Integrating Technology in the Teaching of French Grammar

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Abstract

This study investigates the impact of technology on the teaching of French in Nigerian universities, with particular emphasis on the use of digital tools to enhance grammar instruction. Grammar constitutes the structural foundation of language learning, yet it remains a major challenge for learners of French as a foreign language. In Nigeria, where students have limited exposure to authentic French-speaking environments, the acquisition of grammatical competence is further hindered by insufficient classroom interaction, teacher-centered pedagogies, and inadequate instructional resources. Integrating digital tools into grammar instruction offers opportunities to address these constraints. Using a descriptive research method, this study examines how technological resources—such as language learning applications, interactive grammar software, virtual classrooms, and multimedia platforms—contribute to improving students' mastery of French grammar. It highlights the pedagogical implications of adopting digital tools to create more interactive and learner-centered grammar instruction. Findings from existing studies indicate that such tools significantly enhance learners' understanding of grammatical structures, increase engagement, and support personalized learning pathways. Nevertheless, the integration of technology into French language programmes in Nigeria is limited by factors such as inadequate ICT infrastructure, low digital literacy, unreliable internet access, and insufficient institutional support. The study underscores the need for targeted interventions, including capacity-building programmes for language teachers and increased investment in educational technology. It concludes that when effectively implemented, technology holds immense potential to transform the teaching and learning of French grammar in Nigerian universities.

Keywords: Language Teaching and Learning; Technology; French Grammar; French as a Foreign Language

Introduction

In recent years, the integration of technology into education has become a central focus, reshaping how knowledge is delivered and acquired across various disciplines. Language education, in particular, has been significantly transformed by digital innovations, especially in the teaching of

grammar. This article examines the impact of digital technology on the teaching of French grammar and its implications for both teachers and learners.

French grammar—characterized by its complexity and detailed rules—often presents considerable challenges to learners and instructors alike. While traditional methods such as textbooks and direct instruction remain relevant, they may not always provide sufficient engagement or facilitate the individualized feedback necessary for effective mastery. The introduction of technology, however, offers new possibilities for addressing these challenges by creating learning environments that make the study of French grammar more accessible, interactive, and adaptive.

Digital technologies, including computers, specialized software, and multimedia platforms, possess the potential to revolutionize grammar instruction. These tools provide learners with extensive resources and immediate feedback, enabling autonomous practice beyond the traditional classroom setting. As noted by Godwin-Jones (2018), the interactive features of digital platforms not only complement but also enhance conventional instructional approaches, offering a more dynamic and engaging learning experience.

In Nigeria, the integration of technology into French language instruction presents significant opportunities to improve teaching effectiveness and learner outcomes. Yet, despite its transformative potential, the use of digital tools in university French programmes remains limited by infrastructural deficits, pedagogical constraints, and institutional challenges. It is therefore essential to explore how technology can be effectively deployed to enhance grammar-focused instruction while acknowledging the barriers that impede its widespread adoption.

This study undertakes a descriptive examination of the use of digital tools in teaching French grammar in Nigerian universities. Drawing on existing literature, it explores the benefits and limitations of technological integration and considers its practical implications for both teaching and learning. Specifically, the study seeks to evaluate the role of technology in enhancing grammar instruction in French as a foreign language and to identify the challenges associated with its implementation in Nigerian higher education contexts.

It is expected that this paper will respond to the following questions:

1. How effectively are digital resources being integrated into French grammar instruction?
2. What challenges continue to hinder their adoption?
3. And what practical implications can be drawn for improving the teaching and learning of French grammar in this context?

Addressing these is essential for advancing pedagogical practices and ensuring that French language education in Nigerian universities remains relevant and responsive to contemporary needs.

The Concept of Grammar and Its Importance in Language Acquisition

Grammar is generally regarded as the system of rules governing the structure of a language, encompassing syntax, morphology, and the conventions that enable meaningful communications. It dictates how linguistic elements interact to convey meaning effectively and coherently. Mastery of grammar enables clear communication, both in writing and speech, by ensuring consistency and adherence to standardized linguistic norms.

According to Crystal (2004), grammar is "the structural foundation of our ability to express ourselves," as it provides the framework through which words and phrases are organized to convey meaning. Similarly, Chomsky (1965) conceptualizes grammar as the set of principles and rules that allow speakers to generate an infinite number of sentences from a finite set of elements. From a pedagogical perspective, grammar refers to a description of the rules for forming sentences, including an account of their meaning.

The importance of grammar in language acquisition lies in its role as the bedrock of communicative competence. While vocabulary provides the building blocks of speech, grammar ensures that these blocks are arranged in meaningful and socially acceptable ways. It is pertinent to note that grammar instruction is essential towards achieving accuracy in communication. Furthermore, Ellis (2006) highlights that grammar knowledge contributes to both fluency and accuracy, as it allows learners to internalize patterns and use them spontaneously in communicative contexts.

In the context of French as a foreign language, grammar is particularly crucial because of the language's complex system of verb conjugations, agreements, and syntactic structures. For Nigerian learners with limited exposure to natural French environments, systematic grammar instruction supported by digital tools can help bridge the gap between theoretical knowledge and practical usage. Thus, grammar not only underpins linguistic competence but also serves as a critical element in fostering communicative proficiency in second and foreign language learning.

Not minding the central position of grammar in language acquisition, its teaching is still faced with lack of engagement. Many students find grammar lessons dry and uninspiring, particularly when taught through repetitive exercises rather than interactive and contextualized activities.

Traditional grammar instruction often follows a rigid, rule-based methodology, emphasizing memorization and correction rather than practical application. This can make learning feel mechanical and disconnected from real-world language use.

To enhance grammar instruction, teachers must integrate interactive, context-based, and communicative approaches that bridge the gap between theory and practical language use.

Definition of Technology

Technology can be defined as the application of scientific knowledge for practical purposes, especially in industry, communication, education, and daily life. In a broader sense, it refers to the

tools, machines, systems, and methods that humans develop to solve problems, improve efficiency, and enhance the quality of life.

There are different categories of technology depending on their applications and functions, such as medical technologies, information technologies, agricultural technologies, etc. Each type of technology plays a unique role in advancing society and solving specific challenges in various fields.

This work is concerned with educational technology, which refers to the use of digital tools and resources—such as computers, software, the internet, and multimedia—to support teaching and learning processes.

Role of Technology in Foreign Language Education

Technology has become an indispensable pillar of modern education, revolutionizing pedagogical approaches and transforming the way learners interact with knowledge. In the context of foreign language education, technological advancements have not only enhanced access to resources but have also reshaped the dynamics of classroom engagement, learner autonomy, and language acquisition.

Enhancing Access and Exposure

One of the most significant contributions of technology to foreign language education is the democratization of access. Through online platforms, digital libraries, and language learning applications, students can engage with authentic linguistic materials anytime and anywhere. Tools such as Duolingo and Rosetta Stone offer structured learning paths enriched with multimedia content, fostering exposure to diverse accents, idiomatic expressions, and cultural nuances.

Promoting Interactive and Immersive Learning

Technology promotes interactive and immersive learning through digital platforms such as learning management systems (LMS), online grammar tools, discussion forums, virtual reality (VR), augmented reality (AR), simulations (such as ImmerseMe, Mondly VR), which enable learners to actively practice communication in real-life scenarios, engage with content, collaborate with peers, and receive immediate feedback. These tools foster learner autonomy, participation, and motivation by shifting the classroom from teacher-centered to learner-centered.

Fostering Learner Autonomy and Personalization

Adaptive learning systems driven by artificial intelligence are also reshaping foreign language instruction. These systems analyze individual learning patterns and tailor content accordingly, ensuring that learners progress at their own pace and focus on areas requiring improvement. Eyisi explained that such systems use algorithms to analyze students' performance data and adapt instructions materials, accordingly, ensuring that learners receive content and exercises suited to their individual learning pace and style (2025:756).

Supporting Teacher Innovation and Pedagogical Flexibility

Technology empowers teachers to diversify their instructional strategies and incorporate multimodal teaching methods. From interactive whiteboards to collaborative platforms like Google Classroom, teachers can design dynamic, student-centered learning experiences. Ezeodili (2018) affirmed the necessity of incorporating digital technology in French grammar instruction as proposed by the Common European Framework of Reference for Languages. Blended and flipped classroom models, supported by digital tools, encourage active learning and maximize classroom time for communicative practice. While technological tools are helpful, they should complement, not replace, traditional teaching methods.

Having examined the role of technology in Language Education, this paper proceeds to highlight selected Language acquisition theories and how they align with, and support, the pedagogical use of technology.

Theories of Language Acquisition and Digital tools

The theories of language acquisition, such as Behaviorism, Nativist, and Input Hypothesis, provide a strong framework for understanding how technology can be most effectively employed in the teaching of French grammar. As technology continues to evolve, so too will the ways in which grammar is taught, creating more innovative and effective methods for learners worldwide. Below are the key theories of language acquisition, along with an explanation of how technology complement these approaches.

The Behaviorist Theory (B.F. Skinner)

According to the behaviorist theory, language learning is primarily a process of habit formation. It emphasizes the role of reinforcement, imitation, and repetition. In this view, learners acquire language through the repeated exposure to language stimuli (e.g., sounds, words, and sentences) and the reinforcement of correct language responses. The theory suggests that children or learners can be conditioned to produce correct language forms by positive reinforcement (praise, rewards).

Technology aligns well with the behaviorist theory because many language-learning Apps and platforms (e.g., Duolingo, Memrise) use repetition, immediate feedback, and reinforcement to guide learners. For instance, digital Apps often provide instant corrections, reinforcing the correct form of a grammar rule, while rewarding learners with points or achievements when they answer correctly. The gamified elements of these tools, such as leveling up or earning badges, serve as positive reinforcement, encouraging learners to continue practicing.

Through these repetitive, reinforced practices, learners internalize grammar rules through gradual habituation. Technological tools effectively replicate the stimulus-response cycle in the behaviorist model, enhancing the acquisition of grammatical structures in a way that is both engaging and systematic.

The Nativist Theory (Noam Chomsky)

Noam Chomsky's nativist theory suggests that humans are biologically predisposed to acquire language. He introduced the concept of a "universal grammar," an inherent set of linguistic rules common to all languages. According to this theory, children are born with an innate ability to understand and apply grammatical structures, which are activated by exposure to linguistic input.

Technology supports the nativist theory by providing learners with extensive input in the form of authentic language (via listening, reading, and interacting with native speakers). Moreover, tools that offer progressive difficulty levels or adaptive learning systems (allow learners to encounter language at a level just beyond their current understanding) which align with Chomsky's idea that learners are ready for more complex structures when they have mastered foundational elements

Just as Chomsky suggests that exposure to language triggers innate grammatical faculties, digital tools provide continuous exposure to a variety of language inputs, enhancing learners' ability to internalize grammar. These tools help activate learners' internal linguistic knowledge by facilitating language practice and increasing their capacity for acquiring new grammatical rules through interaction.

The Input Hypothesis (Stephen Krashen)

Stephen Krashen's Input Hypothesis emphasizes the importance of comprehensible input in language learning. According to Krashen (1982), learners acquire language most effectively when they are exposed to language that is slightly above their current level (i+1). This exposure should be meaningful and understandable, even if some of the vocabulary or grammatical structures are unfamiliar. Krashen also stresses that language acquisition occurs when learners focus on communication rather than consciously studying grammar.

Digital tools provide extensive opportunities for comprehensible input. These tools offer content at various proficiency levels, ensuring that learners are consistently exposed to language input that challenges them without overwhelming them. Through the exposure to context-rich input that is just beyond their current proficiency, learners gradually absorb grammatical structures in a natural and intuitive way. The use of technology aligns with Krashen's hypothesis by providing vast amounts of comprehensible input and supporting grammar learning through the natural, contextualized usage of language.

Finally, these theories of language acquisition align well with the use of Technology in learning the grammar of a foreign language, French in particular. Whether through reinforcement, interaction, comprehensible input, or active experimentation, Technology enhances and supports the processes described by these theories. When combined with traditional language-learning methods, technology provides a dynamic and effective way to acquire grammar and achieve proficiency in French language.

Case Study on the Role of Technology

Here are studies demonstrating how technology has enhanced the teaching and learning of French grammar:

1. In the research carried out by Chenu, Gayraud, Martinie, & Wu (2007) in their work titled: *Is computer-assisted language learning (CALL) efficient for grammar learning? An experimental study in French as a second language,* learning of French relative clauses, was investigated. The researchers tried to discover if the acquisition of this grammatical aspect led to better performance and retention through CALL compared to traditional classroom instruction.

It was gathered that CALL is more effective than the traditional method for grammatical points. Participants were adult learners of French as a second language. The experimental group used CALL while the control group received traditional teacher-led instruction

2. Dooly, M., & O'Dowd, R. (2018), in their book *In This Together*: *Teachers' Experiences with*

Online Grammar Teaching investigated teachers' practices, perceptions, and challenges in teaching grammar through online and digitally mediated environments.

Data was collected from language instructors integrating digital tools in grammar lessons across various languages, including French. The researchers examined how tools like Google Docs and collaborative platforms helped with grammar-focused tasks.

The research findings show that using collaborative tools helped students become more engaged and self-aware of grammar usage through peer editing and correction. Digital platforms enhanced the visibility of grammar as a communicative tool rather than just a set of rules.

Findings

Previous research shows that the integration of digital tools has a positive influence on the teaching and learning of grammar in foreign languages, including French. In the research carried out by Chenu, Gayraud, Martinie, & Wu (2007) on the efficiency of Computer-Assisted Language Learning (CALL) in the acquisition of French grammar, focusing on relative clauses. The result showed that technology (CALL) enhances greater performance in the French grammar instruction.

Dooly, M., & O'Dowd, R. (2018). Teachers' Experiences with Online Grammar Teaching. The researchers examined how tools like Google Docs and collaborative platforms helped with grammar-focused tasks. The research findings show that using collaborative tools helped students become more engaged and self-aware of grammar usage through peer editing and correction. Online environments enabled multimodal resources, which enriched grammar practice, enhanced the visibility of grammar as a communicative tool rather than just a set of rules.

Discussion

The integration of technology in grammar instruction has been investigated from both experimental and experiential perspectives. Chenu, Gayraud, Martinie, & Wu (2007) explored the efficiency of Computer-Assisted Language Learning (CALL) for the acquisition of French relative clauses. Using an experimental design with control and treatment groups, they compare learners exposed to CALL with those receiving traditional teacher-led instruction. Results indicated that

the CALL group significantly outperformed their peers both in immediate post tests and in delayed assessments, suggesting superior retention of grammatical structures. The study attributed this success to the interactive design of CALL activities and the immediate feedback provided, which supported learner autonomy and reinforced accuracy.

Dooly and O'Dowed (2018), on the other hand, examined teachers' experiences with online grammar teaching. Drawing on interviews, reflections and case studies across diverse teaching contexts, they highlighted how educators adapted grammar pedagogy to digital environments. With teachers increasingly embedding grammar instruction within communicative and collaborative tasks rather than on rule–driven explanations. Despite difficulties such as technological limitations and increased preparation demands, teachers reported greater learner engagement and autonomy when grammar instruction was mediated through online tools.

These studies highlighted complementary dimensions of technology integration, while Chenu, Gayraud, Martinie, & Wu (2007) provide evidence of measurable gains in learners' performance through CALL, Dooly and O'Dowd (2018) show how teachers negotiate the pedagogical and practical realities of online grammar instruction. Both works illustrate that successful technology-enhanced grammar instruction depends on alignment of interactive tools with adaptive teaching practices.

Implications of Technology for French Grammar

Personalized Learning

With technology, teachers can offer a learning experience that is not only engaging but also personalized. Technology provides personalized learning experience tailored to the learner's proficiency level and specific needs. This is particularly useful in the context of French grammar, where students may struggle with different aspects, such as verb conjugation or the use of prepositions.

This adaptive learning process allows students to focus on their weaknesses, offering a more targeted and efficient approach to grammar acquisition. Personalization ensures that learners spend time practising the grammar concepts that are most challenging for them, rather than going through repetitive exercises they have already mastered (Godwin-Jones, 2018, p. 10). In other words, this approach helps learners at different proficiency levels progress according to their own needs, improving motivation and retention.

Real-Time Feedback and Error Correction

One of the most significant benefits of using digital platforms for learning French grammar is the interactive nature of many tools. These platforms present grammar exercises in the form of drills, quizzes, and challenges that offer immediate feedback, helping learners understand their mistakes and correct them in real-time. This form of active learning encourages retention and enhances understanding.

The app's real-time corrections make learning grammar more effective because learners are provided with instant reinforcement, allowing them to quickly internalize grammatical structures. Research has shown that such feedback loops are critical for language acquisition (VanPatten, 2004, p. 23).

Accessibility and Flexibility

Technology offers learners unprecedented accessibility and flexibility. Learners have access to a wide range of resources and platforms that best respond to their learning needs. Grammar exercises, video lessons, and interactive activities are available anytime and anywhere. This makes learning French grammar more flexible and accessible, giving the learners more control over their learning schedule.

Multimedia Resources for Grammar Contextualization

Another advantage of Technology is its ability to provide multimedia resources that contextualize grammar in real-life usage. Some digital platforms provide learners with short stories, dialogues, and audio-visual content where grammar rules are exemplified in context. This approach allows learners to see how grammar structures are used in actual conversations, making abstract rules more tangible and relatable.

Research suggests that language learners benefit from exposure to grammar in meaningful, communicative contexts (Myles, 2005, p. 123). For example, the use of authentic video content helps learners hear native speakers applying grammar rules in real-life situations, which facilitates comprehension and retention. Moreover, watching videos or listening to podcasts reinforces pronunciation and accent, which is crucial for mastering French grammar, especially verb tenses and sentence structures.

Challenges of Integrating Technology in French Grammar Teaching in Nigerian Universities

Despite the transformative role of digital tools in enhancing French grammar instruction, its implementation in Nigerian universities is still constrained by some factors. Issues such as digital literacy, inadequate infrastructure, equitable access, and the need for continuous teacher training remain critical. Effective implementation requires thoughtful instructional design and alignment with pedagogical goals.

Limited Digital Literacy

Lack of digital literacy has been identified as one of the issues militating against technology implementation for improved French language teaching and learning in Nigeria (Ezeodili 2018). This is a serious issue because, in the event of the possible application of these tools and the teacher is not capable of operating them, the goal of acquiring them becomes forfeited.

We suggest continuous formation of teachers on digital technological skills to enable them to keep abreast with recent innovations and best practices in their teaching profession.

Inadequate ICT Infrastructure

Some Nigerian Universities lack adequate ICT Infrastructure: computers, smart classrooms, and multimedia equipment, etc. The purchase, installation and maintenance of the technological tools require huge sums and may be difficult to achieve. There is also an issue of lack of internet connectivity and/or unstable power supply.

Curriculum Integration Issues

The existing curriculum prioritizes traditional teaching methods. There is a need for curriculum developers to incorporate digital tools and resources towards achieving the learning objectives.

Recommendations

The integration of technology in the language class offers the students the opportunity to learn in class and online at the same time. This method tends to give students control over their learning as well as increase their motivation towards learning.

To address these challenges, teachers and policymakers can consider the following strategies:

Professional Development: It's encouraged that teachers undergo training regularly in order to keep abreast with the recent innovations in the field and how best to integrate them in class for an improved learning experience (Ezeodili, 2018).

Infrastructure Investment: Schools should be provided with adequate ICT tools and internet access, as well as a steady power supply to ensure the application of these tools towards enhanced learning. Ohanma (2023) also included the use of solar-powered facilities to minimise cost and to ensure steady power needed for the teaching materials.

Curriculum Alignment: Curriculum developers should ensure the inclusion of digital resources and activities that align with the language learning objectives.

Blended Methodology: This study recognizes the impact of technology in language education. It however does not recommend that it replaces the traditional classroom method but that technology complements it for a balanced approach.

Conclusion

This study examined the integration of digital tools in the teaching of French grammar in Nigerian universities, highlighting their impact, pedagogical benefits, and challenges. Evidence from previous research underscores that technology enhances grammar instruction by providing learners with interactive exercises, immediate feedback, and opportunities for independent learning. It further shows that teachers benefit from digital resources in diagnosing errors and differentiating instruction, while learners develop greater engagement and autonomy. These insights collectively affirm the transformative role of technology in reshaping French language pedagogy in Nigeria.

However, the study also reveals that infrastructural deficiencies, limited digital literacy, inadequate funding, and inconsistent institutional support remain major obstacles to effective technology integration. Without addressing these systemic challenges, the potential of technology in French grammar instruction will remain underutilised.

In light of these findings, the study suggests that teachers, curriculum developers, policymakers, and university management must collaborate to create enabling conditions for sustainable technology adoption. Practical strategies such as blended learning models, mobile-assisted grammar practice, and teacher capacity building can help maximize the pedagogical benefits of digital tools.

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