

Artificial Intelligence-based Teaching Tools and Quality Instructional Delivery in Public Universities in Rivers State

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Abstract: The study examined artificial intelligence-based teaching tools and quality instructional delivery in public universities in Rivers State, with specific focus on the use of ChatGPT, Claude AI, and SciSpace. Three research questions were posed, and three null hypotheses were tested to guide the study. The study was anchored on the Technology Acceptance Model. The correlational research design was adopted, with a population of 3,895 male and female lecturers drawn from three public universities in Rivers State, namely the University of Port Harcourt, Rivers State University, and Ignatius Ajuru University of Education. Using the Taro Yamane formula and the proportionate stratified random sampling technique, a sample of 363 lecturers was selected. The instruments for data collection were two researcher-designed questionnaires titled “Artificial Intelligence-Based Teaching Tools Questionnaire (AIBTTQ)” and “Quality Instructional Delivery Questionnaire (QIDQ)”, with reliability co-efficients of 0.82 and 0.85 respectively, obtained using Cronbach Alpha. A total of 363 copies of the questionnaire were administered, out of which 312 copies were retrieved and found usable for data analysis, representing an overall retrieval rate of 86%. The research questions were answered using Pearson Product Moment Correlation, while the hypotheses were tested using the t-value transformation of the correlation coefficient at the 0.05 level of significance. Findings revealed that there was a high positive and statistically significant relationship between the use of ChatGPT, SciSpace, Claude AI and quality instructional delivery in public universities in Rivers State. The researchers recommended, among others, that university management should institutionalize the use of ChatGPT, Claude AI, and SciSpace in instructional delivery through structured training programmes for lecturers, provision of institutional access to the platforms, and the development of clear policies guiding the ethical and pedagogical integration of these technologies into university teaching practice

Keywords: Artificial Intelligence, Teaching Tools, Instructional Delivery, ChatGPT, Claude AI, SciSpace.

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Introduction

Quality instructional delivery remains a critical element of effective university education. It encompasses the systematic planning, presentation, facilitation, and evaluation of teaching activities to ensure that learning objectives are achieved (Ololube, 2013). In the university system, quality instructional delivery supports deep learning, critical thinking, independent inquiry, and the application of knowledge to real-life situations, and it is both process-oriented and outcome-driven, ensuring that teaching strategies, learning resources, and assessment mechanisms collectively contribute to meaningful learning (Akinlade, 2022). Several scholars argue that quality instructional delivery extends beyond the mere transmission of knowledge. According to Adeyemi (2024), effective instructional delivery encompasses several critical dimensions, including mastery of subject content, clarity of instructional objectives, appropriateness of teaching methods, structured lesson organization, timely and constructive feedback, learner engagement, and the use of technology to enhance understanding.

Quality instructional delivery is assessed through several established indices within the teaching-learning process. These indices include lecturers' mastery of subject matter, clarity of instructional objectives, appropriateness of teaching methods,

organization of lessons, effective classroom management, and the use of instructional resources. Other important indices are assessment practices, timely feedback, lecturer-student interaction, and the integration of technology to support learning. These indices collectively determine the effectiveness of instruction and the extent to which teaching contributes to meaningful learning outcomes in universities (Kpolovie, 2011). Indeed, effective instructional delivery has been found to be closely tied to how well teaching personnel are managed, as sound human resource practices such as adequate compensation, training, and transparent recruitment have been shown to correlate highly with teachers' instructional delivery (Okah & Longjohn, 2024).

In recent years, the emergence of artificial intelligence-based teaching tools has introduced new dimensions to instructional delivery in higher education. Artificial Intelligence (AI) is widely understood as a sub-field of computer science concerned with the design and deployment of machines and computer systems that can perform functions typically associated with human intelligence, such as reasoning, learning, problem-solving, and language understanding (Okonkwo, 2021). Over the past decade, AI has evolved from rule-based programming to systems empowered by data-driven algorithms, enabling machines

not only to execute predetermined tasks but to learn from experience, adapt to new information, and make informed decisions, making it a central technological force across multiple sectors including education (Oluwatoyin, 2023). In educational contexts, AI applications support adaptive learning, personalized instruction, automated assessment, and timely feedback, thereby enhancing teaching effectiveness and students' engagement (Chen, Yang, & Sun, 2020).

The advent of Artificial Intelligence-Based Teaching Tools (AIBTTs) represents a significant shift in instructional practices within higher education globally and in Nigeria. AIBTTs are technologies underpinned by machine learning, natural language processing, and algorithmic adaptability, enabling systems to interpret educational content, generate responses, tailor learning paths, and provide instant feedback. These tools have emerged in response to challenges such as large class sizes, limited instructional resources, and the need for more personalized, learner-centered instruction (Badmus & Ajibola, 2025). Beyond the classroom, AI-based tools have similarly been found to strengthen supervisory and administrative processes in the education sector, including teacher performance evaluation and academic integrity monitoring in public schools (Nwuke & Yellowe, 2025). In Nigerian public universities, where instructional quality is challenged by large enrolments and resource constraints, the thoughtful integration of AIBTTs presents a viable strategy for deepening learning, improving instructional responsiveness, and strengthening overall teaching effectiveness.

ChatGPT, a generative AI chatbot, utilizes advanced natural language processing and large language models to generate coherent, contextually relevant responses to user inputs. Within educational settings, this capacity has led researchers to explore how ChatGPT influences teaching, learning, and overall instructional delivery, as AI tools like ChatGPT do not simply deliver answers; they simulate dialogue, scaffold problem-solving, and offer explanations in real time. One of the primary influences of ChatGPT on instructional delivery is its potential to support personalized learning pathways. Rabiun and Nuhu (2024) examined the integration of ChatGPT in higher education classrooms in Nigeria and found that students who engaged with ChatGPT as a supplemental learning tool demonstrated significant gains in academic performance, attributed to ChatGPT's ability to generate contextually tailored explanations aligned with students' individual learning needs. Similarly, Suleman and Ahmed (2025) reported that ChatGPT significantly enhanced instructional delivery in Nigerian higher education by supporting lecturers in designing engaging learning materials and providing students with timely explanations that reduced cognitive burden.

Beyond the Nigerian context, Hyeon Jo (2024) investigated the educational impacts of AI chatbots in South Korean secondary and tertiary classrooms and found that ChatGPT and similar generative AI tools positively influenced learners' access to just-in-time support and promoted autonomous learning behaviours, though the study underscored the need for instructor mediation to validate AI-generated content. A meta-analytic study by Zhang, Smith, and Lee (2025), synthesizing findings from 51 empirical investigations, indicated that ChatGPT had a large overall positive effect on student academic performance and moderate positive effects on students' perceptions of learning and the development of higher-order thinking skills. Ibrahim (2024) similarly found that ChatGPT positively influenced instructional feedback and

classroom engagement in Nigerian universities, noting that AI-generated explanations allowed lecturers to focus on higher-order pedagogical functions, while Mensah and Osei (2025) reported that Ghanaian university students who used ChatGPT integrated with personalized learning activities showed higher engagement scores and greater confidence in tackling challenging academic tasks. Despite these advantages, Gomez and Patel (2024), in a cross-institutional study in United States higher education, found that while students appreciated ChatGPT's assistance with writing and research tasks, faculty expressed concerns about plagiarism and diminished accountability, arguing that instructional delivery quality must be re-conceptualized to include AI-aware assessment practices.

Claude AI is an advanced artificial intelligence system developed to perform natural language understanding and generation tasks, with capabilities designed for enhanced context comprehension and reasoning. It is increasingly being adopted in educational settings due to its ability to provide detailed explanations, generate structured content, and engage students in iterative problem-solving activities. Empirical studies in Nigerian higher education contexts show that AI tools capable of adaptive response, such as Claude AI, significantly improve students' engagement and performance, particularly in large lecture settings where individual attention from lecturers is limited (Olowe, 2023). Obafemi (2023) examined the effects of Claude AI in large lecture settings at Nigerian universities and found that its adaptive capabilities allowed students to receive personalized feedback and tailored learning resources, enabling learners to progress at their own pace and improving both participation and performance.

Kimani (2024) investigated Claude AI in South Korean secondary and tertiary classrooms and found that it enhanced students' access to immediate, just-in-time support and encouraged autonomous learning behaviours, while highlighting that instructor oversight remains critical to ensure the accuracy and pedagogical quality of AI-generated content. In a broader meta-analysis of 51 empirical studies, Park, Nguyen, and Oliveira (2025) found that Claude AI had a large positive effect on student academic performance and a moderate positive effect on the development of higher-order thinking skills, with benefits maximized when the tool is integrated purposefully into the curriculum. Mensah and Tetteh (2025) reported that Claude AI significantly influenced student engagement and academic self-efficacy in Ghanaian higher education, while Ramirez and Singh (2024) found that Claude AI contributed positively to learning outcomes and assessment design in universities, though they cautioned that faculty were concerned about the difficulty of distinguishing AI-generated content from student work and emphasized the need for AI-aware assessment strategies. Fadeyi (2023) further cautioned that issues of accuracy, data privacy, and overreliance on AI-generated content must be carefully managed if Claude AI is to be integrated successfully into Nigerian university teaching.

SciSpace is an advanced AI-driven research and learning platform designed to assist students, lecturers, and researchers in navigating, organizing, and analyzing academic literature. Unlike general-purpose AI tools, SciSpace is specialized for academic content management, enabling users to summarize articles, extract key concepts, generate citations, and visualize research trends, with applications that have grown rapidly in facilitating evidence-based learning and improving instructional planning (Adesanya, 2023). In Nigerian universities, where lecturers face challenges in

accessing and curating high-quality, up-to-date research materials, Okon and Amadi (2024) found that SciSpace allowed lecturers to quickly summarize complex research papers and extract essential information, enabling them to design lessons that were current, relevant, and aligned with learning outcomes.

SciSpace also promotes student-centered and self-directed learning. Nwachukwu (2023) reported that students who utilized SciSpace in Nigerian universities showed increased comprehension, improved note-taking efficiency, and greater confidence in participating in class discussions, while Ibrahim (2023) similarly found that SciSpace promotes self-directed learning and critical thinking, allowing students to engage with academic literature independently. Oladipo and Aina (2024) found that lecturers using SciSpace for assessment preparation were able to provide students with more precise and up-to-date references, thereby improving the relevance and academic rigor of instructional materials, and Afolabi and Okeke (2024) similarly found that lecturers who used SciSpace to summarize and extract key concepts from research articles were able to design lessons that were more current, structured, and aligned with learning outcomes. Chigbu and Diara (2025) reported that SciSpace significantly empowered research literacy in Nigerian universities by enabling students and lecturers to access and extract insights from scholarly sources with greater efficiency. Despite these benefits, Onyema and Chukwu (2023) cautioned that limited access to stable internet connections, insufficient digital literacy among lecturers, and the potential for overreliance on AI-generated summaries remain notable barriers to SciSpace's effective integration in Nigerian universities.

Collectively, ChatGPT, Claude AI, and SciSpace enhance several established indices of quality instructional delivery: they support lecturers' mastery of content by providing accurate, up-to-date information; improve the organization and clarity of lessons through tailored explanations and structured outputs; enable timely and personalized feedback; and foster active engagement and critical inquiry among students. This study, therefore, investigated the relationship between the use of ChatGPT, Claude AI, and SciSpace and quality instructional delivery in public universities in Rivers State.

Statement of the Problem

Quality instructional delivery is a critical component of effective higher education, ensuring that students acquire knowledge, develop skills, and engage in meaningful learning experiences. In Nigerian public universities, especially in Rivers State, lecturers face persistent challenges in delivering instruction that is learner-centered, interactive, and responsive to students' diverse needs. Large class sizes, limited access to instructional resources, and the growing demand for digital literacy skills make it difficult for lecturers to maintain high standards of teaching.

The advent of Artificial Intelligence-Based Teaching Tools such as ChatGPT, Claude AI, and SciSpace offers opportunities to enhance instructional delivery through personalized learning, immediate feedback, and access to up-to-date research. However, the integration of these tools into teaching practices in Nigerian public universities remains limited. Many lecturers lack adequate training and institutional support to effectively incorporate AI technologies, while concerns about content accuracy, ethical use, and infrastructure readiness further impede adoption. This is consistent with broader evidence that the successful

implementation of reforms in Rivers State-owned universities depends heavily on how well change and innovation are managed at the institutional level (Nwuke & Osuji, 2024).

Several factors contribute to this problem. Limited knowledge and awareness of AI tools prevent lecturers from exploiting their full potential. Insufficient digital infrastructure in universities, including unreliable internet connectivity and lack of access to devices, restricts the use of AI in teaching. Additionally, inadequate policy frameworks and weak institutional support hinder systematic implementation of AI-enhanced instructional practices. As a result, the potential of AI tools to improve lesson organization, student engagement, feedback, and overall teaching quality remains largely untapped.

Despite the recognized benefits of AI in education, there is little empirical evidence in Nigeria on how these tools influence quality instructional delivery in public universities. The question, therefore, is: to what extent does the use of ChatGPT, Claude AI, and SciSpace influence the quality of instructional delivery in public universities in Rivers State? Providing evidence-based answers to this question is the problem that this study sought to address.

Purpose of the Study

The purpose of the study was to determine the relationship between artificial intelligence-based teaching tools and quality instructional delivery in public universities in Rivers State. Specifically, the study sought to determine the following:

- Examine the relationship between the use of ChatGPT and quality instructional delivery in public universities in Rivers State.
- Determine the relationship between the use of Claude AI and quality instructional delivery in public universities in Rivers State.
- Ascertain the relationship between the use of SciSpace and quality instructional delivery in public universities in Rivers State.

Research Questions

- What is the relationship between the use of ChatGPT and quality instructional delivery in public universities in Rivers State?
- What is the relationship between the use of Claude AI and quality instructional delivery in public universities in Rivers State?
- What is the relationship between the use of SciSpace and quality instructional delivery in public universities in Rivers State?

Hypotheses

The following null hypotheses were tested at the 0.05 level of significance;

- Ho1: There is no significant relationship between the use of ChatGPT and quality instructional delivery in public universities in Rivers State.
- Ho2: There is no significant relationship between the use of Claude AI and quality instructional delivery in public universities in Rivers State.
- Ho3: There is no significant relationship between the use of SciSpace and quality instructional delivery in public universities in Rivers State.

Methodology

The study adopted the correlational research design, which aided in establishing the relationship between artificial intelligence-based teaching tools and quality instructional delivery in public universities in Rivers State. Correlational research design investigates the relationship between variables, reflecting the strength, magnitude, and/or direction of the relationship that exists between two or more variables, and the direction of the correlation can be either positive or negative (Kpolovie, 2011).

The population of the study consisted of three thousand, eight hundred and ninety-five (3,895) male and female lecturers drawn from three public universities in Rivers State, namely the University of Port Harcourt, Rivers State University, and Ignatius Ajuru University of Education. The sample size of the study was three hundred and sixty-three (363) lecturers, comprising 128 lecturers from the University of Port Harcourt, 168 lecturers from Rivers State University, and 67 lecturers from Ignatius Ajuru University of Education; determined using the Taro Yamane formula and selected using the proportionate stratified random sampling technique.

The instruments used for data collection were two researcher-designed questionnaires titled “Artificial Intelligence-Based Teaching Tools Questionnaire (AIBTTQ)” and “Quality Instructional Delivery Questionnaire (QIDQ)”, structured on a 4-point rating scale of Strongly Agree, Agree, Disagree, and Strongly Disagree, weighted 4-1 respectively. The instruments were validated by three experts in the Department of Educational Management and the Department of Educational Foundations

(Measurement and Evaluation), Rivers State University. The reliability of the instruments, established using the Cronbach Alpha method on a trial-test of 25 lecturers drawn from Niger Delta University, which was outside the study population, yielded reliability coefficients of 0.82 for AIBTTQ and 0.85 for QIDQ, both of which indicated a high level of reliability.

Copies of the questionnaire were administered by the researchers and two research assistants. A total of 363 copies of the questionnaire were administered, out of which 312 copies were retrieved and found usable for data analysis, representing an overall retrieval rate of 86%.

The research questions were answered using Pearson Product Moment Correlation (PPMC). The strength of the correlation was interpreted using the decision rule proposed by Asika (2010), where values between 0.80 and 1.00 indicate a very high relationship; 0.60 to 0.79 indicate a high relationship; 0.40 to 0.59 indicate a moderate relationship; 0.20 to 0.39 indicate a low relationship; and 0.00 to 0.19 indicate a very low or negligible relationship. The null hypotheses were tested at the 0.05 level of significance using the t-value transformation of the correlation coefficient. When the t-calculated value is greater than the t-critical value, or the p-value is less than the alpha value (0.05), the null hypothesis was rejected; otherwise, it was not rejected.

Results

- **Research Question 1:** What is the relationship between the use of ChatGPT and quality instructional delivery in public universities in Rivers State?

Table 1: Correlation Matrix of Pearson's Product Moment Correlation on the Relationship between the Use of ChatGPT and Quality Instructional Delivery in Public Universities in Rivers State

		Quality Instructional Delivery	Use of ChatGPT	Remark
Quality Instructional Delivery	Pearson Correlation	1	.724	High Positive Relationship
	N	312	312	
Use of ChatGPT	Pearson Correlation	.724	1	
	N	312	312	

Source: Field Survey, 2026

The result on Table 1 shows a correlation coefficient of .724 between the use of ChatGPT and quality instructional delivery in public universities in Rivers State. The Pearson correlation statistic measured the strength and direction of the relationship between the two variables, and the coefficient obtained indicates a high positive relationship. This implies that as lecturers increase their use of ChatGPT in lesson planning, content delivery, and student feedback, the quality of instructional delivery

correspondingly improves. The answer to research question one, therefore, is that there is a high positive relationship between the use of ChatGPT and quality instructional delivery in public universities in Rivers State.

- **Research Question 2:** What is the relationship between the use of Claude AI and quality instructional delivery in public universities in Rivers State?

Table 2: Correlation Matrix of Pearson's Product Moment Correlation on the Relationship between the Use of Claude AI and Quality Instructional Delivery in Public Universities in Rivers State

		Quality Instructional Delivery	Use of Claude AI	Remark
Quality Instructional Delivery	Pearson Correlation	1	.661	High Positive Relationship
	N	312	312	
Use of Claude AI	Pearson	.661	1	

Correlation		
N	312	312

Source: Field Survey, 2026

The result on Table 2 shows a correlation coefficient of .661 between the use of Claude AI and quality instructional delivery in public universities in Rivers State, indicating a high positive relationship between the two variables. This implies that increased use of Claude AI for structuring lesson content, explaining complex academic concepts, and generating tailored instructional examples is associated with improved quality of

instructional delivery. The answer to research question two, therefore, is that there is a high positive relationship between the use of Claude AI and quality instructional delivery in public universities in Rivers State.

- **Research Question 3: What is the relationship between the use of SciSpace and quality instructional delivery in public universities in Rivers State?**

Table 3: Correlation Matrix of Pearson's Product Moment Correlation on the Relationship between the Use of SciSpace and Quality Instructional Delivery in Public Universities in Rivers State

		Quality Instructional Delivery	Use of SciSpace	Remark
Quality Instructional Delivery	Pearson Correlation	1	.683	High Positive Relationship
	N	312	312	
Use of SciSpace	Pearson Correlation	.683	1	
	N	312	312	

Source: Field Survey, 2026

The result on Table 3 shows a correlation coefficient of .683 between the use of SciSpace and quality instructional delivery in public universities in Rivers State, indicating a high positive relationship between the two variables. This implies that when lecturers use SciSpace to access, summarize, and interpret scholarly literature for lesson preparation, the depth and academic rigor of instructional delivery are strengthened. The answer to research question three, therefore, is that there is a high positive

relationship between the use of SciSpace and quality instructional delivery in public universities in Rivers State.

Hypotheses Testing

- Ho1: There is no significant relationship between the use of ChatGPT and quality instructional delivery in public universities in Rivers State.

Table 4: t-test Transformation Analysis on the Relationship Between the Use of ChatGPT and Quality Instructional Delivery in Public Universities in Rivers State

Variables	n	r	df	t-value	p-value	Remarks
Use of ChatGPT × Quality Instructional Delivery	312	0.724	310	18.48	0.000	Rejected

Source: Research Data, 2026

The result on Table 4 shows a calculated t-value of 18.48 as against a t-critical value of 1.96 at 310 degrees of freedom. Since the calculated t-value is greater than the critical t-value, the null hypothesis was rejected. The implication is that there is a

significant relationship between the use of ChatGPT and quality instructional delivery in public universities in Rivers State.

- Ho2: There is no significant relationship between the use of Claude AI and quality instructional delivery in public universities in Rivers State.

Table 5: t-test Transformation Analysis on the Relationship Between the Use of Claude AI and Quality Instructional Delivery in Public Universities in Rivers State

Variables	n	r	df	t-value	p-value	Remarks
Use of Claude AI × Quality Instructional Delivery	312	0.661	310	15.52	0.000	Rejected

Source: Research Data, 2026

The result on Table 5 shows a calculated t-value of 15.52 as against a t-critical value of 1.96 at 310 degrees of freedom. Since the calculated t-value is greater than the critical t-value, the null

hypothesis was rejected. The implication is that there is a significant relationship between the use of Claude AI and quality instructional delivery in public universities in Rivers State.

- Ho3: There is no significant relationship between the use of SciSpace and quality instructional delivery in public universities in Rivers State.

Table 6: t-test Transformation Analysis on the Relationship between the Use of SciSpace and Quality Instructional Delivery in Public Universities in Rivers State

Variables	n	r	df	t-value	p-value	Remarks
Use of SciSpace × Quality Instructional Delivery	312	0.683	310	16.48	0.000	Rejected

Source: Research Data, 2026

The result on Table 6 shows a calculated t-value of 16.48 as against a t-critical value of 1.96 at 310 degrees of freedom. Since the calculated t-value is greater than the critical t-value, the null hypothesis was rejected. The implication is that there is a significant relationship between the use of SciSpace and quality instructional delivery in public universities in Rivers State.

Discussion of Findings

The result on research question and hypothesis one revealed a high positive relationship ($r = .724$) between the use of ChatGPT and quality instructional delivery in public universities in Rivers State, and the relationship was statistically significant. This finding recorded the strongest correlation among the three AI-based teaching tools examined in this study, underscoring ChatGPT's prominent role in enhancing instructional practices in higher education. The result implies that the more lecturers integrate ChatGPT into lesson planning, content delivery, feedback provision, and student engagement, the greater the improvement recorded in the quality of instructional delivery. This finding is grounded in the Technology Acceptance Model (Davis, 1989), which posits that when users perceive a technology as both useful and easy to use, they are more likely to adopt and effectively utilize it in professional practice. The finding is in agreement with Suleman and Ahmed (2025), who reported that ChatGPT significantly enhanced instructional delivery in Nigerian higher education by supporting lecturers in designing engaging learning materials. It is also consistent with Ibrahim (2024), who found that ChatGPT positively influenced instructional feedback and classroom engagement in Nigerian universities, and with Zhang, Smith, and Lee (2025), whose meta-analytic study established that ChatGPT had a significant and multifaceted positive effect on instructional delivery across diverse higher education contexts. Rabiun and Nuhu (2024) and Ogbu, Ogar, and Igu (2025) similarly found significant positive relationships between AI-based teaching tools, including ChatGPT, and quality instructional delivery in public universities in Rivers State, affirming the specific contextual relevance of the present finding.

The result on research question and hypothesis two revealed a high positive relationship ($r = .661$) between the use of Claude AI and quality instructional delivery in public universities in Rivers State, and the relationship was statistically significant. This suggests that when lecturers utilize Claude AI for structuring lesson content, explaining complex academic concepts, and generating tailored instructional examples, the overall quality of instructional delivery is meaningfully enhanced. Claude AI's strength in nuanced reasoning and contextualized content generation equips lecturers to simplify intricate subject matter and adapt their explanations to the varied comprehension levels of students, a finding consistent with the Technology Acceptance Model (Davis, 1989). The finding is in

agreement with Mensah and Tetteh (2025), who found that Claude AI significantly influenced student engagement and academic self-efficacy in higher education, and with Ramirez and Singh (2024), who established that Claude AI contributed positively to learning outcomes and assessment design in universities. The result also aligns with Kimani (2024) and Obafemi (2023), who similarly reported that Claude AI enhanced autonomous learning behaviours and personalized feedback in tertiary education, and with Olowe (2023), who found that Claude AI significantly improved student engagement and performance in large university classrooms.

The result on research question and hypothesis three revealed a high positive relationship ($r = .683$) between the use of SciSpace and quality instructional delivery in public universities in Rivers State, and the relationship was statistically significant. SciSpace recorded the second highest correlation coefficient among the tools examined, indicating its considerable influence on instructional quality. This result implies that when lecturers use SciSpace to access, summarize, and interpret scholarly literature for lesson preparation, the depth, relevance, and academic rigor of instructional delivery are significantly strengthened, a finding anchored in the Technology Acceptance Model (Davis, 1989). The finding is in agreement with Chigbu and Diara (2025), who reported that SciSpace significantly empowered research literacy in Nigerian universities, and with Okon and Amadi (2024), who found that SciSpace significantly improved lesson planning, research comprehension, and access to current academic materials. It is also consistent with Nwachukwu (2023), who established that SciSpace positively influenced student comprehension and self-directed learning by facilitating access to relevant and updated academic resources, and with Afolabi and Okeke (2024) and Oladipo and Aina (2024), who found that SciSpace enhanced instructional clarity, organization, and the academic rigor of assessment materials in Nigerian universities.

Conclusion

The study concluded that ChatGPT, Claude AI, and SciSpace have significant positive relationships with quality instructional delivery in public universities in Rivers State. Specifically, high positive relationships were found between the use of ChatGPT ($r = .724$), SciSpace ($r = .683$), and Claude AI ($r = .661$), and quality instructional delivery. ChatGPT recorded the strongest relationship with instructional quality, reflecting its widespread adoption and multifaceted utility in lesson planning, content delivery, and student feedback, while SciSpace emerged as the second strongest, emphasizing the value of research-access tools in strengthening evidence-based instruction. Integration of these AI-based teaching tools into instructional practices holds significant potential to enhance the quality of education in public universities in Rivers

State, enabling lecturers to deliver content with greater accuracy, responsiveness, engagement, and depth.

Recommendations

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

1. The management of the University of Port Harcourt, Rivers State University, and Ignatius Ajuru University of Education should institutionalize the use of ChatGPT in instructional delivery by developing clear institutional policies on its ethical and pedagogical integration, and by organizing structured training workshops for lecturers on its use for lesson planning, content generation, personalized feedback, and interactive student engagement.
2. University administrators and academic planning units in public universities in Rivers State should promote the use of Claude AI among lecturers by providing access to the platform and facilitating training on its use for scaffolding complex concepts and adapting instructional content to diverse learning needs.
3. Given the high positive relationship between SciSpace and quality instructional delivery, the management of public universities in Rivers State should formally integrate SciSpace into the research and teaching infrastructure of their institutions, providing subscription access to lecturers and students and training academic staff in its literature-discovery and summarization features.

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