

INVESTIGATING THE INTERSECTION OF TECHNOLOGY EDUCATION AND CULTURAL VALUES AMONG SOUTH-SOUTH NIGERIA EDUCATORS: A QUALITATIVE STUDY.

BY

Onyebuchi-Igbokwe, Grace Chizoma

Department of Fine and Applied Arts,
Alvan Ikoku Federal University of Education,
Owerri, Nigeria.

Grace.onyebuchi-igbokwe@alvanikoku.edu.ng

+23408131664703

And

Egornu Chizoba Anderson

Department of Fine and Applied Arts,
Alvan Ikoku Federal University of Education,
Owerri, Nigeria.

chizoba.egornu@alvanikoku.edu.ng

Abstract

This study explores the dynamic interplay between technology education and indigenous cultural values among educators in South-South Nigeria. As digital integration accelerates within educational systems, tensions often emerge between globalized technological practices and deeply rooted local traditions. Through a qualitative research design, the study engaged twenty

secondary and tertiary educators across Edo, Delta, Rivers, and Bayelsa states using semi-structured interviews and focus group discussions. The findings reveal nuanced perspectives: while educators acknowledge the transformative potential of technology for pedagogy and learner engagement, they also express concern over cultural erosion and identity displacement. Participants advocate for a contextualized technology education framework that aligns with regional cultural ethos and supports culturally responsive teaching. The study underscores the need for policy interventions and teacher training models that harmonize technological advancement with cultural sustainability in curriculum design and classroom practice. This investigation contributes to ongoing discourse on decolonizing education and fostering inclusive, culturally grounded technological literacy in South-South Nigeria.

Keywords: Technology Education, Cultural Values, South-South Nigeria, Culturally Responsive Teaching

Introduction

The increasing penetration of technology into educational systems globally has prompted a re-examination of how traditional cultural values intersect with modern pedagogical tools. In the context of South-South Nigeria rich in ethnic diversity and cultural heritage this intersection raises critical questions about the compatibility of technological education with

indigenous worldviews and teaching practices. Underscoring the quintessence of technology vis- a- vis cultural preservation, Onyebuchi-Igbokwe, et al (2025), highlights that digital media provide an inventive way to deal with issues of cultural valuation because of its ability to record, share, and reinterpret cultural narratives. While technology promises enhanced learning experiences and broader access to information, it also presents a potential threat to cultural continuity and identity, especially when educational content and delivery methods are externally imposed and culturally incongruent (Olayemi, 2022; Udo & Ekpo, 2023).

Technology education, broadly defined as the study and application of technological systems, tools, and processes in learning environments, has been increasingly integrated into Nigerian classrooms through initiatives such as digital literacy programs and smart classroom technologies (Adebayo & Musa, 2021). However, educators often face a dilemma: how to adopt these tools in ways that are both pedagogically effective and culturally respectful. This is particularly relevant in South-South Nigeria, where traditional values, oral traditions, and community-based knowledge systems continue to play a pivotal role in socialization and education (Okonkwo, 2023).

Existing studies have highlighted the challenges associated with implementing technology in culturally diverse regions, including language barriers, resistance to change, and the marginalization of local knowledge

systems (Nwankwo et al., 2024). Despite these concerns, there is limited empirical research on how educators in South-South Nigeria perceive and navigate these challenges. This study addresses this gap by qualitatively investigating the experiences and viewpoints of educators who are at the frontline of integrating technology into their classrooms while upholding cultural integrity.

By centering the voices of local educators, the study aims to inform the development of culturally responsive teaching strategies and policies that harmonize technological advancement with cultural preservation. In doing so, it contributes to broader efforts toward decolonizing education and promoting equity in knowledge production and dissemination within the Global South.

Statement of the Problem

Despite Nigeria's increasing investment in educational technology and the push for digital transformation in schools, there is a growing disconnect between these modern innovations and the cultural realities of the communities they are intended to serve particularly in South-South Nigeria. This region, characterized by ethnic diversity and strong traditional belief systems, often experiences a cultural dissonance when educational technology tools and curricula fail to reflect local knowledge systems, languages, and social values (Okonkwo, 2023; Nwankwo et al., 2024).

Educators in South-South Nigeria find themselves at a crossroads: on one hand, they are expected to implement modern teaching technologies in line with national and global educational standards; on the other hand, they must navigate cultural expectations that emphasize communal knowledge, respect for elders, indigenous languages, and holistic worldviews (Udo & Ekpo, 2023). This tension may result in resistance to technology use, superficial adoption, or the exclusion of culturally grounded pedagogical practices in favor of foreign models (Olayemi, 2022).

Furthermore, the lack of culturally responsive training and policy support for teachers limits their ability to meaningfully integrate technology into teaching without compromising cultural integrity. Most existing studies on technology education in Nigeria focus on infrastructural challenges or student outcomes, with little attention paid to the cultural implications and the lived experiences of educators tasked with bridging the gap between global technological trends and local cultural values (Adebayo & Musa, 2021).

This study, therefore, seeks to investigate how educators in South-South Nigeria perceive and respond to the intersection of technology education and cultural values. It aims to uncover the challenges they face, the coping strategies they adopt, and the implications for culturally responsive teaching and educational policy reform.

Research Objectives

1. To explore educators' perceptions of the relationship between technology education and cultural values in South-South Nigeria.
2. To identify the challenges educators face when integrating technology into culturally diverse classrooms.
3. To examine the strategies educators use to balance technological advancement with cultural preservation in their teaching practices.

Research Questions

1. How do educators in South-South Nigeria perceive the intersection of technology education and indigenous cultural values?
2. What challenges do educators encounter when implementing technology in classrooms within culturally sensitive contexts?
3. What strategies do educators adopt to ensure that technology integration does not undermine cultural identity and values in their teaching?

Theoretical Framework:

This study is anchored in two complementary theoretical perspectives: Culturally Responsive Pedagogy (CRP) and Technological Pedagogical Content Knowledge (TPACK). Together, these frameworks provide a lens for

understanding how educators navigate the intersection of technology education and cultural values.

Culturally Responsive Pedagogy (CRP)

Coined by Geneva Gay (2000), Culturally Responsive Pedagogy emphasizes the importance of integrating students' cultural references into all aspects of learning. CRP posits that effective teaching must be responsive to the cultural contexts of learners by validating their lived experiences, languages, values, and worldviews. In the context of South-South Nigeria, where education traditionally involves communal values, storytelling, respect for elders, and oral traditions, CRP offers a model for developing instructional practices that honor cultural identity while engaging modern technologies. This theory guides the study in analyzing how educators strive to maintain cultural relevance amidst increasing pressure to adopt digital teaching methods.

Technological Pedagogical Content Knowledge (TPACK)

Developed by Mishra and Koehler (2006), the TPACK framework explains how teachers integrate technology effectively by combining three core knowledge domains: technological knowledge (TK), pedagogical knowledge (PK), and content knowledge (CK). TPACK recognizes that effective technology integration is not simply about using tools but about understanding how technology intersects with teaching methods and subject matter. In

the context of this study, TPACK helps to explore how educators make pedagogical choices that reflect both technological competence and sensitivity to cultural content.

By combining CRP and TPACK, this study examines not only whether educators use technology, but *how* and *why* they use it in ways that either align with or diverge from cultural expectations. These theories support an interpretive approach to analyzing educators' experiences and help frame the broader implications for policy and practice in Nigerian education.

Review of Related Literature

1. Technology Integration in Nigerian Education

Technology has increasingly become a focal point in educational reforms across Nigeria, with government-led initiatives promoting digital literacy, smart classrooms, and ICT-enhanced pedagogy (Adebayo & Musa, 2021). Studies show that while the availability of technological tools is gradually improving, especially in urban centers, the effective use of such tools remains inconsistent due to infrastructural challenges, lack of training, and contextual barriers (Olaniyi, 2022). Teachers often report feeling unprepared to use educational technology meaningfully, particularly in rural or culturally complex settings.

Cultural Dynamics in Nigerian Classrooms

Education in Nigeria is deeply embedded in cultural values that shape communication, learning styles, discipline, and knowledge transmission (Okonkwo, 2023). In South-South Nigeria, traditional modes of learning such as storytelling, apprenticeships, and communal problem-solving play a significant role in informal education. These indigenous practices can clash with the often individualistic and content-centered nature of Western-style educational technology, potentially leading to cultural alienation or resistance among students and educators (Udo & Ekpo, 2023).

Educators' Perspectives on Cultural Relevance

Research has shown that when educators are aware of and committed to culturally responsive practices, student engagement and performance increase (Gay, 2000; Ladson-Billings, 2014). In Nigeria, however, there is limited support for culturally responsive teacher training, particularly in relation to technology use (Nwankwo et al., 2024). Some educators express concern that the use of non-local languages in digital tools, along with curriculum content disconnected from local realities, undermines students' cultural identity (Olayemi, 2022).

Balancing Innovation and Tradition

Several scholars emphasize the need for a balanced approach to education that does not pit tradition against

innovation but integrates both meaningfully (Adeoye & Ajayi, 2023). Such integration involves contextualizing digital content, employing multilingual platforms, and designing technology use that reflects local values and knowledge systems. However, this remains under-researched in the Nigerian context, especially in qualitative terms that center the voices and strategies of educators themselves.

Gaps in the Literature

While various studies have addressed technology adoption or cultural relevance in education separately, few have examined how educators negotiate the intersection of these dimensions particularly in culturally rich but technologically evolving regions like South-South Nigeria. This study seeks to fill that gap by exploring how educators experience, interpret, and respond to the challenges and opportunities that arise when technology meets tradition in their classrooms.

Methodology

Research Design

This study adopts a qualitative research design with a phenomenological approach, aimed at capturing the lived experiences and perceptions of educators in South-South Nigeria regarding the intersection of technology education and cultural values. The phenomenological lens allows for in-depth exploration of how educators

interpret and navigate the integration of technology within culturally diverse educational contexts.

Study Area

The research was conducted in selected states within South-South Nigeria specifically Edo, Delta, Rivers, and Bayelsa. These states were chosen for their ethnic and cultural diversity, as well as their varying levels of access to educational technology.

Participants

A total of 20 educators were purposively selected from both secondary and tertiary institutions, ensuring representation across rural and urban locations. Participants included teachers and lecturers who have at least three years of teaching experience and have engaged with some form of educational technology in their teaching practice.

Sampling Technique

Purposive sampling was used to select participants who could provide rich, relevant, and diverse insights. The criteria included:

- Active involvement in technology-assisted teaching.
- Familiarity with local cultural values.

- Willingness to participate in an in-depth interview or focus group discussion.

Data Collection Methods

Two main methods were used:

- Semi-structured interviews (15 participants): These allowed for open-ended responses and follow-up probing.
- Focus group discussions (with 5 educators): These helped to elicit collective views and cultural nuances within educational discourse.

All interviews and discussions were audio-recorded (with consent), transcribed verbatim, and anonymized to guarantee confidentiality.

Method of Data Analysis

This study employed a qualitative thematic analysis approach to analyze data collected from semi-structured interviews and focus group discussions. The aim was to systematically identify patterns and meanings across participants' responses that relate to the intersection of technology education and cultural values.

The analysis followed the six-phase model proposed by Braun and Clarke (2006), which is well-suited for exploring the depth and complexity of experiences in educational and cultural contexts. The use of NVivo 12

software supported efficient data management and coding.

Phase 1: Familiarization with the Data

All audio recordings were transcribed verbatim. The transcripts were read multiple times to ensure a thorough understanding of the content. Initial notes and reflections were written in the margins to capture preliminary insights.

Phase 2: Generating Initial Codes

Coding was conducted both inductively (from emerging data) and deductively (informed by the theoretical frameworks: Culturally Responsive Pedagogy and TPACK). Codes were assigned to words, phrases, and sentences that revealed significant ideas about cultural identity, teaching practices, and technology use.

Phase 3: Searching for Themes

Codes were grouped into broader categories to identify meaningful themes. The process involved constant comparison across participants to detect recurring patterns or unique insights. For instance, codes like “language issues,” “use of proverbs,” and “tech mismatch” were grouped under emerging themes such as *Cultural Dissonance* and *Adaptive Strategies*.

Phase 4: Reviewing Themes

Emergent themes were reviewed for consistency and relevance. Overlapping or redundant themes were refined, and underdeveloped themes were either expanded or excluded. A coding map was created to visualize the relationships between themes and subthemes.

Phase 5: Defining and Naming Themes

Each theme was clearly defined in terms of its significance to the research questions. Definitions were grounded in both participant narratives and theoretical constructs. Key themes included:

- Cultural Dissonance
- Teacher Adaptation
- Cultural Preservation Strategies
- Structural/Technological Barriers

Phase 6: Producing the Report

The final stage involved integrating the themes into a coherent narrative supported by rich, verbatim quotations from participants. These findings were interpreted in light of the theoretical frameworks and existing literature to explain how South-South Nigerian educators navigate the cultural-technological interface in their teaching.

Ensuring Rigor and Trustworthiness

To ensure credibility and reliability in the data analysis:

- Member checking was done by sharing preliminary findings with participants for validation.
- Peer debriefing was conducted with qualitative research experts.
- Triangulation was employed by comparing responses from different states and institution types.
- An audit trail documented all coding decisions and analytical reflections for transparency.

Findings, Results, and Interpretation

The analysis of qualitative data from 15 semi-structured interviews and one focus group discussion (comprising 5 educators) revealed five major themes. These themes reflect how educators in South-South Nigeria experience, interpret, and navigate the integration of technology education within culturally diverse environments.

Theme 1: Cultural Dissonance in Digital Content

Many educators reported that most educational technologies and digital content are designed without consideration for local cultural values, languages, and community realities.

“The platforms are good, but they feel foreign. They don’t reflect who we are or how we communicate.” – Teacher, Edo State

Interpretation:

There exists a significant disconnect between globalized digital education tools and local cultural contexts. Educators often feel that these technologies impose external norms and discourage indigenous knowledge systems, resulting in disengagement from students, especially in rural communities.

Theme 2: Adaptation and Localization of Instruction

Participants described how they adapt technology to suit cultural realities by incorporating local examples, storytelling, and translation into native languages during lessons.

“Sometimes I translate the English apps into pidgin or add examples from our festivals to help them understand.” – Lecturer, Rivers State

Interpretation:

Educators are not passive adopters of technology. They actively re-contextualize digital tools and content, aligning them with students' cultural identities. This behavior reflects high levels of pedagogical agency and a commitment to culturally responsive teaching.

Theme 3: Resistance to Culturally Incompatible Technology

Some educators reported an intentional or passive resistance to using technology that undermines or ignores their cultural practices.

“We don’t use that e-book anymore. It makes the students think foreign is better. We prefer using the printed local materials.” – Secondary School Teacher, Delta State

Interpretation:

When technology is perceived as threatening to cultural identity or sovereignty, educators resist its adoption, even if it offers technical advantages. This suggests the need for inclusive, culturally sensitive digital curricula that reflect local heritage.

Theme 4: Infrastructural and Institutional Barriers

Educators across urban and rural areas highlighted issues such as erratic power supply, poor internet access, lack of culturally inclusive software, and limited training.

“We have computers, but no electricity. The training they gave us was also too general—nothing about our context.” – Teacher, Bayelsa State

Interpretation:

The intersection of culture and technology in education

cannot be addressed without considering the systemic and infrastructural challenges that limit equitable access. Teachers' ability to effectively integrate culture into technology use is hindered by institutional neglect.

Theme 5: Aspiration for Balanced Integration

Educators expressed a strong desire for technology integration that respects and enhances, rather than replaces, local cultural values.

"It's not about rejecting technology. We want to blend it with our traditions. That's the real education." –
 Lecturer, Delta State

Interpretation:

There is a growing consciousness among educators of the need to create a balanced approach where modern technological advancement coexists with indigenous educational philosophies. This indicates toward an opportunity for culturally hybrid pedagogies and curriculum innovation.

Table 1. Summary of Key Results

Theme	Core Insight	Implication for Policy and Practice
Cultural Dissonance	Digital tools often lack local relevance	Need for culturally localized content development
Teacher Adaptation	Educators modify tools to	Empower teachers as co-creators of

	fit their context	culturally relevant tech
Resistance to Technology	Rejection of tools that threaten identity	Inclusion of cultural sensitivity in design and deployment
Institutional Barriers	Poor infrastructure and training limit impact	Improve contextualized capacity-building and resources
Balanced Integration Aspirations	Desire for culturally inclusive innovation	Develop hybrid pedagogical models

(Source: Researcher's Concept, 2025)

Interpretive Synthesis

The intersection between technology education and cultural values is characterized by tension, negotiation, and innovation. South-South Nigerian educators strive to protect cultural integrity while embracing digital transformation. The findings align strongly with the principles of Culturally Responsive Pedagogy (CRP) and Technological Pedagogical Content Knowledge (TPACK), revealing the need for educational frameworks and policies that:

- Recognize cultural identity as central to learning,
- Support teacher agency in content adaptation,
- Address infrastructural and systemic barriers,

- Promote co-creation of technology with local stakeholders.

Conclusion

This qualitative study examined the ways in which educators in South-South Nigeria navigate the intersection of technology education and cultural values. The findings revealed that while educators acknowledge the transformative potential of educational technologies, they are also deeply concerned about the cultural irrelevance of most digital tools and content available to them.

Educators are not passive users of technology they actively adapt, resist, or reinterpret digital tools to align with their local realities. Their actions demonstrate the importance of culturally grounded teaching and the critical role of teacher agency in making technology meaningful. However, infrastructural challenges, lack of contextual training, and limited access to culturally inclusive digital resources hinder their ability to effectively integrate technology in ways that respect and reflect their students' cultural identities.

In light of these findings, it is clear that any effort to enhance technology education in culturally diverse settings must consider the social, historical, and cultural dynamics of the communities it seeks to serve. Sustainable and effective digital education must strike a balance between innovation and tradition.

Recommendations

Based on the study's findings, the following recommendations were made:

1. Develop Culturally Inclusive Digital Content

Policymakers, curriculum developers, and edtech designers should collaborate with local educators to create digital resources that reflect indigenous languages, customs, examples, and worldviews.

2. Incorporate Culturally Responsive Pedagogy in Teacher Training

Teacher education programs should integrate modules on Culturally Responsive Pedagogy (CRP) and localized technology use. This will empower teachers to blend technology with cultural content effectively and confidently.

3. Improve Infrastructure and Access

Governments and educational stakeholders must address foundational issues such as electricity, internet access, and the provision of functional devices—particularly in rural and underserved areas.

4. Engage Educators in Co-Creation of Technology

Teachers should be involved in the design and adaptation of educational technologies. Their frontline experiences

provide valuable insights into what works culturally and pedagogically in their contexts.

5. Promote Hybrid Educational Models

Institutions should support teaching approaches that combine modern technology with traditional learning methods such as storytelling, communal knowledge sharing, and cultural festivals.

6. Policy Reforms for Context-Sensitive Technology Integration

Educational policy should mandate contextually relevant technology adoption that aligns with local needs, rather than implementing generic, one-size-fits-all digital education programs.

References

- Adebayo, A. M., & Adekoya, B. O. (2020). Exploring teachers' perception of culturally relevant pedagogy in Nigerian classrooms. *African Educational Research Journal*, 8(2), 392–401. <https://doi.org/10.30918/AERJ.82.20.057>
- Adebayo, R., & Musa, H. (2021). Digital transformation in Nigerian schools: Trends, challenges, and policy directions. *Nigerian Journal of Educational Technology*, 14(2), 45–59. <https://doi.org/10.4314/njet.v14i2.4>
- Adeoye, S., & Ajayi, K. (2023). Rethinking educational

- innovation in Africa: The role of indigenous knowledge in digital transformation. *African Educational Review*, 19(1), 60–75.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Gay, G. (2018). *Culturally responsive teaching: Theory, research, and practice* (3rd ed.). Teachers College Press.
- Gay, G. (2000). *Culturally Responsive Teaching: Theory, Research, and Practice*. Teachers College Press.
- Ladson-Billings, G. (2014). Culturally relevant pedagogy 2.0: Aka the remix. *Harvard Educational Review*, 84(1), 74–84.
- Mishra, P., & Koehler, M. J. (2006). Technological Pedagogical Content Knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017–1054. <https://doi.org/10.1111/j.1467-9620.2006.00684.x>
- Nwankwo, C., Adeyemi, L., & Bassey, I. (2024). Cultural sensitivity in ICT integration: Perspectives from African classrooms. *African Journal of Educational Research*, 21(1), 33–49.
- Okonkwo, F. (2023). Indigenous knowledge systems and the future of education in Nigeria. *Journal of Cultural and Educational Studies*, 8(1), 12–27.
- Olaniyi, M. (2022). *ICT and teacher capacity development in Nigeria: Issues and interventions*. West African Journal of Educational

- Development, 5(3), 89–102.
- Olayemi, T. (2022). Technology and tradition: Negotiating identity in African education. *International Journal of African Studies*, 10(3), 109–124.
- Onyebuchi-Igbokwe, G.C., Nakwasi, R.N., Egornu, C.A., & Amanze, P.C. (2025). Agricultural heritage and multi-media art: A study on the preservation and promotion of agricultural cultural heritage through digital media in Imo, Anambra, and Enugu states. *Journal of Ceramic and Environmental Design*. 12, (1), 40-52.
- Onyia, C. R., & Offorma, G. C. (2016). ICT and cultural preservation: Nigerian indigenous knowledge in the digital age. *Journal of Education and Practice*, 7(30), 23–30. <https://www.iiste.org>
- Udo, M., & Ekpo, A. (2023). Teachers' attitudes toward technology use in culturally diverse Nigerian classrooms. *Contemporary Issues in Education in Africa*, 5(4), 78–94.
- Ughasoro, M. D., & Nwoke, B. I. (2021). Technological pedagogical content knowledge (TPACK) and culturally responsive teaching in Nigeria. *Contemporary Educational Technology*, 13(1), ep289. <https://doi.org/10.30935/cedtech/9559>
- Wang, V. C. X., & Torrisi-Steele, G. (2016). Culturally responsive teaching in digital learning environments: The need for rethinking pedagogy. *International Journal of Adult Vocational Education and Technology*, 7(4), 14–25. <https://doi.org/10.4018/IJAVET.2016100102>

Yusuf, M. O., & Yusuf, H. T. (2009). Educational reforms in Nigeria: The potential of information and communication technology (ICT). *Educational Research and Review*, 4(5), 225230. <https://academicjournals.org/ERR>