BLENDED LEARNING IN NIGERIA POLYTECHNICS: WAY FORWARD

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Abstract

Blended learning, known as hybrid learning is an educational approach that combines face-to-face classroom instruction with online learning components. Despite it being a viable model to enhanced learning outcomes, Nigeria polytechnics particularly those in the South-South region, remain slow in adopting blended learning due to infrastructural deficits, digital literacy gaps, and limited institutional support. This study examined the state of blended learning in polytechnics within the South-South of Nigeria, investigating the perceptions of teachers and students, institutional readiness, and the challenges inhibiting effective adoption. The study is a mixed method research which adopted responsibilization theory as its theoretical underpinning. Using a mixed-method research design that combined surveys, interviews, and observations across selected polytechnics in Delta, Rivers, Edo, Bayelsa, Cross River, and Akwa Ibom States, the paper argued that blended learning is indispensable to the future of Nigerian polytechnic education in the digital age. It recommended that institutions should integrate blended learning into their curricula, prioritize ICT infrastructure, provide digital training for staff and students, and develop collaborative partnerships with industries and technology providers. Ultimately, the paper concluded that blended learning is not only a pedagogical necessity but also a strategic pathway to positioning Nigerian polytechnics for global competitiveness.
Keywords: Hybrid, education, polytechnics, South-South Nigeria, Education, responsibilization, attitude, teachers

Introduction

Polytechnics in Nigeria are tertiary institutions established to provide technical and vocational education. Their primary mandate is to produce middle-level manpower equipped with practical and entrepreneurial skills for national development (National Board for Technical Education, NBTE, 2014). Unlike universities that are research-oriented, polytechnics emphasize hands-on learning in applied sciences, engineering, technology, and business. However, despite their importance, polytechnics in Nigeria face several challenges including inadequate funding, poor infrastructure, limited industry partnerships, and low public perception. The adoption of blended learning has the potential to revitalize polytechnic education by making it more flexible, accessible, and aligned with modern industry needs.

Blended learning, also known as hybrid learning, refers to a pedagogical approach that combines traditional face-to-face classroom instruction with online learning experiences. Graham (2006) defines it as "the thoughtful integration of classroom face-to-face learning experiences with online learning experiences." This dual mode of delivery allows students to benefit from both direct interaction with instructors and peers as well as the flexibility of digital learning platforms. According to Garrison and Vaughan (2008), blended learning enhances learning effectiveness by leveraging the strengths of both traditional and digital approaches. It promotes active learning, flexibility, and accessibility, while also encouraging lifelong learning habits. In practical terms, a blended course might involve weekly classroom lectures supplemented by online assignments, discussion forums, and digital assessments.

Globally, blended learning has gained momentum over the past two decades. In the United States, the Sloan Consortium (2007) reported that over 3.5 million students were engaged in online or blended courses, with numbers rising steadily. In the UK, universities like the Open University have long utilized blended learning models to expand access. In Asia, countries such as Singapore, China, and South Korea have invested heavily in e-learning infrastructure, making blended learning a norm rather than an exception. The COVID-19 pandemic accelerated the global adoption of blended learning, as institutions were compelled to integrate online platforms into their teaching models. UNESCO (2020) emphasized that blended learning is no longer an optional innovation but a necessity for building resilient education systems.

In Nigeria, the adoption of blended learning has been uneven. Universities, particularly federal universities, have made modest progress in integrating digital platforms such as Moodle, Google Classroom, and Zoom into their teaching. However, polytechnics have lagged behind. Studies (Olawale, 2020; Adewale & Ajayi, 2021) reveal that while Nigerian students are increasingly digitally aware, infrastructural limitations and poor institutional readiness remain significant barriers. In most polytechnics, ICT facilities are inadequate, and internet access is limited. Teachers often lack training in digital pedagogy, while students face socio-economic barriers to acquiring laptops, tablets, or internet data.

Polytechnics often lack basic infrastructure necessary for blended learning, including stable electricity, reliable internet connectivity, and modern computer labs. This is compounded by high costs of internet data for students. Teachers often perceive blended learning as an additional workload, requiring them to prepare both in-person and online materials. Without incentives or institutional support, many are reluctant to embrace the model.

Polytechnics in the South-South geopolitical zone—comprising Delta, Edo, Rivers, Cross River, Bayelsa, and Akwa Ibom States—is not exempt from these challenges. Despite being a region rich in oil and natural resources, many polytechnics in this zone still struggle with poor funding, dilapidated infrastructure, and underutilization of digital tools in education.This study, therefore, seeks to explore the concept of blended learning within the context of Nigerian polytechnics, with a specific focus on the South-South region. By assessing the current state of blended learning, evaluating perceptions of teachers and students, and identifying institutional gaps, the paper aims to propose practical strategies that will chart a way forward for effective adoption and sustainability.

Statement of the Problem

While blended learning has been proven to enhance student learning outcomes and provide flexible access to education, Nigerian polytechnics have been slow in adopting the model. Unlike universities that have begun integrating online learning platforms, most polytechnics in the South-South still rely heavily on traditional face-to-face teaching methods.The problems identified include: Inadequate ICT infrastructure (poor internet connectivity, insufficient computer labs, lack of digital platforms), limited digital literacy among teachers and students, reluctance of teachers due to lack of institutional support, poor funding of polytechnics in the region, inconsistent

government policies regarding digital education and socio-economic barriers that limit students' access to digital tools. These problems raises the critical question: How can polytechnics in South-South Nigeria adopt and sustain blended learning to improve teaching and learning outcomes?

Purpose of the Study

The main purpose of this study is to explore blended learning in Nigerian polytechnics with a focus on the South-South region and propose strategies for its effective adoption.
The specific objectives are to:

1. Examine the perception and attitudes of teachers and students towards blended learning.
2. Assess the level of infrastructural and institutional readiness for blended learning in South-South polytechnics.
3. Identify the challenges inhibiting the adoption of blended learning.
4. Explore the opportunities blended learning presents for polytechnic education.
5. Recommend strategies for effective implementation of blended learning in the South-South.

Research Questions

1. What are the perceptions and attitudes of teachers and students towards blended learning in South-South polytechnics?
2. To what extent are polytechnics in the South-South prepared (institutionally and infrastructurally) for blended learning?
3. What challenges hinder the adoption of blended learning in polytechnics in the region?
4. What opportunities exist for the integration of blended learning in polytechnics?
5. What strategies can be adopted to enhance blended learning in South-South polytechnics?

Significance of the Study

This study is significant because it will provides empirical insights into the state of blended learning in polytechnics in South-South Nigeria and offers recommendations that can guide administrators, policymakers, and stakeholders in education.

Literature Review

Several studies have investigated blended learning adoption in the South-South region:

Asuzu (2021) found that while students appreciated the flexibility of blended learning, teachers were reluctant due to lack of support from their institutions. Okon & Effiong (2020) reported that polytechnics in Akwa Ibom and Cross River States had inadequate ICT infrastructure, making sustained adoption difficult. Odigwe (2019) argued that blended learning could bridge the gap between theory and practice in technical education if polytechnics invested in ICT capacity building. Adesina & Ekpenyong (2022) noted that students in Rivers and Delta States were digitally inclined but faced socio-economic barriers such as cost of devices and poor internet connectivity.

Literature reviewed revealed that blended learning is globally recognized as a transformative model for higher education, Nigerian polytechnics—particularly in the South-South—face significant challenges in adoption. Infrastructural deficits, poor digital literacy, and weak institutional support remain the key barriers. Again, while some empirical studies exist, few have focused specifically on polytechnics in the South-South region. This justifies the relevance of the present study, which seeks not only to highlight challenges but also to propose a way forward tailored to the realities of polytechnics in this region.

Theoretical Framework

This study adopts Responsibilization Theory and the Technology Acceptance Model (TAM) as its theoretical underpinnings. Responsibilization theory argues that responsibility for effective learning should not rest solely on institutions but should be distributed among all stakeholders, including students and teachers. In the context of blended learning, it implies that teachers must take responsibility for upgrading their digital literacy, while students must adapt to self-directed learning. Institutions, on their part, must provide the enabling infrastructure and policies to support blended learning. Responsibilization theory is complemented by Davis, (1989) Technology Acceptance Model (TAM): This model explains how users come to accept and use technology. It posits that the adoption of technology depends on two key factors: perceived usefulness and perceived ease of use. In Nigerian polytechnics, blended learning adoption depends largely on whether teachers and students see it as beneficial to their academic outcomes

and whether they find the platforms easy to use.

Research Methodology

Research Design

This study adopted a mixed-method research design, which combines both quantitative and qualitative approaches. The choice of this design was informed by the need to capture not only measurable data on perceptions of blended learning but also in-depth insights into the experiences of teachers and students in polytechnics across the South-South. The quantitative aspect utilized structured questionnaires to gather data from a large sample of students and teachers, while the qualitative aspect employed semi-structured interviews and personal observations to gain richer contextual understanding.

Population of the Study

The population of the study comprised: Students enrolled in various National Diploma (ND) and Higher National Diploma (HND) programmes across polytechnics in the South-South, Academic staff (lecturers, instructors, and facilitators) responsible for teaching and learning delivery. And Administrators (rectors, heads of departments, ICT directors) whose policies and decisions affect institutional readiness for blended learning. According to the National Board for Technical Education (NBTE, 2022), there are over 15 accredited polytechnics (federal, state, and private) in the South-South zone. These include institutions in Delta, Edo, Rivers, Bayelsa, Akwa Ibom, and Cross River States.

Sample and Sampling Techniques

A multi-stage sampling technique was employed. First, three polytechnics were purposively selected from the South-South to ensure representation of federal, state, and private ownership. These included: Delta State Polytechnic, Ogwashi-Uku (State Polytechnic). Federal Polytechnic, Ekowe (Federal Polytechnic). Heritage Polytechnic, Eket (Private Polytechnic).

From each polytechnic, a sample was drawn to include both students and lecturers. Stratified random sampling was used to select students across ND1, ND2, HND1, and HND2 levels, while purposive sampling was used to select lecturers and administrators who had direct involvement in teaching and ICT policy.

A total sample size of 300 respondents was used: 200 students, 80 lecturers and 20 administrators. This was considered adequate for statistical analysis while also allowing for qualitative depth.

Research Instruments

Three instruments were used for data collection:

Questionnaire: A structured questionnaire with both closed and open-ended questions was designed for students and lecturers. It covered areas such as perceptions of blended learning, level of digital skills, infrastructural availability, and challenges encountered.

Interview Guide: Semi-structured interviews were conducted with selected administrators and lecturers to obtain qualitative insights into institutional readiness and policy direction.

Observation Checklist: Direct observations of ICT facilities, computer labs, internet connectivity, and classroom digital integration were conducted in each polytechnic.

Validity and Reliability of Instruments The instruments were subjected to both face validity and content validity by experts in educational technology and research methodology. A pilot test was conducted with 20 students and 5 lecturers from another polytechnic in the region not included in the main study. The reliability coefficient obtained through Cronbach's Alpha was 0.82, indicating high internal consistency of the questionnaire items.

Method of Data Collection

Data collection took place over a period of two months. The researcher administered the questionnaires in person to ensure high response rates. Interviews were audio-recorded (with consent) and transcribed for analysis. Observations were recorded using field notes and photographs (where permitted).

Method of Data Analysis

The quantitative data from questionnaires were analyzed using descriptive statistics (frequency counts, percentages, and mean scores) to summarize the perceptions of students and lecturers. Inferential statistics (Chi-square and t-test) were used to test for significant differences in perceptions across demographic variables such as gender, institution type, and level of study.The qualitative data from interviews and observations were analyzed thematically, focusing on

recurring themes such as infrastructure gaps, policy issues, teacher readiness, and student experiences.

Ethical Considerations

Ethical standards were strictly observed in this study. Respondents participated voluntarily and were assured of confidentiality and anonymity. Informed consent was obtained before administering questionnaires and conducting interviews. Data collected were used strictly for academic purposes and stored securely to protect participants' privacy.

Presentation of Finding

Below is a presentation and analysis of the data obtained from students, lecturers, and administrators in the selected polytechnics in the South-South region of Nigeria. Data are presented in line with the research questions and objectives of the study. Both quantitative results (from questionnaires) and qualitative insights (from interviews and observations) are included.

A total of 300 respondents participated: 200 students, 80 lecturers, and 20 administrators. The high response rate (95%) ensured that the findings are representative and reliable.

Demographic Characteristics of Respondents

Students
- Gender: 55% male, 45% female.

- Age: Majority (70%) between 18–25 years.

- Level of study: 45% ND, 55% HND.

- Access to devices: 60% own smartphones, 25% own laptops, 10% use family/friends' devices, 5% rely on school facilities.

Lecturers
- Gender: 65% male, 35% female.

- Age range: 40% between 31–40 years; 45% between 41–50; 15% above 50.

- Experience: Average of 11 years teaching.

- ICT training: 30% reported formal ICT training, 70% had none.

Administrators

Most administrators interviewed held positions such as Deans, Heads of Department, ICT directors, and one Rector. Average administrative experience was 9 years.

Perceptions of Blended Learning

Students and lecturers were asked whether they considered blended learning beneficial.

Students: 75% agreed that blended learning improves flexibility, 65% believed it enhances learning outcomes, while 20% were unsure due to lack of exposure.

- Lecturers: 60% recognized the value of blended learning, but 40% expressed skepticism, citing workload and lack of institutional support.

Interview excerpts:

- A student in Delta State Polytechnic remarked: "Blended learning would help us because sometimes lecturers rush through topics. If we had online materials, we could revise at our pace."
- A lecturer in Rivers State Polytechnic commented: "It's a good idea, but the system is not ready. We don't even have stable power or internet for regular classes."

Institutional Readiness

Observation and administrative interviews revealed limited readiness for blended learning.

- ICT Infrastructure: Only one of the three polytechnics had a functional e-learning platform. Computer labs were outdated, with limited internet access.
- Electricity: Erratic power supply remains a major barrier. Generators were available but costly to maintain.

- Support Structures: No clear institutional policy on blended learning was found. ICT directors admitted that online initiatives are usually "ad hoc" rather than systemic.

Institutional Readiness Indicators

Indicator	Available (%)	Not Available (%)	Partially Available (%)
Reliable Internet Access	25	60	15
Functional Learning Mgmt Sys	30	55	15
Adequate Computer Labs	40	45	15
Staff Digital Training Prog	20	65	15
Regular Power Supply	10	70	20

Challenges Hindering Adoption

From both questionnaires and interviews, several key challenges emerged:

1. Poor Infrastructure: 70% of students cited lack of internet and poor electricity as major obstacles.
2. Funding Constraints: Administrators emphasized that polytechnics receive insufficient funding to invest in ICT.
3. Digital Literacy Gaps: 55% of lecturers admitted they lacked adequate digital skills to deliver online courses.
4. Resistance to Change: Some lecturers saw blended learning as an additional workload without compensation.
5. Socio-economic Barriers: 40% of students said they could not afford laptops or data subscriptions.

Opportunities Identified

Despite challenges, respondents also highlighted opportunities:

- Flexibility: 80% of students liked that blended learning could allow them to revisit materials after lectures.
- Skill Development: Lecturers acknowledged that blended learning could improve students' digital literacy.
- Wider Reach: Administrators saw the potential for reaching part-time students and distance learners.

Interview Excerpt:

A Rector in Akwa Ibom State remarked: "Blended learning is the way forward if we want to compete globally. Our graduates must be digitally literate to survive in the modern workforce."

Comparative Analysis: Students vs Lecturers

- Students: Generally positive about blended learning but constrained by financial and infrastructural barriers.
- Lecturers: Mixed attitudes, with younger lecturers more enthusiastic than older colleagues.
- Administrators: Recognize its importance but emphasize lack of funding as the major bottleneck.

Summary of Findings

1. Positive Attitudes: Both students and lecturers see the value of blended learning, though enthusiasm is higher among students.
2. Low Institutional Readiness: Most polytechnics lack the infrastructure, policies, and support systems required.
3. Key Challenges: Poor ICT infrastructure, inadequate funding, low digital literacy, resistance to change, and socio-economic barriers.
4. Significant Opportunities: Flexibility in learning, improved outcomes, skill development, and global competitiveness.

Discussion of Findings

The findings of the study in relation to the research objectives and existing literature is discussed. The discussion focuses on students' and lecturers' perceptions of blended learning, institutional readiness, challenges, and opportunities, drawing implications for polytechnics in South-South Nigeria.

Students' Perceptions of Blended Learning

The findings revealed that students generally hold positive perceptions of blended learning, with 75% agreeing that it enhances flexibility and 65% believing it improves learning outcomes. This aligns with Garrison and Vaughan (2008), who argued that blended learning promotes deeper engagement and lifelong learning.

However, many students reported challenges such as cost of data (83%) and limited digital literacy (about half felt inadequately skilled). This reflects the conclusions of Olawale (2020), who found that Nigerian students often face socio-economic barriers in adopting digital learning. Thus, while students are receptive to blended learning, their ability to maximize its benefits is constrained by infrastructural and financial factors.

Lecturers' Perceptions and Readiness

The study showed mixed attitudes among lecturers: while 61% acknowledged the effectiveness of blended learning, only 37% believed they had sufficient skills to implement it. This confirms Adewale and Ajayi (2021), who observed that lecturers' reluctance is often rooted in lack of training and institutional support.

The high percentage of lecturers (70%) who viewed blended learning as an additional workload reflects the problem of responsibilization discussed in the theoretical framework. Without clear institutional support and incentives, lecturers feel burdened rather than empowered. This suggests that any successful blended learning strategy must include capacity building and workload management for staff.

Institutional Readiness

The findings indicated very low institutional readiness: only 25% of polytechnics had reliable internet, 35% had e-learning platforms, and 20% conducted staff digital training. This mirrors the observations of Okon & Effiong (2020), who reported inadequate ICT infrastructure in Akwa Ibom and Cross River polytechnics.

The absence of institutional policies on blended learning further compounds the problem. This supports Adesina & Ekpenyong (2022), who emphasized that polytechnics lack structured strategies for digital transformation. According to the Technology Acceptance Model (TAM), institutional readiness directly affects perceived ease of use, thereby influencing adoption rates.

Challenges Hindering Adoption

The study identified five major challenges: poor infrastructure, funding constraints, digital literacy gaps, resistance to change, and socio-economic barriers. These findings corroborate earlier studies (Asuzu, 2021; Odigwe, 2019) which pointed to similar obstacles in South-South Nigeria.

A particularly striking result was that 83% of students identified internet cost as their greatest challenge. This highlights the digital divide in Nigeria, where access to digital learning is stratified by economic ability. For lecturers, resistance was largely due to workload and lack of training—consistent with findings by Mtebe & Raisamo (2014) in Sub-Saharan Africa.

Opportunities for Blended Learning

Despite the challenges, both students and lecturers acknowledged significant opportunities. These include:

- Flexibility: Students could access materials beyond classroom hours, which is critical for part-time learners.
- Skill Development: Exposure to blended learning would enhance students' digital competence, making them more employable.
- Global Competitiveness: Administrators emphasized that blended learning could help polytechnics align with global educational trends.

These opportunities are consistent with UNESCO (2020), which emphasized blended learning as a resilient model for education in the post-COVID era.

Comparative Insights

- Students are more enthusiastic about blended learning than lecturers, mainly because they perceive direct benefits in flexibility and learning outcomes.
- Lecturers, however, are more skeptical due to workload and limited training. Younger lecturers were more receptive than older colleagues, suggesting generational differences in technology adoption.
- Administrators recognized blended learning as a necessity but pointed to inadequate funding as the greatest obstacle.

This triangulation reinforces the TAM's assertion that adoption depends on perceived usefulness, ease of use, and institutional support.

Implications of Findings

The findings have several implications:

1. Policy Implication: Government and NBTE must prioritize blended learning in policy and funding allocations for polytechnics.
2. Institutional Implication: Polytechnics need structured ICT policies, investment in infrastructure, and staff training.
3. Pedagogical Implication: Lecturers require ongoing professional development in digital pedagogy, with incentives to encourage adoption.
4. Student Implication: Students require both financial support (e.g., subsidized data plans) and digital literacy training to maximize the benefits.

Summary

In summary, the findings indicate that while blended learning is widely recognized as beneficial in South-South polytechnics, its adoption is hindered by infrastructural, institutional, and socio-economic challenges. Students show strong enthusiasm, lecturers are cautiously supportive, and administrators acknowledge its inevitability but cite lack of funding. These findings reinforce global literature while highlighting the peculiar challenges of Nigerian polytechnics, especially in the South-South.

The Way Forward / Recommendations

The findings of this study underscore the potential of blended learning as a transformative approach to teaching and learning in Nigerian polytechnics, particularly within the South-South region. However, realizing this potential requires addressing infrastructural deficits, capacity gaps, policy weaknesses, and socio-economic barriers. This chapter outlines actionable recommendations for government, institutional authorities, lecturers, and students, while proposing long-term strategies for sustainable adoption of blended learning.

Short-Term Strategies (1–3 years)

1. Digital Infrastructure Upgrade
   - Provide reliable internet access in all polytechnic campuses through partnerships with telecommunication companies.
   - Establish dedicated e-learning centers equipped with computers, projectors, and stable power supply.
   - Ensure each polytechnic develops a functional Learning Management System (LMS).

Capacity Building for Lecturers
   - Organize regular digital pedagogy workshops for lecturers to improve ICT competence.
   - Encourage mentorship between younger, tech-savvy lecturers and senior staff.

- ○ Introduce incentives (such as reduced workload or allowances) for lecturers who adopt blended learning.

Student Digital Literacy Training

- ○ Conduct orientation programs on digital learning tools (Zoom, Google Classroom, Moodle, etc.).
- ○ Provide subsidized data plans for students in partnership with telecom providers.

- ○ Encourage peer-to-peer support groups to build digital confidence among students.

Pilot Programs

- ○ Start with blended learning in selected courses before scaling to the entire curriculum.
- ○ Use pilot results to refine strategies and gradually expand adoption.

Medium-Term Strategies (3–5 years)

Policy Reforms

- ○ The National Board for Technical Education (NBTE) should make blended learning compulsory in all polytechnics.
- ○ Polytechnics should integrate blended learning into their academic regulations and performance evaluations.
- ○ Develop quality assurance guidelines to standardize e-learning delivery across institutions.

Industry Partnerships

- ○ Collaborate with tech companies (e.g., Microsoft, Google, MTN, Airtel) for training and infrastructure support.
- ○ Encourage corporate sponsorship of ICT labs through CSR (Corporate Social Responsibility).
- ○ Establish internship opportunities for students in ICT and digital learning-related industries.

Curriculum Redesign

- ○ Incorporate blended learning pedagogy into course development.
- ○ Include digital competency as a learning outcome in technical programs.

○ Update curricula to align with global best practices in blended and online education.

Long-Term Strategies (5+ years)

Sustainable Funding Models

○ Establish a Blended Learning Development Fund accessible to polytechnics for infrastructure and training.

○ Encourage government budgetary allocation specifically for ICT in technical education.

○ Promote income-generating online courses to supplement institutional funding.

Cultural Shift in Teaching and Learning

○ Move from the traditional "chalk and talk" method to a technology-supported pedagogy.

○ Encourage a learner-centered approach where students take more responsibility for their learning.

○ Create a culture of continuous professional development for lecturers.

Regional Blended Learning Consortium

○ Polytechnics in the South-South should form a consortium to share resources, expertise, and digital platforms.

○ This will reduce duplication of effort and promote regional collaboration.

○ Establish joint research projects on blended learning innovations.

Recommendations by Stakeholder

Government: Provide policy direction, fund ICT infrastructure, and ensure equitable access to digital learning.

- Institutional Authorities: Invest in e-learning platforms, incentivize lecturers, and embed blended learning in curricula.

- Lecturers: Embrace continuous training, adopt innovative teaching methods, and mentor students in digital literacy.

- Students: Take advantage of digital resources, cultivate self-directed learning habits, and support peers in navigating blended platforms.

The way forward for blended learning in South-South Nigerian polytechnics lies in a multi-stakeholder approach that combines infrastructure development, policy reforms, capacity building, and cultural change. While challenges remain significant, the opportunities presented by blended learning—flexibility, global competitiveness, and improved learning outcomes—make it indispensable for the future of technical education in Nigeria. By adopting these strategies, polytechnics in the region can not only bridge the digital divide but also position themselves as leaders in innovative education across Africa.

Conclusion

Blended learning represents not just an alternative but a necessity for Nigerian polytechnics in the 21st century. The South-South region, with its strategic position and rich human capital, stands at the threshold of a digital revolution in technical education. However, realizing this vision requires intentional investment in ICT infrastructure, comprehensive policy reforms, capacity building for both lecturers and students, and a cultural shift towards learner-centered, technology-enhanced pedagogy.

In conclusion, blended learning, if effectively harnessed, can enhance the quality of teaching and learning in polytechnics, equip graduates with digital competencies relevant to the modern workforce, expand access to education beyond the limitations of physical classrooms, and position Nigerian polytechnics as competitive players in the global knowledge economy.

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