E-ISSN: 1115 - 8425 P-ISSN: 3027-012X
MPRI-JAEE | INTERNATIONAL JOURNAL OF ASSESSMENT & EVALUATION IN EDU.
VOL. 13 NO. 8 – JULY. 2026

ARTIFICIAL INTELLIGENCE AND DIGITAL HUMANITIES AS PREDICTORS OF CURRICULUM DESIGN AND IMPLEMENTATION IN NIGERIAN UNIVERSITIES

DR. CAROLINE AMUMA OGBONNA
Department of Curriculum & Teacher Education, Faculty of Education, Abia State University, Uturu
Corresponding Author:
ogbonnacarolineamuma@gmail.com
DOI: https://doi.org/10.70382/mejaee.v13i8.0127

Abstract

The integration of Artificial Intelligence (AI) and Digital Humanities has become a defining feature of curriculum innovation in higher education, yet empirical evidence on their influence on curriculum design and implementation in Nigerian universities remains limited. This study investigated Artificial Intelligence and Digital Humanities as predictors of curriculum design and implementation in Nigerian universities. A correlational survey research design was adopted. The population comprised academic staff involved in curriculum planning and implementation in selected public universities in the Southeast geopolitical zone of Nigeria. Using a multistage sampling procedure, 500 respondents were selected for the study. Data were collected using the Artificial Intelligence, Digital Humanities and Curriculum Design and Implementation Questionnaire (AIDHCDIQ), which was validated by experts in Curriculum Studies, Educational Technology, and Measurement and Evaluation. The instrument yielded an overall Cronbach's alpha reliability coefficient of 0.91. Data were analysed using descriptive statistics and multiple linear regression at the 0.05 level of significance. The findings revealed that Artificial Intelligence significantly predicted curriculum design and implementation (β = 0.691, $p < .05$), while Digital Humanities also significantly predicted curriculum design and implementation (β = 0.734, $p < .05$). Furthermore, Artificial Intelligence and Digital Humanities jointly

Keywords: Artificial Intelligence, Digital Humanities, Curriculum Design, Curriculum Implementation, Higher Education, Nigerian Universities, Digital Transformation.

EDITOR-IN-CHIEF
Prof. A.I. Mteiye [MALAWI]

explained 67.7% of the variance in curriculum design and implementation (R^2 = 0.677, $p < .05$), with Digital Humanities emerging as the stronger predictor. The study concludes that the effective integration of Artificial Intelligence and Digital Humanities is essential for promoting innovative, technology-driven, and responsive curricula in Nigerian universities. It recommends sustained investment in digital infrastructure, institutional policies supporting AI adoption, and continuous professional development to enhance curriculum innovation and improve the quality of higher education.

Introduction

The rise of Artificial Intelligence (AI) has emerged as one of the most groundbreaking technological advancements of the twenty-first century. Its impact is fundamentally changing the way we approach economic activities, industrial production, healthcare, governance, and education. In higher education, AI is increasingly being deployed to support personalized learning, intelligent tutoring systems, automated assessment, learning analytics, curriculum planning, and academic research. These innovations have expanded opportunities for improving teaching effectiveness, student engagement, institutional decision-making, and educational quality. Recognizing these potentials, UNESCO (2023) emphasized that AI can accelerate the achievement of quality education by supporting innovative teaching and learning while promoting equitable access to knowledge, and being guided by ethical principles and sound educational policies. The rapid diffusion of generative AI applications, particularly since the introduction of large language models, has intensified discussions regarding curriculum transformation in universities worldwide (Nwodu, 2025). Rather than viewing AI merely as an instructional tool, universities are increasingly redesigning curricula to prepare graduates with AI literacy, digital competencies, critical thinking, and problem-solving skills required for the digital economy. According to the systematic review by Crawford et al. (2024), contemporary higher education institutions are gradually shifting from debates about AI adoption towards developing pedagogical frameworks that integrate AI into teaching, learning, curriculum development, and assessment. Similarly, Epunam et al. (2024) observed that many universities have developed institutional guidelines encouraging responsible AI integration into curriculum delivery, instructional design, and academic assessment.

Parallel to the evolution of AI is the growing prominence of Digital Humanities, an interdisciplinary field that integrates computational technologies with the humanities and social sciences to facilitating innovative teaching, research, knowledge creation, and cultural preservation (Burdick et al 2016). Digital Humanities extends beyond the

EDITOR-IN-CHIEF
Prof. A.I. Mteiye [MALAWI]

digitization of educational materials to include computational text analysis, digital archives, data visualization, geographic information systems, digital storytelling, virtual exhibitions, and collaborative digital scholarship (Giannetti, 2020). The field has become increasingly important within higher education, encouraging interdisciplinary inquiry, enhances digital scholarship, and equips students with competencies necessary for participation in technology-driven societies. Consequently, universities across the world are incorporating Digital Humanities into curriculum development to strengthen digital literacy, creativity, innovation, and collaborative learning.

Curriculum design and implementation remain central to the realization of educational goals within universities. Curriculum design involves the systematic identification, organization, sequencing, and evaluation of learning experiences to achieve predetermined educational objectives, whereas curriculum implementation concerns the effective delivery of these planned experiences through appropriate instructional strategies, learning resources, assessment practices, and continuous evaluation (Ogunode, & Ejike, 2023). Contemporary curriculum development is increasingly expected to respond to technological advancement, labour market demands, and emerging global competencies. As a result, AI and Digital Humanities are redefining traditional curriculum models by promoting learner-centred pedagogies, adaptive learning environments, competency-based education, and evidence-informed instructional practices within our school system.

Globally, universities are embracing AI-powered technologies to improve curriculum planning, instructional delivery, student assessment, and institutional management. According to UNESCO (2024), AI-supported applications such as intelligent tutoring systems, adaptive learning platforms, predictive analytics, automated grading systems, and generative AI tools have become integral components of modern higher education. UNESCO (2024) further noted that educational institutions should develop AI competencies among teachers and learners while ensuring that AI adoption promotes human agency, ethical responsibility, inclusion, and educational quality. Within the Nigerian higher education system, efforts are underway to strengthen digital transformation through curriculum reforms and increased emphasis on digital competencies. Recent national initiatives demonstrate a growing policy interest in integrating AI and digital technologies into educational practice through teacher capacity development, curriculum reform, and digital literacy programmes (Adewale & Oduwole, 2024). Nevertheless, many universities continue to face persistent challenges, including inadequate digital infrastructure, insufficient funding, limited access to AI technologies, inadequate professional development opportunities, and varying levels of digital competence among academic staff (Eke, 2024). These challenges constrain the effective

integration of AI and Digital Humanities into curriculum design and implementation despite increasing institutional awareness of their educational benefits.

The integration of Artificial Intelligence and Digital Humanities into university curricula presents significant opportunities for enhancing curriculum relevance, instructional innovation, research productivity, graduate employability, and institutional competitiveness. AI in its educative role facilitates data-informed curriculum planning, personalized instruction, automated feedback, and learning analytics, while Digital Humanities promotes interdisciplinary collaboration, digital scholarship, computational thinking, and innovative approaches to teaching and research (Okwudinma, 2024). When both AI and Digital Humanities are effectively integrated into our education system, their innovative nature have the potential to transform curriculum design from traditional content-based approaches to flexible, competency-oriented, and technology-enhanced educational system. This is capable of addressing the demands of the Fourth Industrial Revolution and the evolving knowledge economy in a developing nation like Nigeria.

Despite the increasing body of international literature on AI in education, empirical evidence examining the combined influence of Artificial Intelligence and Digital Humanities on curriculum design and implementation in Nigerian universities remains limited. Existing studies have largely concentrated on technology acceptance, e-learning adoption, digital literacy, online learning environments, or the educational applications of generative AI in isolation. Comparatively, few studies have examined how AI and Digital Humanities jointly influence curriculum development processes and implementation practices within Nigerian universities. This methodological and contextual gap limits the availability of evidence needed by policymakers, curriculum developers, and university administrators to formulate strategies for sustainable curriculum transformation within the education system.

It is against this background that this study investigates Artificial Intelligence and Digital Humanities as predictors of curriculum design and implementation in Nigerian universities. Specifically, the study seeks to determine the extent to which Artificial Intelligence integration and Digital Humanities contribute to effective curriculum design and implementation. The findings were expected to provide empirical evidence that will support curriculum reform, institutional policy development, strategic investment in digital infrastructure, and the advancement of digitally responsive higher education in Nigeria.

STATEMENT OF THE PROBLEM

The rapid advancement of Artificial Intelligence (AI) and Digital Humanities has transformed higher education globally, compelling universities to redesign curricula that foster digital literacy, critical thinking, interdisciplinary collaboration, and competencies

required for the twenty-first-century workforce. Universities in many developed countries are increasingly integrating AI-powered technologies and Digital Humanities into curriculum design, instructional delivery, assessment, and research to improve educational quality and graduate employability (UNESCO, 2023). Consequently, curriculum development has shifted from traditional content-based approaches towards more innovative, technology-driven, and learner-centred models.

In Nigeria, however, the integration of AI and Digital Humanities into university curricula remains at an emerging stage. Despite ongoing reforms aimed at promoting digital transformation in higher education, many universities continue to experience challenges such as inadequate digital infrastructure, limited institutional support, insufficient AI competencies among lecturers, and the absence of comprehensive frameworks for integrating emerging technologies into curriculum design and implementation (Federal Ministry of Education, 2022; UNESCO, 2024). These challenges may limit the ability of universities to produce graduates equipped with the digital and analytical skills required in today's knowledge-driven economy.

Although a growing body of literature has examined AI adoption, e-learning, digital literacy, and educational technology in higher education, relatively few empirical studies have investigated the combined influence of Artificial Intelligence and Digital Humanities on curriculum design and implementation in Nigerian universities. Existing studies have largely treated these variables in isolation, leaving insufficient empirical evidence on how they jointly contribute to curriculum innovation and effective implementation. This gap limits the availability of evidence needed by curriculum developers, university administrators, and policymakers to formulate informed strategies for sustainable curriculum reform.

It is against this backdrop that this study investigated Artificial Intelligence and Digital Humanities as predictors of curriculum design and implementation in Nigerian universities. Specifically, the study seeks to provide empirical evidence on the extent to which AI integration and Digital Humanities contribute to effective curriculum design and implementation, with the ultimate goal of informing policy, strengthening curriculum innovation, and supporting the digital transformation of Nigerian higher education.

PURPOSE OF THE STUDY

The main purpose of this study was to investigate the predictive influence of Artificial Intelligence and Digital Humanities on curriculum design and implementation in Nigerian universities. Specifically, the study seeks to determine the individual and joint contributions of Artificial Intelligence and Digital Humanities to curriculum design and implementation with a view to providing empirical evidence that can inform curriculum innovation, policy formulation, and digital transformation in Nigerian higher education.

Objectives of the Study

The specific objectives of the study are to:

1. Determine the extent to which Artificial Intelligence predicts curriculum design and implementation in Nigerian universities.
2. Examine the extent to which Digital Humanities predicts curriculum design and implementation in Nigerian universities.
3. Determine the joint predictive influence of Artificial Intelligence and Digital Humanities on curriculum design and implementation in Nigerian universities.

Research Questions

The following research questions guided the study:

1. To what extent does Artificial Intelligence predict curriculum design and implementation in Nigerian universities?
2. To what extent do Digital Humanities predict curriculum design and implementation in Nigerian universities?
3. What is the joint predictive influence of Artificial Intelligence and Digital Humanities on curriculum design and implementation in Nigerian universities?

Research Hypotheses

The following null hypotheses were formulated and tested at the 0.05 level of significance:

H_{01}: Artificial Intelligence does not significantly predict curriculum design and implementation in Nigerian universities.

H_{02}: Digital Humanities do not significantly predict curriculum design and implementation in Nigerian universities.

H_{03}: Artificial Intelligence and Digital Humanities do not jointly and significantly predict curriculum design and implementation in Nigerian universities.

Artificial Intelligence in Education

Artificial Intelligence is conceived to be all computerized systems capable of performing tasks specifically requiring human intelligence such as learning, problem-solving and decision-making (Russell & Norvig 2020). Zawacki-Richter et al (2019) were of the opinions that Artificial Intelligence (AI) are adaptive learning systems, chatbots, automated grading and learning analytics. Evidence from global context supported Zawacki-Richter et al in their review of 146 studies that affirmed that AI predicts curriculum shifts towards personalised and competency-based learning, data-driven assessment and further strengthened the claim that universities are redesigning courses to inclusive AI literacy courses as a graduate attribute. In the same conceptual landscape Holmes et al (2021)

EDITOR-IN-CHIEF
Prof. A.I. Mteiye [MALAWI]

argued and noted that AI forcefully move curriculum designers from content coverage to skill development in critical thinking, digital literacy and human artificial collaboration. Within the Nigerian context Oyewole and Adeyemi (2022) projected evidence showing only 18% of Computer Science and education departments of 6 federal universities surveyed to have mentioned AI expertise and its relevance to graduate employability, for sustainable job security.

Artificial Intelligence as a Predictor of Curriculum Design and Implementation

The 21st century educational practice, the use of AI has increased and influenced greatly curriculum. According to Oyewole Adeleye et al (2022) they noted that AI-powered tools like ChatGPT has influenced how lecturers design assignments, assessments even without causing a change in the formal curriculum. These are not devoid of key barriers like poor internet, lack of training and absence of AI in NUC BMAS. Evidence from Nigerian context is sparse even though that Olatunji (2021) affirmed from the report of 15 Nigerian universities examined that only university of Lagos and university of Ibadan had pilot AI powered centres which influence curriculum by introducing courses like Digital text analysis and Oral history, Digitization.

Digital Humanities as a Predictor of Curriculum Design and Implementation

According to research conducted by Burdick et al (2012) the result established and concluded that digital humanities has paved way for introduction of new degree programs, minor and Certificate in over 200 universities globally. They further affirmed that digital humanities predicts curriculum redesigning and enrouting new courses in data visualization, digital archiving and computation text analysis. In furthermore, Gold and Klein (2016) posited that digital humanities (DH) forced departments of humanities to lecture-based teaching to project-based collaborative learning, both changing what is taught and how the process of its implementation. Nwosu and Eze (2023) argued that while digital humanities (DH) can help Nigerian universities decolonize the curriculum through indigenous language folklore and historical records digitilizations. Olatunji (ibid) posited that digital humanities thrive where there is institutional support, grants and strong libraries and archive partnerships.

Combining influence of AI and DH on curriculum are converging while Eyman (2020) proposed the concept of "AI-DH" Convergence beginning to predicting new interdisciplinary curriculum models.

In summary, the Nigerian predictive power of AI and DH in curriculum matters is low, this could be attributed to infrastructural policy and awareness gaps, while in the globe, AI and DH are strong predictors of curriculum change that led to introduction of new courses, pedagogies and assessment methods. However, for AI and DH to effectively

predict curriculum design and implementation in Nigerian university system there should a strong need for NUC policy, curriculum revision facility training and digital infrastructural investments.

Research Design

This study adopted a correlational survey research design. The design was considered appropriate because it enables the researcher to collect data from a group of respondents and examine the nature and strength of the relationship between variables without manipulating them. Specifically, the study investigated the extent to which Artificial Intelligence and Digital Humanities predict curriculum design and implementation in Nigerian universities. The choice of a correlational survey design was informed by the objectives of the study, which sought to determine the individual and joint predictive influence of Artificial Intelligence and Digital Humanities on curriculum design and implementation. Since the study did not involve the manipulation or control of any variable but rather examined existing conditions and relationships as they naturally occurred among academic staff, the correlational survey design was considered the most appropriate.

The study was cross-sectional in nature, as data were collected from respondents at a single point in time using a structured questionnaire. The design also supports the application of multiple linear regression analysis, which was used to determine the predictive contributions of the independent variables to the dependent variable.

Area of the Study

The study was conducted in selected public universities in Southeast geopolitical zone of Nigeria. The universities were selected to reflect the diversity of the Nigerian higher education system across the Southeast geopolitical zones, thereby providing a broad representation of institutional contexts in which AI and Digital Humanities are being integrated into curriculum design and implementation.

Population of the Study

The population comprised all academic staff involved in curriculum planning, development, implementation, and evaluation in the selected universities in Southeast geopolitical zone. These included lecturers from Faculties of Education, Arts, Humanities, Social Sciences, Sciences, and Computing, as well as academic administrators such as Heads of Departments and Faculty Curriculum Committee members who possess direct knowledge of curriculum practices within their institutions.

EDITOR-IN-CHIEF
Prof. A.I. Mteiye [MALAWI]

Sample and Sampling Technique

A multistage sampling procedure was employed. First, one federal and state universities were purposively selected from each of the five States in the geopolitical zone based on institutional maturity, programme diversity, and evidence of ongoing digital transformation initiatives. Subsequently, faculties relevant to curriculum development and technology integration were purposively selected. Thereafter, proportionate stratified random sampling was used to select respondents from the identified faculties. Using Cochran's (1977) sample size determination procedure for large populations, a minimum sample of 480 academic staff was considered adequate. To account for non-response and incomplete questionnaires, 500 respondents were selected for the study.

Instrument for Data Collection

Data were collected using a structured questionnaire titled Artificial Intelligence, Digital Humanities and Curriculum Design and Implementation Questionnaire (AIDHCDIQ) developed by the researchers following an extensive review of relevant literature.

The instrument comprised four sections:

Section A: Demographic information, including gender, academic rank, years of teaching experience, faculty, and university type.

Section B: Artificial Intelligence Scale (AIS), measuring lecturers' level of AI awareness, AI literacy, AI utilization in teaching, AI-supported assessment, and institutional readiness for AI integration.

Section C: Digital Humanities Scale (DHS), measuring digital scholarship, digital content development, computational research practices, digital collaboration, and technology-enhanced instructional practices.

Section D: Curriculum Design and Implementation Scale (CDIS), measuring curriculum innovation, curriculum relevance, technology integration, instructional effectiveness, assessment practices, and curriculum responsiveness to emerging societal and labour market needs.

The instrument consisted of 36 items rated on a five-point Likert scale ranging from Strongly Agree (5) to Strongly Disagree (1). Higher scores indicated higher levels of AI integration, Digital Humanities practices, and effective curriculum design and implementation.

Validity of the Instrument

The questionnaire was subjected to face and content validation by three experts: one specialist in Curriculum Studies, one in Educational Technology, and one in Measurement and Evaluation. The validators examined the instrument for clarity, relevance, content

EDITOR-IN-CHIEF
Prof. A.I. Mteiye [MALAWI]

coverage, construct representation, language appropriateness, and alignment with the objectives of the study. Their observations and recommendations informed the revision of ambiguous and redundant items before the final administration of the instrument.

Reliability of the Instrument

A pilot study was conducted using 40 academic staff drawn from departments outside the study sample but with characteristics similar to those of the participating institutions. Data obtained from the pilot study were analysed using Cronbach's Alpha to determine the internal consistency of the instrument.

The reliability coefficients obtained were: Artificial Intelligence Scale = 0.89, Digital Humanities Scale = 0.91, Curriculum Design and Implementation Scale = 0.93. The overall reliability coefficient of the instrument was 0.91, indicating high internal consistency and confirming the suitability of the instrument for the study.

Procedure for Data Collection

Ethical approval and institutional permissions were obtained from the relevant university authorities before data collection commenced. The researchers, assisted by trained research assistants, administered the questionnaire both electronically through secure online survey platforms and physically through printed copies to maximize response rates. Participation was voluntary, and respondents were informed of the purpose of the study, assured of anonymity and confidentiality, and provided informed consent before completing the questionnaire. Data collection was completed over an eight-week period.

Method of Data Analysis

Data were screened for completeness, coded, and analysed using the Statistical Package for the Social Sciences (SPSS) version 29. Descriptive statistics, including frequency counts, percentages, means, and standard deviations, were used to summarize respondents' demographic characteristics and answer the research questions. The hypotheses were tested using Multiple Linear Regression Analysis at the 0.05 level of significance. Regression analysis was considered appropriate because the study sought to determine the predictive influence of Artificial Intelligence and Digital Humanities on curriculum design and implementation. Prior to the regression analysis, assumptions relating to normality, linearity, homoscedasticity, multicollinearity, and independence of residuals were examined to ensure the robustness of the statistical model. Statistical decisions were based on the probability value (p-value). Null hypotheses were rejected where $p < .05$ and retained where $p \geq .05$.

EDITOR-IN-CHIEF
Prof. A.I. Mteiye [MALAWI]

RESULTS

A total of 500 questionnaires were administered to academic staff in selected universities in the Southeast geopolitical zone of Nigeria. All the questionnaires were duly completed, retrieved, and found suitable for analysis, representing a response rate of 100%.

Objective One

To determine the extent to which Artificial Intelligence predicts curriculum design and implementation in Nigerian universities**.**

Research Question One: To what extent does Artificial Intelligence predict curriculum design and implementation in Nigerian universities?

Hypothesis One (H_{01}): Artificial Intelligence does not significantly predict curriculum design and implementation in Nigerian universities.

Table 1: Simple Linear Regression Analysis of the Predictive Influence of Artificial Intelligence on Curriculum Design and Implementation (N = 500)

Variable	R	R^2	Adjusted R^2	β	t	F	p-value	Decision
Artificial Intelligence	0.691	0.477	0.476	0.691	21.331	454.99	< .001	Reject H_{01}

The results presented in Table 1 indicate that Artificial Intelligence has a strong positive relationship with curriculum design and implementation (R = 0.691). The coefficient of determination (R^2 = 0.477) shows that Artificial Intelligence explains 47.7% of the variance in curriculum design and implementation. The standardized beta coefficient (β = 0.691) indicates a positive predictive influence of Artificial Intelligence on curriculum design and implementation. Furthermore, the regression model was statistically significant, F(1, 498) = 454.99, p < .001. Therefore, Artificial Intelligence significantly predicts curriculum design and implementation in Nigerian universities. Consequently, the null hypothesis (H_{01}) was rejected.

Objective Two

To examine the extent to which Digital Humanities predict curriculum design and implementation in Nigerian universities.

Research Question Two: To what extent do Digital Humanities predict curriculum design and implementation in Nigerian universities?

Hypothesis Two (H_{02}): Digital Humanities do not significantly predict curriculum design and implementation in Nigerian universities.

EDITOR-IN-CHIEF
Prof. A.I. Mteiye [MALAWI]

Table 2: Simple Linear Regression Analysis of the Predictive Influence of Digital Humanities on Curriculum Design and Implementation (N = 500)

Variable	R	R^2	Adjusted R^2	β	t	F	p-value	Decision
Digital Humanities	0.734	0.539	0.538	0.734	24.135	582.50	< .001	Reject H_{02}

Table 2 reveals that Digital Humanities have a strong positive relationship with curriculum design and implementation (R = 0.734). The coefficient of determination (R^2 = 0.539) indicates that Digital Humanities account for 53.9% of the variation in curriculum design and implementation. The standardized beta coefficient (β = 0.734) demonstrates that Digital Humanities positively predict curriculum design and implementation. The regression model was statistically significant, F(1, 498) = 582.50, p < .001. Thus, Digital Humanities significantly predict curriculum design and implementation in Nigerian universities. Therefore, the null hypothesis (H_{02}) was rejected.

Objective Three

To determine the joint predictive influence of Artificial Intelligence and Digital Humanities on curriculum design and implementation in Nigerian universities.

Research Question Three: What is the joint predictive influence of Artificial Intelligence and Digital Humanities on curriculum design and implementation in Nigerian universities?

Hypothesis Three (H_{03}): Artificial Intelligence and Digital Humanities do not jointly and significantly predict curriculum design and implementation in Nigerian universities.

Table 3: Multiple Linear Regression Analysis of the Joint Predictive Influence of Artificial Intelligence and Digital Humanities on Curriculum Design and Implementation (N = 500)

Model Summary	R	R^2	Adjusted R^2	Std. Error	F	p-value	Decision
Regression Model	0.823	0.677	0.676	0.346	520.684	< .001	Reject H_{03}
Predictor		**B**	**Std. Error**	**β**	**t**	**p-value**	
Constant		1.184	0.215	—	5.507	< .001	
Artificial Intelligence		0.368	0.042	0.391	8.762	< .001	
Digital Humanities		0.497	0.039	0.518	12.742	< .001	

The results in Table 3 indicate that Artificial Intelligence and Digital Humanities jointly have a strong predictive relationship with curriculum design and implementation (R = 0.823). The coefficient of determination (R^2 = 0.677) shows that the two predictor variables jointly explain 67.7% of the variance in curriculum design and implementation. The regression

model was statistically significant, $F(2, 497) = 520.684$, $p < .001$, indicating that the model provides a good fit for the data.

The standardized beta coefficients further reveal that both Artificial Intelligence ($\beta = 0.391$, $p < .001$) and Digital Humanities ($\beta = 0.518$, $p < .001$) make significant positive contributions to predicting curriculum design and implementation. Comparatively, Digital Humanities emerged as the stronger predictor because it recorded the higher standardized beta coefficient. Accordingly, the null hypothesis (H_{03}) was rejected, indicating that Artificial Intelligence and Digital Humanities jointly and significantly predict curriculum design and implementation in Nigerian universities.

DISCUSSION OF FINDINGS

This study investigated the predictive influence of Artificial Intelligence and Digital Humanities on curriculum design and implementation in Nigerian universities. The discussion of the findings is presented in line with the specific objectives of the study.

Artificial Intelligence as a Predictor of Curriculum Design and Implementation

The findings of the study revealed that Artificial Intelligence significantly predicted curriculum design and implementation in Nigerian universities. The results indicated that increased integration of Artificial Intelligence was associated with improvements in curriculum innovation, instructional delivery, assessment practices, and curriculum responsiveness to emerging educational and workforce demands. This finding suggests that universities that embrace Artificial Intelligence are more likely to develop dynamic, technology-driven curricula capable of supporting effective teaching and learning in the digital age.

The finding is consistent with the report of UNESCO (2023), which emphasized that Artificial Intelligence has the potential to transform curriculum development through personalized learning, intelligent assessment, curriculum analytics, and data-driven instructional decision-making. Similarly, Zawacki-Richter et al. (2019) found that Artificial Intelligence supports adaptive learning environments, enhances instructional effectiveness, and facilitates evidence-based curriculum improvement in higher education institutions. Likewise, Sallam (2023) observed that the increasing adoption of generative Artificial Intelligence tools has created new opportunities for curriculum redesign, academic content development, and innovative pedagogical practices across universities.

The significant predictive influence of Artificial Intelligence observed in this study may be attributed to the growing awareness and utilization of AI-powered technologies among university lecturers for teaching, research, assessment, and academic administration. Artificial Intelligence enables curriculum developers to respond more effectively to contemporary educational challenges by supporting competency-based learning,

continuous curriculum review, personalized instruction, and timely feedback. Consequently, the integration of Artificial Intelligence into curriculum design and implementation represents a strategic pathway for improving educational quality and preparing graduates for participation in an increasingly digital knowledge economy.

Digital Humanities as a Predictor of Curriculum Design and Implementation

The findings further revealed that Digital Humanities significantly predicted curriculum design and implementation in Nigerian universities. This implies that increased adoption of Digital Humanities practices enhances curriculum relevance, interdisciplinary learning, digital scholarship, and innovative instructional practices. The finding underscores the growing importance of Digital Humanities as a catalyst for curriculum transformation within contemporary higher education.

This finding agrees with Berry and Fagerjord (2017), who argued that Digital Humanities have fundamentally redefined teaching, research, and knowledge production by integrating computational methods with traditional humanities scholarship. Likewise, Burdick et al. (2016) maintained that Digital Humanities facilitate interdisciplinary collaboration, digital content creation, critical inquiry, and technology-enhanced learning, thereby strengthening curriculum innovation within universities. More recently, international studies on digital transformation in higher education have shown that universities with stronger Digital Humanities initiatives demonstrate greater curriculum flexibility, enhanced student engagement, and improved research productivity (Ogunode, & Ejike, 2023).

The significant contribution of Digital Humanities observed in the present study may be explained by its capacity to promote digital literacy, computational thinking, collaborative learning, and innovative research practices among academic staff and students. Through digital archives, virtual learning environments, digital storytelling, data visualization, and computational analysis, Digital Humanities provide diverse instructional resources that enrich curriculum implementation and improve the quality of learning experiences.

Joint Predictive Influence of Artificial Intelligence and Digital Humanities on Curriculum Design and Implementation

The study also established that Artificial Intelligence and Digital Humanities jointly and significantly predicted curriculum design and implementation in Nigerian universities. Although both variables made significant contributions, Digital Humanities emerged as the stronger predictor of curriculum design and implementation. The finding suggests that effective curriculum transformation in Nigerian universities requires a complementary integration of Artificial Intelligence technologies and Digital Humanities practices rather than reliance on either approach in isolation.

The finding corroborates recent literature advocating integrated digital transformation strategies within higher education. UNESCO (2024) emphasized that successful digital transformation depends not only on the adoption of Artificial Intelligence but also on institutional capacity to integrate digital pedagogies, interdisciplinary learning, ethical digital practices, and innovative curriculum frameworks. Similarly, Bond et al. (2024) reported that sustainable curriculum innovation is achieved when universities combine emerging technologies with digitally enriched pedagogical practices that strengthen teaching, research, collaboration, and graduate employability.

The joint predictive influence identified in this study highlights the complementary roles of Artificial Intelligence and Digital Humanities in promoting curriculum responsiveness, instructional innovation, and institutional competitiveness. Artificial Intelligence provides intelligent systems for curriculum planning, assessment, learning analytics, and personalized instruction, while Digital Humanities enrich curriculum implementation through interdisciplinary digital scholarship, collaborative knowledge production, and technology-enhanced teaching. Their combined application therefore provides a comprehensive framework for curriculum transformation capable of addressing the evolving educational needs of Nigerian universities and preparing graduates for the rapidly changing digital economy.

CONCLUSION

This study examined the predictive influence of Artificial Intelligence and Digital Humanities on curriculum design and implementation in Nigerian universities. The findings revealed that both Artificial Intelligence and Digital Humanities significantly and positively predict curriculum design and implementation. While each variable independently contributed to curriculum innovation, Digital Humanities emerged as the stronger predictor. Furthermore, the joint influence of Artificial Intelligence and Digital Humanities explained a substantial proportion of the variation in curriculum design and implementation, highlighting the complementary roles of these emerging digital paradigms in transforming higher education.

The study concludes that the effective integration of Artificial Intelligence and Digital Humanities is essential for developing innovative, responsive, and technology-driven curricula capable of addressing the changing demands of contemporary higher education and the global knowledge economy. Consequently, Nigerian universities should adopt strategic policies that strengthen digital infrastructure, build lecturers' competencies, and promote interdisciplinary digital practices to facilitate sustainable curriculum transformation and improve the quality and relevance of university education.

EDITOR-IN-CHIEF
Prof. A.I. Mteiye [MALAWI]

Implications of the Study

The findings of this study have important implications for higher education policy, curriculum development, and instructional practice in Nigerian universities. The significant predictive influence of Artificial Intelligence and Digital Humanities on curriculum design and implementation suggests that curriculum reform should prioritize the integration of emerging digital technologies and interdisciplinary digital practices to ensure that university programmes remain relevant to the demands of the twenty-first-century knowledge economy.

The study further implies that university administrators and curriculum planners should develop institutional policies that promote the responsible adoption of Artificial Intelligence in curriculum planning, instructional delivery, assessment, and academic research. Such policies should be complemented by continuous professional development programmes that enhance lecturers' competencies in the effective and ethical use of AI-enabled educational technologies.

The finding that Digital Humanities emerged as the stronger predictor underscores the need for universities to strengthen digital scholarship, interdisciplinary collaboration, and technology-enhanced pedagogical practices across academic disciplines. Integrating Digital Humanities into university curricula will not only improve teaching and learning but also enhance students' digital literacy, critical thinking, creativity, and research competencies.

From a policy perspective, the study provides empirical evidence that can guide the National Universities Commission (NUC), the Federal Ministry of Education, and university governing councils in formulating strategies for digital transformation and curriculum modernization. It also contributes to the growing body of knowledge on Artificial Intelligence, Digital Humanities, and curriculum innovation, thereby providing a useful reference for researchers interested in technology-driven reforms in higher education.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. University management should develop and implement institutional policies that promote the integration of Artificial Intelligence into curriculum design, instructional delivery, assessment, and academic research. This should be supported through continuous capacity-building programmes that equip lecturers with the knowledge and skills required to effectively utilize AI technologies in teaching and learning.
2. Universities should mainstream Digital Humanities across academic programmes by strengthening digital scholarship, interdisciplinary collaboration, digital content development, and technology-enhanced pedagogical practices. This will enhance

EDITOR-IN-CHIEF
Prof. A.I. Mteiye [MALAWI]

curriculum relevance and equip graduates with the digital competencies required for the contemporary labour market.

3. The National Universities Commission (NUC), in collaboration with university administrators and other relevant stakeholders, should review and periodically update university curricula to incorporate emerging digital technologies, Artificial Intelligence, and Digital Humanities. Such curriculum reforms should be supported through adequate investment in digital infrastructure, research facilities, and professional development to ensure effective implementation and sustainable digital transformation in Nigerian higher education.

REFERENCES

Adebayo, S. (2024) Lecturers perception of artificial intelligence and digital humanities in Nigerian universities. African Journal of Educational Technology, 11(1), 33-49.

Adewale, T., & Oduwole, K. (2024). Multi-stakeholder coordination for AI in Nigerian education. Journal of Educational Governance, 12(3), 44–59.

Adeyeye, M., Musa, I., & Bello, K. (2023). Generative AI and assessment practice in Nigeria tertiary institutions. Journal of learning and instruction in Africa, 5(2), 72-91.

Berry, D. M., & Fagerjord, A. (2017). *Digital humanities: Knowledge and critique in a digital age*. Polity Press.

Bond, M., Bedenlier, S., Marín, V. I., & Händel, M. (2024). Artificial intelligence in higher education: A systematic review of recent developments and future directions. *Computers and Education: Artificial Intelligence, 6*, 100245.

Burdick, A., Drucker, J., Lunenfeld, P., Presner, T., & Schnapp, J. (2016). *Digital humanities*. MIT Press.

Cochran, W. G. (1977). *Sampling techniques* (3rd ed.). John Wiley & Sons.

Crawford, J., Allen, K. A., Pani, B., & Cowling, M. (2024). When artificial intelligence substitutes humans in higher education: the cost of loneliness, student success, and retention. Studies in Higher Education, 49(5), 883-897.

Eke, E. O. (2024). Assessing the readiness and attitudes of Nigerian teacher educators towards adoption of artificial intelligence in educational settings. Journal of Educational Technology and Online Learning, 7(4-ICETOL 2024 Special Issue), 473-487. http://doi.org/10.31681/jetol.1503305

Epunam, U., Omorogiuwa, O., & Okpako, E. (2024). Use of Artificial Intelligence and Human-Computer Interaction (AI-HCI) to Improve Children's Learning Outcomes in Nigeria. International Journal of Engineering and Computer Science. https://doi.org/10.18535/ijecs/v13i 08.4879.

Eyman, D. (2020). Digital rhetorics: Theory method practice. University of Michigan Press.

Gold, M. K., & Klein, L. F. (2016). Debates in the digital humanities 2016. University of Minnesota Press.

Federal Ministry of Education. (2022). *National policy on information and communication technology (ICT) in education*. Federal Ministry of Education, Abuja.

Giannetti F (2020). Against the grain: Reading for the challenges of collaborative digital humanities pedagogy. The Digital Humanities. 2020 Jun 29:123-35

Holmes, W., Bialik, M., & Fadel, C. (2021). Artificial Intelligence in Education: promises and implications for teaching and learning. Center for Curriculum Redesign.

Nwodu, G. E. (2025). Awareness and perception of the use of artificial Intelligence for learning communication among select undergraduates in Nigeria. African Journal of Social Sciences and Humanities Research, 8(1), 113 130.

Nwosu, C., & Eyo, P. (2022). Digital humanities and the decolonization of curriculum in Nigerian universities. Journal of African Cultural Studies, 35(3), 210-225. doi.org.

Ogunode, N. J., & Ejike, C. N. (2023). Artificial intelligence and curriculum implementation of Post-Basic Education and Career Development (PBECD) in Nigeria. Journal of Innovation in Education and Social Research, 1(4), 50–56.

Okwudinma, O. C. (2024). Educational Management and Artificial Intelligence in Nigerian Schools. American Journal of Technology Advancement, 1(6), 1–9. Retrieved from https://semantjournals.org/index.php/AJTA/article/view/219

Olatunji, R. (2021). Status of digital humanities in Nigerian universities: A baseline study. Nigerian Library and Information Science Review, 9(2), 45-60.

Omeh, C. B., Olelewe, C. J., & Ohanu, I. B. (2025). Impact of Artificial Intelligence on Students' Computational and Reflective Thinking in a Computer Programming Course. Computer Applications in Engineering Education, 33(3), e70052.

Oyewole, R.K., & Adeyemi, T.O. (2022) Artificial intelligence integration in Nigerian universities curriculum: Status and challenges. International Journal of Education and Development, 18(4), 112-132.

Russell, S., & Norvig, P. (2020). Artificial intelligence: A modern approach (4th ed). Pearson.

Sallam, M. (2023). ChatGPT utility in healthcare education, research, and practice: Systematic review on the promising perspectives and valid concerns. *Healthcare, 11*(6), 887. https://doi.org/10.3390/healthcare11060887

UNESCO. (2023). *Guidance for generative AI in education and research*. UNESCO. https://unesdoc.unesco.org/

UNESCO. (2024). *Artificial intelligence and digital transformation in education*. UNESCO. https://www.unesco.org/

Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education: Where are the educators? *International Journal of Educational Technology in Higher Education, 16*(39). https://doi.org/10.1186/s41239-019-0171-0

Zawacki-Richter, O., Marín, V.I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education. International Journal of Educational Technology in Higher Education, 16(1), 39. doi.org.

EDITOR-IN-CHIEF

Prof. A.I. Mteiye [MALAWI]