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Leveraging Digital Tools for Vocabulary Development in Nigerian ESL Classrooms

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Abstract

This study investigates the extent to which digital technology is strategically incorporated in Nigerian English language classrooms to enhance vocabulary development among ESL learners. Grounded in Constructivist Learning Theory, which emphasizes active learner engagement and knowledge construction through meaningful experiences; the theory explores how digital tools can foster interactive and student-centered vocabulary acquisition Given the persistent challenges associated with teaching vocabulary, the study emphasizes the importance of stimulating learners' interest and motivation by leveraging digital resources to create dynamic learning environments. A quantitative research approach was employed to analyze data collected through structured questionnaires administered to 40 English language teachers across government, missionary, and private secondary schools. The findings reveal that while digital technologies, such as computers and internet connectivity are present in schools, their application in vocabulary instruction remains limited. Most English language laboratories are non-functional, and many teachers lack adequate familiarity with internet-based educational tools and vocabulary teaching software. The most frequently used digital method involves projecting downloaded pictures and videos to engage students visually. However, unreliable internet access continues to hamper more advanced technological integration. The study concludes that in order to enhance vocabulary learning in today's technology-driven era, English language teachers must

become proficient in the use of online platforms and software tailored for vocabulary instruction. It recommends regular professional development programs, including workshops and seminars, to equip teachers with the necessary digital pedagogical skills. By doing so, learners can be more effectively supported in building their vocabulary in meaningful, interactive, and engaging ways.

Keywords: Digital, technology, instructional materials, vocabulary, software program

Introduction

The traditional means of second language learning and teaching have always been through textbooks and role plays, with focus on acquiring the four language skills: reading, writing, speaking, and listening. Textbooks are designed to enable learners to develop these skills. Reading comprehension passages allow learners to get acquainted with unfamiliar words and their contextual usage. Instructors encourage learners to identify new words, their morphological composition, word origin, check their meaning in a dictionary, expose them to different contextual usages, and form sentences with them (Pearson et al. 2007). However, Beck et al. (2008) note that direct and explicit teaching of vocabulary in class is not enough to improve students' acquisition of new words. In addition to classroom exercises, learners should also read extensively to become acquainted with more lexical items in the target language.

With present technological advancements, this generation is exposed to numerous kinds of digital technology that transform text beyond its traditional form. To enhance the acquisition of the four language skills, new literacy makes use of multimedia tools in the form of videos, sound, text, and other digital tools to generate, communicate, and negotiate meaning (Clark 2013; Stenger 2018). According to Kharade (2022), learning language skills becomes arduous and time-consuming without internet software programs

and other multimedia technologies. Tapscott (2008) avers that to become progressive educators, there is a need to design pedagogy to align with the demands of this fast-paced world. Technology can help facilitate learning goals for individuals with wide differences in their abilities (Brand, Favazza & Dalton 2012).

Given the necessity of vocabulary development, both learners and language instructors need to utilize every available means to help students build their vocabulary. One of the problems teachers face is the inability to motivate students' interest in acquiring new words (Ardiyanti, Kamsinah, Nurasik & Said 2021). Vocabulary is an area where teachers seek guidance on instructional approaches, strategies, and materials (Berne & Blachowicz 2008). Due to the challenging situation in teaching vocabulary development, teachers need to stimulate their students' interest by using different methods and techniques to encourage a positive attitude towards learning vocabulary (Gardner 1985). Isola, Xiao, Torralba, and Oliva (2011) affirm that one of the proven factors that help teachers develop a positive attitude towards learning is the use of technology. According to them, the use of technology helps students be actively involved in classes due to the interest it generates. In the 20th century, the popular technological applications used in classrooms were radio, television, film, VHS, VCR, and cassettes. Towards the end of the century, other applications such as digital CD players, projectors, DVDs, and computers emerged (Siddiquah & Salim 2017). Computers paved the way for multimedia tools, also known as CALT (Computer Assisted Language Teaching) (Segler 2001). The educational process has been favorably and positively impacted by computer and other ICT innovations. They provide opportunities for more productive and innovative instructions, allowing learners to interact with audiovisual materials to enhance their creative and intellectual abilities. With the variety of symbolic modes such as text, graphics, multicolor images, motion, and audiovisuals, learners tend to partner with computers as tutors, offering

opportunities for independent investigation, individualized learning, personalized activities, and teamwork (Aduwa-Ogiegbaen & Iyamu 2005).

However, studies from Nigeria indicate that most secondary schools are yet to fully integrate ICT tools, due to a lack of resources and poor infrastructure (Adeosun 2010). Proper infrastructure such as computers, internet facilities, and constant electricity supply are needed for full implementation of advanced ICT-assisted instructions. In Nigeria and most developing countries, fewer computers are available for instructional purposes. Most schools in Nigeria establish computer laboratories only for developing computer skills, and not for teaching other subjects. However, in developed countries, computers are available in the educational system for individual students during classroom instructions (United Nations Educational Scientific and Cultural Organization (UNESCO) 2014). A recent survey by the U.S. Department of Education indicated that 97 percent of teachers had one or more computers in their classroom every day during the winter and spring of 2009 (Rathore & Sonawat 2015). Technological devices such as LCD or digital light processing projectors, interactive whiteboards, and digital cameras are available in classrooms, equipping teachers with powerful tools to support teaching and learning. In the light of the above submissions, this study therefore is set to explore how digital tools can be effectively leveraged to enhance vocabulary development among learners in Nigerian ESL classrooms. It seeks to identify the current challenges, assess the availability and use of digital resources, and propose practical strategies for integrating technology into vocabulary instruction to improve learners' engagement and outcomes.

Literature Review

Integrating digital tools for teaching vocabulary involves using different types of technology to foster students' learning

experiences. It actively engages students in classroom learning, making English language lessons vivid, interesting, and motivating (Pun 2013). Dalton and Grisham (2011) propose strategies teachers can use to foster vocabulary learning through technological tools organized into three instructional areas: teaching and learning words, strategy using digital language tools, and increasing students' reading volume to support incidental vocabulary learning. The following are some digital tools for enhancing vocabulary acquisition:

Tools Showing Relationship of Different Words in a Text

These tools include programs like Wordle, an online application that allows users to create and manipulate word clouds from text. It is a word game that challenges users to find a five-letter word in six guesses with clues. Another similar tool is a Wordsift, also available online. Both tools are free. Wordsift is designed to help teachers manage the demands of vocabulary and academic language in their text materials. It helps students preview text and quickly scan for relevant and challenging vocabulary, as highlighted by Sergey (2020) and further supported by Adesope, Lavin, Thompson, and Ungerleider (2010).

Several other online games are freely available and can enhance vocabulary acquisition. These games include crossword puzzles, word scrambles, picture-word matches, anagrams, word jumbles, boggle, and many other entertaining ways to learn (Sergey, 2020). In selecting suitable games for vocabulary teaching and learning, educators should consider parameters such as the number of learners, proficiency level, cultural context, timing, and classroom settings (Kayseroglu & Samur, 2018). Muhanna (2012) highlights that games are challenging and amusing;, providing learners with opportunities to improve their communication skills while learning and practising new words. When used appropriately and frequently, digital games are effective self-study tools that help learners develop automaticity in the target language (Feng 2009). Vardanjani (2014) emphasizes that learning vocabulary through

games can foster students' cognitive skills, emotional engagement, and interactive abilities. However, teachers should adhere to specific guidelines based on learners' needs to integrate the games into their curriculum. Teachers can enhance learning by bookmarking games, preparing test items, and designing activities focused on prefixes and suffixes, thereby enabling students to engage in memorable independent practice and collaborative group work (Dalton & Grisham, 2011).

Language Laboratory and PowerPoint Projection

PowerPoint projection and language laboratories are basic technologies that can support language teaching, including vocabulary acquisition. Teachers can use projectors to display multimedia representations of words, such as audiovisual materials and videos, in PowerPoint slides with hyperlinks to facilitate learning the four English language skills. Prayoga, Padmadewi, and Pratiwi (2022) emphasize the necessity of using PowerPoint as an effective tool for bringing students closer to digital learning media, maintaining the characteristics of Generation Z. Language laboratories provide students with opportunities to listen to native English speakers, exposing them to the real context of English vocabulary usage. Feng (2009) asserts that mastering the rules of a target language does not mean learners can use the language correctly and fluently. The more vocabulary and rules are practised, the more automatic they become.

Social Media Platforms

Social media platforms (SMP) enable users to engage in online activities, create profiles, connect with others, exchange information, create content, engage in live streaming, link to other resources, and send and receive instant messages in various forms such as text, audio, photos, and videos (Dewing 2010). Using these forms, learners are exposed to diverse uses of English, enhancing their vocabulary acquisition and overall language skills. Facebook, Twitter, Instagram, Snapchat, and WhatsApp are leading platforms

that enable students to express vocabulary knowledge, improve reading skills, and enhance word learning with reference tools. Kabilan and Zahar (2016) study the effectiveness of Facebook as a Social Media platform for enhancing vocabulary learning and discovered that students' vocabulary acquisition improved while interacting and socializing with fellow students and other Facebook users, particularly native speakers of the target language. They argued that Facebook is an effective learning tool, capable of motivating students and increasing engagement, interaction, collaboration, and confidence. Connolly (2011) observes that SMP has educational value as instruments for knowledge sharing and communication. Research has shown that social media platforms are veritable environments for developing English language skills, providing a casual cross-linguistic learning context where the conversational qualities of the English language are explored (Puspa 2018).

In addition to multimedia and social platforms, hypertext glosses provide another effective digital method for vocabulary learning. Hypertext Glosses presented in the text margins and footnotes can also help furnish learners with meanings and usage of lexical items contextually. According to Hassan et al. (2017), hypertext gloss deals with the clarification, rendition, annotation, or explanation of a lexical item in a text to make it comprehensible for the reader. It deals with attaching a link to the word so that upon clicking on that link, one can obtain more information regarding the same word. It could be text, images, or videos. Vocabulary glosses presented in hypertext environments have been found valuable in vocabulary learning as it is designed to attract readers' attention to target words and this is mostly found in computerized text.

Digital Text and Online Educational Platforms

Reading and listening to digital text with text-to-speech and audiobooks can help increase students' reading volume. These methods also acquaint them with the contextual expression of new

words. The multimodal and interactive features of digital text or e-books provide English language learners with opportunities for independent and interactive reading, enabling them to create meaning from the text through multimedia elements such as comments, movies, links, sound effects, and auto-reading of the text (Skolverket 2021). The multimedia features of digital text motivate students' interest in extensive reading and improve their reading skills, which in turn help build their vocabulary (Jiawook 2022). Hypertext glosses presented in text margins and footnotes can help learners understand the meanings and usage of lexical items within context. According to Hassan, Ali, and Sipr (2017), hypertext gloss deals with the clarification, rendition, annotation, or explanation of a lexical item in a text to make it comprehensible for the reader.

Online or E-Learning Education Platforms

Online or e-learning platforms are tools integrated into institutional systems for remote lesson delivery. They use the internet or other digital content and modern educational technology to facilitate educational activities (Karim & Goodwin 2013). Some platforms like Wordwall and Quizlet are designed primarily for vocabulary teaching and learning. For instance, Wordwall is an online game-based learning platform designed to help teachers set up interactive and engaging class activities for students both in person and online. Wordsift is a free web-based tool designed to assist teachers in managing vocabulary and academic language in their materials. It enables students to preview text and swiftly identify relevant and challenging vocabulary. By clicking on a word in the word cloud, students can access Google Images and Visual Thesaurus, which facilitate the exploration of related words such as synonyms and antonyms. The software also displays all sentences where the selected word appears. Clicking on a sentence brings up a new display showing the sentence in context. Wordsift includes advanced features like the ability to drag words and images to a workspace to create mini posters or worksheets,

offering innovative methods for learning vocabulary. Quizlet is another widely used platform that significantly enhances vocabulary instruction through digital flashcards. It is a free online tool that enables both educators and learners to create sets of flashcards containing terms and definitions. These flashcards can be shared, customized, and used in various modes such as spelling, matching games, multiple-choice tests, and timed quizzes. Quizlet also offers a "learn" mode that uses adaptive questioning to help students master vocabulary through repetition and feedback. According to Ismael (2022), Quizlet's interactivity and personalized learning paths make it an effective resource for vocabulary acquisition.

The platform also supports collaborative learning through its Quizlet Live feature, which groups students into teams and encourages them to work together to match terms with correct definitions. This promotes peer interaction and contextual word usage that fosters deeper engagement and retention. Additionally, Quizlet's mobile compatibility ensures that learners can study vocabulary on-the-go, increasing accessibility and flexibility (Ismael, 2022). Beyond tools dedicated solely to vocabulary learning, more advanced online platforms such as Google Meet, Microsoft Teams, and World Word also support the teaching of English language skills through real-time communication and collaboration. These platforms are primarily designed for virtual conferencing, but their capabilities extend far beyond simple video calls. They offer tools such as breakout rooms, live chat, whiteboards, screen sharing, and file sharing, which can be used to simulate classroom experiences and facilitate interactive learning (Karim & Goodwin, 2013).

According to Altakhaineh et al. (2023), platforms like Microsoft Teams and Google Meet can be strategically used to divide large classrooms into smaller groups for targeted vocabulary practice. For example, during an English lesson on adjectives, a teacher can

assign different groups to describe various images or characters using a specific set of vocabulary words. These breakout sessions allow students to use words in context, discuss their meanings, and practice pronunciation with their peers. This method promotes active learning, encourages collaboration, and builds confidence in using new vocabulary in meaningful ways.

Furthermore, these platforms often integrate with other educational tools and apps, enabling seamless access to digital dictionaries, grammar checkers, translation services, and learning management systems. Teachers can assign homework, provide feedback, and monitor progress all within the same digital environment. The use of multimedia elements, such as audio clips, videos, and animations, further enriches vocabulary learning by exposing students to various accents, speech patterns, and real-life scenarios (Karim & Goodwin, 2013).

Online learning platforms also offer benefits for assessment and feedback. Teachers can use built-in analytics to track student performance, identify areas of difficulty, and adjust instruction accordingly. Quizzes and assessments can be automatically graded, saving time and providing instant feedback to learners (Ismael, 2022). This supports formative assessment practices, where students can learn from their mistakes and gradually improve.

Theoretical Framework

This study is grounded in Constructivist Learning Theory, as propounded by Piaget, (1972) which emphasizes that learners actively construct knowledge through interaction with their environment, collaboration with others, and engagement with meaningful, real-world tasks. In a constructivist classroom, the teacher's role shifts from information provider to facilitator in guiding students as they explore, discover, and co-construct knowledge.

In line with this perspective, modern educational technology theory supports the strategic use of digital tools to enhance teaching and learning. According to Lei (2017), modern educational technology involves the deliberate integration of information and communication technologies (ICT) to design, develop, manage, and evaluate learning experiences. These tools are not just technical aids but serve as platforms for active learning, creativity, collaboration, and student engagement. Yang, Miller, and Wu (2022) emphasize that institutions and educators must provide the necessary digital infrastructure and support systems to facilitate meaningful learning through technology. The use of ICT in vocabulary development directly aligns with constructivist ideals. Rather than relying solely on rote memorization, digital tools allow learners to engage with vocabulary in interactive and context-rich ways. For instance, Computer-Assisted Language Learning (CALL) environments support exploration and immediate feedback that help students build their lexical knowledge while developing problem-solving and communicative competencies (Taghizadeh & Hasani-Yourdshahi, 2020). With the growing accessibility of mobile devices and internet resources, students now have the opportunity to experience multimodal learning, which engages multiple senses and learning styles. This approach reinforces vocabulary acquisition through visual, auditory, and kinesthetic interaction which are core tenets of constructivist learning. As Sergey (2020) points out, embracing digital technology, especially in vocabulary instruction, can stimulate interest and sustain learner motivation.

ICT also fosters social learning, which is another important constructivist principle. Through collaborative tools and digital platforms, students can share ideas, negotiate meaning, and co-construct vocabulary knowledge in both formal and informal settings. Social interaction, peer feedback, and authentic communication are integral to deep and lasting language acquisition. Furthermore, this research resonates with the

transformative role of ICT in education. Aduwa and Iyamu (2005) note its growing importance in all sectors of modern society, including education. ICT has been shown to enhance creativity, cognitive thinking, efficiency, and productivity (Adeosun, 2010), and improve the quality and accessibility of education.

From the above submission, it is evident that, this study adopts the constructivist view that vocabulary learning is most effective when students actively engage with words through meaningful digital experiences. Digital tools serve not merely as content delivery mechanisms but as platforms that promote exploration, collaboration, and reflection as key processes in constructing lasting vocabulary knowledge.

Empirical Review

The idea of learning through technology in an ESL classroom has been explored extensively by scholars who examine its effectiveness in improving mastery of the language skills. One study conducted to determine whether Wiki technology would improve students' writing skills in a college English as a foreign language writing class showed its benefits. In the study, through the use of a Wiki page, students were engaged in writing and posting passages. They also read and responded to their classmates' posts. Students who participated in the exercise reported an enhanced learning experience due to immediate feedback from their instructor. Students in the study also reported that they improved their vocabulary, spelling, and sentence structure by reading the work of their classmates (Lin & Yang, 2011).

More so, a study conducted by Basal, Yilmaz, Tanriverdi, and Sari (2016) examine the effectiveness of using Duolingo in an ESL classroom. The findings revealed that students who used Duolingo demonstrated a 35% improvement in vocabulary retention compared to those who relied solely on traditional methods. In a study by Lin and Lin (2019), ESL learners used an AR-based application to explore vocabulary related to animals and their

habitats. The participants demonstrated a significant improvement in both receptive and productive vocabulary skills, with post-test scores showing a 42% increase. The study also found that AR's multisensory approach catered to diverse learning styles, particularly benefiting visual and kinesthetic learners. The above review is an indication that the use of technology is vital in facilitating vocabulary retention, sentence structure, and engagement through interactive, multisensory, and collaborative approaches.

Methodology

This study employs a descriptive survey design to investigate the extent to which ESL teachers in the South-South region of Nigeria deploy digital technological tools in vocabulary instruction, adopting a quantitative research approach. The quantitative research method is used to obtain measurable results on the extent of digital technological integration in vocabulary teaching and learning in ESL classrooms. Closed-ended questionnaires and structured interviews were used as instruments for data collection. Leedy (1993) states that quantitative research data are collected through closed-ended questionnaires and structured interviews to ensure high result validity and high-quality research. This justifies using closed-ended questionnaires and structured interviews as research instruments for data collection in this study, which aims for unbiased and objective insights regarding the extent and level of digital technology integration in teaching vocabulary in the South-South Regions of Nigeria.

Self-designed questionnaires and structured interviews were the instruments used to collect data for this study. Convenient sampling was used to select 40 participants for the study: 10 teachers each from one government-owned school, one missionary school, and two private-owned schools in Ibusa, Asaba, and Agbo, Delta State, in the South-South Region of Nigeria. This mix of participants from private and public-owned schools was designed

to ensure broader coverage and enhance the validity and reliability of research outcome. The data was analyzed using statistical tables and simple percentages.

The questionnaire was designed to elicit information from teachers regarding the extent of the use of digital technology in teaching vocabulary development in their classrooms. In contrast, the structured interview was designed to find out the challenges facing such practices in the Nigerian context, represented by their various institutions. The responses for the structured interview were recorded on a POP 4 TECNO Android phone, which was later transcribed by the researcher for analysis.

The data were analyzed using a quantitative research method. The analysis is presented in two sections. The first section focuses on the closed-ended questionnaire, with the questions and responses systematically tabulated and analyzed using statistical methods. The second section presents the results of the structured interviews. Responses from interviewees are organized in tables and quantified using simple percentages to facilitate interpretation.

Data Analysis, Presentation and Discussion of Result

Part 1: Questionnaire; Questions and Responses

Questions in this part are closed-ended, with options available for respondents to tick their preferred choices.

Table 1: Distribution of Respondents by Class of Teaching

CLASS OF TEACHING	FREQUENCY	PERCENTAGE %
JSS 1-3	22	55
SSS 1-3	18	45
TOTAL	**40**	**100**

Source: Field Survey, 2025

The table above captures the different levels of classes in secondary schools that teachers are assigned to. The analysis

reveals that 22 (55%) of the respondents teach JSS 1-3, while the remaining 18 (45%) teach SSS classes.

Table 2: Distribution of Respondents by Gender

CLASS OF TEACHING	FREQUENCY	PERCENTAGE %
Male	15	37.5
Female	25	62.5
TOTAL	**40**	**100**

Source: Field Survey, 2025

The table above captures the gender distribution of the respondents. The analysis reveals that 15 (37.5%) of the respondents are male, while the remaining 25(62.5%) are female.

Table 3: Times of Weekly Engagement of Students in Vocabulary Development

How many times in a week do you engage students in vocabulary development?	FREQUENCY	PERCENTAGE %
Once in a week	40	40
Twice in a week		
TOTAL	**40**	**100**

Source: Field Survey, 2025

The table above captures the number of times teachers engage students in vocabulary development in the classroom. The table shows that teachers engage students in vocabulary development once a week.

Table 4: Giving Online Assignment to Students

How often do you give your students online assignments?	FREQUENCY	PERCENTAGE %
Rarely	10	25
Very often	0	0
Not at all	30	75
Always	0	0
TOTAL	**40**	**100**

Source: Field Survey, 2025

The table above captures how often teachers give online assignments to students. The results show that 10 (25%) of teachers rarely give online assignments, while 30 (75%) do not give online assignments at all.

Table 5: The Stability of Internet Connectivity

How steady is the internet connectivity in your school?	FREQUENCY	PERCENTAGE %
Not steady	29	73
Very steady	0	0
Often steady	11	27.5
TOTAL	**40**	**100**

Source: Field Survey, 2025

The table above shows responses on the stability of internet connectivity in schools. The results indicate that 11 (27.5%) affirm that their school internet connectivity is often steady, while 29 (73%) believe there is consistent fluctuation in the internet connection.

Table 6: Availability of Language Laboratory

Does your school have language laboratory?	FREQUENCY	PERCENTAGE %
Yes	0	0
No	40	40
TOTAL	**40**	**100**

Source: Field Survey, 2025

The table above captures the availability of language laboratories in secondary schools. The results reveal that all respondents claimed there is no language laboratory in their schools.

Part 2

This part consists of structured interview questions that allowed interviewees to provide answers to challenges they face with using digital technology in teaching and learning English vocabulary.

Table 7: Types of Technological Tools used for Teaching of Vocabulary

What type of technological tools do you use to support teaching of vocabulary in your class?	FREQUENCY	PERCENTAGE %
Laptop and projector Online	33	83
dictionary and thesaurus	7	17.5
Language laboratory Online	0	0
software applications	0	0
TOTAL	40	100

Source: Field Survey, 2025

The table above captures the types of technological tools used by teachers to enhance or support teaching and learning vocabulary in and outside the classroom. It was discovered that most teachers (33, or 83%) use laptops and projectors. None of the respondents indicated using specialized educational platforms or language laboratories, except for 7 (17.5%) who use online dictionaries and thesauruses.

Table 8: The Use of Smart Phones by Students in Classroom

Do you allow students to use smart phones in classrooms to search for word meaning? Give reasons for you answer.	FREQUENCY	PERCENTAGE %
No. This is because students are not allowed access to smart phones in school premises by the school authority.	40	100
Yes	0	0
TOTAL	40	100

Source: Field Survey, 2025

The table above reveals responses on whether students are allowed to use smartphones in class to search for the meanings of unfamiliar words. The results show that all interviewees agreed that students are not allowed to use smartphones in class because the school authority prohibits them.

Table 9: Online Program or Platform Teachers are Familiar with for Vocabulary Development Teaching

Aside online dictionary and thesaurus, which other online program or platform for vocabulary development are you familiar with? Mention any one or two.	**FREQUENCY**	**PERCENTAGE %**
I am familiar with Ulesson and Google Meet but do not use them during classroom interactions, and hardly give students assignments with them.	15	37.5
I am familiar with Google Meet, but used it last during COVID-19 pandemic to engage students in remote lessons.	25	62.5
TOTAL	**40**	**100**

Source: Field Survey, 2025

The table above captures the type of online programs and software applications that teachers use to support teaching and learning vocabulary with their students. The results reveal that most teachers are not familiar with online software and platforms for teaching vocabulary development. Those who mentioned Ulesson and Google Meet indicated that they stopped using them after the COVID-19 pandemic.

Table 10: Accessibility to Computer and Internet Facility while Class is in Progress by Students

Do students in your class have access to computer and internet facilities while class is in progress? Give reasons for your answer.	**FREQUENCY**	**PERCENTAGE %**
No, there are no such provisions in the classrooms. Computers are only kept in the computer laboratory and only made accessible to students during computer classes.	40	1005
Yes	0	0
TOTAL	**40**	**100**

Source: Field Survey, 2025

The table above captures responses from interviewees on whether students have access to computers while classes are on. 100% of

the interviewees indicated "No" because computers are not made available in classrooms but rather in computer laboratories.

Table 11: Challenges in the use of Digital Technology in Teaching Vocabulary

What are your challenges in the use of digital technology in teaching vocabulary? Mention any one or two.	**FREQUENCY**	**PERCENTAGE %**
Poor internet connectivity and erratic/ electricity supply.	24	60
Unfamiliarity with appropriate educational software for vocabulary development and lack of experience on how to use the available ones.	16	40
TOTAL	**40**	**100**

Source: Field Survey, 2025

The table above reveals the challenges facing teachers in using digital technology in teaching vocabulary development. The challenges mentioned by the interviewees include ignorance of the existence of software for vocabulary development, lack of experience in using the available ones, poor internet connectivity, and poor electricity supply.

Discussion of Results

This research explores the extent of integration of digital technology in teaching vocabulary in secondary schools within the South-South Region/States of Nigeria. The findings highlight significant gaps and challenges in the adoption of technology that provides a critical view of the current state of digital integration in vocabulary instruction. The result of the analysis reveals that the most commonly used technologies by teachers in classrooms are computers and projectors. However, even these tools are only utilized by a few teachers. This is an indication of a limited penetration of digital resources in vocabulary teaching. The underutilization of these tools suggests a lack of access, training, or motivation among teachers to integrate technology effectively

into their teaching practices. Furthermore, the results show that many teachers are unaware of specific software applications, programs, and online platforms designed to enhance vocabulary instruction. This deficiency in awareness and expertise hinders the ability of teachers to enrich the learning experience and make vocabulary lessons more engaging and effective.

Another critical finding is the absence of language laboratories in secondary schools across the region. This indicates a lack of infrastructural investment and prioritization of language education in the region's educational policy. This infrastructural gap ultimately limits opportunities for students to practise and improve their vocabulary using modern tools and techniques. Additionally, the instability of internet connectivity and electricity supply presents a formidable challenge. Reliable internet access is a cornerstone for utilizing digital tools effectively, as it facilitates access to a plethora of online resources, platforms, and interactive tools. Similarly, inconsistent electricity supply disrupts the use of any digital tools, making it difficult for teachers to rely on technology during lessons.

Another barrier identified is the unavailability of computers for individual student use in classrooms. This restricts students to passive forms of learning, often reliant on teacher-led instruction and traditional hardcopy textbooks. Teachers' lack of expertise in handling digital technology is another pressing issue. Many teachers shy away from assigning online tasks due to their limited proficiency in using technology. Consequently, vocabulary instruction remains rooted in traditional methods that rely on hardcopy textbooks and rote learning techniques.

In summary, this study reveals that teaching vocabulary development in the South-South Region of Nigeria largely remains traditional, with minimal integration of digital technology. Key challenges include limited access to technology, lack of teacher

expertise, absence of language laboratories, and infrastructural deficiencies, such as unstable electricity and internet connectivity. These findings highlight the urgent need for targeted interventions, including investments in infrastructure, professional development for teachers, and policies aimed at promoting the integration of digital tools in education. Addressing these challenges is crucial to aligning vocabulary instruction with global trends in educational technology and ensuring students are adequately prepared for the demands of the modern world.

Conclusion

This study examines the current state of digital technology integration in vocabulary development in classrooms where English is taught as a second language in Nigeria's South-South region. Despite the availability of digital tools such as computers and Internet connectivity, their utilization for vocabulary teaching remains minimal. The findings reveal several barriers to effective digital integration, including a lack of functional language laboratories, inadequate familiarity with educational software among teachers, and inconsistent internet connectivity. Teachers primarily rely on traditional methods like using textbooks and occasionally using projectors to display multimedia content. This limited use of technology fails to fully engage students and harness the potential benefits of digital tools for vocabulary acquisition. To address these challenges, there is a need for continuous professional development programs that will equip teachers with the necessary skills to integrate digital technologies effectively.

Furthermore, the study emphasises the importance of providing reliable infrastructure, including stable internet connectivity and access to functional language laboratories. By addressing these issues, educators can create a more engaging and effective learning environment that promotes vocabulary acquisition and improves overall language proficiency. This study maintains, therefore, that embracing digital technology in ESL classrooms can significantly

enhance vocabulary learning, motivating students and preparing them for academic and career success in a technologically advanced world. Continuous efforts towards the training of personnel and infrastructural improvements are essential to realizing the full potential of digitalized vocabulary development in ESL education.

Recommendations

In view of the challenges identified in integrating digital technologies in classrooms for teaching vocabulary, this study recommends further studies to provide insights on strategic digital training educators should be acquainted with, leveraging specific internet-based software programs and mobile applications available on their smartphones to actively engage students.

This study also recommends that regular workshops and seminars should be conducted to acquaint, and train teachers on the use of both basic and advanced digital educational software tools for vocabulary development that can complement their effort and competences in classroom setting. A continuous support system should be put in place where teachers can seek help and share best practices on the use of digital technologies in teaching of vocabulary development.

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