

Investigations on Deployment of Artificial Intelligence for the Implementation of Guidance and Counseling Programme in Public Secondary Schools in FCT, Abuja, Nigeria

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Abstract

This study investigated the deployment of Artificial Intelligence for the implementation of Guidance and Counseling programmes in Public Secondary Schools in the Federal Capital Territory, Abuja., Nigeria. A descriptive research method was adopted for the study. The study was carried out in Abuja. The population of the study comprised Counsellors in all public secondary schools in FCT, Abuja, Nigeria. The sample size for the study was 60. A researcher developed an instrument titled “Deployment of Artificial Intelligence for Implementation of Guidance and Counseling Programme Questionnaire” (DAIIGCPQ). Face validation was done for the instrument. The instrument was given to three experts for validation. Two experts from the Department of Educational Foundations Faculty of Education, University of Abuja were involved in the validation of the instrument. The scores generated were collected and analyzed using Mean and standard deviation to answer the research questions and z-test to test the null hypotheses at a 0.05 level of significance. The study concluded that there was a significant relationship between artificial intelligence and the effective implementation of Guidance and Counseling programmes in public Secondary Schools. The study also revealed that inadequate artificial intelligence facilities, Unstable power supply, Unstable Net service, poor maintenance and poor funding were the problems militating against the effective deployment of Artificial Intelligence for the implementation of Guidance and Counseling programmes in public secondary schools in FCT, Abuja, Nigeria. Based on this finding, the paper recommended that artificial intelligence facilities should be provided to all departments of Guidance and Counselling of public secondary schools in FCT, Abuja, Nigeria.

Keywords: Artificial Intelligence, Curriculum Implementation, Guidance and Counseling programme

Introduction:

Guidance and counselling programme is one of the programmes offered in Nigerian educational institutions, especially at the secondary school level. Guidance and counselling is a service that all human beings need at one point in their life. There is no human being that has never

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had a problem at one point or another. Once a problem arises, one seeks solutions, suggestions or even other people's opinions about the problem. In one way or another, one seeks guidance and counselling services (Alutu, 2005; Garner, 2000; Suleiman et al., 2019). Guidance and counselling according to Adebukola (2015) is the process of helping individuals discover and develop their educational, vocational and psychological potentialities and thereby achieve an optional level of personal happiness and social usefulness. Akpan (2010), defined guidance and counselling as an educational service that seeks to provide the school child the opportunity to obtain holistic educational development that prepares him/her for functional life.

The implementation of Guidance and Counseling programs in educational institutions is supported by many resources such as information communication technology and artificial intelligence. AI is an educational resource that is transforming the educational sector (Ogunode and Olowonefa, 2023). According to Copeland (2023) is the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. The term is frequently applied to the project of developing systems endowed with the intellectual processes characteristic of humans, such as the ability to reason, discover meaning, generalize, or learn from experience.

Artificial intelligence according to Ogunode & Ukozor (2023) is the ability of a machine to carry out tasks usually carried out by human intelligence. Artificial intelligence is a branch of science that deals with programming machines with a simulation of human intelligence to perform similar tasks normally carried out by human beings. Frankenfield (2023) defined Artificial intelligence (AI) as the simulation of human intelligence by software-coded heuristics. Artificial Intelligence is a branch of science producing and studying machines aimed at the stimulation of human intelligence processes.

The deployment of artificial intelligence in the implementation of the Guidance and Counseling programme in public secondary schools in FCT, Abuja appear to not have been effective due to many challenges. It also seems that many Guidance and Counseling professionals have not ascertained the impact AI can have in the implementation of the Guidance and Counseling programme in public secondary schools in FCT, Abuja. It is based on this that this paper investigates the deployment of Artificial Intelligence for the implementation of Guidance and Counseling programmes in public secondary schools in FCT, Abuja, Nigeria.

Objectives of the Study:

The objectives of this study are to investigate the deployment of Artificial Intelligence for the implementation of Guidance and Counseling programmes in public secondary schools in FCT, Abuja. The sub-objective includes:

- i. To find out if deployment of Artificial Intelligence aids the implementation of Guidance and Counseling programme in public secondary schools in FCT, Abuja.;
- ii. To find out the problems militating against the effective deployment of Artificial Intelligence for the implementation of Guidance and Counseling programme in public secondary schools in FCT, Abuja, Nigeria.

Research Questions:

Based on this research objectives, the researcher formulated the following research questions to address the objectives:

- i. To what extent do deployment of Artificial Intelligence aids the implementation of Guidance and Counseling programme in public secondary schools in FCT, Abuja.?
- ii. What are the problems militating against the effective deployment of Artificial Intelligence for the implementation of Guidance and Counseling programmes in public secondary schools in FCT, Abuja, Nigeria?

Hypothesis:

H₁: There is no significant difference between the mean scores of male counsellors and female counsellors on the extent of artificial intelligence aiding the implementation of Guidance and Counseling programmes in public secondary schools in FCT.

Methods:

A descriptive research method was adopted for the study. The study was carried out in Abuja. The population of the study comprised Counsellors in all public secondary schools in FCT, Abuja, Nigeria. The sample size for the study was 60. A researcher developed an instrument titled “Deployment of Artificial Intelligence for Implementation of Guidance and Counseling Programme Questionnaire” (DAIIGCPQ). The instrument has sections A and B. Section A, dealt with the demographic variables of the respondents while section B covered the variables under investigation. The instrument was designed on a 4-point rating scale with response options ranging from Strongly Agree (SA); Agree (A); Disagree (D); and Strongly Disagree (SD). Face validation was done for the instrument. The instrument was given to three experts for validation. Two experts from the Department of Educational Foundations Faculty of Education, University of Abuja were involved in the validation of the instrument. The inputs of the assessors were used to build the final version of the instrument. The internal consistency of the instrument was determined through a test-retest process. The scores generated were collected and analyzed using Mean and standard deviation to answer the research questions and z-test to test the null hypotheses at a 0.05 level of significance.

Data Analysis:

Table 1: Z-Test Analysis of the Mean Scores

Variables	N	Mean	SD	DF	Z-cal	Z-crit	Sign Lev	Remarks
Male Counsellors	42	2.93	0.82	781	.29	1.99	0.05	Accepted
Female Counsellors	18	2.97	0.86					

Table 1 indicates that the z-calculated value of 0.29 is less than the z-critical value of 1.99 at 781 degrees of freedom and 0.05 significance level. Hence the null hypothesis states. Hence the null hypothesis which states that there is no significant difference between the mean scores of male and female Counsellors on the extent of artificial intelligence aiding the implementation of Guidance and Counselling services in public services in FCT, Abuja, Nigeria is accepted.

Data collected on problems militating against the effective deployment of Artificial Intelligence for the implementation of the implementation of Guidance and counseling programme in public secondary schools in FCT (Table 2) indicated positive answers for all items 1 to 4. That is agreement that inadequate artificial intelligence facilities with a mean of 3.32, Unstable power supply with a mean of 2.96, Unstable Net service with a mean of 3.03, poor maintenance with a

mean of 2.63 and poor funding with a mean of 2.89 and a total mean of 3.38 which is greater than the cut-off point of 2.50.

Table 2: Problems Militating Against the Effective Deployment of Artificial Intelligence

Items	Means	Decision
Inadequate artificial intelligence facilities	3.32	Accepted
Unstable power supply	2.96	Accepted
Unstable Net service	3.03	Accepted
Poor maintenance	2.63	Accepted
Poor funding	2.89	Accepted
Grand mean	3.38	Accepted

Discussion of Findings:

The result collected revealed that there is a positive significant relationship between artificial intelligence and the implementation of Guidance and Counseling programmes in public secondary schools in FCT, Nigeria. This result is in line with the discovery of Igbokwe (2023) and Ogunode, et al. (2023) who found that AI supported the implementation of teaching and learning programmes in schools. Pocket (2022) and Singh and Jain (2022) also concluded that AI aided the implementation of teaching, learning and service programmes in educational institutions. The result also disclosed that inadequate artificial intelligence facilities, Unstable power supply, Unstable Net service, poor maintenance and poor funding are the problems militating against the effective deployment of Artificial Intelligence for the implementation of Guidance and Counseling programmes in public secondary schools in FCT, Abuja, Nigeria. This result collaborates with the finding of Ogunode et al., (2024) and Ogunode and Gregory (2023) who concluded that unstable internet service, power supply, shortage of AI facilities, and poor literacy on the part of teachers and students are the constraints to the deployment of AI in secondary schools.

Conclusion:

The study concluded that there was a significant relationship between artificial intelligence and effective implementation of Guidance and Counseling programmes in public secondary schools. The study revealed that disclosed that inadequate artificial intelligence facilities, Unstable power supply, Unstable Net service, poor maintenance and poor funding are the problems militating against the effective deployment of Artificial Intelligence for the implementation of Guidance and Counseling programme in public secondary schools in FCT, Abuja, Nigeria.

Recommendations:

Based on this finding, the paper recommended that artificial intelligence should be provided to all departments of Guidance and Counselling of public secondary schools, in FCT, Abuja, Nigeria.

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