise lacked the necessary training required to interact with or manage AI-powered tools, and skepticism among counsellors about the reliability of AI for emotional and psychological interventions hindered its adoption in the institutions. This finding concurs and is equally consistent with the findings of Aina (2020) study which identified poor internet access, lack of funding, and inadequate ICT tools as major barriers to digital integration in Nigerian universities. Similarly, Oyelere et al. (2021) study found out that many academic and counselling professionals in Nigeria lacked the digital literacy and confidence to adopt AI-powered platforms. The absence of ethical frameworks and data protection mechanisms also contributes to resistance toward AI integration, as indicated by Holmes and Tuomi (2022) study findings. Their findings emphasized that safeguarding user data, ensuring transparency in algorithms, and

promoting responsible use were the key to public trust in AI systems that is currently lacking in many Nigerian institutions.

Finally, the study finding revealed strategies which can be adopted to enhance effective integration of AI in counselling services in public universities in Anambra State. They included that the universities should engage in regular training and retraining for counsellors' capacity building in AI and digital counselling tools, universities should invest in digital infrastructure to support effective AI integration in counselling services, policies likewise data protection laws should be developed to guide ethical AI use and confidentiality in counselling services, collaboration with edtech firms or international organizations to provide access to resources and expertise in order to improve AI adoption in the universities, AI tools should be culturally adapted to suit the Nigerian universities context including counselling services, adequate government funding should be constantly available to support innovation in student support services in counselling in the universities, pilot programmes should be organized to help test likewise improve AI integration before full-scale adoption in the universities, encouraging cross-sectoral collaboration which enables public institutions to collaborate with psychologists, software developers, data scientists and counselling professionals to co-create hybrid systems where AI supports should be used to complement not replace human counsellors for effective integration in the universities, mobilization of robust digital infrastructure, high-speed internet, data storage, computing power, likewise functionality and maintenance capacity of ICT infrastructure for effective integration of AI in counselling services in the universities, locally relevant AI tools should be designed to reflect the cultural and linguistic diversity of the region to improve adoption and effectiveness of AI in counselling services, and the universities need to prioritize investments in cloud-based systems, likewise AI software integration tools, possibly through public-private partnerships (PPP) for effective integration in counselling services. This finding relates and corroborates with the findings of Miao and Holmes (2021) study which indicated that teacher and counsellor training was essential for the successful adoption of AI in educational settings. Furthermore, the findings of Fitzpatrick et al. (2017) study demonstrated that the effectiveness of AI in psychological support depended not only on technology but also on proper design,

localization, and ethical supervision. The findings of Cheng (2022) study also support these findings, noting that partnerships with tech providers and gradual, pilot-based implementation approaches enhanced adoption of AI and minimize resistance. The call for policy frameworks is echoed in UNESCO's (2021) guidance for governments, which emphasizes national AI strategies, ethics codes, and digital infrastructure expansion. However, it has been established from the findings of this present study that the integration of AI in counselling services in public universities in Anambra State is currently low, with multiple structural, capacity-related, and ethical challenges impeding the progress. Nonetheless, there is a strong consensus among stakeholders on actionable strategies that can promote effective AI adoption in counselling services in the universities in both Anambra State and beyond. Hence, meaningful adoption will require infrastructural investment and development, policy reforms and ethical guidelines, stakeholder or staff training, institutional partnerships, and cultural change within institutions. A strategic and phased approach to AI integration can promote more responsive, inclusive, and effective counselling services for students in the digital age.

Conclusion

The study explored the current state of Artificial Intelligence (AI) integration in counselling services across public universities in Anambra State, Nigeria. The findings revealed that while AI holds significant potential for enhancing counselling delivery through 24/7 support, efficiency and scalability, yet, its integration remains at a very minimal level, almost non-existence in counselling services, especially at the public universities. Several interrelated challenges hindered effective adoption, including inadequate ICT infrastructure, limited digital literacy among counsellors, lack of institutional policy frameworks, and ethical concerns about data privacy and trust in automated systems. Despite these challenges, the present study indicated strong support among counselling staff, ICT personnel, and administrators for the adoption of AI, if appropriate improvement strategies are implemented. These include investing in infrastructure, building human capacity, developing policies for ethical use, and promoting gradual integration through culturally relevant and localized tools. The study concludes that the integration of AI into counselling

services is not only necessary but inevitable in the face of increasing student needs and the global trend towards digital transformation in education. A strategic, inclusive, and well-supported implementation process will be key to achieving this goal in Nigerian universities.

Recommendations

Based on the findings, the following recommendations are proffered:

1. Public universities through the support of the National Universities Commission (NUC) should ensure effective integration of AI in counselling services in public universities in Anambra State, by initiating/establishing digital platforms which provides automated counselling support, organizing continuous capacity building training for university counsellors, student affairs officers, and ICT staff through workshops and certification programmes to enhance their digital literacy and AI readiness. This will increase their competence and confidence in using AI-powered platforms for student support services likewise improve the current state of AI integration in counselling services.
2. The government, NUC and university management should curb the challenges hindering effective integration of AI in counselling services in public universities in Anambra State and prioritize the upgrading of digital infrastructure through their investment in ICT infrastructure and development of AI-compatible platforms such as high-speed internet, cloud-based systems and AI software, among other. Institutions could start with small-scale AI applications, such as chatbots for basic queries, before expanding to more complex counselling functions for effective integration of AI in counselling services.
3. There is need for the public universities to adopt the improvement strategies such as formulating clear institutional policies and national frameworks that guide the ethical, secure, inclusive and context-appropriate use of AI in counselling services. These policies should include provisions for data privacy,

cultural sensitivity, student consent and the hybrid use of AI to complement rather than replace human counsellors.

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