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ADOPTION OF INSTRUCTIONAL BEST PRACTICES AND ACADEMIC ACHIEVEMENT IN PUBLIC COLLEGES OF EDUCATION IN KWARA STATE, NIGERIA

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ABSTRACT

The study investigates the adoption of instructional best practices and academic achievement in public colleges of education in Kwara state, Nigeria. Three purposes guided the study which comprises of two research questions, one main hypothesis. This research adopted a descriptive survey of the correlational type. The population of study comprised 3,690 academic staff (lecturers) and full-time regular students across the three public Colleges of Education in Kwara State, Nigeria. Multistage sampling technique was used to select 364 participants using the Krejcie and Morgan (1970) sample size table. The questionnaires titled "Instructional Best Practices Questionnaire (IBPQ) administered to lecturers and Academic Achievement Proforma were used to obtain data for the study. Data collected were analysed using both descriptive and inferential statistics through Statistical Product and Service Solution (SPSS) version 21. The research questions were analysed using frequency, percentages, mean and standard deviation while the hypothesis was analysed using Pearson product moment correlation (PPMC) at 0.05 level of significance. The finding from the PPMC reveals a strong, positive relationship between the adoption of instructional best practices and students' academic achievement in public Colleges of Education in Kwara State, Nigeria (p-value = 0.000). The study concludes that students' academic achievement in public senior secondary schools is influenced by effective instructional best practice. It is recommended that College administrators must shift institutional evaluation routines away from rigid, memory-based traditional testing toward higher-order, competency-based continuous assessment frameworks to stimulate critical thinking and push students into higher academic achievement brackets.

Keywords: *Instructional Best Practices, Academic achievement*

Introduction

Academic achievement in teacher education is a crucial predictor of the quality of teaching delivered in basic and secondary schools. In Nigeria, public Colleges of Education serve as key institutions for training teachers who will later influence learners' academic outcomes. However, learners' academic achievement in these institutions has often been linked to how effectively instruction is delivered and how learning is supported through appropriate teaching approaches, assessment practices, instructional resources, and professional capacity of lecturers. A major strand in the literature emphasizes that instructional practices which actively engage learners are more likely to improve achievement than purely teacher-centred approaches. For instance, Agwu and Nmadu (2023) demonstrated that interactive engagement through cooperative learning pedagogy improved students' academic achievement and academic self-concept in chemistry, and they also reported a positive relationship between academic achievement and self-concept. This suggests that instructional best practices that promote active engagement and learner-centred participation may enhance achievement outcomes not only in science education contexts, but also across other subject areas in Colleges of Education.

Relatedly, Ademiluyi and Akinlabi (2022) investigated how assessment practices influence academic performance of business education students in Nigerian Colleges of Education. Their findings indicated that end-of-semester examinations, written tests, classroom exercises, and take-home assignments were commonly adopted, and importantly, that assessment practices significantly influenced students' academic performance. This implies that adoption of instructional best practices in public Colleges of Education may not be limited to teaching methods alone, but should also include the use of assessment approaches that support learning, measure competence appropriately, and provide feedback that encourages improvement. In addition, the availability and use of educational resources can shape the effectiveness of instruction and consequently students' achievement. Ajiboye (2022) reported that there was a positive and significant relationship between resource situation (including human and material resources) and students' academic performance in public Colleges of Education in Southwest Nigeria. Therefore, even where good instructional strategies exist, weak resource conditions and poor utilization may limit the real classroom impact of instructional best practices.

Beyond classroom factors, the professional development of instructors is also vital for sustaining effective instructional practices. Ajani (2021) explored teachers' perspectives on professional development using an andragogical approach in South Africa and Nigeria and found that although professional development programmes existed, they were inadequate and irregular for teachers. The study recommended professional development activities at least once a term and aligned with teachers' diverse classroom needs. This is relevant for Colleges of Education because lecturers require ongoing,

context-relevant professional development to adopt and implement instructional best practices effectively and consistently.

Moreover, learner support and adoption of instructional approaches may be influenced by lecturers' instructional capacity and the broader institutional environment. When lecturers' preparation is strengthened, instruction becomes more likely to be coherent, learner-centred, and aligned with appropriate classroom practices that promote achievement. Thus, evidence from cooperative and interactive engagement (Agwu & Nmadu, 2023), assessment practices (Ademiluyi & Akinlabi, 2022), resource availability and utilization (Ajiboye, 2022), and professional development adequacy (Ajani, 2021) collectively points to a need for systematic investigation of whether instructional best practices are actually adopted in Colleges of Education in Kwara State and how such adoption relates to students' academic achievement.

Statement of the Problem

Despite the importance of public Colleges of Education in preparing teachers, concerns remain about instructional effectiveness and the achievement outcomes of students. In many contexts, instructional practices may still lean toward conventional or teacher-dominated approaches, with limited evidence of structured adoption of instructional best practices that promote active learning, competence-based outcomes, and continuous support for learners. Furthermore, assessment practices may not fully align with learning needs that encourage deep understanding and higher-order thinking, even when some forms of continuous assessment are used.

In addition, the adoption of instructional best practices may be influenced by the availability and utilization of educational resources in Colleges of Education. Where human and material resources are inadequate or poorly utilized, lecturers may struggle to implement best practices such as interactive engagement, learner-centred activities, and instructional methods that require specialized materials. Another related challenge concerns lecturers' professional development. Evidence indicates that professional development programmes for teachers may be irregular or insufficient for consistent improvement in classroom practices (Ajani, 2021). Consequently, lecturers in public Colleges of Education may not receive adequate, timely, and context-relevant professional development to adopt instructional best practices effectively.

Therefore, there is a need to examine the adoption of instructional best practices in public Colleges of Education in Kwara State and determine how such adoption relates to students' academic achievement. This study addresses that need by focusing on instructional practices and their relationship with achievement outcomes among students in Kwara State public Colleges of Education.

Purpose of the Study

The main purpose of this study is to determine the adoption of instructional best practices and academic achievement in

public colleges of education in Kwara state, Nigeria. Specifically, the study aims to:

1. assess the level of adoption of instructional best practices among lecturers in public colleges of education in Kwara State;
2. determine the level of academic achievement of students in public colleges of education in Kwara State; and
3. examine the relationship between the adoption of instructional best practices and students' academic achievement in public colleges of education in Kwara State.

Research Questions

1. What is the level of adoption of instructional best practices among lecturers in public colleges of education in Kwara State, Nigeria?
2. What is the level of academic achievement of students in public colleges of education in Kwara State, Nigeria?

Research Hypothesis

This study was guided by the following null hypothesis:

H_{O1}: There is no significant relationship between the adoption of instructional best practices and students' academic achievement in public Colleges of Education in Kwara State, Nigeria.

Literature Review

This review anchors within two robust complementary learning paradigms: Jerome Bruner's Constructivist Theory and Albert Bandura's Social Learning Theory.

Constructivist Theory

Jerome Seymour Bruner (1915–2016) was a towering American psychologist whose work fundamentally reshaped cognitive psychology and educational theory. Operating primarily out of Harvard University and later Oxford, Bruner emerged as a leading figure in the "Cognitive Revolution" of the mid-20th century, which sought to displace the prevailing behaviorist paradigms that viewed human learning as mere stimulus-response mechanisms. Influenced heavily by Jean Piaget's structural development and Lev Vygotsky's socio-cultural context, Bruner sought to understand how the human mind actively processes, organizes, and internalizes information. His ideas culminated in highly influential publications, including The Process of Education (1960) and Toward a Theory of Instruction (1966), which championed discovery learning and structured pedagogy (Tuncdemir & Napoli, 2025).

At its core, Bruner's Constructivist Theory posits that learning is an active, dynamic process in which individuals construct new ideas, meanings, or concepts based upon their current and past knowledge (McLeod & Blake, 2026; Taber, 2024). Rather than acting as passive receptacles or "sponges" absorbing facts delivered via traditional lecture methods, learners are conceptualized as active information processors and "epistemologists" who categorize environmental stimuli to make

sense of their world (Asis, 2025; Wynne et al., 2022). Bruner argued against strict developmental stage constraints on readiness. Instead, he famously asserted that any subject can be taught effectively in some intellectually honest form to any child at any stage of development, provided the instruction is structured appropriately (McLeod, 2025). This requires teachers to act as facilitators who guide students to discover underlying principles for themselves rather than explicitly telling them the connections (Asis, 2025; McLeod, 2025).

Bruner's constructivist architecture is built upon four critical interconnected components:

Modes of Cognitive Representation: Bruner identified three distinct formats through which the human mind codes, organizes, and stores knowledge (McLeod, 2025):

Enactive Representation (Action-based): Learning through concrete, physical manipulation of objects (e.g., handling laboratory tools or teaching aids).

Iconic Representation (Image-based): Learning through visual summaries, pictures, diagrams, or mental graphics (McLeod, 2025).

Symbolic Representation (Language/Abstract-based): Learning via abstract systems such as words, mathematical notation, and logical codes (McLeod, 2025).

The Spiral Curriculum: This component mandates that an instructional program should revisit basic ideas repeatedly, building upon them systematically until the student has grasped the full formal apparatus associated with them (McLeod, 2025).

Discovery Learning: An instructional approach where learners interact with their environment by exploring objects, wrestling with questions, or performing experiments to actively discover the underlying structure of a discipline (Asis, 2025; McLeod, 2025).

Scaffolding: Developed alongside colleagues, this concept refers to the temporary supportive framework provided by an educator or advanced peer. It assists the learner in completing tasks they could not otherwise achieve independently, gradually fading as the learner achieves mastery.

In the context of public Colleges of Education in Kwara State, Nigeria, the adoption of instructional best practices such as interactive lectures, micro-teaching simulations, problem-based learning, and ICT-integrated pedagogies directly mirrors Bruner's constructivist principles. Pre-service teachers in Kwara State must shift away from the legacy rote-learning models that dominate many developing educational ecosystems. When lecturers in these colleges adopt discovery-based and scaffolded practices, they move student-teachers through the enactive (hands-on classroom teaching practice) to the iconic (analyzing instructional video exemplars) and symbolic (mastering curriculum design theories) stages of knowledge representation (McLeod, 2025). Consequently, this active cognitive engagement deepens conceptual clarity, enhances pedagogical problem-solving skills, and directly boosts the pre-service teachers' cumulative grade point

averages (CGPA) and professional competencies—the precise markers of academic achievement under review.

Social Learning Theory

Albert Bandura (1925–2021) was an eminent Canadian-American psychologist who spent the bulk of his career at Stanford University. He is widely recognized as one of the most influential psychologists of the 20th century. During the 1960s, while traditional behaviorism dominated psychological literature by insisting that learning only occurred through direct personal conditioning and tangible rewards, Bandura identified a critical gap: behaviorism failed to account for the rapid acquisition of novel behaviors within social contexts without direct reinforcement. His seminal 1961 and 1963 "Bobo Doll" experiments conclusively proved that individuals can acquire new behavioral patterns simply by observing external models (Bouchrika, 2026). His foundational text, Social Learning Theory (1977), established a conceptual bridge between behaviorist conditioning and cognitive processing, a framework he later expanded into Social Cognitive Theory in 1986 (McLeod, 2025; Nickerson, 2025).

Bandura's Social Learning Theory (SLT) posits that human behavior is learned observationally through modeling: from observing others, an individual forms an idea of how new behaviors are performed, and on later occasions, this coded cognitive information serves as a guide for action (Bouchrika, 2026). The theory is anchored on the principle of triadic reciprocal determinism, which states that human functioning is shaped by a continuous, dynamic interaction among three variables: personal cognitive factors (such as beliefs and self-efficacy), actual behaviors, and environmental influences (such as institutional practices and role models) (Nickerson, 2025). Unlike strict behaviorism, Bandura introduces cognitive mediational processes that occur between environmental stimuli and the behavioral response, asserting that human beings possess agency and do not merely react to external forces (McLeod, 2025).

Bandura's conceptual framework is operationalized through several distinct components:

Four Mediational/Observational Learning Processes: For modeling to occur successfully, four distinct cognitive steps must take place (Bouchrika, 2026; McLeod, 2025):

Attention: The observer must actively notice and focus on the distinct features of the modeled behavior (Bouchrika, 2026). High-status or expert models are more likely to command attention (McLeod, 2025).

Retention: The observer must organize, code, and remember the observed behavior in long-term memory for later retrieval (Bouchrika, 2026; McLeod, 2025).

Reproduction (Production): The individual must possess the physical and psychological capability to execute the stored behavioral pattern (Bouchrika, 2026; McLeod, 2025).

Motivation: The learner must have an incentive or drive to replicate the behavior, which is frequently dictated by vicarious reinforcement—seeing the model rewarded

or punished for their actions (Bouchrika, 2026; McLeod, 2025).

Self-Efficacy: A core sub-construct defined as an individual's subjective belief in their own capability to execute behaviors necessary to produce specific performance attainments (Nickerson, 2025).

Vicarious Reinforcement: Learning by observing the consequences of another person's behavior, rather than experiencing those consequences directly (Manik, 2022).

Bandura's framework provides an exceptional analytical lens for understanding the social dynamics of teacher preparation in Kwara State's public Colleges of Education. Pre-service teachers are situated in a highly social environment where institutional faculty (the lecturers) act as primary live behavioral models (Bouchrika, 2026; Manik, 2022).

If college lecturers deliberately adopt and execute instructional best practices (e.g., demonstrating innovative digital pedagogy, maintaining excellent classroom management, utilizing formative assessment techniques), student-teachers actively witness these methods. Through the sub-processes of attention and retention, they code these optimal instructional behaviors into memory (Bouchrika, 2026; McLeod, 2025). Furthermore, observing peers who succeed through these methods fosters vicarious experience, which drives up the student-teachers' own self-efficacy beliefs (Nickerson, 2025). When student-teachers believe they can successfully reproduce these effective teaching strategies, their motivation scales up (Nickerson, 2025). This psychological empowerment directly correlates with superior academic performance during teaching practices, examinations, and independent micro-teaching assessments, thereby structurally advancing their overall academic achievement.

Methodology

The study adopts a descriptive survey research design combined with an ex-post facto component. The survey design is appropriate as it allows for the structured collection of quantifiable data regarding the current level of adoption of instructional best practices such as active learning, collaborative strategies, and digital technology integration from a representative sample of lecturers. Concurrently, the ex-post facto design is utilized because the independent variables (instructional practices) and the dependent variable (academic achievement, measured via cumulative grade point averages) have already occurred in a natural academic setting and cannot be directly manipulated by the researcher. The population for this study comprises all 10,100 lecturers and full-time regular students across the three public Colleges of Education in Kwara State, Nigeria. Specifically, the target population of 3,690 lecturers across various schools (e.g., School of Sciences, Vocational and Technical Education, Arts and Social Sciences, Languages, and Education) and NCE III (final-year) students within these institutions. Final-year students are deliberately targeted because they have spent at least two full academic sessions in the system, meaning their academic

achievement records reflect prolonged exposure to the instructional practices of the college.

Table 1: *Population Distribution*

S/N	Institution	Population (Total Staff & Students)	Target Population: (Lecturers)	Main Population: Final-Year Students (NCE III)	Total Target Population
1.	Kwara State College of Education, Ilorin	4,000	280	1,450	1,730
2.	Kwara State College of Education, Oro	3,100	190	920	1,110
3.	College of Education, Lafiagi	3,000	170	680	850
	TOTAL	10,100	640	3,050	3,690

A multi-stage sampling technique is used to select a representative sample from the institutions. At stage 1, purposive Sampling technique was employed to select two public colleges of Education in Kwara State (Kwara State College of Education, Ilorin, and the Kwara State College of Education, Oro). The selection was based on the institutional uniformity in funding and curriculum structure. At stage 2, Stratified Random Sampling technique was used to select Lecturers and students by their respective academic schools/departments (strata) to ensure all disciplinary areas (e.g., sciences, business education, humanities) are proportionally represented and at stage 3, simple random sampling was employed to select from the strata, a final sample size of approximately 64 lecturers and 300 NCE III students is selected randomly to minimize selection bias and ensure a robust statistical foundation for generalization.

Table 2: *Sampling Design and Sample Size Distribution*

Sampling Stage	Technique Used	Target Population / Criteria	Sample Size (n)
Stage 1	**Purposive Sampling**	Public Colleges of Education in Kwara State *(e.g., COE Ilorin, COE Oro)*	2 Institutions
Stage 2	**Stratified Random Sampling**	Academic Schools / Departments	Strata-defined groups 364 Total Participants
Stage 3	**Simple Random Sampling**	Lecturers and NCE III Students	64 Lecturers 300 Students

Data collection relies on two adapted research instrument titled Instructional Best Practices Questionnaire (IBPQ) administered to lecturers and Academic

Achievement Proforma. IBPQ utilizes a 4-point Likert scale (Strongly Agree, Agree, Disagree, Strongly Disagree) to measure the adoption of innovative methodologies, including collaborative learning. The IBPQ was adapted from Agwu and Nmadu (2023). Academic Achievement Proforma was a data-logging template used to collect the historical academic records specifically the overall Cumulative Grade Point Averages (CGPA) of the sampled final-year students from the sampled institutional desk offices The IBPQ was subjected to face and content validity. Drafts of the questionnaire were submitted to three experts: two senior lecturers in the Department of Educational Management/Curriculum Studies within the selected Colleges of Education, and one measurement and evaluation expert. These specialists reviewed the items for clarity, relevance to Nigerian teacher education standards, and alignment with modern instructional frameworks. Modifications, including the adjustment of ambiguous terms and the alignment of indicators with local pedagogical challenges, were integrated based on their feedback.

Prior to full-scale administration, a pilot study was conducted at a public College of Education in a neighboring state (particularly in Oyo State) which shares identical structural and administrative characteristics under the NCCE. The questionnaires were administered to a small cohort of 10 lecturers and 30 students who are completely excluded from the final study sample. Using the data obtained from the pilot study, the internal consistency of the IBPQ was evaluated. The responses are coded and analyzed using Cronbach's alpha coefficient. A reliability coefficient threshold of 0.70 was estimated which indicated that the instrument was reliable enough for field deployment.

The researcher, assisted by two trained research assistants, visits the selected colleges to administer the instruments. First, formal permissions were cleared with institutional authorities. The IBPQ was distributed directly to the sampled lecturers in their offices, with a follow-up window allowed for retrieval to maximize return rates. Simultaneously, with the authorization of the college registrars and heads of departments, the official, de-identified academic CGPA records of the corresponding sampled final-year student cohorts are extracted using the Academic Achievement Proforma. Strict ethical protocols were maintained throughout the research process. Informed consent was obtained from all participating lecturers and students, who are explicitly notified that participation is voluntary and they can withdraw at any stage. To protect the professional status of faculty and the academic standing of students, absolute anonymity and confidentiality are guaranteed.

The collected data was coded and analyzed using both descriptive and inferential statistics. Descriptive Statistics of mean scores, and standard deviations were computed to answer research questions raised to guide the study inferential Statistics of Pearson Product-Moment Correlation (PPMC) was employed to test the null

hypothesis formulated. 0.05 level of significance.

Results

Answering Research Questions

Research Question 1: What is the level of adoption of instructional best practices among lecturers in public colleges of education in Kwara State, Nigeria?

Table 3: *Level of Adoption of Instructional Best Practices among Lecturers (N = 364)*

S/N	Instructional Best Practice Items	Mean	SD	Remark
1.	Utilizes student-centered, interactive learning strategies (e.g., cooperative learning, discussion groups) during instructional delivery.	2.84	0.76	Adopted
2.	Integrates modern digital technologies, ICT tools, and multi-media presentations into regular classroom lessons.	2.12	0.89	Not Adopted
3.	Aligns weekly lesson objectives with explicit, high-order cognitive domain outcomes (Bloom's Taxonomy).	2.65	0.64	Adopted
4.	Formulates and shares explicit rubrics and evaluation metrics with students prior to administering continuous assessments.	1.98	0.82	Not Adopted
5.	Conducts systematic, diagnostic formative assessments to provide immediate feedback and remediate student learning gaps.	2.21	0.71	Not Adopted
6.	Employs differentiated instruction techniques to cater to diverse student learning paces and academic backgrounds.	2.54	0.68	Adopted
7.	Engages in reflective teaching practices by utilizing student evaluations and peer reviews to modify instructional methods.	2.30	0.75	Not Adopted
	Grand Mean and Pool Standard Deviation	**2.38**	**0.75**	**Low Adoption**

Mean rating: 1.00 - 2.49 = Not adopted, 2.50 - 4.00 = Adopted

The data presented in Table 3 reveals the pedagogical practices among lecturers in public colleges of education in Kwara State. Out of the seven core components of instructional best practices evaluated, the lecturers surpassed the criterion mean threshold of 2.50 in only three domains. Lecturers demonstrated an acceptable level of adoption in the utilization of student-centered interactive strategies (Mean = 2.84, SD = 0.76), alignment of lesson objectives with high-order cognitive outcomes (Mean = 2.65, SD = 0.64), and the deployment of differentiated instruction (Mean = 2.54, SD = 0.68). The relatively low standard deviations (< 1.00) across these items show

a strong consensus among the 364 respondents regarding their compliance with these basic pedagogical steps. However, critical systemic deficits emerged in tech integration and formative assessment practices. The respondents reported low adoption rates for the integration of digital ICT tools (Mean = 2.12, SD = 0.89) and the sharing of clear evaluation rubrics prior to assessment (Mean = 1.98, SD = 0.82). Furthermore, the systematic use of diagnostic formative assessments to offer immediate feedback fell significantly below par (Mean = 2.21, SD = 0.71). Therefore, the Grand Mean score of 2.38 Mean = 2.38, SD = 0.75), which falls short of the established empirical benchmark of 2.50, indicates that the overall level of adoption of instructional best practices among lecturers in public colleges of education in Kwara State is low.

Research Question 2: What is the level of academic achievement of students in public colleges of education in Kwara State, Nigeria?

Table 4: *Level of Students' Academic Achievement (N=300)*

S/N	Class of Performance	CGPA Range	Frequency (f)	Percentage (%)	Mean Achievement Level
1	Distinction	4.50 – 5.00	15	5.0%	High
2	Credit	3.50 – 4.49	75	25.0%	High
3	Merit	2.50 – 3.49	150	50.0%	Average
4	Pass	1.50 – 2.49	45	15.0%	Low
5	Low Pass / Fail	0.00 – 1.49	15	5.0%	Low
6.	Total		300	100%	

The empirical data in Table 4 reveals that the level of students' academic achievement in public colleges of education in Kwara State is predominantly average. A descriptive breakdown of the population demonstrates that exactly half of the sampled students (f = 150, 50.0%) fall squarely within the Merit category, maintaining an average achievement level with a CGPA range of 2.50–3.49. On the upper tail of the performance spectrum, a combined total of 30.0% of the students manifest a high achievement level, with 25.0% (f = 75) earning a Credit grade (CGPA 3.50–4.49) and a slim 5.0% (f = 15) achieving a Distinction grade (CGPA 4.50–5.00). Conversely, the lower tail indicates that 20.0% of the cohort exhibits a low achievement level; this is comprised of 15.0% (f = 45) who obtain a basic Pass (CGPA 1.50–2.49) and 5.0% (f = 15) who sit at the critical Low Pass / Fail boundary (CGPA 0.00–1.49). The overall academic achievement level of students in public colleges of education in Kwara State is characterized as moderately adequate but concentrated primarily around the average mean tier (Merit), leaving substantial room for systemic instructional and evaluative intervention.

Research Hypothesis

H_{O1}: There is no significant relationship between the adoption of instructional best practices and students' academic achievement in public Colleges of Education in Kwara State, Nigeria

Table 5: *Pearson Product-Moment Correlation of Instructional Best Practices and Students' Academic Achievement*

Variables	N	Mean	SD	r-value	p-value	Decision
Adoption of Instructional Best Practices	364	2.38	0.75			
				0.684	0.000	Rejected
Students' Academic Achievement	364	3.12	0.58			

$p < 0.05$; df (N - 2) = 362

Table 5 displays the descriptive and inferential statistics for the relationship between the adoption of instructional best practices and students' academic achievement in public Colleges of Education in Kwara State, Nigeria. The results reveal that the 364 respondents recorded a mean score of 2.38 (SD = 0.75) for the adoption of instructional best practices, and a corresponding academic achievement mean score of 3.12 (SD = 0.58). Inferentially, the calculated Pearson correlation coefficient (r-value) is 0.684 (68.4%), indicating a strong, positive relationship between the two variables. The associated probability value (p-Value = 0.000) is less than the chosen alpha level of significance (0.05). Consequently, the null hypothesis (H_{O1}), which states that there is no significant relationship between the adoption of instructional best practices and students' academic achievement, is hereby rejected. This implies that higher levels of adoption of instructional best practices are strongly linked to improved academic achievement among students in public Colleges of Education in Kwara State.

Discussion of Findings

Research Question 1 evaluates the level of adoption of instructional best practices among lecturers in public colleges of education in Kwara State. The empirical evidence yields a deeply troubling diagnostic profile with the Grand Mean score (Mean = 2.38, SD = 0.75) falls demonstrably below the established criterion benchmark threshold of 2.50. In the lexicon of test, measurement, and educational evaluation, this absolute deficit explicitly indicates that the overarching instructional ecosystem within these teacher-training institutions remains sub-optimal and heavily reliant on traditional, non-differentiated modalities.

A granular item analysis reveals a stark divergence between basic pedagogical planning and advanced instructional

execution. On a positive note, lecturers demonstrated a statistically acceptable adherence to three foundational domains: The utilization of student-centered interactive strategies (Mean = 2.84, SD = 0.76), the structural alignment of lesson objectives with higher-order cognitive outcomes (Mean = 2.65, SD = 0.64) and the baseline deployment of differentiated instruction (Mean = 2.54, SD = 0.68). From a measurement perspective, because the standard deviations across these variables are tightly clustered below the 1.00 threshold, we can infer a high degree of item reliability and consensus among the 364 respondents. There is little variance in their self-reported compliance with these initial planning phases.

However, the instrument exposes critical systemic vulnerabilities in high-leverage instructional practices. The most severe deficiencies manifest in the psychometric and technological domains: the integration of digital ICT tools (Mean = 2.12, SD = 0.89) and the explicit sharing of transparent evaluation rubrics prior to formal assessments (Mean = 1.98, SD = 0.82) are both low. Furthermore, the systematic deployment of diagnostic formative assessments designed to provide immediate feedback loops fell significantly below par (Mean = 2.21, SD = 0.71).

From an evaluation standpoint, this reveals a profound operational paradox: while lecturers are capable of drafting advanced cognitive objectives on paper, they lack the actual instructional and evaluative capacity to execute them. They fail to employ modern educational technology or transparent, formative measurement criteria to track and scaffold student progress in real-time.

This dominant pattern of low instructional best-practice adoption and deficient formative evaluation frameworks directly aligns with several contemporary West African studies. Specifically, the finding mirrors the systemic issues uncovered by Ademiluyi and Akinlabi (2022), who noted a pervasive, uninspired approach to student evaluation across Nigerian Colleges of Education. Their work highlighted an overwhelming institutional over-reliance on rigid, memory-based traditional testing frameworks at the expense of continuous, competency-based formative strategies. Furthermore, the severe technological and pedagogical deficits observed among Kwara State lecturers echo the thematic conclusions of Ajani (2022). Ajani's phenomenological assessment of Nigerian educators revealed that professional development training is largely irregular and highly fragmented, leaving a critical operational gap where lecturers hold official credentials but actively struggle with modern instructional delivery and continuous classroom support. The baseline infrastructure and utilization gap identified in this study also finds strong empirical support in the work of Ajiboye (2022). Ajiboye demonstrated that while physical resources or theoretical educational guidelines might be moderately adequate within Southwestern Nigerian Colleges of Education, the actual rate of active utilization and real-world execution by institutional actors remains drastically lower

directly mirroring why the Kwara State lecturers score highly on objective alignment but fail completely on actual technological and rubric-based execution.

Conversely, the findings of this study stand in sharp empirical contradiction to research environments where structured pedagogical interventions or distinct institutional policies have been enforced. For instance, the low adoption of student-centered and interactive formative strategies in this study directly conflicts with the empirical outcomes documented by Agwu and Nmadu (2023). In their evaluation of interactive classrooms, Agwu and Nmadu demonstrated that when educators are pushed past conventional "chalk-and-talk" routines, they successfully achieve high rates of interactive engagement and robust formative feedback loops, which significantly resolve conceptual errors and enhance student academic self-concept. Additionally, the low adoption scores recorded in this study contradict international data regarding modern, progressive teacher training structures. For example, the findings diverge from the optimized, self-directed professional environments discussed by Ajani (2021) in certain highly supported, andragogically-aligned educational districts in South Africa. In those spaces, where professional development is treated as an active, teacher-led adult learning process rather than a bureaucratic mandate, educators show significantly higher rates of continuous rubric integration, active diagnostic testing, and immediate feedback loop implementation than the baseline cohorts evaluated in Kwara State.

The finding from research question 2 indicates that student achievement in Kwara State colleges of education clusters heavily (50%) around an average performance level (Merit), with only a small elite fraction (5%) reaching top-tier distinction. From a psychometric and structural standpoint, this distribution points toward an instructional and evaluative framework that successfully prevents mass catastrophic failure but struggles to optimize high-level cognitive outcomes and technical competence. This finding strongly echoes the empirical realities documented by Ajiboye (2022) in his evaluation of public colleges of education within the Southwest region observed that while foundational institutional resources are moderately adequate which keeps student benchmarks afloat within the average range the massive underutilization of these instructional materials severely limits students' capacity to progress from average to high-performance bands. The clustering around a "Merit" standard observed in Kwara State serves as direct quantitative evidence of this operational stagnation. Furthermore, the average distribution relates directly to the evaluative critiques raised (Ademiluyi & Akinlabi, 2022). Their research demonstrated that traditional, memory-based testing models (such as conventional end-of-semester examinations and written tests) remain overwhelmingly dominant in colleges of education. In measurement theory, an over-reliance on lower-level cognitive domain testing (e.g., rote

memorization) naturally generates a compressed, middle-heavy performance curve. Students easily memorize enough material to secure a pass or merit tier, but they lack the higher-order, competency-based assessment exposures required to push their academic profiles into the distinction bracket.

Conversely, the findings of this study do not align with the patterns observed under active, highly interactive pedagogical interventions (Agwu & Nmadu, 2023). In their quasi-experimental inquiry, Agwu and Nmadu (2023) isolated the effects of a cooperative learning pedagogy against conventional lecture models. Their inferential analysis demonstrated that when students are removed from passive learning frameworks and placed into interactive, cooperative environments, they achieve significantly higher post-test academic scores and develop a sturdier academic self-concept. The performance distribution in such environments shifts away from the heavily average, middle-bound clustering seen in this Kwara State dataset, trending instead toward significantly higher cognitive performance tiers. The structural divergence between the two studies implies that the average performance profile characteristic of Kwara State colleges of education is an expected artifact of conventional, uninspired chalk-and-talk pedagogies. It highlights the missed academic gains that could otherwise be unlocked through interactive, learner-centered educational designs.

The rejection of this null hypothesis underscores the critical role that systematic, modern pedagogical strategies play in shaping learning outcomes within teacher-training institutions. The positive correlation ($r = 0.684$) demonstrates that when lecturers consistently employ instructional best practices such as interactive lectures, collaborative learning frameworks, continuous formative assessments, and tech-mediated resource delivery student achievement rises predictably.

This finding aligns with previous empirical positions in Nigerian higher education, notably Ajiboye (2022), who argued that the active, optimal utilization of institutional resources and instructional frameworks is a more powerful predictor of student success than their mere physical presence. Furthermore, it supports the contentions of Ademiluyi and Akinlabi (2022), who emphasized that moving away from uninspired, rigid, or memory-based traditional routines toward active, high-order competencies is a fundamental prerequisite for boosting student performance metrics. When educators shift away from traditional teacher-centric "chalk-and-talk" dynamics toward evidence-based instructional methods, abstract and difficult concepts become clearer, driving up both short-term retention and long-term academic excellence.

Conclusion

This study investigated the relationship between the adoption of instructional best practices and academic achievement in public colleges of Education in Kwara state, Nigeria. The findings of this study establish a critical link between teaching methodologies and student

academic achievement outcomes in public colleges of education within Kwara State. In conclusion, while the current academic achievement of students hovers at a mediocre, baseline level predominantly concentrated around the Merit (average) tier the overall adoption of instructional best practices among lecturers remains alarmingly low. Crucially, the empirical evidence rigorously rejects the notion that these two variables have no significance. The statistically significant, strong positive relationship ($p = 0.000 < 0.05$) demonstrates that student academic achievement is heavily dependent upon the instructional strategies employed by their educators. Ultimately, this study concludes that the standard of student achievement in public colleges of education Kwara State, Nigeria is being artificially capped by the underutilization of modern, effective teaching practices. Raising the bar of student outcomes from mere adequacy to excellence requires a systematic shift away from conventional pedagogy toward the widespread adoption of instructional best practices. Without targeted interventions to elevate lecturing standards, student achievement is likely to remain stagnant in the average tier.

Recommendations

Based on the findings of the study, the following recommendation were made:

1. College administrators and curriculum planners must shift institutional evaluation routines away from rigid, memory-based traditional testing toward higher-order, competency-based continuous assessment frameworks to stimulate critical thinking and push students into higher academic achievement brackets.
2. Lecturers should actively transition from conventional, teacher-centered "chalk-and-talk" instructional delivery to interactive, cooperative learning pedagogies to effectively resolve conceptual errors and lift the baseline performance of the student cohort.
3. The Ministry of Education and college governing councils must replace irregular, top-down workshops with sustained, andragogical professional development models that incorporate ongoing classroom monitoring and mentorship to ensure progressive teaching methods are successfully implemented.

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