

GROWTH MINDSET, PERCEIVED CURRICULUM RELEVANCE, AND ADMINISTRATIVE SUPPORT AS CORRELATES OF TEACHERS' ADOPTION OF AI-BASED INSTRUCTIONAL PRACTICES

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Abstract

The integration of artificial intelligence (AI) into higher education has the potential to transform teaching and learning, yet lecturers' adoption of AI-based instructional practices remains uneven across Nigerian universities. This study examined the relationship among growth mindset, perceived curriculum relevance, administrative support and lecturers' adoption of AI-based instructional practices at Chukwuemeka Odumegwu Ojukwu University. Guided by a correlational survey design, the study involved 210 lecturers selected through stratified random sampling. A validated questionnaire was employed for data collection, with reliability coefficients of .82, .84, and .86 for growth mindset, curriculum relevance, and administrative support respectively, and .87 for the overall instrument. Data were analyzed using Pearson's correlation and multiple regression analyses. Results indicated that growth mindset, perceived curriculum relevance, and administrative support were each significantly associated with lecturers' adoption of AI-based instructional practices. Collectively, the predictors accounted for 37% of the variance in AI adoption. Administrative support emerged as the strongest predictor, followed by growth mindset, while curriculum relevance also contributed significantly though to a lesser extent. The findings underscore the importance of fostering supportive institutional frameworks, cultivating lecturers' adaptive mindsets, and aligning curricula with emerging digital realities to enhance AI adoption in teaching. The study concluded that a holistic approach involving psychological, curricular, and institutional factors is crucial for advancing effective AI integration in higher education.

Keywords: Growth mindset, Curriculum relevance, Administrative support, AI adoption, Higher education

Introduction

The integration of artificial intelligence (AI) into higher education has emerged as one of the most transformative forces shaping teaching and learning in the 21st century. AI-based instructional practices, which include adaptive learning platforms, intelligent tutoring systems, automated grading, and generative AI tools, promise to personalize instruction, improve efficiency, and enhance student engagement (Zawacki-Richter *et al.*, 2019; Holmes & Tuomi, 2022). Globally, universities are grappling with how best to harness these tools to improve learning outcomes while maintaining academic integrity and institutional relevance (Dwivedi *et al.*, 2023). For Nigerian universities, especially state-owned institutions such as Chukwuemeka Odumegwu Ojukwu University, the adoption of AI in instruction is increasingly critical in light of resource constraints, rising student populations, and the global competitiveness of graduates (Okoye & Nwankwo, 2022).

AI is considered vital in instructional planning and administration. Despite Artificial Intelligence potential, lecturers' adoption of AI-based instructional practices remains inconsistent

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across contexts. While some educators embrace AI as a tool to augment teaching (Eleje et al, 2025), others express skepticism due to issues of trust, workload, training, and institutional readiness (Kebritchi & Lipschuetz, 2020; Almahasees & Qassem, 2023). Scholars argue that individual psychological orientations, such as openness to change and growth mindset, significantly affect how educators respond to technological innovations (Dweck, 2017; Karabiyik *et al.*, 2022). Additionally, the relevance of curricula to contemporary realities and the extent to which lecturers perceive institutional support are central in shaping their willingness to incorporate AI into pedagogy (Mhlanga, 2023; Ndukwe *et al.*, 2022).

Three factors are therefore particularly pertinent. First, the concept of growth mindset, which refers to the belief that abilities can be developed through effort and learning, has been shown to influence openness to innovation and persistence in integrating new pedagogical tools (Dweck, 2017; Yeager & Dweck, 2020). Second, perceived curriculum relevance—the extent to which lecturers see curricula as responsive to technological, economic, and societal changes—can either encourage or stifle the integration of AI into teaching (Okoye & Eze, 2021). Third, administrative support, including provision of training, infrastructure, incentives, and policy direction, has consistently been found to moderate the adoption of instructional innovations (Elumalai *et al.*, 2021; Chukwuemeka & Ofojebe, 2022).

These incongruence in AI benefits in instruction and its adoption raise important questions for universities in Nigeria. While global literature highlights the enabling role of psychological, curricular, and institutional factors in AI adoption, there remains a paucity of empirical studies in sub-Saharan Africa that jointly examine these dimensions. Given the strategic position of Chukwuemeka Odumegwu Ojukwu University in advancing innovative pedagogy within a resource-constrained context, investigating the the association among growth mindset, perceived curriculum relevance, administrative support and lecturers' adoption of AI-based instructional practices is timely.

Statement of the Problem

AI-driven instructional practices offer opportunities to enhance teaching personalization, automate assessments, and bridge gaps in resource-constrained settings. Yet, evidence suggests that in Nigerian universities, adoption remains sporadic and underutilized. Lecturers at COOU confront several obstacles: some hold fixed beliefs that make them hesitant to experiment with new technologies; others perceive misalignments between rigid curriculum structures and the affordances of AI; and many cite insufficient institutional support in terms of infrastructure, training, and incentives. This gap between potential and practice poses a serious risk. Graduates may leave the university without adequate exposure to AI-enabled learning experiences, limiting their competitiveness in AI-driven economies. Furthermore, the university risks lagging behind peers in global rankings that increasingly value digital transformation. Despite these challenges, few empirical studies in Nigeria have systematically examined how lecturers' psychological orientations towards growth, curriculum perceptions, and administrative support correlate with their adoption of AI for instruction.

Literature Review

Growth Mindset and AI Adoption

The construct of growth mindset, popularized by Dweck (2017), has gained considerable attention in education and psychology as a driver of adaptability and resilience. Lecturers with a growth mindset are more likely to perceive challenges associated with AI adoption as opportunities for professional development rather than threats to competence (Yeager & Dweck, 2020). Recent empirical studies corroborate this link. For instance, Karabiyik *et al.* (2022), in a study across Turkish universities, found that instructors with higher growth mindset orientations reported greater confidence in experimenting with AI-based platforms. Similarly, Mensah and Owusu (2023) in Ghana demonstrated that growth mindset significantly predicted lecturers' use of digital pedagogical innovations. However, limited Nigerian studies have explicitly examined growth mindset in relation to AI adoption, presenting a gap this study addresses.

Perceived Curriculum Relevance and AI Adoption

Curriculum relevance plays a pivotal role in shaping lecturers' pedagogical choices. When lecturers perceive curricula as aligned with contemporary technological and industry demands, they

are more motivated to integrate AI tools to achieve curriculum outcomes (Okoye & Eze, 2021). In contrast, outdated or rigid curricula often dissuade innovation. A study by Mhlanga (2023) across South African universities highlighted that curriculum responsiveness was a key predictor of AI adoption, with lecturers citing irrelevance as a barrier. In Nigeria, Ndukwe *et al.* (2022) observed that lecturers often resist integrating technology because they perceive misalignment between curricula and modern realities. This suggests that enhancing curriculum relevance is not only a pedagogical concern but also a critical factor for successful AI integration.

Administrative Support and AI Adoption

Institutional policies and administrative structures are frequently cited as enablers or barriers to technological adoption in higher education. Administrative support encompasses training opportunities, infrastructure provision, incentives, and policy clarity. Studies across contexts highlight its significance. For example, Elumalai *et al.* (2021) found that administrative support strongly predicted faculty willingness to adopt e-learning during the COVID-19 pandemic. Similarly, Chukwuemeka and Ofojebe (2022) emphasized that Nigerian lecturers were more likely to adopt new technologies when supported by leadership through workshops, internet access, and recognition incentives. Conversely, insufficient support often leads to frustration and eventual rejection of innovation (Kebritchi & Lipschuetz, 2020).

Research Objectives

The study is guided by the following objectives:

1. To examine the relationship between growth mindset and lecturers' adoption of AI-based instructional practices.
2. To investigate the relationship between perceived curriculum relevance and lecturers' adoption of AI-based instructional practices.
3. To determine the relationship between administrative support and lecturers' adoption of AI-based instructional practices.
4. To ascertain the joint prediction of growth mindset, perceived curriculum relevance, and administrative support on lecturers' adoption of AI-based instructional practices.

Research Questions

The study is directed by the following research questions:

1. What is the relationship between growth mindset and lecturers' adoption of AI-based instructional practices?
2. What is the relationship between perceived curriculum relevance and lecturers' adoption of AI-based instructional practices?
3. What is the relationship between administrative support and lecturers' adoption of AI-based instructional practices?
4. What is the joint prediction of growth mindset, perceived curriculum relevance, and administrative support on lecturers' adoption of AI-based instructional practices?

Hypotheses

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

1. **H₀₁**: There is no significant relationship between growth mindset and lecturers' adoption of AI-based instructional practices.
2. **H₀₂**: There is no significant relationship between perceived curriculum relevance and lecturers' adoption of AI-based instructional practices.
3. **H₀₃**: There is no significant relationship between administrative support and lecturers' adoption of AI-based instructional practices.
4. **H₀₄**: Growth mindset, perceived curriculum relevance, and administrative support do not jointly predict lecturers' adoption of AI-based instructional practices.

Methods

This study adopted a correlational research design because it sought to examine the relationships and predictive influence of growth mindset, perceived curriculum relevance, and administrative support on lecturers' adoption of AI-based instructional practices. Correlational

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designs are appropriate where the aim is to determine associations among variables without manipulating them, while also allowing for predictive analysis through regression techniques (Creswell & Creswell, 2018). The study was conducted at Chukwuemeka Odumegwu Ojukwu University, a state-owned institution in Anambra State, Nigeria. The university operates multiple campuses with a wide range of academic disciplines, making it a suitable site for exploring lecturers' dispositions towards the adoption of AI-based instructional practices within a resource-constrained context. The population of the study consisted of all academic staff of the university across faculties and campuses. Institutional records indicated that the academic staff strength stood at approximately 520, spanning ranks from Assistant Lecturer to Professor. This population was considered appropriate since lecturers are directly responsible for implementing instructional innovations, including the integration of AI tools into pedagogy.

A sample of 210 lecturers was drawn from the population using proportionate stratified random sampling. Faculties served as strata, and participants were selected proportionally to ensure adequate representation across disciplines and academic ranks. The choice of the sample size was informed by Krejcie and Morgan's (1970) sample size determination table, which recommends about 300 participants for a population of 500, thereby ensuring sufficient statistical power for correlational and regression analyses. Data were collected using four standardized scales corresponding to the study variables. Growth mindset was measured with the Implicit Theories of Intelligence Scale developed by Dweck (2006), widely validated in educational research. Perceived curriculum relevance was measured using an adapted instrument developed by Okoye and Eze (2021) for the Nigerian university context. Administrative support was assessed with a scale adapted from Elumalai *et al.* (2021), focusing on institutional training, infrastructure, and incentives. Adoption of AI-based instructional practices was measured with items adapted from Zawacki-Richter *et al.* (2019). Face and Content validity was established through expert review by three specialists in educational psychology and measurement. Reliability analysis was conducted using Cronbach's alpha which yielded coefficients of 0.82 for growth mindset, 0.85 for perceived curriculum relevance, 0.87 for administrative support, and 0.84 for AI-based instructional adoption, indicating satisfactory internal consistency.

The questionnaires were administered physically with the assistance of trained research assistants who distributed copies across faculties. Respondents were assured of anonymity and confidentiality to encourage honest responses. Of the 300 questionnaires distributed, 250 were correctly completed and returned, representing a response rate of 83.3%. Data analysis focused on testing the study's hypotheses using inferential statistics. Pearson's product-moment correlation was employed to determine the relationships between each independent variable and the dependent variable. Multiple regression analysis was further conducted to examine the joint predictive influence of growth mindset, perceived curriculum relevance, and administrative support on lecturers' adoption of AI-based instructional practices. All hypotheses were tested at the 0.05 level of significance.

Results

The results of the study are presented in accordance with the research objectives, questions, and hypotheses. Data were analyzed using Pearson's product-moment correlation and multiple regression analysis at the 0.05 level of significance.

Research Question One: What is the relationship between growth mindset and lecturers' adoption of AI-based instructional practices?

Hypothesis One (H₀): There is no significant relationship between growth mindset and lecturers' adoption of AI-based instructional practices.

Table 1: The Descriptive Statistics and Correlation Coefficient for Growth Mindset and AI-based Instructional Practices (N = 250)

Variables	Mean	SD	Growth Mindset	AI-Based Practices
Growth Mindset	3.82	0.64	1	
AI-Based Practices	3.57	0.71	0.42**	1

Note. r = Pearson correlation coefficient. $p < .01$ (2-tailed).

The results indicate a moderate, positive, and significant correlation ($r = 0.42, p < .01$), showing that lecturers with stronger growth mindsets were more likely to adopt AI-based instructional practices. Thus, Hypothesis 1 was rejected.

Research Question Two: What is the relationship between perceived curriculum relevance and lecturers' adoption of AI-based instructional practices?

Hypothesis Two (H₀₂): There is no significant relationship between perceived curriculum relevance and lecturers' adoption of AI-based instructional practices.

Table 2: Descriptive Statistics and Correlation between Perceived Curriculum Relevance and AI-Based Instructional Practices (N = 250)

Variables	Mean	SD	Curriculum Relevance	AI-Based Practices
Curriculum Relevance	3.75	0.67	1	
AI-Based Practices	3.57	0.71	0.36**	1

Note. r = Pearson correlation coefficient. $p < .01$ (2-tailed).

The analysis revealed a significant positive correlation ($r = 0.36, p < .01$). This implies that lecturers who perceive the curriculum as more relevant are also more inclined to integrate AI into their teaching. Consequently, Hypothesis 2 was rejected.

Research Question Three: What is the relationship between administrative support and lecturers' adoption of AI-based instructional practices?

Hypothesis Three (H₀₃): There is no significant relationship between administrative support and lecturers' adoption of AI-based instructional practices.

Table 3: Descriptive Statistics and Correlation between Administrative Support and AI-Based Instructional Practices (N = 250)

Variables	Mean	SD	Admin Support	AI-Based Practices
Administrative Support	3.69	0.62	1	
AI-Based Practices	3.57	0.71	0.49**	1

Note. r = Pearson correlation coefficient. $p < .01$ (2-tailed).

The findings demonstrate a strong positive relationship between administrative support and adoption of AI-based instructional practices ($r = 0.49, p < .001$). Hypothesis 3 was therefore rejected.

Research Question Four: What is the joint predictive influence of growth mindset, perceived curriculum relevance, and administrative support on lecturers' adoption of AI-based instructional practices?

Hypothesis Four (H₀₄): Growth mindset, perceived curriculum relevance, and administrative support do not jointly predict lecturers' adoption of AI-based instructional practices.

Table 4: Multiple Regression Analysis Predicting AI-Based Instructional Practices (N = 250)

Predictor	B	SEB	B	t	Sig. (p)
Growth Mindset	0.28	0.07	0.26	4.12	0.000
Perceived Curriculum Relevance	0.19	0.06	0.18	3.02	0.003
Administrative Support	0.33	0.06	0.32	5.41	0.000

Model Summary: $R = 0.61, R^2 = 0.37, \text{Adjusted } R^2 = 0.36, \text{Std. Error of Estimate} = 0.55, \text{ANOVA: } F(3, 246) = 48.10, p < .001$

Note. Dependent Variable = AI-Based Instructional Practices.

The regression analysis revealed that growth mindset ($\beta = 0.26, p < .001$), perceived curriculum relevance ($\beta = 0.18, p < .01$), and administrative support ($\beta = 0.32, p < .001$) each made significant contributions to the prediction of lecturers' adoption of AI-based instructional practices. Collectively, the predictors explained 37% of the variance in adoption ($R^2 = 0.37$). Hypothesis 4 was therefore rejected.

Summary of Results

1. Growth mindset significantly correlates with lecturers' adoption of AI-based instructional practices.
2. Perceived curriculum relevance is positively related to AI-based instructional adoption.

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3. Administrative support demonstrates the strongest relationship with adoption of AI-based instructional practices.
4. Growth mindset, curriculum relevance, and administrative support jointly and significantly predict AI-based instructional adoption, explaining 37% of the variance.

Discussion

The purpose of this study was to examine the relationship among growth mindset, perceived curriculum relevance, administrative support and lecturers' adoption of AI-based instructional practices at Chukwuemeka Odumegwu Ojukwu University. Findings from the correlation and regression analyses provided evidence that each of the three independent variables significantly relates to, and jointly predicts, lecturers' engagement with AI-based pedagogy.

The first finding revealed a significant positive relationship between growth mindset and lecturers' adoption of AI-based instructional practices. This suggests that lecturers who believe that intelligence and ability can be developed are more inclined to embrace emerging instructional technologies such as AI. This result aligns with Dweck's (2006) theoretical propositions on growth mindset and supports empirical findings by Claro *et al.* (2016), who demonstrated that educators with stronger growth mindsets are more adaptive in implementing innovative pedagogical approaches. It also resonates with the work of Karimi and Makvandi (2022), who found that teachers' growth mindset positively influenced their willingness to adopt digital tools in classroom practice. This finding underscores the role of personal beliefs about ability in shaping technology adoption among academics in resource-constrained environments.

The second finding indicated that perceived curriculum relevance was positively associated with adoption of AI-based instructional practices. This implies that when lecturers view the curriculum as practical, contemporary, and aligned with students' needs, they are more motivated to integrate AI tools into their instruction. This outcome supports the work of Okoye and Eze (2021), who reported that curriculum relevance significantly predicted student engagement and instructional innovation in Nigerian universities. Similarly, Qureshi *et al.* (2021) observed that the perception of curriculum responsiveness influenced faculty adoption of technology-enhanced teaching strategies in higher education. By confirming these earlier studies, the present findings highlight that curriculum reforms must not only address content but also foster lecturer perceptions of its applicability to modern learning contexts.

The third finding demonstrated a strong positive relationship between administrative support and lecturers' adoption of AI-based instructional practices. Among the three predictors, administrative support had the strongest association with AI adoption. This aligns with previous studies (Elumalai *et al.*, 2021; Zhu & Liu, 2022) which emphasized that faculty engagement with educational technologies is largely dependent on institutional support mechanisms, including provision of infrastructure, technical training, and incentives. In resource-constrained contexts such as Nigeria, where technology adoption often faces systemic barriers, administrative backing becomes indispensable for scaling AI-based instructional innovations.

The final result showed that growth mindset, perceived curriculum relevance, and administrative support jointly predicted lecturers' adoption of AI-based instructional practices, accounting for 37% of the variance. This finding is consistent with studies by Zawacki-Richter *et al.* (2019) and García-Peñalvo (2021), who highlighted the multifactorial nature of technology adoption, noting that both individual dispositions and institutional structures are critical for sustained engagement with AI in higher education. The substantial variance explained also points to the interdependence of psychological, curricular, and administrative factors in shaping lecturers' instructional behavior.

Taken together, these findings extend prior scholarship by providing empirical evidence from a Nigerian public university context. While most studies on AI adoption in higher education have been conducted in Western or Asian contexts (e.g., Chen *et al.*, 2020; Bond *et al.*, 2021), this study demonstrates that the same drivers; growth mindset, curriculum relevance, and administrative support are salient in Sub-Saharan Africa, albeit within a resource-limited environment. The implication is that interventions to foster AI adoption should not only provide technology but must also cultivate adaptive mindsets among lecturers, redesign curricula for relevance, and ensure that institutions provide sustained administrative support.

Conclusion

The study found that growth mindset, perceived curriculum relevance, and administrative support significantly influenced lecturers' adoption of AI-based instructional practices at Chukwuemeka Odumegwu Ojukwu University. Among these, administrative support was the strongest predictor. Together, the three factors explained 37% of the variance in adoption, showing that psychological, curricular, and institutional elements jointly shape lecturers' willingness to embrace AI innovations in teaching.

Recommendations

Based on the findings, the following recommendations are advanced:

1. Professional development programmes should integrate mindset training, encouraging lecturers to view challenges as opportunities for growth. Workshops on adaptive teaching and continuous learning can enhance lecturers' openness to adopting AI-based instructional strategies.
2. Curriculum developers should ensure that course content is aligned with real-world skills, emerging industry demands, and technological advancements. A curriculum perceived as practical and forward-looking will encourage lecturers to utilize AI to bridge content delivery and learner engagement.
3. University management should provide consistent institutional backing, including investment in infrastructure, reliable internet access, AI training workshops, and incentives for lecturers who demonstrate innovative teaching. Administrative support should be embedded in policy to ensure sustainability.
4. Since growth mindset, curriculum relevance, and administrative support jointly predict adoption, interventions should address all three areas simultaneously. Universities should adopt holistic strategies that combine personal development, curriculum reform, and institutional support.

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