

Integrating Technology into English Language Curriculum Design: Trends, Benefits and Challenges in the Nigerian Context

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Abstract: *This study investigates the integration of technology into the English language curriculum in Nigeria, focusing on emerging trends, benefits, and challenges. At the turn of the 21st century, information and communication technologies (ICTs) have become essential tools for enhancing teaching, learning, assessment, and curriculum development across the world. Notably, technology integration has advanced through approaches such as Mobile-Assisted Language Learning (MALL). However, despite the global shift toward technologically enriched education, the effective incorporation of digital tools into the English language curriculum in Nigeria remains inadequate and inconsistent. This gap is largely attributed to infrastructural deficiencies, insufficient teacher training, and limited incentives that hinder the adoption of ICT-based instructional practices. This study is anchored on the Technological Pedagogical and Content Knowledge (TPACK) framework, which aligns with its aim of examining the trends, benefits, and challenges associated with technology integration in English language education. A qualitative research design was employed, utilizing interviews, Focus Group Discussions (FGDs), and document analysis. Findings reveal that although the integration of technology is becoming more widespread, it is still uneven across schools. The study concludes that effective integration requires stronger alignment among curriculum developers, teacher professional development initiatives, and supportive policy frameworks. It recommends increased funding and infrastructural investment to enable full and equitable integration of technology in English language education.*

Key words: English language, technology, curriculum, education

INTRODUCTION

The integration of technology into education has really transformed pedagogical practices worldwide, most especially in language and in Nigeria in particular. At the turn of 21st century, Information and Communication Technologies (ICTs) have become an essential tool for enhancing teaching, learning, assessment, and curriculum development (Kessler, 2020) worldwide. English language education has gained from interactive digital platforms; online learning environments, and technological tools that support communicative competence such as reading fluency, and language creativity (Golonka et al., 2021).

In many developed nations of the world, technology integration in English Language Teaching (ELT) has been advanced with blended learning models, mobile-assisted language learning (MALL), and multimedia resources have all reshaped curriculum design to be more learner-centered (Hubbard, 2022; Salaberry, 2021). However, in the Nigerian educational context, challenges are abound cutting across inadequate infrastructure, insufficient teacher training, policy gaps, and limited funding have all continued to impede effective use of technology in teaching and learning and most specifically in English language classrooms (Osadebe, 2020; Abubakar & Bello, 2022).

Nigeria's National Policy on Education acknowledges the significant role that ICT plays in education, but the practical implementation of technology integration remains difficult across states and institutions (Federal Ministry of Education, 2019). Teachers are faced with barriers such as lack of political will on the part of the government, poor internet connectivity, lack of instructional devices, and limited professional development opportunities (Ojedokun et al., 2023). Curriculum designers, on the other hand, struggle to align traditional curriculum expectations with emerging digital pedagogies, creating gaps that warrant qualitative investigation.

This paper focuses on exploring trends, benefits, and challenges of integrating technology in the design of the English language curriculum in Nigeria. A qualitative approach that enables deep insights into stakeholders' lived experiences, perceptions, and contextual complexities, providing rich data for meaningful curriculum reform is the aim of this study.

Statement of the Problem

Despite the global shift toward technological enhanced education, an effective incorporation of digital tools in English language curriculum in Nigeria is still inadequate and inconsistent. In spite that national, state and institutional policies have adequately promoted digital literacy and ICT-based teaching, the situation in many schools particularly public and under-resourced private schools show a disconnect between policy expectations and realities in classroom practice. Empirical studies indicate that English language teachers are generally aware of the teaching and learning value of technology for improvement such as learner engagement, promoting interactive lesson, and supporting diverse instructional strategies. However, stakeholders (teachers) lack the practical competencies, infrastructural support, and

administrative encouragement required to implement these tools meaningfully within curriculum planning and delivery (Adebowale & Adebisi, 2022; Akande, 2021).

In addition to infrastructural deficiencies such as constant electricity, reliable internet connectivity, and functional digital devices, teachers still complain of insufficient training opportunities and limited institutional incentives to adopt effective technologically-based ICT approach. As a result of this deficiency, the use of ICT in English language education remained superficial, sporadic, or completely lacking, therefore, limiting the benefit associated with 21st-century instructional practices. This disconnect can be attributed to persistent challenges in planning and implementing a curriculum that will reflect modern teaching demands and supports the development of learners' digital communication competencies. This study, therefore, seeks to investigate this critical knowledge gap by exploring the trends, benefits, and challenges associated with integrating technology into English language curriculum design in Nigeria.

Purpose of the Study

The main purpose of this paper is to investigate the trends, benefits, and challenges of integrating technology into the English language curriculum design in Nigeria. Specifically, the study aims to:

1. investigate current trends in technology integration within English language curriculum design in Nigerian schools.
2. examine the perceived benefits of technology use in teaching and learning English.
3. Identify the challenges that hinder successful integration of technology in curriculum design and implementation.

Research Questions

This study will be guided by the following research questions:

1. What are the current trends in the integration of technology into English language curriculum design in Nigeria?
2. What benefits do key stakeholders perceive from the use of technology in English language curriculum design?
3. What challenges are associated with integrating technology into the English language curriculum in Nigeria?

Scope of the Study

This study focuses on selected secondary schools and tertiary institutions in Nigeria. The participants will include: English language teachers, curriculum planners and officials, students learning English and ICT coordinators involved in educational technology implementation.

The study will explore curriculum design practices involving digital tools, instructional media, learning platforms, and other ICT resources relevant to English language education.

LITERATURE REVIEW

Technology in English Language Education

Educational technology refers to “digital tools, ICT infrastructure, and online platforms purposefully used to support teaching and learning” (Salaberry, 2021). In English language teaching (ELT), “technology creates opportunities for interactive instruction, multimodal content, learner autonomy, and access to authentic language resources” (Napida et al., 2024). Studies show that integrating tools like YouTube, educational apps, digital textbooks, etc. can effectively enhance engagement that will benefit both teachers and learners in classroom and it will improve language output when embedded in instructional planning. The use of ICT like Mobile-assisted language learning (MALL), flipped classrooms, and online collaboration platforms have shown that prominent modalities will reshape curriculum design by introducing flexibility and learner-centered pedagogy (Başar & Şahin, 2022; technology review).

Curriculum Design and Technology Integration

Curriculum design involves “systematic planning of content, pedagogy, assessment, and instructional methods” (Ornstein & Hunkins, 2022). When teaching and learning are integrated with technology, “curriculum design and learning experience goes beyond static lesson plans to include digital resource curation, adaptive learning pathways, and technology-supported assessments” (Irro-Adjekpovu & Nwabuaku, 2024). Technologically enhanced curriculum design supports personalised learning, fosters critical thinking, and enriches language learning ecosystems through interactive media and connectivity (Wang & Kabilan, 2024).

Benefits of Technology Integration

The integration of technology into English language teaching and curriculum design has been widely recognized as a catalyst for improving instructional quality and learning outcomes in the 21st century. These benefits of technological integration are highlighted as follows:

Enhanced Engagement and Interaction

Studies show that technology’s role in making instruction more interactive, motivating learners to actively participate in tasks that go beyond textbook. Digital tools create opportunities for synchronous and asynchronous interaction that enrich communicative competence.

Improved Access and Flexibility

The use of ICT through online platforms and digital materials gives learners access to diverse language resources outside the traditional classroom, thereby encouraging independent learning.

Support for Differentiated Instruction

Technology allows teachers to effectively customize instruction to match learners’ need, proficiency levels, individual learning speeds, and preferred learning styles. This flexibility allows more personalised

learning experiences and has been consistently emphasized in qualitative studies as one of the major strengths of technologically enhanced instruction.

Professional Growth for Teachers

Effective integration of technology in teaching and learning is connected to teachers' growing confidence and digital competence, which in turn positively influences the way they conceptualize and design the curriculum. As stakeholders become more experienced in using digital tools, they are better able to integrate innovative strategies that enhance learning. The benefits are well documented in English Language Teaching (ELT) scholarship as well as broader ICT integration research, both of which demonstrate that when technology use is adapted to the local context, curriculum implementation tends to improve significantly.

Challenges to Technology Integration

Infrastructural Limitations

In developing educational settings, the absence of reliable technological infrastructure poses a major barrier to effective ICT adoption. Persistent challenges such as poor internet connectivity, irregular electricity supply, insufficient computers or digital devices, and outdated technological resources make it difficult for teachers and learners to meaningfully engage with technology in the classroom. These limitations not only disrupt instructional continuity but also restrict the extent to which digital tools can be incorporated into curriculum implementation.

Teacher Preparedness and Professional Development

A significant obstacle to successful technology integration is lack of preparedness by the teachers. Many educators do not receive consistent or comprehensive professional development that equips them with the necessary digital skills and pedagogical strategies for incorporating or integrating technology into curriculum design. Without adequate training and ongoing support, teachers may feel uncertain, overwhelmed, or reluctant to use digital tools, resulting in ineffective implementation. Continuous professional development is therefore essential to build teachers' confidence and competence, enabling them to integrate technology in ways that enrich teaching and learning.

Empirical Review

Aremu et al. (2024) conducted a study that investigated the use of Computer Assisted Language Learning (CALL) and teleconferencing to improve English language performance among secondary school students in Oyo State. Using questionnaires and electronic instructional tools, the researchers taught selected students and teachers and found that CALL improved outcomes in WASSCE and NECO, as well as students' communicative competence. The study concludes that technology-supported instruction can raise achievement and recommends stronger digital infrastructure in schools. In relation to the present study, it supports the beneficial impact of technology in English education but focuses narrowly on CALL as an instructional tool rather than exploring broader trends, curriculum design considerations, or

nationwide integration practices. It also does not analyse teacher preparedness, policy frameworks, curriculum guidelines, or a diversity of emerging digital tools. The key gap, therefore, is the absence of a comprehensive, curriculum level, national examination of technology integration trends, benefits, and challenges in English language teaching across Nigeria, which this study aims to address.

Adelana (2022) presents a descriptive study examining Nigerian English teachers' current perceptions of using technology to teach Oral English, involving 215 teachers who completed a perception-based questionnaire. Findings show that teachers generally hold positive attitudes toward integrating technology in Oral English instruction, and the study recommends continuous professional development to help teachers adapt to evolving technological tools. In relation to the present study which focuses on trends, benefits, and challenges in integrating technology into English language curriculum design, the study contributes useful insight into teacher perceptions, which is one aspect of technology integration. However, it does not address broader curriculum design issues, national trends, infrastructural barriers, or the overall benefits and challenges across the English curriculum. The gap lies in its limited focus on perceptions about Oral English rather than a comprehensive examination of technology integration across listening, speaking, reading, writing, curriculum guidelines, policy structures, and nationwide implementation practices, which the present study aims to provide.

Deji-Afuye & Deji-Afuye (2025) investigate how sociocultural factors and ESL teachers' beliefs shape technology-enhanced classroom practices in Ekiti State, using the Technology Acceptance Model and a mixed-methods approach involving interviews and classroom observations. It finds that teachers' perceived usefulness, ease of use, attitudes, school policies, and cultural values strongly influence technology adoption. The study supports TAM as an effective explanation for technology use among ESL teachers and recommends contextualized training, better infrastructure, and supportive policies. In relation to this study, the study offers useful insight into teacher beliefs and sociocultural influences which are the important components of technology integration but it does not examine national trends, curriculum design processes, or the broader benefits and challenges across English language teaching. The main gap is that the study focuses narrowly on teacher dispositions and classroom practice in one state, without addressing curriculum level integration, nationwide patterns, or comprehensive challenges and benefits in English language curriculum design, which this study aims to fill.

Ajaps (2020) argues for the incorporation of mobile devices such as GSM phones into English language teaching in Nigerian higher institutions despite common concerns about their negative effects. It highlights how ICT and mobile technologies support flexible, learner-driven learning and notes that their educational potential remains underused in Nigeria. Drawing from scholarly perspectives and the author's classroom experience, the paper outlines several advantages of mobile-supported English language learning. In relation this study, it contributes by emphasizing the benefits of a specific technological trend such as mobile-assisted language learning which aligns with the exploration of technology's role in English education. However, it does not address curriculum design, national integration patterns, teacher readiness, policy frameworks, or broader systemic challenges. The key gap is the lack of a comprehensive,

curriculum level analysis of trends, benefits, and challenges across Nigerian schools; instead, the study focuses narrowly on mobile devices and higher education contexts, leaving open the wider investigation this paper seeks to provide.

Garba (2025) presents a mixed-methods study combining bibliometric analysis of global ICT-in-ELT research with Nigerian case studies to assess how digital tools enhance English language learning. It reports strong positive effects of ICT on vocabulary, speaking, writing, and listening, noting increased engagement and personalized learning. Despite these benefits, challenges such as infrastructural deficits, low teacher digital literacy, and ethical concerns limit equitable ICT adoption, especially in underserved regions. The study recommends context-specific strategies, blended learning, and policy reform to improve implementation. In relation to this study, it aligns well with the examination of trends, benefits, and challenges but focuses more on global literature and skill-based enhancements than on curriculum design processes in Nigeria. The research gap lies in its limited engagement with the actual English language curriculum framework, policy alignment, teacher readiness for curriculum level integration, and how technology is systematically embedded in Nigerian school curricula areas which this study aims to address.

Akinwumi et al. (2025) presents a qualitative study examining how science, technology, and innovation contribute to educational transformation in Nigeria using systematic literature review and thematic analysis. It shows that emerging technologies such as AI, blockchain, and VR can enhance accessibility, personalise learning, and support inclusivity. However, infrastructural weaknesses, inadequate teacher training, and policy gaps hinder effective implementation, prompting recommendations for investment, capacity building, and supportive policies. While the study offers valuable insight into broad technological trends and systemic challenges, its scope is general to the entire education sector rather than specific to English language teaching. The gap lies in its lack of focus on English language curriculum design, skill-specific benefits, classroom-level experiences, and ELT-specific challenges; these omissions underscore the need for the present study, which directly investigates trends, benefits, and barriers within the English language curriculum in Nigerian schools.

Ahmed (2024) examines how digital transformation and artificial intelligence can improve English as a Second Language learning in Nigeria, where traditional teaching methods often fail to address learners' diverse linguistic needs. It highlights how AI tools support personalized learning, adaptive assessments, and richer engagement while expanding access to digital resources. The study outlines key opportunities such as improved learning experiences and better assessment, alongside challenges including limited infrastructure, inadequate teacher training, and cultural considerations. Recommendations emphasize investment in technology, teacher capacity building, and ethical data practices. Although useful for understanding AI-enhanced English teaching, the study does not address curriculum level trends, the structure of English language curriculum design, or systemic barriers in Nigerian schools. The main gap is its focus on AI tools and pedagogical potential rather than on how technology is integrated into the

English language curriculum, the broader benefits and challenges across school levels, and nationwide implementation patterns core areas that the present study seeks to investigate.

Garba (2025) presents a mixed-methods study, exploring how ICT supports English Language Teaching using bibliometric analysis and Nigeria case studies. It shows that ICT significantly improves language skills such as vocabulary, speaking, writing, and listening, while also increasing learner engagement and personalization. The study identifies major barriers such as poor infrastructure, weak digital literacy, and ethical issues surrounding AI, alongside regional inequalities that limit access. It calls for blended learning models, policy reforms, and collaborative efforts to strengthen ICT adoption in ELT. While the study is valuable for showing ICT's impact on language learning, it focuses mainly on skill development and global research trends rather than on curriculum design processes in Nigerian schools. The key gap is its lack of attention to how technology is integrated into the English language curriculum itself, the institutional frameworks guiding such integration, and the specific benefits and challenges teachers face during curriculum implementation which is precisely what the present study aims to address.

Napida et al. (2024) presents a qualitative study exploring instructional technology tools used by English language teachers, focusing on two teachers in SMA Negeri 4 Bandar Lampung. It identifies various tools such as projectors, laptops, sound systems, digital textbooks, and online platforms like YouTube and Instagram. The study finds that these technologies enhance teaching effectiveness, improve student engagement, and support better learning outcomes. Data were collected through semi-structured interviews and analysed thematically to reveal recurring patterns in classroom technology use. While the study highlights practical classroom applications of technology, it is limited to a very small sample and a single context, focusing mainly on tool usage rather than broader educational structures. In relation to the present study, it contributes insight into trends and benefits of instructional technology but does not address curriculum design, national implementation patterns, or systemic challenges in Nigeria. The key gap is its narrow focus on individual teacher practices and specific tools, without examining how technology is embedded in English language curriculum design, policy frameworks, or large-scale challenges and benefits across Nigerian schools.

Suwarni & Natsir (2024) presents a mixed-methods study examining English teachers' perceptions and classroom practices regarding technology integration in Indonesia. It involves 120 teachers surveyed and 15 selected for interviews and classroom observation across different educational levels. Findings reveal a significant gap between positive teacher attitudes toward technology and its actual classroom use, influenced by factors such as digital competence, institutional support, pedagogical beliefs, and infrastructure access. While teachers recognize technology's benefits for motivation and authentic language learning, they struggle with aligning it to objectives, classroom management, and assessment. The study recommends improved teacher training and supportive educational policies. In relation to the present study, it contributes useful insight into perceived benefits, challenges, and influencing factors of technology integration, but it is situated outside Nigeria and focuses on teacher perception-practice gaps rather than curriculum design. The key gap is its lack of focus on English language curriculum design

frameworks, national ICT-in-education trends in Nigeria, and systemic curriculum level integration issues, which are central to this study.

Resource and Policy Gaps

Current curriculum documents and policy guidelines available in Nigeria lack explicit, practical guidelines for incorporating technology into English language teaching. Consequently, teachers are often left out to improvise with use of digital tools, without the structured policy guidelines, instructional models, or supportive resources required to implement technology meaningfully. This absence of clear direction can lead to inconsistent practices, limited innovation, and varied interpretations of what technology integration should look like within the curriculum.

These issues align with major research findings in educational technology, which have consistently identified inadequate policy support, insufficient resources, and limited professional development as persistent obstacles to successful technology integration. Studies across different contexts similarly emphasize that unless these systemic gaps are addressed, curriculum innovation efforts are likely to face significant constraints and may not achieve their intended outcomes.

Theoretical Framework

Technological Pedagogical and Content Knowledge (TPACK)

The Technological Pedagogical and Content Knowledge (TPACK) framework is situatable to the present study because it investigates the trends, benefits, and challenges of integrating technology into English language curriculum design in Nigeria. TPACK explicates how teachers effectively integrate technology into teaching by combining three essential knowledge domains: Content Knowledge (CK), Pedagogical Knowledge (PK), and Technological Knowledge (TK). The framework is built on Shulman's (1986, 1987) concept of Pedagogical Content Knowledge (PCK), which was later extended by Mishra and Koehler (2006) to include technology as an essential component of 21st-century teaching and learning.

Content Knowledge (CK) according to the theory refers to teachers' understanding of English language subject matter, which include its grammar, vocabulary, comprehension, oral English, writing skills and other aspects of the subject. Also, Pedagogical Knowledge (PK) stands for the principles, methods and modalities of teaching which include instructional strategies, classroom management, assessment practices, and learner engagement approaches in a classroom environment. In the teaching of the language (English), this includes communicative language teaching, task-based learning, and collaborative learning strategies (Harris & Hofer, 2020; Jang & Tsai, 2021).

Technological Knowledge (TK) on the other hand refers to the abilities to use effectively digital tools like computers, mobile devices, learning management systems, language learning applications, interactive boards and AI-based educational platforms. TK also stands for Mobile-Assisted Language Learning

(MALL), Computer Assisted Language Learning (CALL), and emerging AI-supported language tools that are increasingly shaping global education systems (Chai et al., 2021; Xie et al., 2022).

“The interaction among CK, PK, and TK lies the strength of TPACK. Their interconnections and interactions of Pedagogical Content Knowledge (PCK), Technological Content Knowledge (TCK), and Technological Pedagogical Knowledge (TPK), are collectively culminated into TPACK” (Mishra et al., 2020; Koh et al., 2022). PCK focuses on how subject content is best taught, TCK examines how technology reshapes content delivery, and TPK explores how pedagogy changes when technology is introduced. The full integration of these domains enables teachers to design meaningful, technology-enhanced instruction.

TPACK is relevant to this study because the integration of technology into English language curriculum in Nigeria necessitated teachers of the subject to possess competence across all three domains mentioned above. For example, using digital storytelling for writing instruction requires knowledge of English composition (CK), appropriate instructional strategies (PK), and digital tool proficiency (TK) for effectiveness. In the absence of this full integration, technology use becomes ineffective (Scherer et al., 2021).

The paper adopts this framework to help explain current trends in technology integration in education worldwide. Generally, schools (universities and secondary schools) are fast integrating digital tools like virtual learning environments, mobile applications, and online collaboration platforms. However, studies have shown that full implementation depends mainly on teachers’ TPACK competences or abilities rather than mere availability of technology (Zhang & Cui, 2023; Voogt et al., 2021). In the Nigeria situation, it has reflected in the gap existing between technological availability and the effectiveness in classroom use as a result of limited teacher abilities and trainings.

Conclusively, the TPACK framework presents a comprehensive lens for understanding how technology, pedagogy, and content interact in English language curriculum design. It provides the basis for the analysis of current trends which explains the benefits of effective integration, and identifies challenges that hinder successful implementation in Nigerian schools. By applying TPACK, this study is posited to critically examine how technology can be meaningfully embedded into English language teaching and learning to improve curriculum effectiveness and learner outcomes.

Research Design

This paper adopts a qualitative research design, specifically a phenomenological approach. This is due to the fact that “phenomenology is appropriate when the researcher seeks to understand lived experiences and how participants make sense of a phenomenon” (Creswell & Poth, 2018). The aim is to explain how teachers, curriculum designers, students, and ICT experts undersand the trends, benefits, and challenges of incorporating technology into English language curriculum design.

Population and Sampling Techniques

Population

The target population for this study includes English language teachers in Nigerian secondary and tertiary institutions, curriculum designers involved in English language curriculum formulation ICT personnel or technology support staff and students learning English language courses. These groups are the target because they represent stakeholders in curriculum design and implementation in Nigeria.

Sampling Technique

A purposive sampling strategy was used to select participants would provide relevant insights into the topic under study. “Purposive sampling allows researchers to intentionally choose participants with firsthand experience in using or influencing technology-based curriculum practices” (Palinkas et al., 2015).

The sample size was determined by data saturation, which occurs when additional interviews no longer yield new themes or insights (Guest, Bunce, & Johnson, 2020). Approximately 15–20 participants were selected which include:

1. 8 English language teachers
2. 4 curriculum designers
3. 2 ICT coordinators
4. 6 students

This range aligns with qualitative studies that prioritize depth over breadth.

Data Collection Methods

Three methods were used to collect data from the respondents identified above; they are

Semi-Structured Interviews

Semi-structured interviews were conducted with following: teachers, curriculum designers, and ICT coordinators to gather detailed descriptions of their experiences with technology integration.

Interview guide questions were limited to the following:

1. “What trends have you observed in incorporating technology into English language curriculum?”
2. “What benefits have you noticed from using technology in classroom instruction?”
3. “What challenges do you encounter with technology integration?”

Each interview lasted approximately 20-45 minutes approximately.

Focus Group Discussions (FGDs)

Focus group discussions were conducted with students in line with topic of the study so as to capture opinions about technology use in English language learning in their classrooms. This strategy helps reveal group dynamics, patterns of consensus or divergence, and collective perspectives

Document Analysis

Document analysis was the third strategy used in this study. The documents reviewed are: i. National and institutional curriculum documents, ii. Policy guidelines on ICT integration, and iii. Teaching schemes and lesson plans that reflect technology usage.

This is expedient because document analysis supports “triangulation by comparing participants’ narratives with existing curricular frameworks” (Bowen, 2020).

Research Instruments

Three data collection instruments (such as interviews, FGD and Documents Analysis) were developed and summarized as follow”

Instrument

Interview Guide

Focus Group Guide

Document Review

Purpose

To explore participants’ perceptions and experiences in the use of ICT in teaching and learning of English language

To capture student views on technology use in teaching and learning of English language

Checklist To assess curriculum policy and design of ICT available for teaching and learning of English language

Data Analysis Procedures

Document data were analyzed from the interview, FGD and content analysis of documents to identify alignments and inconsistencies with participant narratives.

Ethical Considerations

This study adhered to standard ethical protocols such as: 1. Informed Consent: Participants of this research pre-informed and they were also informed of the purpose of the study, 2. Voluntary Participation: it is clear that and on record that no participant was forced to participate in the study. they were informed that they could withdraw anytime if they so desire, iii. Confidentiality: The participants’ identities were anonymous with the questionnaire without name and tags, and 3. Data Security: they researcher assured the respondents of the safety of the data and digital recordings and transcripts were stored in password-protected files. 4. Lastly, ethics clearance was obtained from institutions required and the person(s) concerned.

DATA PRESENTATION, ANALYSIS AND DISCUSSION

Data Presentation

The data for the study were analyzed based on the research questions above, e.g.

1. What are the current trends in the integration of technology into English language curriculum design in Nigeria?

2. What benefits do key stakeholders perceive from the use of technology in English language curriculum design?
3. What challenges are associated with integrating technology into the English language curriculum in Nigeria?

Presentation of Findings

1. Current Trends in the Integration of Technology into English Language Curriculum Design in Nigeria

Findings from interviews and focus group discussions indicate that technology integration in English language curriculum practices is becoming more widespread, although largely uneven across schools. The analysis revealed several emerging trends that reflect both global shifts in language education and context-specific adaptations within Nigerian schools.

Multimedia Integration

Participants consistently highlighted a growing reliance on multimedia resources such as digital videos, audio clips, podcasts, and animated instructional materials. These tools were used particularly in listening and speaking lessons, where teachers felt that traditional textbooks were insufficient for exposing learners to authentic language use.

One participant noted:

“We now use videos from online platforms, YouTube and the likes to make listening lessons more real for students.” (Teacher A, Interview)

This indicates a shift toward experiential, context-rich learning environments. Teachers reported that multimedia helped students hear different accents, observe real-life language use, and improve pronunciation. In addition, some teachers reported using locally produced digital content such as radio interviews and Nollywood clips to aid contextual comprehension.

This trend aligns with current literature that emphasizes multimodal learning as a way to improve engagement and deepen comprehension (Wang & Kabilan, 2024; Napida et al., 2024). It also reflects TPACK-aligned practice, where teachers attempt to combine technological tools with pedagogical strategies to support specific linguistic outcomes.

Mobile-Assisted Language Learning (MALL)

Another notable pattern was the widespread use of mobile phones despite school-level restrictions in some cases. Students frequently used mobile dictionaries, note apps, voice-recording functions, and messaging platforms such as WhatsApp to practice vocabulary, share assignments, and engage in collaborative learning outside the classroom.

According to one ICT coordinator,

“Students now take pictures of the board, record short dialogues, and even send voice notes for speaking tasks.” (ICT Coordinator C, Interview)

This demonstrates that mobile technologies support learning continuity beyond physical classroom spaces. Teachers also explained that students often engage in informal English practice through social media interactions, short-form videos, and online forums an extension of classroom learning that corresponds with global studies in MALL (Başar & Şahin, 2022).

In many low-resource schools, mobile technology served as the most accessible digital tool, acting as a bridge where laptops and desktops were unavailable. This underscores the importance of mobile-friendly curriculum planning.

Perceived Benefits of Technology Use in English Language Curriculum Design

Analysis of stakeholder perspectives revealed several benefits associated with technologically enhanced English language instruction. These benefits were consistently reported across teachers, ICT coordinators, and students, reflecting shared experiences of the value technology brings to teaching and learning.

Enhanced Learner Engagement

Participants described noticeable improvements in learner attention, participation, and enthusiasm during lessons that incorporated digital tools. Interactive platforms, gamified tasks, and audiovisual content were particularly highlighted as motivating.

One teacher remarked:

“Students participate more when lessons include digital tasks instead of only textbooks.” (Teacher C, Interview)

Students appeared more willing to attempt speaking tasks when allowed to record their voices privately, reducing performance anxiety. Others enjoyed interactive quizzes and games because they provided immediate feedback.

These observations align with findings from Salaberry (2021) and Golonka et al. (2021), which show that technology-enriched environments foster higher engagement and improve communicative competence. The qualitative data suggests that engagement is not only cognitive but also emotional, as students feel more connected to digitally mediated lessons.

Access to Diverse Learning Resources

Teachers and students alike noted that technology expanded their access to varied linguistic materials beyond the prescribed curriculum. The introduction of online articles, digital storybooks, English learning apps, podcasts, and interactive grammar tools created a more flexible learning environment.

A student explained:

“We use online articles, interactive games and this has expanded what we can learn beyond the book.”
(Student F, FGD)

Such access enables exposure to different genres, accents, authentic texts, and real-time information elements that traditional textbooks cannot provide regularly. Teachers also expressed those digital tools made lesson preparation easier, as they could quickly source materials tailored to student needs.

This echoes research highlighting the value of digital resources in supporting authentic language input and differentiated instruction (Kessler, 2020). It also demonstrates movement toward more learner centered and inquiry driven pedagogy.

Challenges Associated with Integrating Technology into the English Language Curriculum

Despite the increasing adoption of technology, findings revealed persistent barriers affecting the consistency and depth of integration across Nigerian schools. These challenges were structural, pedagogical, and socio-economic.

Infrastructural Barriers

Participants repeatedly emphasized infrastructural limitations, especially unstable internet connectivity, limited access to functional digital devices, and unreliable electricity. Many schools lacked computer laboratories, and teachers frequently had to improvise by using personal laptops or phones.

As one ICT coordinator stated:

“We plan to use online tools, but connectivity often disrupts lessons.” (ICT Coordinator B, Interview)

Power outages forced teachers to revert to traditional teaching methods even when they had prepared digital lessons. Some schools lacked projectors, making it impossible to display multimedia content to large classes. These infrastructural problems created inequalities between urban and rural schools, limiting the scalability of technologically enhanced instruction.

The findings support previous research identifying infrastructure deficiencies as a major impediment to digital teaching in Nigeria and other developing countries (Osadebe, 2020; Ojedokun et al., 2023).

Teacher Preparedness and Training Gaps

Participants acknowledged that many teachers lacked sufficient training in integrating technology into teaching, even when digital devices were available. While some had basic computer literacy, they were unsure how to align technological tools with curriculum objectives or how to manage tech- supported activities in large classrooms.

A teacher expressed this clearly:

“We know technology is important, but we lack formal training on how to apply it pedagogically.”
(Teacher D, Interview)

Most training opportunities available were one-off workshops focused on technical skills rather than long-term pedagogical development. As a result, some teachers relied on only a limited range of tools, leading to superficial integration rather than meaningful transformation of teaching practices.

This finding supports literature that emphasizes the need for continuous professional development to foster effective technology integration (Adebowale & Adebisi, 2022; Akande, 2021). Without stronger support systems, teachers struggle to navigate curriculum demands while adopting new tools.

ANALYSIS AND DISCUSSION

Research Question 1

The study shows a gradual shift toward blended learning and learner-centered technology use in English instruction. This pattern aligns with global shifts documented in ELT research where multimedia, cloud-based tools, and mobile learning are increasingly blended into curriculum design (Salaberry, 2021; Wang & Kabilan, 2024).

Benefits Interpreted

The primary benefits enhanced engagement and expanded access reflect the pedagogical promise of technology highlighted in CALL (Computer Assisted Language Learning) literature (Golonka et al., 2021). Importantly, the Nigerian context underscores that even limited digital integration can positively affect classroom dynamics when thoughtfully implemented.

Challenges Interpreted

The infrastructural challenges (internet, electricity) and preparedness gaps echo broader structural issues identified in educational technology research in developing contexts (Osadebe, 2020; Ojedokun et al., 2023; Abubakar & Bello, 2022). These factors suggest that technological integration is not merely a pedagogical choice but also an institutional and socio-economic issue.

DISCUSSION

The observed trends reflect a global movement toward technology-enhanced language instruction, though paced by contextual constraints. For example, mobile learning a dominant trend in the present study is similarly highlighted in international ELT research as a flexible, student-friendly modality (Başar & Şahin, 2022).

Benefits

Participants' perceptions of increased engagement and resource access are consistent with research showing that technology can support communicative competence and learner motivation (Salaberry, 2021; Kessler, 2020). Notably, students in this study expressed appreciation for choice and variety in learning materials a qualitative theme aligning with contemporary discourse on learner autonomy (Golonka et al., 2021).

Challenges Aligned with Prior Studies

Challenges identified especially infrastructure and teacher training gaps are well-documented across Nigerian educational research. For instance, studies emphasize that without supportive policies and professional development systems, technology integration remains superficial (Adebowale & Adebisi, 2022; Akande, 2021).

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary of Findings

Based on interviews, focus group discussions, and document analysis, the key themes from this study include:

On what are the current trends in the integration of technology into English language curriculum design in Nigeria?

Participants described several emerging trends: Multimedia integration (use of audio, video, and digital storytelling in English lessons). Mobile-Assisted Language Learning (MALL) through social media and language apps. Cloud-based platforms such as Google Classroom and interactive learning boards were being used for lesson delivery and resource sharing.

These trends align with recent literature that points to blended and flexible learning approaches becoming more common in ELT globally (Salaberry, 2021; Wang & Kabilan, 2024).

On what benefits do key stakeholders perceive from the use of technology in English language curriculum design

Participants perceived multiple positive outcomes from technology integration: Enhanced engagement: Students showed increased participation when technology was used. Improved accessibility: Learners had access to diverse resources beyond textbooks. Skill-building: Digital platforms supported development in listening, reading, writing, and speaking. These findings reflect broader educational insights that technology supports learner autonomy and communicative competence (Golonka et al., 2021; Kessler, 2020).

On What challenges are associated with integrating technology into the English language curriculum in Nigeria

Several barriers were highlighted: Infrastructural issues such as poor internet and unstable electricity. Teacher readiness and training gaps hampered effective technology use. Policy and resource constraints limited consistent integration into curriculum planning.

These challenges mirror existing research on developing country contexts where infrastructure and capacity issues can slow technology adoption (Abubakar & Bello, 2022; Ojedokun et al., 2023; Adebowale & Adebisi, 2022).

CONCLUSIONS

Drawing from the data and supported by scholarly sources, the study concludes that:

1. Technology integration in English curriculum design is evolving in Nigeria but remains uneven across regions and institutions due to socio-economic and infrastructural barriers.
2. Benefits of technology use are real and supported by both students and teachers, particularly in enhancing engagement and expanding access to learning resources.
3. Challenges primarily relate to infrastructure, capacity building, and institutional readiness, rather than resistance to technology itself.
4. Effective integration requires alignment between curriculum design, teacher development, and supportive policy frameworks not merely access to hardware or software.

These conclusions align with both local and internationally based research that emphasize the importance of holistic implementation strategies in educational technology (Salaberry, 2021; Ojedokun et al., 2023).

Implications of the Study

Implications for Policy

Educational policymakers should recognize that technology integration requires more than procurement of devices; it also requires clear frameworks, resource allocation, mentorship, and accountability systems. Federal and state ministries of education should fund technology infrastructure and ensure equitable access across schools (Federal Ministry of Education, 2019).

Implications for Curriculum Designers

Curriculum designers must embed technology-aligned competencies and activities directly into syllabus frameworks rather than treating technology as an add-on. Doing so supports meaningful integration that enhances both content delivery and learning outcomes (Ornstein & Hunkins, 2022).

Implications for Teachers and Practitioners

Teachers should be encouraged to pursue continuous professional development that focuses on pedagogical uses of technology rather than just operational skills (Adebowale & Adebisi, 2022). School authorities can organize peer-led training and communities of practice to build capacity in effective tech use.

Recommendations

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

1. For Policymakers:

- a. There should be a clear development and enforcement strategy for ICT policy frameworks that define digital competencies across the curriculum and schools.
 - b. There should be substantial investment in technological infrastructure such as reliable internet access, hardware, and maintenance systems for schools and colleges.
 - c. There should be a budget on funding for technologists, support staff and teachers for yearly development.
2. For Curriculum Developers:
 - a. Curriculum developers should integrate technology competencies directly into English language curriculum.
 - b. Curriculum developers should collaborate with stakeholders in the education sector so as to recommend ICT and digital tools for officials and teaching staff for guides.
 3. For Teachers:
 - a. Teachers should engage in training and retraining along personal professional development focused on teaching applications with ICT.
 - b. Teachers should be encouraged to develop lesson plans that integrate digital tools in their lessons to reflect the goal of the curriculum.
 4. For Future Researchers:
 - a. Further research should be conducted to explore changes in technology integration over time.
 - b. There should be further investigation and comparative studies across states to identify professional best practices and barriers.
 - c. Further research should explore students' digital literacy and learning outcomes of integration of ICT to curriculum across subjects

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