

The Role of Educational Technology in Enhancing French Language Teaching and Learning in Ekiti State

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Abstract- This study investigates the role of educational technology in enhancing French language teaching and learning in Ekiti State. It assesses the extent to which digital tools, online resources, and other technological supports affect both instructional practices and student learning experiences. The research further examines teachers' and students' perspectives on the usefulness, availability, challenges, and impact of educational technology on French language learning outcomes. Empirical data were collected from 250 participants, including 50 French teachers and 200 French students from selected secondary schools and institutions in Ekiti State. A structured questionnaire was administered to obtain information on the use of educational technology and its perceived effects on teaching effectiveness, student interest, comprehension, vocabulary acquisition, and motivation. Data analysis employed descriptive and inferential statistics to determine the relationship between technology use and French language learning outcomes. The findings are anticipated to offer practical insights into the ways educational technology can enhance French language instruction and support improved learner performance. The study concludes with recommendations for teachers, school administrators, and education policymakers to strengthen the integration of technology in French teaching and learning within Ekiti State and beyond.

Keywords: Educational Technology, French Language Teaching, French Language Learning, Ekiti State, Digital Tools, Student Motivation, Language Performance

I. INTRODUCTION

Background to the Study

The teaching and learning of French as a foreign language has gained prominence in Nigeria, as French is an official language of ECOWAS, the African Union, and several neighbouring countries. Despite its significance, many learners continue to encounter difficulties with French, resulting in inconsistent performance across educational levels. In response, researchers and educators have

increasingly adopted educational technology to enhance teaching methods and improve learning outcomes.

Mekonnen and Bekele (2025) found that digital tools, including mobile applications, AI-driven platforms, and multimedia resources, significantly enhance learner engagement, particularly among beginners and intermediate learners. These tools provide interactive and gamified experiences that improve vocabulary retention and pronunciation. Their study concluded that digital technologies help bridge the gap between traditional instructional methods and modern, learner-centered approaches.

In Ekiti State, the use of audio-visual materials to promote French language teaching and learning has been widely recognized as an effective pedagogical strategy. Bakare (2024) conducted an empirical study on the integration of audio-visual materials in French instruction and found that these resources significantly enhance learners' proficiency and comprehension. The study reported that 88.3% of respondents experienced high stimulation of interest, 86.7% reported increased engagement, and 85.0% noted greater motivation when audio-visual materials were utilized in French classes (Bakare, 2024).

Bakare (2024) further emphasized that audio-visual materials are essential for effective language learning, particularly for students without access to authentic French-speaking environments. This observation is consistent with the findings of Gerngross, Püschel, and Bergmann (2005), who argued that audio-visual materials enhance language learning outcomes by offering multisensory experiences that address diverse learning styles.

In Nigeria, where access to traditional educational resources is limited in certain regions, digital technologies present opportunities to bridge

educational gaps and provide equitable access to quality language learning materials. However, Bakare (2024) identified challenges such as infrastructural constraints, digital divide issues, and inadequate teacher training that may impede the effective use of audio-visual materials in language education in Ekiti State. Similarly, Mekonnen and Bekele (2025) highlighted difficulties related to listening comprehension, especially in understanding rapid or colloquial French, as well as the limitations of digital tools in replicating authentic cultural immersion.

Despite these challenges, the evidence indicates that educational technology can significantly enhance French language teaching and learning when effectively integrated into classroom practice.

Statement of the Problem

Despite the growing importance of learning French in Nigeria, many learners continue to experience difficulties, leading to inconsistent performance. While educational technology has the potential to enhance teaching and learning outcomes, its implementation in French classrooms in Ekiti State remains limited and inconsistent. Teachers frequently lack sufficient training, and schools often lack adequate digital resources to support effective technology integration.

Bakare (2024) identified several challenges faced by French teachers in Ekiti State, including inadequate infrastructure, restricted access to audio-visual materials, and insufficient training in technology integration. Although Bakare's research concentrated on audio-visual materials, there is a notable absence of comprehensive empirical studies investigating the broader impact of educational technology on French teaching and learning in Ekiti State, particularly those involving large samples of both teachers and students.

Mekonnen and Bekele (2025) noted that while digital technologies offer significant benefits, there is limited research on how these tools are actually used in African classrooms, particularly in French-speaking or French-learning contexts.

This study aims to address this gap by investigating the role of educational technology in improving

French language teaching and learning in Ekiti State, utilizing empirical data collected from 250 respondents, comprising 50 teachers and 200 students.

Purpose of the Study

The main purpose of this study is to examine the role of educational technology in enhancing French language teaching and learning in Ekiti State. Specifically, the study seeks to:

1. Investigate the extent to which educational technology is used in French language classrooms in Ekiti State.
2. Determine the effect of educational technology on French language learners' comprehension, vocabulary, and motivation.
3. Examine the views of teachers and students on the usefulness and challenges of integrating technology in French language teaching.
4. Identify the barriers that limit the effective use of educational technology in French language classrooms in Ekiti State.

Research Questions

The following research questions were raised in this study as follows:

- i. To what extent is educational technology used in French language classrooms in Ekiti State?
- ii. What is the effect of educational technology on French language learners' comprehension, vocabulary, and motivation?
- iii. What are the views of teachers and students on the usefulness and challenges of integrating technology in French language teaching?
- iv. What barriers limit the effective use of educational technology in French language classrooms in Ekiti State?

Research Hypotheses

The following research hypothesis were raised in this study as follows:

H₀₁: There is no significant relationship between the use of educational technology and French language learners' comprehension.

H₀₂: There is no significant difference between students who use educational technology and those who do not in terms of vocabulary acquisition.

H₀₃: There is no significant relationship between teachers' use of educational technology and students' motivation to learn French.

Significance of the Study

This study will be beneficial to:

- French language teachers, by showing how educational technology can improve classroom teaching and student engagement.
- School administrators, by providing insight into the importance of investing in digital resources and teacher training.
- Curriculum planners and policymakers, by offering evidence-based recommendations for integrating technology into French language instruction.
- Students, by showing how technology can support better understanding, interest, and performance in French.
- Researchers, by adding empirical data to the existing literature on educational technology and French language learning in Nigeria.

Delimitation of the Study

The study is limited to secondary schools and institutions in Ekiti State. It focuses on French language teachers and students, with 250 respondents (50 teachers and 200 students). It examines the use of educational technology and its impact on French language teaching and learning outcomes, including comprehension, vocabulary, and motivation.

II. LITERATURE REVIEW

Conceptual Framework

Concept of Educational Technology

Educational technology refers to the ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources (AECT, 2008). In language education, it includes audio-visual materials, digital platforms, mobile applications, multimedia resources, and AI-driven tools.

Research shows that educational technology transforms language learning by providing immersive and personalized experiences. A systematic review by *Frontiers in Education* (2025) found that virtual reality (VR), augmented reality (AR), and adaptive learning technologies significantly improve vocabulary acquisition and retention in second language education.

Concept of French Language Teaching and Learning

French language teaching in Nigeria faces challenges including inadequate instructional materials, limited exposure to native speakers, and low student engagement. A study on digital tools in Southwest Nigeria (which includes Ekiti State) found that teachers struggle with limited access to digital learning tools and insufficient training on technology integration.

Mobile-Assisted Language Learning (MALL)

MALL enhances French language acquisition by providing flexibility and accessibility for learners anytime and anywhere. Studies show MALL improves vocabulary acquisition, listening comprehension, grammar learning, and pronunciation while enhancing student engagement and motivation.

Relationship Between Educational Technology and French Language Learning

Educational technology supports French language learning through:

- Multisensory experiences that cater to diverse learning styles (Gerngross, Püschel, & Bergmann, 2005)
- Interactive and gamified content that increases engagement (Mekonnen & Bekele, 2025)
- Immediate feedback that enhances retention (Zhao et al., 2023)
- Self-paced learning through mobile apps and digital platforms
- Improved pronunciation through speech recognition tools

Review of Empirical Studies

Studies on Audio-Visual Materials and French Language Learning

Bakare (2024) conducted a study on audio-visual materials in French language instruction in Ekiti State with 60 French teachers. Key findings included:

Outcome	Percentage
High stimulation of interest	88.3%
High engagement	86.7%
High motivation	85.0%
Improved comprehension	83.3%

Bakare (2024) concluded that audio-visual materials are essential for effective language learning and recommended investment in digital resources and teacher training.

Studies on Digital Technologies and French Language Learning

Mekonnen and Bekele (2025) conducted a mixed-method study on digital technologies and French language learning. Their findings showed:

- Vocabulary retention: Digital tools significantly improved vocabulary among beginner and intermediate learners
- Pronunciation: Interactive apps with speech recognition improved accuracy
- Listening comprehension: Enhanced but faced challenges replicating authentic cultural immersion
- Learner motivation: Gamified content increased motivation and engagement

Studies on Multimedia Learning Principles

Mayer's (2009) Cognitive Theory of Multimedia Learning is based on three assumptions: dual-channel (people have separate channels for visual and auditory information), limited-capacity (individuals have limited ability to absorb information), and active-processing (people should be actively engaged). His 12 principles include multimedia (use words + pictures), coherence (remove unnecessary content), and modality (use narration with visuals). These principles support using audio-visual materials and interactive digital content in French language learning.

Studies on Research-Backed Instructional Techniques

Research by Webb and Nation (2017) suggests that combining related and unrelated lexical fields enhances retention by fostering differentiation and semantic linking. Digital flashcards with spaced algorithms (e.g., Anki) support this process. Peer quizzing is another powerful tool where learners benefit from retrieval, feedback, and interaction.

Studies on Technology in African Classrooms

Leveraging Digital Tools to Improve French Language Teaching in Southwest Nigeria highlighted that limited research examines practical challenges and opportunities associated with integrating digital tools into French language instruction in states such as Ekiti. The study emphasized the need for greater awareness among teachers and practical strategies for effective technology integration.

Theoretical Framework

Multimedia Learning Theory (Mayer, 2009)

This study is grounded in Multimedia Learning Theory by Mayer (2009), which states that people learn better from words and pictures than from words alone. Key principles include dual coding, cognitive load management, and active processing. In French language learning, this theory supports using audio-visual materials, videos, and interactive digital content to enhance comprehension and retention.

Technology Acceptance Model (Davis, 1989)

The Technology Acceptance Model (TAM) by Davis (1989) explains user technology adoption through perceived usefulness and perceived ease of use. A study applying TAM to ICT for English language learning found that motivation, ICT skills, and attitudes affect actual ICT use, mediated by perceived ease of use, perceived usefulness, and attitudes. This model helps understand why French teachers and students may or may not adopt educational technology.

Summary of Literature Review

The literature reviewed shows that:

1. Educational technology enhances language learning in vocabulary, pronunciation, listening comprehension, and motivation.

2. Audio-visual materials significantly improve engagement and comprehension in Ekiti State
3. MALL enhances French language acquisition through flexibility and accessibility
4. Challenges remain in African classrooms: infrastructural limitations, insufficient teacher training, limited device access
5. Technology acceptance depends on motivation and training, not just equipment.
6. Multimedia Learning Theory and TAM provide theoretical support for technology use in language learning.

study), yielding Cronbach Alpha = 0.82 (high reliability).

Data Collection and Analysis

Questionnaires were administered in schools and retrieved immediately. Data were analysed using:

- Descriptive statistics (frequency, percentage, mean) for research questions
- Inferential statistics (Pearson r, t-test) for hypotheses at 0.05 significance level
- SPSS software for analysis

III. METHODOLOGY

Research Design

This study uses a descriptive survey research design to examine educational technology use in French language teaching and learning in Ekiti State.

Population and Sample

The population consists of French language teachers and students in secondary schools in Ekiti State. The sample comprises 250 respondents:

Group	Number
French Teachers	50
French Students	200
Total	250

Stratified random sampling was used to ensure adequate representation.

Instrument

A structured questionnaire titled "Educational Technology and French Language Teaching and Learning Questionnaire (ETFLQ)" was used. It has two sections:

- Section A: Demographics
 - Section B: Technology use, effects on comprehension/vocabulary/motivation, challenges
- 4-point Likert scale (Strongly Agree to Strongly Disagree).

Validity and Reliability

Validity was ensured through expert review. Reliability was tested with 30 respondents (pilot

IV. DATA PRESENTATION AND ANALYSIS

Demographic Profile

Variable	Category	Frequency	Percentage
Group	Teachers	50	20%
	Students	200	80%
Gender (Teachers)	Male	28	56%
	Female	22	44%
Gender (Students)	Male	105	52.5%
	Female	95	47.5%

Research Question 1: Extent of Technology Use

Technology Type	Mean Score	Interpretation
Audio-visual materials	2.45	Moderate use
Mobile apps	2.20	Low-moderate use
Digital platforms	2.10	Low use

Finding: Educational technology is moderately used, with audio-visual materials most common.

4.3 Research Question 2: Effect on Learning Outcomes

Outcome	Technology Users	Non-Users
Comprehension	3.65	2.85
Vocabulary	3.70	2.90
Motivation	3.80	2.75

Finding: Technology users scored significantly higher in all outcomes.

Research Question 3: Views on Usefulness and Challenges

Statement	Teachers (%)	Students (%)
Technology improves learning	88%	92%

Statement	Teachers (%)	Students (%)
Technology is available	45%	50%
Need more training	82%	40%

Finding: Both agree technology helps, but availability and training are challenges.

Research Question 4: Barriers

Barrier	Percentage
Lack of infrastructure	72%
Lack of training	66%
Limited device access	60%
Unstable internet	56%

Finding: Main barriers are infrastructure (72%), training (66%), and device access (60%).

Hypotheses Testing

Hypothesis One (H₀₁)

H₀₁: There is no significant relationship between the use of educational technology and French language learners' comprehension.

Variable s	N	Mean	SD	r-value	df	p-value	Decision	Remark
Educational Technology Use	200	3.25	0.68	0.68	198	< 0.05	Reject H ₀₁	Significant
Learner Comprehension	200	3.17	0.72					

Interpretation: The result shows a significant positive relationship ($r = 0.68$, $df = 198$, $p < 0.05$) between the use of educational technology and French language learners' comprehension. This means that as technology use increases, learners' comprehension improves significantly.

Hypothesis Two (H₀₂)

H₀₂: There is no significant difference between students who use educational technology and those who do not in terms of vocabulary acquisition.

Variable s	N	Mean	SD	t-value	df	p-value	Decision	Remark
Technol	1	3.7	0.4	4.1	1	<	Reje	Signif

ogy Users	20	3.10	0.72	52	98	0.05	ct H ₀₂	icant
Learner Comprehension	200	3.17	0.72					

Interpretation: The result shows a significant difference ($t = 4.52$, $df = 198$, $p < 0.05$) between students who use educational technology and those who do not. Students who use technology (Mean = 3.70) have significantly better vocabulary acquisition than non-users (Mean = 2.90).

Hypothesis Three (H₀₃)

H₀₃: There is no significant relationship between teachers' use of educational technology and students' motivation to learn French.

Variable s	N	Mean	SD	r-value	df	p-value	Decision	Remark
Teacher s' Technology Use	200	2.85	0.75	0.72	198	< 0.05	Reject H ₀₃	Significant
Learner Comprehension	200	3.17	0.72					

Interpretation: The result shows a significant positive relationship ($r = 0.72$, $df = 198$, $p < 0.05$) between teachers' use of educational technology and students' motivation to learn French. When teachers use technology more in their teaching, students become more motivated to learn French.

All three hypotheses rejected: Technology use significantly improves comprehension, vocabulary, and motivation.

V. DISCUSSION OF FINDINGS

The study's findings showed that technology use is moderate, with audio-visual materials most common, aligning with Bakare's (2024) finding that audio-visual materials are effective in Ekiti State.

Also, it was revealed that technology significantly improves comprehension, vocabulary, and motivation, as supported by Mekonnen & Bekele

(2025) and *Frontiers in Education* (2025) on digital tools enhancing vocabulary and engagement.

Furthermore, the study's findings revealed that training and availability are major challenges, consistent with *Quest Journals* (2024) in Southwest Nigeria, indicating infrastructural limitations and insufficient teacher preparation.

Moreover, the study's findings indicate that 72% cite a lack of infrastructure and 66% cite a lack of training, confirming that technology acceptance depends on training and motivation, not just equipment (TAM study).

In conclusion, the rejection of all hypotheses confirms a significant relationship between technology use and learning outcomes, supporting Multimedia Learning Theory (Mayer, 2009).

VI. CONCLUSION

This study concludes that educational technology significantly enhances French language teaching and learning in Ekiti State. Technology use improves comprehension, vocabulary, and motivation. However, major lapses include lack of infrastructure (72%), insufficient teacher training (66%), and limited device access (60%). These gaps must be addressed to fully realise technology's potential in French language education.

VII. RECOMMENDATIONS

1. **Build Better Technology Facilities in Schools:** Most teachers and students said there is not enough equipment in schools. Schools need to buy computers and projectors and ensure there is stable electricity. Without these basic things, technology cannot work well in the classroom.
2. **Train Teachers Properly on How to Use Technology:** Many teachers said they need more training. Most teachers want to use technology but do not know how. Schools and the government should organise regular workshops and training sessions so teachers can learn how to use digital tools confidently in their French classes.

3. **Give Students and Teachers Access to More Devices:** Many respondents said there are not enough devices, such as tablets, laptops, or phones, for learning. Schools should provide more devices so that every student can access technology for learning French.
4. **Fix the Internet Problem:** Over half of the respondents said the internet is not stable. Good internet is very important for using online learning tools. Schools and the government should work to provide fast, reliable internet to all schools that teach French.
5. **Make Technology Part of the French Curriculum:** The curriculum should include technology as a regular part of learning French. This way, technology will not be an extra thing but a normal part of how French is taught in schools.
6. **Encourage Students to Use Learning Apps on Their Phones:** Many students already have phones. They should be encouraged to use French learning apps outside of class time. These apps can help them practice vocabulary, pronunciation, and listening skills anytime and anywhere.
7. **Support More Research on Technology and French Learning:** We need more studies to understand how technology affects French learning in the long run. Future research should look at specific tools like AI chatbots, mobile apps, and online platforms to see what works best for students in Nigeria

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