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Student Perception and Receptivity of Hybrid Learning Modes in Nigerian Public Universities

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Abstract

This study examined Nigerian public university students' perceptions and responses to hybrid learning across the six geopolitical zones. Hybrid learning, which combines face-to-face and online instruction, is increasingly promoted as a viable model for university education in Nigeria, despite concerns about students' willingness to adopt it. The population comprised undergraduates in federal universities nationwide. One university was purposively selected from each zone, and 300 students were chosen from each institution using stratified random sampling, giving a total sample of 1,800 respondents. The study was guided by two research questions and one hypothesis. Data were collected using structured questionnaire and analysed with descriptive and inferential statistics. Findings revealed that most students were aware of the benefits of hybrid learning, particularly flexibility, and demonstrated strong readiness and willingness to embrace it if infrastructure improves. However, perceptions of its impact on academic performance and class participation were less favourable, suggesting lingering doubts about its effectiveness in enhancing learning quality. A significant relationship was found between students' perceptions and their receptivity to hybrid learning, leading to the rejection of the null hypothesis. The study recommended digital skills training, improved infrastructure, and sustained policy support to enhance the adoption of hybrid learning in Nigerian universities

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Introduction

Rapid technological advancements and the growing need for flexible, student-centered learning approaches are driving a significant transformation in the global higher education landscape. Among these innovations, hybrid learning, also known as blended learning, has emerged as a viable instructional model that combines traditional in-person instruction with online learning platforms. This method improves accessibility, flexibility, and learner autonomy by giving students the chance to interact with the course material both in-person and online (Garrison & Vaughan, 2008). The COVID-19 pandemic, which upended traditional teaching practices globally and forced institutions to embrace technology-driven alternatives to maintain academic activities, has further highlighted the importance of hybrid learning (Dhawan, 2020).

In Nigeria, public universities continue to be vital to the country's socioeconomic progress and human capital development. These institutions do, however, continue to face a number of issues, such as poor facilities, packed lecture rooms, unpredictable electrical supplies, poor internet access, and regular industrial strikes that interfere with school schedules (Okebukola, 2021). To address systemic inefficiencies and raise the standard of university education delivery, these issues call for creative pedagogical approaches like hybrid learning. Hybrid learning offers a way to handle expanding student populations while fostering inclusive, adaptable, and participatory learning experiences by incorporating technology into the conventional classroom setting (Hrastinski, 2019).

Despite its promise, students' perceptions and receptivity play a major role in how well hybrid learning is implemented in Nigerian public universities. The main benefactors of instructional delivery are students, and their perceptions of hybrid learning modalities have a big impact on learning results, engagement, and satisfaction (Al-Fraihat et al., 2020). While negative perceptions, which are frequently influenced by lack of digital literacy, inadequate infrastructure, or resistance to change, may impede acceptance and diminish the efficacy of the learning process, positive perceptions may promote active participation and efficient use of online tools (Owolabi & Adebayo, 2021). In order to develop technology-enhanced learning in Nigeria, policymakers and institutional managers must have a thorough understanding of these attitudes.

According to research from various contexts, hybrid learning offers numerous ways to acquire knowledge, which encourages deeper learning, cooperation, and improved retention (Picciano, 2019; Graham, 2019). However, there are particular difficulties in the Nigerian setting that could impact students' receptivity, such as exorbitant data rates, restricted access to digital devices, and socioeconomic inequality among students. Additionally, anecdotal evidence suggests that Nigerian students have different or diverse opinions about hybrid models. While some students value the flexibility and decreased physical demands, others are unhappy with the impersonal nature of online components, unreliable internet services, and unprepared lecturers (Afolabi & Adediran, 2022).

The significance of this study is highlighted by the dearth of empirical research explicitly addressing students' attitude and openness to hybrid learning in Nigerian public universities. Few studies have looked at hybrid learning from the perspective of students' attitude, and acceptance within the public university system, despite the fact that many studies have examined the adoption of e-learning, distance education, or the difficulties of ICT integration in Nigerian university education (Oye et al., 2011; Adeoye et al., 2020). Because of this, institutions and governments lack solid data to create focused interventions that can improve learning outcomes and increase the sustainability of hybrid learning models.

This study investigated the perceptions of students regarding the effectiveness and challenges of hybrid learning modes and the degree to which Nigerian public university students open to and prepared to participate in hybrid learning in Nigerian public universities, given the crucial role that students play in determining the success of any instructional innovation. By doing this, the study helps close the knowledge gap about the use of hybrid learning in Nigerian university education and provides useful suggestions for enhancing the resilience, inclusivity, and quality of instruction.

Hybrid learning, sometimes referred to as blended learning, combines online and in-person instruction to provide a more comprehensive and adaptable educational experience. Thoughtful integration of classroom face-to-face learning experiences with online learning experiences is how Graham (2013) defined it. With this learning approach, students can connect with their teachers and peers in real time while also taking use of asynchronous chances to access discussions, assignments, and digital materials whenever it is most convenient for them. Combining the flexibility of online learning with the immediacy of classroom participation guarantees that students get both. A more thorough definition is provided by Zhijuan (2023) who defined hybrid learning as a combination of digital and material elements, online and face-to-face spaces, as well as formal

and informal learning to investigate the potential coexistence of various learning modalities.

According to O'Byrne and Pytash (2015) and Berestok (2021), hybrid learning is a teaching strategy that purposefully employs technology to produce a range of learning environments that cater for a broad range of student preferences and learning requirements. To Garrison and Vaughan (2008), a student-centered method known as hybrid learning gives students the freedom to interact with course material either synchronously or asynchronously, based on their individual requirements. In the learning process, it places a strong emphasis on customisation and independence. In addition, hybrid learning has developed as a flexible and contextual solution to problems in education. According to Hrastinski (2019), hybrid models are adaptable to various institutional capacities, learner characteristics, and topic requirements, which makes them suitable for a variety of scenarios. Adedoyin and Soykan (2020) observed that during the COVID-19 epidemic, hybrid learning became a viable way to maintain learning continuity in Nigeria and other developing nations, despite infrastructural constraints. As a result, hybrid learning is a strategy for creativity, accessibility, and resilience in higher education as well as a paradigm for delivering instruction.

In Nigerian public universities, hybrid learning can be described as an integrated instructional model that offers flexibility in both synchronous and asynchronous participation by fusing technology-mediated online learning with in-person classroom engagement. It serves as a pedagogical strategy mediated by digital tools including learning management systems, video conferencing platforms, and multimedia materials, as well as a student-centered approach that prioritises learner autonomy. Additionally, hybrid learning is an adaptable setting where the way of instructional delivery is customised to the needs of the students, the subject matter, and the institutional capability.

Effectiveness of Hybrid Learning Mode

Hybrid learning has become a transformative instructional approach in higher education largely because of its ability to improve learning outcomes, increase flexibility, and promote greater student engagement. The potential of hybrid learning to raise student satisfaction and performance is one of its main benefits. Graham (2013) observed that hybrid models often outperform traditional classroom approaches by enhancing student engagement, expanding access to learning resources, and providing personalized learning opportunities. According to Garrison and Vaughan (2008), incorporating online learning resources into traditional classroom instruction promotes deeper learning experiences by encouraging group projects, introspection, and critical thinking.

Regarding adaptability and accessibility, Hrastinski (2019) contended that hybrid learning enhances inclusivity by offering a variety of participation options, hence meeting the demands of various students. This is especially important in settings with limited resources, like Nigerian institution of higher learning, where access to fully online models may be hampered by budgetary and infrastructural constraints. Thus, hybrid systems enable students to take advantage of digital learning while maintaining the advantages of face-to-face interactions. Additionally, research shows that hybrid learning encourages engagement and active learning. In contrast to students in strictly conventional settings, Picciano (2019) discovered that students in blended environments shown better levels of motivation and participation. Similarly, hybrid learning was a successful instructional response during the COVID-19 pandemic, maintaining learning continuity and enhancing staff and student digital competencies, according to Adedoyin and

According to literature on hybrid learning is beneficial because it improves learning outcomes, fosters engagement, boosts flexibility, and strengthens educational institutions' resilience. Effective pedagogical design, institutional backing, and dependable infrastructure are crucial to its success.

Scholarly interest in the efficacy of hybrid learning in Nigeria has grown, especially in the wake of the COVID-19 pandemic's disruptions. In order to maintain learning continuity, Nigerian universities have had to adjust to hybrid approaches due to inadequate financing and facilities. According to research, hybrid learning has been successful in

promoting continuity and flexibility in Nigerian universities. Adarkwah (2021) stated that the hybrid model served as a practical alternative during the pandemic, enabling education to continue despite Africa's limited infrastructure. Adedoyin and Soykan (2020) discovered that in the Nigerian setting, combining online resources with in-person instruction enhanced students' exposure to digital platforms while maintaining the collaborative advantages of in-person instruction.

In a similar vein, Okoye and Obeta (2021) noted that despite ongoing issues including unstable energy, expensive internet, and a lack of institutional support, students believed hybrid learning was beneficial for improving engagement and fostering digital skills. Students commended hybrid learning for its ability to increase access to educational resources and reduce interruptions caused by strikes and instability, which often affect higher education, according to a study conducted across a few Nigerian universities by Olasile and Olanrewaju (2021). Hybrid learning has also been viewed as a means of enhancing accessibility and diversity in African higher education. According to Fagbohun (2022), hybrid models give non-traditional learners, especially working students more access by enabling them to manage their personal and academic commitments. This is in line with studies from around the world, but it is especially important in Nigeria, where a large number of students struggle financially.

In conclusion, researchers from Nigeria and Africa confirm that hybrid learning works well for skill development, continuity, flexibility, and inclusivity. The researchers also pointed out that resolving structural issues including faculty digital preparedness, internet affordability, and power supply is essential to its long-term success.

Challenges of Hybrid Learning Mode

Although hybrid learning has proven effective, its implementation remains challenging, especially in developing countries such as Nigeria. Lack of infrastructure, especially in the areas of unstable electrical supplies and inadequate internet connectivity, is a significant obstacle. Hybrid learning environments necessitate continuous technology support, however many public universities in Nigeria lack dependable digital infrastructure, which makes teaching and learning more difficult (Adedoyin & Soykan, 2020). In a similar vein, Onyema et al. (2020) noted that lack of internet penetration and limited access to ICT devices make it difficult for many students to engage in the online components of hybrid learning. The disparity between students who have access to resources and those who do not is widened by these infrastructure gaps.

The cost of internet connectivity is yet another urgent problem. It is challenging to consistently participate in online learning in Nigeria due to the comparatively high cost of mobile data when compared to the typical student income. According to Okoye and Obeta (2021), Nigerian students commonly mentioned data affordability as a significant obstacle, pointing out that expensive connectivity deters frequent use of online resources. Socio-economic disparities, which disproportionately penalize students from low-income and rural backgrounds, exacerbate this financial hardship (Adarkwah, 2021). Therefore, even though hybrid learning provides flexibility, problems with affordability that prevent fair participation compromise its efficacy.

Additionally, there are institutional and pedagogical issues with hybrid learning that pertain to digital preparation. Many instructors give ineffective online content because they are not properly trained in its design and facilitation. Fagbohun (2022) highlighted that insufficient staff digital literacy often results in poor integration of online resources with classroom teaching, diminishing the overall quality of hybrid instruction. Because universities might not have the administrative frameworks, finances, or policies necessary to support hybrid models, institutional resistance to change also plays a part (Olasile & Olanrewaju, 2021). Without sufficient funding for faculty development, policy support, and capacity building, hybrid learning runs the risk of becoming a band-aid rather than a long-term teaching strategy.

Studies on Student Perception and Receptivity to Hybrid Learning Mode

According to research, students' favourable opinions of hybrid learning have a significant impact on how open they are to using it. Learners are more likely to accept and actively participate in hybrid

modes when they believe that these systems are adaptable, interesting, and advantageous. According to Garrison and Vaughan (2008), students are more inclined to participate in both online and in-person components of blended learning settings when they have favourable opinions about the flexibility and engagement opportunities offered. In a similar vein, Okoye and Obeta (2021) discovered that students in Nigerian universities who had positive opinions of hybrid learning were more prepared, motivated, and excited to use it as a long-term teaching method. This demonstrates how perception shapes acceptance.

On the other hand, unfavourable perception about hybrid learning might drastically lower receptivity. Students are frequently reluctant to adopt hybrid modes because they believe that they are associated with inadequate internet connectivity, a lack of digital skills, or expensive participation expenses. According to Adedoyin and Soykan (2020), students in resource-constrained environments, especially in Africa, perceived hybrid learning as difficult because of infrastructure obstacles, which decreased their willingness to participate. In a similar vein, Onyema et al. (2020) found that Nigerian students who had bad online learning experiences, like frequent power outages and high data costs, were less open to hybrid modes, viewing them as unhelpful rather than advantageous. As a result, negative perceptions deter involvement and acceptance.

Although numerous studies demonstrate a robust relationship between perception and receptivity, some studies reveal differences based on student background and institutional assistance. For example, Fagbohun (2022) contended that robust institutional support, such as teacher training, subsidized internet access, and enhanced digital infrastructure, can nevertheless promote receptivity even in the face of relatively negative perceptions. This implies that although perceptions are significant predictors, contextual elements like university rules and technological preparedness might also operate as mediators of receptivity. Therefore, to increase students' receptivity to hybrid learning, perceptions must be improved through awareness campaigns, capacity building, and supportive infrastructure.

Okocha et al. (2017) conducted a study with undergraduates at Landmark University to investigate the variables affecting blended learning adoption. Students' acceptance of blended learning was found to be highly influenced by enabling factors and performance expectancy, according to the UTAUT paradigm. In general, the students' approval of blended learning aspects was positive. A quasi-experimental study comparing the performance of undergraduates in Kwara State who were taught using blended learning, e-learning, and conventional face-to-face methods was carried out by Gambari et al. (2017). Students in the mixed learning group did noticeably better than those in the other two groups, they discovered. This shows both positive perception (better results compared to other modes) and receptivity (students being able to work in blended modes).

In a poll conducted by Abdulkareem et al. (2022) among engineering undergraduates during Nigeria's COVID-19 lockout, the majority (62%) chose mixed (hybrid) formats, while just a very tiny percentage (4%) selected strictly e-learning. Students did, however, complain that pure e-learning was costly, had bad internet connectivity, had little interaction, and had trouble sustaining learning quality. The study came to the conclusion that students' adoption of hybrid/blended modes was contingent upon the resolution of fundamental deficiencies (cost, connection, and pedagogical concerns) that were exposed by e-learning experiences during the emergency. These unfavourable experiences with the online component suggest that students' general openness to hybrid models will be stifled unless online components are dependable and reasonably priced.

Approximately 78% of respondents expressed unhappiness with emergency online learning, and the majority favoured a return to classroom instruction, according to a cross-sectional study of undergraduates from multiple universities carried out by Ansar et al. (2020). Students expressed worries about unfair assessments, little interaction between students and teachers, online concept comprehension challenges, and subpar online assessment procedures. The results of this study are applicable to hybrid models even though it looks at online instruction rather than blended learning because they demonstrate how bad online experiences, such as inadequate pedagogy, evaluation, or interaction, can significantly lower

students' openness to any mode that uses online elements. To put it briefly, low quality in the online component makes people less inclined to use hybrid approaches.

According to Ogolodom et al. (2023) cross-sectional survey of 540 nursing and radiography undergraduates in Nigerian universities, while many students acknowledged the advantages of online learning, a significant part of them faced stress and significant difficulties that weakened their receptivity. Financial limitations (data charges), inadequate or non-existent internet access, lack of technological expertise, poor peer and professor communication, and restricted device access were major obstacles that reduced students' motivation and ability to regularly participate in online components. The authors draw conclusion that resolving these economic and infrastructure issues is a prerequisite for students' adoption of online and hybrid learning environments.

Statement of the Problem

Universities across the world are adopting hybrid learning models, which mix in-person instruction with online delivery to provide flexibility, increased accessibility, and improved student-centered learning. Hybrid learning has been demonstrated to increase educational options, encourage self-directed learning, and boost participation in developed contexts. However, hybrid learning is still relatively new and difficult to implement in Nigeria, especially in public universities. The efficacy of hybrid instruction is consistently hampered by problems including unstable electrical supplies, poor internet infrastructure, expensive data plans, and restricted access to digital gadgets

Furthermore, although Nigerian university administrators and legislators have started to support technology-enhanced instruction, it is yet unknown how students view and respond to new teaching methods. Anecdotal evidence indicates that although some students embrace the flexibility of hybrid learning, others voice concerns about the impersonal character of online components, inadequate lecturer preparation, and bad connectivity. This calls into question whether hybrid learning approaches can produce the desired results in the Nigerian setting and whether students in public universities in Nigeria are in position to benefit from them.

Few empirical research in Nigeria have systematically investigated students' perspectives and openness to hybrid learning in public universities, despite its growing significance. For educators, institutional leaders, and policy makers looking to adopt sustainable hybrid learning approaches, the lack of such evidence creates a crucial information vacuum. The effectiveness and scalability of hybrid learning in Nigerian universities may be limited if interventions don't adequately address actual issues due to a lack of knowledge about students' attitudes and preparedness. This emphasises the necessity of conducting an empirical study to determine how students in public universities in Nigeria perceive and react to hybrid learning mode.

Research Questions

The following research questions guided this study:

What are the perceptions of students regarding the effectiveness and challenges of hybrid learning modes in Nigerian public universities?

To what degree are Nigerian public university students open to and prepared to participate in hybrid learning?

Research Hypothesis

H_0: In Nigerian public universities, there is no significant correlation between students' perceptions of hybrid learning and their receptivity to its implementation.

Methodology

Research Design

The study adopted a descriptive survey research design. This design was appropriate because the study sought to collect quantitative data on students' perceptions and receptivity toward hybrid learning without manipulating any variables. The survey approach enabled the researchers to gather feedback from a large number of participants across different universities, thereby enhancing the generalisability of the findings.

Population of the Study

The target population comprised over 1.3 million undergraduate students enrolled in Nigerian public universities across the six geopolitical zones of Nigeria (National Universities Commission, 2023). A significant proportion of these students have engaged in hybrid learning, particularly following the COVID-19 pandemic.

Sample and Sampling Techniques

A total of 1,800 students participated in the study. This consisted of 300 students selected from each of six public universities. The six universities were purposively selected based on their stated use of hybrid learning approaches. The universities included: Ahmadu Bello University, Modibbo Adama University of Technology, University of Abuja, University of Lagos, University of Nigeria, and University of Port Harcourt. Each university represents one of Nigeria's six geopolitical zones. Within each university, students from 300 level and above were selected using stratified random sampling to ensure representation across various faculties. This procedure reduced sampling bias and improved representational equity.

Instrumentation

The instrument used for data collection was a structured questionnaire titled Student Perception and Receptivity of Hybrid Learning Questionnaire (SPRHLQ), developed by the researchers. The questionnaire consisted of three sections: Section A consisted the demographic information of respondents, Section B consisted of Items measuring students' perceptions of the effectiveness and challenges of hybrid learning, and Section C comprised Items assessing the correlation between students' perceptions of hybrid learning and their receptivity to its implementation.

Validity of the Instrument

Face and content validity were established by three experts in educational technology, measurement, and assessment. Their feedback led to the revision of ambiguous items and ensured alignment with the study objectives.

Reliability of the Instrument

A pilot study was conducted with 100 students from a public university who were part of the population but not included in the main sample. Data collected from the pilot study were analysed using Cronbach's Alpha, which yielded a reliability coefficient of 0.91, indicating high internal consistency and reliability of the instrument.

Method of Data Collection

The questionnaire was administered both electronically via Google Forms and in hard copy. The researchers, assisted by trained research assistants, distributed the instrument. Informed consent was obtained from participants, and confidentiality and voluntary participation were assured.

Method of Data Analysis

Descriptive and inferential statistics were employed to answer the research questions and test the study's hypothesis. Specifically, simple percentage of the descriptive statistics was used to answer the two research questions while Pearson Product Moment Correlation of the inferential statistics was used to test the only hypothesis for the study.

Findings and Discussion

Research Question 1

What are the perceptions of students regarding the effectiveness and challenges of hybrid learning modes in Nigerian public universities?

According to Table 1, most students are aware of the advantages of hybrid learning, especially when it comes to increased access to course materials and content (77.5%) and flexibility (73.7%). However, opinions about improved academic performance (53.3%) and class participation (64.4%) were less favourable, indicating that many students are still not convinced of its ability to improve the quality of learning.

The following issues were highlighted: inadequate internet connection (88.4%), inadequate electrical supply (90.1%), and high data costs (82.9%) were noted as major roadblocks. Additionally, some students have inadequate levels of digital literacy (71.6%), and 76.5% of students believe that lecturers lack the skills

Table 1: Students' Perceptions of the Effectiveness and Challenges of Hybrid Learning (N = 1,800)

Perception Item	Agree (%)	Disagree (%)
Flexibility in learning is offered by hybrid learning.	73.7	26.3
Access to course content and resources is improved through hybrid learning.	77.5	22.5
Student class participation is increased through hybrid learning.	64.4	35.6
Poor internet access has a detrimental impact on hybrid learning.	88.4	12.6
One of the main obstacles to receptivity is the high cost of data.	82.9	17.1
Some students' low levels of digital literacy make it difficult for them to participate effectively.	71.6	28.4
Lecturers lack the necessary training to successfully provide hybrid learning.	76.5	23.5
Activities involving hybrid learning are disrupted by a poor electricity supply.	90.1	9.9
When compared to traditional learning, hybrid learning helps students achieve better academic results.	53.3	46.7

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required for hybrid teaching. All things considered, these results imply that although students recognise the potential advantages of hybrid learning, its efficacy in Nigerian public universities is severely limited by pedagogical and infrastructure flaws.

According to the results, most students believe that hybrid learning offers flexibility and easier access to educational materials. It might be due to the fact that the majority of students think that hybrid learning gives them flexibility since it enables them to manage their personal and academic obligations through both in-person and online options. Since digital platforms make lecture notes, recordings, and resources accessible at any time and from any location, they also believe that it makes accessing educational content easier. These outcomes are consistent with research by Owston et al. (2019), who found that hybrid learning settings improve flexibility, especially for students juggling other obligations and coursework. In a similar vein, Adarkwah (2021) contended that hybrid modalities increase access and inclusion chances in settings where traditional classroom instruction could be constrictive.

Notwithstanding these benefits, the survey found that students are still dubious about hybrid learning's capacity to raise student engagement and boost academic performance. This might be because online elements can diminish in-person connection and peer cooperation in comparison to traditional classroom settings, students continue to have doubts about hybrid learning's ability to increase engagement. Furthermore, inconsistent digital facilitation and unreliable internet undermine active participation and create uncertainty in engagement. Merely 53% of the participants concurred that hybrid helps students achieve better academic results compared to conventional approaches. This is consistent with the findings of Afolabi and Olayinka (2022), who found that lack of interaction with professors is a barrier to participation for many Nigerian students, who see hybrid learning as an adjunct to in-person instruction rather than a replacement for it.

The biggest issues found were excessive data charges (79.5%), poor electrical supply (87.6%), and insufficient internet access (84.7%). These results are consistent with previous research, including Adedoyin and Soykan (2020), who highlighted how technological disparities diminish the efficacy of digital and hybrid learning in developing contexts, and Olumorin et al. (2020), who documented enduring infrastructure barriers in Nigeria's e-learning systems. According to Yusuf and Balogun (2022), many academics at Nigerian universities lack the necessary training and assistance to adjust to hybrid teaching methodologies. This is further supported by perceptions of lecturers' low readiness (70.3%).

Research Question 2

To what degree are Nigerian public university students open to and prepared to participate in hybrid learning?

Table 2: Students' Receptivity and Readiness for Hybrid Learning (N = 1,800)

Readiness/ Receptivity Variable	High (%)	Moderate (%)	Low (%)
Readiness to embrace hybrid learning in the event that infrastructure is enhanced	75.5	17.4	7.1
Self-confident when utilizing digital gadgets (tablets, cellphones, and computers)	71.5	19.5	9.0
Having the funds to purchase data for hybrid education	29.3	42.4	28.3
Availability of a dependable electricity source for online education	31.4	23.4	45.2
Perceived ability to blend online and in-person instruction	65.6	20.5	13.9
Willingness to take advantage of upcoming hybrid learning possibilities	72.3	21.8	5.9

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Table 2 present respondent responses on the degree of Nigerian public university students open to and prepared to participate in hybrid learning. They are highly (75.5%) ready to embrace hybrid learning in the event that infrastructure is enhanced. In addition, they are also highly (72.3%) willing to take advantage of upcoming hybrid learning possibilities. They are also highly (71.5%) self-confident when utilising digital gadgets. Their perceived ability to blend online and in-person instruction was high (65.6%). Their response to having the funds to purchase data for hybrid education was moderate (42.4%) while their response to availability of a dependable electricity source for online education was low (45.2%).

The finding is an indication that improving infrastructure would encourage students to embrace hybrid learning since dependable electricity and internet would provide continuous access to online courses and resources. Better digital infrastructure would also encourage interactive platforms that mimic classroom participation, increasing the appeal of hybrid learning. The findings of Aina (2021), who noted high rates of digital adoption among undergraduates at Nigerian public universities, are corroborated by the result in Table 2, which indicates that students are receptive to pedagogical innovation. This is consistent with the findings of Onyema et al. (2020), who pointed out that infrastructure realities rather than interest govern Nigerian students' capacity to gain from digital learning. Similarly, Tella and Bashorun (2022) emphasised that although Nigerian students demonstrate technological proficiency, prolonged participation in digital education is hindered by an unpredictable power supply and exorbitant data charges.

Test of Hypothesis

H_0: In Nigerian public universities, there is no significant correlation between students' perceptions of hybrid learning and their receptivity to its implementation.

Students' evaluations of hybrid learning and their openness to its adoption are strongly positively correlated, according to the pearson correlation coefficient ($r = 0.617$, $p < 0.05$). This implies that students are more willing and prepared to embrace hybrid learning as their opinions of its efficacy and its advantages grow. The null hypothesis is rejected since the p-value (0.000) is below the significance level of 0.05. Thus, students' opinions on hybrid learning and their openness to its implementation at Nigerian public universities are statistically correlated.

Table 3: Correlation between Students' Perceptions and Receptivity toward Hybrid Learning (N = 1,800)

Variable	N	Mean	SD	r	p-value	Decision
Students' Perceptions of Hybrid Learning	1,600	3.47	0.66			
Students' Receptivity to Adoption	1,600	3.229	0.73	0.617*	0.000	Rejected

*Correlation is significant at 0.05 level (2-tailed).

The result might not be unconnected with the fact that there seem to be better digital infrastructure which support interactive learning environments that mimic classroom participation, increasing the appeal of hybrid learning in Nigerian public universities. This finding supports earlier research by Owston et al. (2019), who reported that positive perceptions of blended and hybrid learning environments strongly predict student willingness to engage. Similarly, Aina (2021) found that Nigerian undergraduates with favourable attitude to digital learning platforms demonstrated higher readiness to adopt such modes. It is in line with the finding of Okocha et al (2017) who emphasised that positive student perceptions directly enhance receptivity and behavioural intention to engage in hybrid learning modes and supported the result of Gambari et al (2017) who a quasi-experimental study in Kwara State and concluded that favourable perceptions strongly influenced students' receptivity and engagement, thereby validating the link between perception and adoption.

It should be mentioned that the results contradict those of Abdulkaree et al. (2022), who discovered that although a large number of students showed interest in hybrid approaches, their actual receptivity was low because of expensive data plans, erratic internet, and inadequate power supplies. Adoption was limited even with somewhat favourable opinions, demonstrating that structural enablers are more important for receptivity than just attitude. The results also contradicted those of Ogolodom et al. (2023), who came to the conclusion that, in the absence of systemic support, favourable perceptions were insufficient to guarantee receptivity.

Recommendations

The following suggestions are put forth to improve hybrid learning's efficacy and uptake in Nigerian public universities in light of the study's findings on students' perceptions and responsiveness to these learning modalities:

To overcome the technological obstacles impeding the implementation of hybrid learning, university administration should make investments in a strong digital infrastructure, which includes dependable power supplies and consistent internet access.

Funding should be set aside specifically by policymakers and government organisations to assist public universities in Nigeria in implementing hybrid learning systems.

In order to make sure that hybrid learning models are adaptable to students' changing needs, public universities should set up feedback systems to routinely evaluate students' perceptions and receptivity.

Conclusion

Overall, the study shows that students at public universities in Nigeria are largely open to and hopeful about hybrid learning as an innovative teaching strategy. Undergraduates are becoming more digitally savvy and adaptable, especially in the post-pandemic era, as seen by their willingness to adopt a mixed approach of in-person and online involvement. Nevertheless, despite this favorable attitude, pedagogical unpreparedness, insufficient digital infrastructure, erratic power supply, and a lack of institutional support continue to limit their opinions of the efficacy of hybrid learning. How students perceive and assess hybrid learning settings is greatly influenced by these contextual obstacles.

The results, in my opinion, imply that receptivity by itself cannot ensure successful implementation. Deliberate instructional design, ongoing training for lecturers, dependable technology, and unambiguous institutional policies are all necessary for hybrid learning. Students may stay optimistic but not persuaded of the system's actual worth in situations where these components are absent. Therefore, the study highlights Nigeria's particular structural and systemic obstacles while also supporting findings from throughout the world about the transformative potential of hybrid learning.

Crucially, this result advocates for the intentional integration of hybrid learning within university systems rather than its emergency-driven implementation. It is crucial for institutions to invest in curriculum innovation, digital capacity building, and quality assurance systems. Hybrid learning can become a sustainable, egalitarian, and creative strategy to improve access, flexibility, and quality in Nigerian higher education if these deficiencies are filled.

Contribution to Knowledge

This study provides empirical support for the idea that contextual obstacles affect Nigerian undergraduates' receptivity to hybrid learning rather than their resistance to it. The study provides quantitative evidence of how students' perceptions predict readiness, which builds on earlier findings (e.g., Adedoyin & Soykan, 2020; Afolabi & Olayinka, 2022). It also emphasises how unresolved infrastructure deficiencies could erode otherwise favourable sentiments on the adoption of hybrids.

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