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Institutional and Lecturers' Preparedness and Attitude Towards Adoption of Digital Instructional Delivery Strategies in Federal Universities in South-South Nigeria

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Abstract
Federal universities in South-South Nigeria experience substantial enrolment pressures, resulting in high lecturer-student ratios in addition to the infrastructural deficits. This necessitates the adoption of digital instructional delivery strategies. This study utilized a mixed-methods design to investigate institutional and lecturers' preparedness and attitudes toward these strategies. Employing a multi-stage sampling procedure, involving the purposive and accidental sampling techniques, 1,138 academic staff, representing 10% of the population, were selected from six federal universities. Data collection utilized three researchers-developed instruments: Institutional and Lecturers' Digital Instructional Delivery Preparedness and Attitude Questionnaire (ILDIDPAQ), Institutional and Lecturers' Digital Instructional Delivery Preparedness and Attitude Structured Interview (ILDIDPASI), and Institutional and Lecturers' Digital Instructional Delivery Preparedness and Attitude Direct Observations (ILDIDPADO). Upon validation by two Educational Technology, one Psychology, and two Educational Measurement experts, the ILDIDPAQ yielded a Cronbach's Alpha reliability coefficient of 0.83. Data collected was analyzed via the IBM SPSS version 27, utilizing the Frequency, Mean, Standard Deviation, and One-Sample T-test to evaluate four null hypotheses at the 0.05 significance level. Findings indicate that both institutional and lecturers' preparedness for digital instructional delivery are significantly below average. Furthermore, institutional attitude significantly deviates from neutral, whereas lecturers' attitude is significantly above average. This research exposes a substantial paradoxical gap between lecturers'

positive predispositions and the systemic infrastructural and personal preparation deficits that obstruct the effective implementation of digital instructional strategies. To address these challenges, university management must prioritize digital infrastructural investment, comprehensive lecturer training, and supportive leadership to translate positive attitudes into improved pedagogical practices.

Keywords: Institutional Preparedness, Lecturers' Preparedness, Institutional Attitude, Lecturers' Attitude, Adoption, Digital Instructional Strategies.

Introduction

The COVID-19 pandemic increased the pace at which digital learning strategies developed in higher education worldwide. While some adopted e-learning, others went for hybrid and blended learning. E-learning is a strategy that utilizes internet connectivity and technological resources to deliver instructions and facilitate learning, the hybrid learning style provides face-to-face and online options allowing the learner to choose the one that suits him; while the blended learning strategy combines face-to-face with online learning seamlessly. While these strategies offer many advantages like greater flexibility, access to a variety of learning resources, and personalized learning experiences, success therein depends upon careful planning along with adequate resources and support systems.

The affordability of federal universities in providing tertiary education, in contrast to their private counterparts, results in a substantial student population at both the undergraduate and postgraduate levels. This high enrollment, however, strains the lecturer-to-student ratio due to limited government funding for adequate staffing. Consequently, overcrowded classrooms become the norm, creating a suboptimal learning environment often lacking effective technological resources (Quaye et al., 2015; Johnson, et al., 2021; Muraina et al., 2025). Students frequently find themselves crammed into lecture halls that are simply not designed to accommodate such large numbers. This leads to unconducive learning conditions, where seating is inadequate, forcing some students to stand or sit on the floor (Akomolafe et al., 2024). Such circumstances contribute to increased student absenteeism, a prevalent issue in tertiary institutions (Johnson, et al., 2021). As Quaye et al. (2015) point out, even those students who do attend classes often experience dissatisfaction due to environmental factors and other related issues that hinder effective learning. The situations call for an unprecedented shift from the traditional instructional delivery strategies, which call for an urgent assessment of the level of preparedness as well as the attitude of educational institutions' management towards effectively adopting the digital instructional delivery strategies.

Institutional preparedness refers to a set of factors, including the availability of robust technological infrastructure, high-speed internet connectivity, reliable learning management systems (LMS), and sufficient hardware devices with accompanying software applications. In addition, there should be clear policies and guidelines regarding online and hybrid and blended learning, including quality assurance mechanisms, academic integrity protocols, and support services for students and faculty. Eli-Chukuw (2021) revealed that institutional support is crucial in terms of adequate funding, technical support services, and professional development programs to be successfully implemented in adopting digital instructional strategies.

The preparedness of the lecturers is a necessary condition for the successful delivery of an online and hybrid courses. This implies pedagogical expertise in the design and delivery of engaging online learning experiences, familiarity with a range of online teaching tools and technologies, as well as capacity to communicate and interact effectively with

students in the virtual environment. Ambon et al. (2024) have conducted research that stresses the importance of continuous professional development programs meant to prepare lecturers for acquiring the skills and competencies required for effective digital instructional deliveries.

Exploring institutional and lecturers' attitudes is crucial for understanding the effective adoption of digital instructional strategies in Nigerian federal universities. Institutions shape the policy framework, distribute resources, and offer training, which directly affects the use of these approaches. In the absence of an enabling infrastructure, such as technology and professional development, lecturers may not be able to implement digital teaching methods. Additionally, lecturers' attitudes, including their willingness to embrace change, pedagogical beliefs, and perceived self-efficacy, significantly influence their instructional practices. According to Khavugwi and Ogange (2019), the positivity of orientation and belief about support from institutions correlates with the enhanced rate of adopting new learning practices.

While studies have stressed the dynamic potentials associated with diversifying instructional delivery strategies by embracing online, hybrid and blended learning; there exists a research gap in the level of preparedness of institutions, and lecturers in federal universities, especially in South-South Nigeria, which this study seeks to fill. The researchers therefore seek to explore the preparedness of South-South Nigerian federal universities, including their institutional management and lecturers, to effectively adopt digital instructional delivery strategies. Specifically, the following null hypotheses were advanced for scientific testing:

i. There is no significant difference between the mean score of institutional preparedness for the adoption of digital instructional delivery strategies and the neutral midpoint (3) on the scale.
ii. There is no significant difference between the institutional attitude towards the adoption of digital instructional delivery strategies and the neutral midpoint (3) on the scale.
iii. The mean score of lecturers' preparedness does not differ significantly from the neutral midpoint of 3 on the scale.
iv. The mean score of lecturers' attitudes does not differ significantly from the neutral midpoint of 3 on the scale.

Literature Review

This review takes into consideration the major factors of institutional and lecturer preparedness for the effective implementation of digital instructional strategies, thus:

Digital Instructional Delivery Strategies

Digital instructional strategies have become increasingly popular in higher education as institutions attempt to accommodate different learning styles, enhance student engagement, and prepare graduates for a rapidly changing world, amidst the high population of students. Empirical research has investigated the effectiveness of digital approaches like blended learning, flipped classrooms, and project-based learning. It has been discovered that blended learning, or the combination of online and offline teaching, can improve learning results and increased student satisfaction, as well as greater flexibility (Ofem et al., 2026). Flipped classrooms, where students learn content remotely and use class time for active learning activities, have been discovered to enhance student engagement and

critical thinking (Kus, 2025). Moreover, project-based learning, where the students are involved in actually working on real projects, has been proven to improve critical abilities of collaboration, problem-solving, and communication (Johnson et al., 2021b). These further affirm that differentiated instructional strategies, when effectively put into practice, can offer great value to learning and development among the students.

Despite this, the successful implementation of digital learning methods is not without challenges. Previous studies have highlighted that institutional facilitation in the form of adequate infrastructure, faculty and staff training, and technical support is crucial in facilitating the adoption of such practices (Ohaire-Udebu & Chukwuemeka, 2024). Lecturers' pedagogical and IT competencies are also crucial in their capacity to incorporate multiple instructional methods into practice, in addition to students' access to technology, digital literacy, and self-directed learning skills, play an important role in the success of digital learning programs. Overcoming these issues through targeted interventions and support services is essential to maximize the potential of digital instructional strategies and ensure equal access to quality education.

Institutional Preparedness for the Adoption of Digital Instructional Delivery Strategies

Institutional preparedness for the adoption of digital instruction delivery methods in Nigerian higher learning institutions is a complex situation with varying degrees of preparedness across various institutions. The presence of infrastructure, the quality of institutional development and support, and the institution's culture of embracing innovative instructional strategies are some of the factors that contribute to this preparedness. Research has indicated that although some Nigerian tertiary institutions have made great progress in establishing the required technological infrastructure and staff training (Ohaire-Udebu & Chukwuemeka, 2024; Akomolafe et al., 2024), others remain behind because of budget limitations, technical incapacity, and resistance to innovation (Muraina et al., 2025). This variation in readiness calls for a situation-specific strategy in the adoption of digital instructional delivery approaches, considering the specific strengths and weaknesses of each institution.

Besides, achieving a balance in diversifying instructional delivery through the effective utilization of innovative technologies also relies not just on institutional preparedness but the lecturers' preparedness to embrace these new styles of learning. Literature indicates that while the majority of lecturers are technologically literate and receptive to technology-based teaching and learning (Akindapo et al., 2024), others may be disrupted by a lack of access to technology, lack of digital literacy competencies, or tendencies toward traditional face-to-face instruction (Akaeze & Akaeze, 2024). Therefore, institutions, being the primary driver of the vision, need to consider lecturers' demography, learning style, and technological access when designing and putting in place digital instructional delivery strategies.

Lecturers' Preparedness for the Adoption of Digital Instructional Delivery Strategies

Lecturer preparedness for the adoption of digital instructional delivery strategies in Nigerian tertiary institutions is a core determinant of the success of such programs. Institutions may invest in resources and technology, but the ultimate utilization and implementation of these interventions are highly dependent on the capacity and willingness of lecturers to adapt and implement them. Several research studies have shown that lecturers need to be pedagogically capable, technologically capable, and prepared to embrace new modes of teaching (Bankole, 2022; Adu, 2023). Some studies indicate that the majority of lecturers are pedagogically informed but technically or confidently deficient in applying

technology in their instruction (Bubou & Job, 2021). This is a niche area that calls for special professional development efforts to enhance the digital literacy of lecturers, providing them with hands-on experience in various pedagogical technologies, and an environment that promotes experimentation and innovation.

Moreover, lecturers' beliefs and mindsets toward digital instructional delivery methods play significant roles in influencing their adoption and implementation. A few lecturers may resist the use of new methods and prefer the conventional lecture approach, while others may fear the perceived complexity of using technology or dealing with multiple learning environments (Baleni, et al. 2025). Addressing these challenges through open communication, sharing successful models of digital instruction, and providing ongoing support and guidance can help build a more positive attitude towards these practices. In addition, recognizing and rewarding lecturers who embrace innovative teaching strategies can also encourage the adoption of digital instructional delivery strategies in Nigerian tertiary institutions.

Institutional Attitude Towards the Adoption of Digital Instructional Delivery Strategies

Institutional attitude towards the adoption of digital instructional delivery methods in Nigerian tertiary institutions is a major factor that can either make or break the effective implementation of such endeavors. A positive and constructive institutional attitude is characterized by the presence of a clear vision for the integration of different modes of instruction, a willingness to provide necessary resources and support, and a culture that acclimates innovation and continuous enhancement of teaching and learning (Irele, 2021; Ogedi & Ugwokaegbe, 2024). This may involve developing policies that encourage the use of technology in teaching, investing in training and infrastructure, and rewarding and recognizing faculty members who use innovative teaching approaches. Where organizations demonstrate that they are committed to digital teaching, there is a cascade effect, with lecturers being encouraged to experiment with new approaches and an institutional commitment to enhancing the learning experience being developed.

However, other institutions may exhibit more ambivalent or even resistant responses when it comes to adopting digital instructional delivery methods. This could be because of various factors, such as a deep commitment to traditional methods of instruction, fears about the cost and complexity of employing new technologies, or a lack of awareness of the potential benefits of digital instruction (Muraina et al., 2025). In such cases, it is imperative that institutional leaders actively assuage these fears, compellingly communicate the vision for change, and actively nurture faculty and staff. This may involve providing workshops and seminars to raise awareness of the benefits of digital instruction, providing seed grants to support innovative teaching initiatives, and nurturing communities of practice where there is shared experiences and collaboration.

Lecturers' Attitudes Toward the Adoption of Digital Instructional Delivery Strategies

Lecturers' disposition to adopt digital instructional delivery methods is a major determinant of their success. An open-minded attitude, where lecturers are open to new methods, believe in the potential of digital instruction, and are ready to try and adapt, can have a significant effect on the success of these methods (Olubode et al., 2023; Oladayo & Oladayo, 2024). Instructors who adopt these mindsets are more likely to take advantage of professional development opportunities, solicit resources and aid, and innovatively combine multiple teaching methods into practice. This

positive attitude can culminate in more stimulating learning experiences for students and eventually lead to better learning outcomes.

Conversely, negative attitudes, possibly rooted in resistance to change, skepticism towards the effectiveness of new methods, or apprehension of extra workload, can hinder the adoption and proper implementation of digital instructional delivery techniques (Akomolafe et al., 2024; Lucky-Aleruchi, 2026). Lecturers who are resistant to change may be less willing to invest time and effort in learning new technologies or pedagogical approaches and thus may adopt innovative strategies superficially or ineffectively. These unfavorable attitudes should be met through a multi-dimensional approach, like presenting unambiguous and persuasive evidence for the benefits of digital instruction, offering adequate training and assistance, and offering means for lecturers to share experiences and issues.

Theoretical Framework

This research work rests on the foundation of the following theories.

The Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT), and its extension UTAUT2, offers an overarching framework to account for the drivers of people's intention to use and actual usage of technology, including varied learning strategies. UTAUT, first established by Venkatesh et al. (2003), combines core concepts of a series of prominent technology acceptance models, like the Theory of Planned Behavior, the Technology Acceptance Model, and the Social Cognitive Theory. It contends that performance expectancy, effort expectancy, social influence, and facilitating conditions are the strongest determinants of the intention to use technology. UTAUT2, an extension of UTAUT, incorporates such as hedonic motivation, price value, and habit, considering the role they play in the adoption of technology, particularly within consumer environments, but with educational implications too.

In the context of this research, UTAUT and UTAUT2 can explain institutions and lecturers' adoption of such methods. Performance expectancy, which is the belief that digital instructional strategies will improve the effectiveness of teaching, and effort expectancy, which is the perceived ease of use, are determining factors. Social influence, as the perception that others in the workplace and leadership in the organization support the adoption of digital instructional strategies, is a deciding factor. Facilitating conditions such as the presence of adequate resources and technical support are required to facilitate lecturers in implementing these strategies effectively. Along with this, considering UTAUT2, factors such as hedonic motivation (the enjoyment that is derived by implementing the technology) and habit (to what extent the use of the technology becomes a habit) can also affect lecturers' prolonged engagement with digital instruction.

The Resource-Based View (RBV)

Resource-based view (RBV) theory provides a critical framework to determine how lecturers and institutions can implement digital learning models with their existing resources. According to Wernerfelt (1984) and Barney (1991), RBV posits that competitive advantage occurs because a firm possesses valuable, rare, inimitable, and non-substitutable (VRIN) resources. In the context of the higher education environment, this implies that institutions and instructors possess certain resources that enable them to offer quality, diverse learning experiences. These resources

can be tangible, i.e., information technology and classrooms, or intangible, i.e., faculty expertise, pedagogical knowledge, and organizational culture. Identifying and consciously allocating these resources could enable universities to create a sustainable competitive advantage in the intensely competitive environment of higher education.

Using the RBV in the context of digital instructional delivery, organizations need to assess their assets on VRIN dimensions. For example, a superior learning management system (LMS) with advanced functionality can be an asset, but it is unlikely to be unique because most universities have comparable systems. But if the institution has a unique combination of a cutting-edge LMS, extremely seasoned teachers of online pedagogy, and an innovative culture, then this combination of resources is extraordinary and perhaps unreplaceable, which grants the institution an edge in providing effective digital learning. Similarly, lecturers with abundant pedagogical content knowledge, complemented by experience in using educational technologies and passion for student-centered learning, possess valuable, rare, and formidable resources that enable them to craft engaging and effective digital learning experiences.

Methodology

The mixed method research design was used for this study because it involved both quantitative and qualitative data. The area of this study was the South-South region of Nigeria, which is one of the six geopolitical zones in the country, comprising of six states. The states are: Akwa-Ibom, Bayelsa, Cross River, Delta, Edo, and Rivers State, each with one federal university as the University of Uyo, Federal University Oyueke, University of Calabar, Nigerian Maritime University Okerenkoko, University of Benin, and University of Port Harcourt, respectively. The population of the study covered all the 11,379 academic staff in the six federal universities across the six States. A sample of 1,138 academic staff, representing 10% of the population, participated in the study. The sample was drawn from the six federal universities across the six States using a multi-stage sampling procedure involving the Purposive and Accidental Sampling Techniques. Data collection was facilitated using the researchers' developed instruments, known as the Institutional and Lecturers' Digital Instructional Delivery Preparedness and Attitude Questionnaire (ILDIDPAQ), Institutional and Lecturers Digital Instructional Delivery Preparedness and Attitude Structured Interview (ILDIDPASI), and Institutional and Lecturers Digital Instructional Delivery Preparedness and Attitude Direct Observations (ILDIDPADO). The ILDIDPAQ consisted of two sections: Section A captured demographic information pertinent to the study, while Section B consisted of parts 1 to 4, with each part having five items. Parts 1 and 2 probed the institutional preparedness and attitude, while parts 3 and 4 checked the lecturers' readiness and attitude; making a total of twenty items that employed a modified four-point Likert scale (Strongly Agree, Agree, Disagree and Strongly Disagree). The ILDIDPASI was made up of four parts, with a total of eight structured interview items, with two each focusing on institutional preparedness and attitude as well as lecturers' preparedness and attitude. The ILDIDPADO was prepared using the basic benchmark for institutional and lecturers' preparedness and attitude. The validity of the instruments was established through the reviews by two EdTech, one Psychology, and two Educational Measurement experts. The reliability of ILDIDPAQ was established using Cronbach's Alpha with a coefficient of 0.83. The administration of the instruments was done by the researchers, in groups of four, with the help of five research assistants (post-graduate students) recruited and trained by the researchers in each sampled institution.

The data collection spanned two weeks. Data collected were subsequently sorted, screened, coded and analyzed using frequency, mean, standard deviation and one sample t-test for testing all null hypotheses at a .05 level of significance. The IBM Statistical Package for Social Sciences (SPSS), version 27, was used in running the data analysis.

Results

Table 1: Frequencies, Mean, Standard Deviation and one sample t-test of difference for respondents' responses on institutional preparedness for the adoption of digital instructional delivery strategies (n = 1138)

S/N	Item Statement	SA	A	N	D	SD	Midpoint	$\bar{X}$	SD	t-value	df	p-value	Dec.
1	Our university has a clear policy framework for the adoption of diverse instructional delivery strategies.	0	180	421	397	140	+3.00	2.56	.89	96.13	1137	.000	S
2	The university provides adequate technological infrastructure (e.g., reliable internet, learning management systems) to support diverse instructional delivery.	0	168	424	391	155	+3.00	2.53	.90	94.46	1137	.000	S
3	There are sufficient resources allocated for faculty training and development in diverse instructional delivery methods.	0	136	447	406	149	+3.00	2.50	.86	97.31	1137	.000	S
4	The university actively encourages and supports the use of blended learning and	23	161	388	437	129	+3.00	2.57	.93	92.63	1137	.000	S

	online learning approaches.												
5	The university has a robust system for evaluating the effectiveness of diverse instructional delivery strategies.	17	144	421	422	134	+3.00	2.55	.90	94.62	1137	.000	S
	Grand Mean						**+3.00**	**2.54**	**.40**	**209.56**	**1137**	**.000**	**S**

Note: SA = Strongly Agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly Disagree $\bar{X}$ = Mean, SD = Standard Deviation, Dec = Decision, S=Significant

The result presented in Table 1 shows the frequencies, mean, standard deviation, and one sample t-test for respondents' responses on institutional preparedness for the adoption of digital instructional delivery strategies. From the results, most of the respondents were either neutral or disagreed to institutional preparedness for the adoption of digital instructional delivery strategies. This result is evident in the mean ratings which were below the midpoint mean (+3.00). The grand mean (M=2.54, SD = .40), implies that there is a low level of institutional preparedness for the adoption of digital instructional delivery strategies. Further analysis showed that the institutional preparedness Mean scores differed significantly (t(df=1137) = 209.56, p = .000) from the neutral midpoint value (3) on the scale. This is because the associated probability value (p=.000) is less than 0.05 level of significance at which the result was being tested. Therefore, the null hypothesis was rejected, implying that institutional preparedness for the adoption of digital instructional delivery strategies is significantly below average. In other words, there is a low level of institutional preparedness for the adoption of digital instructional delivery strategies in federal universities in South-South, Nigeria.

To buttress the above result, interviews with university administrators revealed that although some universities have developed general policies advocating for innovative or blended learning, these documents often lack actionable steps. As one university staff member shared, "*Yes, there are policy documents here and there, but they rarely go beyond paper; there's no clear system to monitor or drive implementation.*" Another administrator remarked, "*We have an e-learning unit, but their activities are ad hoc, and most departments are not actively engaging with them*."

Furthermore, results from direct observations also highlighted key infrastructural lapses. Several campuses had unreliable Wi-Fi in key learning spaces, and many projectors and smartboards were found non-functional. While computer labs existed, they were often outdated and under-equipped. Observation of training centers also revealed that faculty development rooms were present but largely underutilized, with little evidence of scheduled training sessions. Policies related to blended learning were either unused in administrative offices or absent from visible common areas where faculty could easily access them. These qualitative insights help explain the statistically low institutional preparedness found in the quantitative data. This suggests that while there is surface-level awareness of

digital instructional delivery, universities in South-South, Nigeria have not yet translated this into tangible infrastructure and operational preparedness.

Table 2: Frequencies, Mean, Standard Deviation and one sample t-test of difference for respondents' responses on institutional attitude towards the adoption of digital instructional delivery strategies (n = 1138)

S/N	Item Statement	SA	A	N	D	SD	Midpoint	$\bar{X}$	SD	t-value	df	p-value	Dec.
1	The university leadership is committed to fostering innovation in instructional delivery.	11	407	426	141	153	+3.00	2.98	1.03	97.84	1137	.000	S
2	The university values and promotes student-centered learning approaches.	22	404	417	162	133	+3.00	3.02	1.90	99.69	1137	.000	S
3	There is a culture of continuous improvement in teaching and learning practices within the university.	20	410	430	154	124	+3.00	3.04	1.00	102.58	1137	.000	S
4	The university is open to incorporating emerging educational technologies into its instructional delivery.	13	449	397	155	124	+3.00	3.06	1.01	102.87	1137	.000	S
5	The university actively seeks feedback from students and lecturers regarding instructional delivery.	21	388	418	158	153	+3.00	2.97	1.05	95.91	1137	.000	S
	Grand Mean						**+3.00**	**3.02**	**.47**	**214.06**	**1137**	**.000**	**S**

Note: SA = Strongly Agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly Disagree $\bar{X}$ = Mean, SD = Standard Deviation, Dec = Decision, S=Significant

The result in Table 2 indicates that the majority of the respondents were either neutral or disagreed with the institutional attitudes towards the adoption of digital instructional delivery strategies. This result is obvious in the mean ratings which were either below or slightly above the midpoint mean (+3.00). The grand mean (M=3.02, SD = .47), denotes that there is a positive but unfavorable institutional attitude towards the adoption of digital instructional delivery strategies. The one-sample t-test analysis further revealed that there is a significant difference (t(df=1137) = 214.06, p = .000) between the institutional attitude towards the adoption of digital instructional delivery strategies and the neutral midpoint (3) on the scale. This is because the associated probability value (p=.000) is less than the 0.05 level of significance at which the result was being tested. Thus, the null hypothesis was rejected, meaning that institutional attitude towards the adoption of digital instructional delivery strategies in federal universities in South-South, Nigeria, is significantly different from neutral.

Supporting the above finding with the qualitative data results, during interviews, many universities' leadership expressed general support for innovation in instructional delivery but acknowledged that practical actions are limited. One respondent noted, "*The management occasionally organizes workshops and encourages departments to try new teaching methods, but it's not something we prioritize across the board*." Another commented, "*We did a few pilot programs last year, but they were only for a handful of lecturers*."

In addition, observations of the physical environment confirmed this cautious attitude. In several lecture halls, flexible seating arrangements to promote collaboration were present, but in many cases, traditional lecture layouts still dominated. While university bulletins and websites occasionally mentioned workshops or seminars on technology integration, these communications were often sporadic and not framed as core institutional priorities. The frequency of observed events related to innovative teaching was low, with modest attendance levels. These findings suggest that while institutional leaders are not resistant to adopting digital instructional delivery, there is a lack of systemic momentum or sustained initiatives to fully champion and embed innovation within the organizational culture.

Table 3: Frequencies, Mean, Standard Deviation and one sample t-test of difference for respondents' responses on lecturers' preparedness for the adoption of digital instructional delivery strategies (n = 1138)

S/N	Item Statement	SA	A	N	D	SD	Midpoint	$\bar{X}$	SD	t-value	df	p-value	Dec.
1	I possess the necessary technical skills to effectively utilize diverse instructional delivery strategies.	19	152	429	406	132	+3.00	2.58	.92	94.68	1137	.000	S
2	I am confident in my ability to design and deliver engaging online or blended learning courses.	15	150	437	398	138	+3.00	2.57	.91	94.92	1137	.000	S
3	I have received adequate training on the use of various educational technologies.	13	154	393	447	131	+3.00	2.54	.91	94.51	1137	.000	S
4	I am familiar with different pedagogical approaches for diverse learners.	19	144	397	433	145	+3.00	2.52	.93	91.93	1137	.000	S
5	I have access to resources and support for developing and implementing diverse instructional delivery strategies.	17	131	448	401	141	+3.00	2.54	.90	95.01	1137	.000	S
	Grand Mean						**+3.00**	**2.55**	**.40**	**216.03**	**1137**	**.000**	**S**

Note: SA = Strongly Agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly Disagree $\bar{X}$ = Mean, SD = Standard Deviation, Dec = Decision, S=Significant

The result presented in Table 3 signifies the frequencies, mean, standard deviation, and one sample t-test for respondents' responses on lecturers' preparedness for the adoption of digital instructional delivery strategies. The result showed that most of the lecturers were either neutral or disagreed to their preparedness for the adoption of digital instructional delivery strategies. This result is evident in the mean ratings which were below the midpoint mean (+3.00). The grand mean (M=2.55, SD = .40), implies that there is a low level of lecturers' preparedness for the

adoption of digital instructional delivery strategies. In addition, the one-sample t-test analysis revealed that the mean score of lecturers' preparedness differed significantly (t(*df*=1137) = 216.03, *p* = .000) from the neutral midpoint of 3 on the scale. This is because the associated probability value (p=.000) is less than the 0.05 level of significance at which the result was being tested. As a result, the null hypothesis was rejected, which implies that lecturers' preparedness for the adoption of digital instructional delivery strategies is significantly below average. In essence, there is a low level of lecturers' preparedness for the adoption of digital instructional delivery strategies in federal universities in South-South, Nigeria.

From the qualitative data analysis, lecturers interviewed acknowledged that although they are expected to integrate technology and diverse methods into their teaching, most have received little to no formal training on how to do so. As one lecturer explained, "*Apart from a few online webinars, we haven't had any consistent or structured training programs*. A lot of us are self-taught, and even then, we are unsure if we are doing things correctly." Another mentioned, "*We've faced challenges. especially with designing blended courses—there's no real institutional support, and sometimes we don't even have the software or hardware to make things work*."

Additionally, from the direct observations, lecturers were seldom seen using LMS platforms during lectures, and instructional materials remained largely paper-based or static PowerPoint presentations. Many classrooms lacked multimedia-rich materials, and lecturers demonstrated visible discomfort when addressing basic technical issues during class, frequently seeking external technical assistance. This combination of quantitative and qualitative evidence paints a clear picture of limited faculty preparedness, which could be hampering the broader institutional goal of implementing digital instructional strategies.

Table 4: Frequencies, Mean, Standard Deviation and one sample t-test of difference for respondents' responses on lecturers' attitudes toward the adoption of digital instructional delivery strategies (n = 1138)

S/N	Item Statement	SA	A	N	D	SD	Midpoint	$\bar{X}$	SD	t-value	df	p-value	Dec.
1	I believe that diverse instructional delivery strategies can enhance student learning outcomes.	598	384	156	0	0	+3.00	4.39	.72	206.86	1137	.000	S
2	I am willing to experiment with new and innovative teaching methods.	567	429	142	0	0	+3.00	4.37	.70	212.07	1137	.000	S
3	I am open to incorporating technology into my teaching practices.	557	435	146	0	0	+3.00	4.36	.70	210.66	1137	.000	S
4	I believe that blended learning or online learning can provide a flexible and accessible learning experience for students.	580	413	145	0	0	+3.00	4.38	.70	210.89	1137	.000	S
5	I am motivated to continuously improve my teaching skills and adapt to evolving educational needs.	550	446	142	0	0	+3.00	4.36	.69	212.23	1137	.000	S
	Grand Mean						**+3.00**	**4.37**	**.30**	**484.04**	**1137**	**.000**	**S**

Note: SA = Strongly Agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly Disagree $\bar{X}$ = Mean, SD = Standard Deviation, Dec = Decision, S=Significant

The results in Table 4 show that the majority of the respondents agreed in terms of their attitude toward the adoption of digital instructional delivery strategies. This result is evident in the mean ratings which were above the midpoint mean (+3.00). The grand mean (M=4.37, SD = .30), also implies that there is a positive lecturers' attitude towards the

adoption of digital instructional delivery strategies. In addition, the one-sample t-test analysis revealed that the mean score of lecturers' attitudes differed significantly (t(*df*=1137) = 484.04, *p* = .000) from the neutral midpoint of 3 on the scale. This is given the fact that the associated probability value (p=.000) is less than 0.05 level of significance at which the result was being tested. Therefore, the null hypothesis was rejected, which can be construed that lecturers' attitudes toward the adoption of digital instructional delivery strategies in federal universities in South-South, Nigeria, are significantly above average. This demonstrates a positive attitude toward the adoption of digital instructional delivery strategies.

Furthermore, from the qualitative data analysis, lecturers commonly expressed genuine excitement about integrating new teaching methods into their practice. One commented, "*I believe blended learning and multimedia make a huge difference. Students today are more engaged when we incorporate videos, simulations, or even just discussion forums*." Another lecturer remarked*, "What motivates me is the joy of seeing students more active and responsive when I try out new methods, even though we don't always have the tools, I still try*."

Additionally, observations supported these attitudes. Many lecturers encouraged student collaboration, actively used interactive discussions, and in a few cases, referred students to additional online resources or learning platforms. Several lecturers were also observed engaging with students after class to answer questions or provide additional tech-based learning support. From the foregoing, it can be that despite facing systemic challenges, the lecturers' positive attitude suggests they are intrinsically motivated and recognize the value of digital strategies in enhancing learning outcomes.

Discussion of Findings

This study was generally aimed at assessing institutional and lecturers' preparedness and attitude towards the effective adoption of digital instructional strategies in federal universities in South-South Nigeria. First, the study revealed that institutional preparedness was significantly below the neutral midpoint, indicating inadequate readiness among universities to implement digital instructional strategies effectively. These findings are consistent with the broader literature on Nigerian tertiary institutions, where levels of preparedness for digital instruction are known to vary widely. For instance, the finding aligns with Idika et al. (2024), who observed that Nigerian universities often lack the necessary infrastructure and support systems for effective e-learning adoption. Similarly, Ogedi and Ugwokaegbe (2024) highlighted those insufficient motivational strategies from organizational leadership correlate with poor instructional delivery among lecturers. Furthermore, Ohaire-Udebu and Chukwuemeka, (2024) and Akomolafe et al., (2024) found that some Nigerian universities have made commendable progress in establishing technological infrastructure and training programs.

However, others lag due to chronic budget limitations, technical capacity issues, and institutional resistance to change (Muraina et al., 2025). These infrastructural disparities mirror what was observed in this study, where universities lacked fully functional digital learning tools, and professional development activities were minimal. In addition, the institutional gaps identified in the findings of this study corroborate with the work of Habila (2020) and Bankole

(2022), who both concluded that without an institutionally driven effort to build technological ecosystems and consistent staff development, effective diversification of instructional delivery remains unlikely. Hence, while isolated institutions might show pockets of preparedness, the general pattern aligns with the present study's finding of an overarching deficit in institutional readiness in the South-South region.

The study also showed that institutional attitude was slightly above neutral but not markedly positive, reflecting a lukewarm attitude toward adopting digital instructional strategies in the universities. This attitude is common in recent discussions about the changing face of universities, where a shift towards online learning has led to concerns about declining educational standards and the impersonal nature of modern universities. This finding agrees with Irele (2021) and Ogedi and Ugwokaegbe (2024), who identified that a positive institutional attitude is often tied to leadership's commitment to providing the needed resources, establishing clear policies, and rewarding innovation. In contrast, Muraina et al., (2025) observed that some institutions in Nigeria exhibit lukewarm or even resistant attitudes toward new instructional methods, often clinging to traditional practices or expressing concerns about the costs and complexity of change. Such institutional ambivalence was reflected in the qualitative interviews of this study, where leadership appeared to favor incremental changes rather than systemic reforms. Moreover, this subdued institutional enthusiasm might explain why the available infrastructure in some universities is underutilized or inconsistently maintained, further confirming the assertion by Muraina et al. (2025) that institutional leadership is a pivotal driver of change in instructional delivery practices.

The finding of the study also revealed that lecturers' preparedness was significantly below the average, indicating a lack of preparedness or readiness to adopt digital instructional delivery strategies. This finding is consistent with Oladayo and Oladayo (2024), who found that while lecturers had a positive attitude towards using virtual classrooms, there was a significant difference in attitudes based on years of teaching experience, with less experienced lecturers showing more readiness to adopt new technologies. The findings also add credence to Adu (2023) and Bankole (2022), who emphasized that while many Nigerian lecturers possess pedagogical knowledge, their technical proficiency remains insufficient to integrate digital delivery effectively. Bubou and Job (2021) also reported that lecturers often lack the confidence to apply technology in the classroom, despite being pedagogically capable. Additionally, the finding also supports Akaeze and Akaeze (2024), who pointed out that factors such as limited access to technology and insufficient digital literacy training continue to undermine lecturers' preparedness. In line with these findings, qualitative data in this study revealed lecturers frequently struggle with implementing online and blended courses, often relying on outdated or paper-based materials. This suggests that while there is a general willingness to embrace digital instructional methods, actual preparedness is hindered by factors such as inadequate training and support, particularly among more experienced lecturers.

Finally, the study revealed that lecturers' attitudes were significantly above the neutral midpoint, indicating a positive attitude toward adopting digital instructional delivery strategies. This positive attitude aligns with Idika et al. (2024), who reported that despite challenges, lecturers exhibited a readiness to embrace e-learning, driven by the perceived benefits for student engagement and learning outcomes. In addition, the finding is consistent with studies by Olubode et al. (2023) and Oladayo and Oladayo (2024), who found that lecturers with open and positive mindsets are more

likely to embrace new teaching strategies and experiment with various instructional tools. Likewise, Akindapo et al. (2024) highlighted that most lecturers in Nigerian universities are technologically receptive, even if institutional challenges slow their full engagement with new teaching methods. However, this study also supports Baleni et al. (2025) and Lucky-Aleruchi (2026), who noted that while positive attitudes exist, they are often not enough to overcome barriers like inadequate training or infrastructure. Indeed, this study observed a mismatch where lecturers' enthusiasm is met with institutional unpreparedness and limited professional development opportunities, hindering the full adoption of digital instructional strategies.

Conclusions

Following the findings of the study, it was concluded that institutional preparedness for the adoption of digital instructional delivery strategies is significantly below average. In other words, there is low level of institutional preparedness for the adoption of digital instructional delivery strategies in federal universities in South-South, Nigeria. Additionally, institutional attitude towards the adoption of digital instructional delivery strategies in federal universities in South-South, Nigeria, significantly differs from neutral. Furthermore, lecturers' preparedness for the adoption of digital instructional delivery strategies is significantly below average, implying that there is low level of lecturers' preparedness for the adoption of digital instructional delivery strategies in federal universities in South-South, Nigeria. Finally, lecturers' attitude towards the adoption of digital instructional delivery strategies in federal universities in South-South, Nigeria, is significantly above average, implying that lecturers in federal universities in South-South, Nigeria demonstrate positive attitude towards the adoption of digital instructional delivery strategies.

Recommendations

Based on the findings and conclusions reached, the study proposes as follows:

i. The policymakers and management of federal universities must enhance institutional infrastructure and capacity building. This involves investment in digital resources and comprehensive lecturer training for technical readiness.

ii. The policymakers and management must develop favorable institutional leadership that must demonstrate commitment through policy and resource investment transparency, providing a supportive environment for innovation.

iii. The policymakers and universities' management should focus on enhancing the technical competence of instructors by initiating specialized training and mentorship programs to bridge the gap between theoretical knowledge of teaching and its practical implementation.

iv. The policymakers and universities' management need to capitalize on the enthusiasm shown by lecturers by developing congenial environments and providing ongoing support to ensure that instructors' positive attitudes translate into effective implementation of new teaching approaches.

v. Finally, further studies should consider students' preparedness and attitude towards digital instructional delivery in south-south and other geopolitical zones in Nigeria, as well as the institutional and lecturers' preparedness and attitude in federal universities in other geopolitical zones.

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