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The Impact of Digital Technologies on French Language Learning

Ishibie, Charity Isaac
Department of French,
School of Secondary Education (Languages),
Federal College of Education (Technical), Omoku.

Email: okpagic@gmail.com

Abstract
The need to improve language learning techniques remains paramount among teachers of French as a foreign language. Several methods and instruments have been tested by these teachers to find a way to make the learning of the language effortless. In recent times the revolution brought by digital technologies has led to fast decline in the use of known traditional methods. This development boils down to how far have such digital tools such as mobile Apps, AI-driven platforms and multimedia resources gone in replacing normative approaches to the teaching and learning of French? To what extent have they proved so effective? This study therefore explores the impact of digital technologies on French language acquisition in the 21st century, focusing on mobile apps, AI-driven platforms, and multimedia resources. It employed a mixed-method approach, involving the survey of French language learners and the analysis of their use of digital tools. Findings suggest that digital tools and technologies become integral to language learning, it is essential to assess their effectiveness in enhancing language skills, including vocabulary acquisition, pronunciation, listening comprehension, and cultural immersion. Moreover, they significantly enhance learner engagement, especially among beginners and intermediate learners, by providing interactive, gamified experiences that improve vocabulary retention and pronunciation. However, advanced learners expressed frustration with the limited content available for more complex grammar and conversational practice. The study also highlights challenges related to listening comprehension, particularly in understanding fast or colloquial French, and the limitations of digital tools in replicating authentic cultural immersion. Despite these challenges, digital technologies are shown to complement traditional methods of language learning, particularly when integrated into blended learning models. The study concludes by underscoring the importance of digital tools, such as offering more advanced content, enhancing cultural immersion features, and addressing accessibility issues to bridge the digital divide. It recommends the need for further development of artificial intelligence (AI) and augmented reality (AR) technologies to create more personalized, immersive language learning experiences.

Keywords : Digital Learning, French Language Acquisition, Mobile Apps, Artificial Intelligence (AI), Cultural Immersion

Résumé
La primauté d'améliorer les techniques de l'apprentissage de la langue reste prééminente chez les professeurs de français. Plusieurs méthodes et instruments ont été adoptés par les professeurs pour assurer que l'apprentissage de la langue n'est pas encombrant. Récemment, la révolution issue de des technologies numériques a entrainé un déclin dans l'application de la méthode traditionnelles connues. Ce développement soulève certaines questions telles que comment les outils numériques tels que mobile Apps, AI-driven platforms, et multimedia resources ont-ils remplacé les méthodes traditionnelles dans l'enseignement et l'apprentissage du français ? Jusqu'à quel point ont-ils été efficaces ? La présente étude explore l'impact des technologies numériques sur l'acquisition du français pendant le 21^{ième} siècle, mettant accent sur les mobile Apps, AI-driven platforms et multimedia resources. Sa méthode mixte implique un examen des apprenants de la langue française et l'analyse de leur utilisation des outils numériques. Les

résultats montrent que les outils et technologies numériques sont devenus des éléments intégraux dans l'apprentissage de la langue et c'est très pertinent d'apprécier leur efficacité en cas de faciliter la compétence linguistique y compris l'acquisition du vocabulaire, la prononciation, la compréhension orale et l'immersion culturelle. De plus, ils améliorent considérablement le dévouement de l'apprenant surtout parmi les débutants et les intermédiaires en leur fournissant des expériences interactives et ludiques qui améliorent la rétention et la prononciation du vocabulaire. Cependant, les apprenants avancés ont exprimé leur frustration face au contenu limité disponible pour la grammaire et la pratique conversationnelle plus complexes. L'étude met également en lumière les défis liés à la compréhension de l'écoute, en particulier la compréhension du français rapide ou familier, et les limites des outils numériques dans la reproduction de l'immersion culturelle authentique. Malgré ces difficultés, les technologies numériques semblent compléter les méthodes traditionnelles d'apprentissage des langues, en particulier lorsqu'elles sont intégrées dans des modèles d'apprentissage mixtes. L'étude se termine par des recommandations pour améliorer les outils numériques, comme offrir du contenu plus avancé, améliorer les caractéristiques d'immersion culturelle et résoudre les problèmes d'accessibilité pour combler le fossé numérique. Cette recherche souligne la nécessité de poursuivre le développement de l'intelligence artificielle (IA) et des technologies de réalité augmentée (RA) afin de créer des expériences d'apprentissage immersif plus personnalisées.

Mots-clés : Apprentissage numérique, Acquisition de la langue française, Applications mobiles, Intelligence artificielle (IA), Immersion culturelle.

Introduction

The acquisition of the French language, like other foreign languages, has undergone significant transformation in the 21st century, largely due to the integration of digital technologies. The advent of digital tools and platforms has reshaped not only the way French is taught but also the manner in which learners acquire it, making language learning more accessible, engaging, and interactive (Godwin-Jones, 2018). While traditional pedagogical approaches have long emphasized face-to-face interaction and immersion, digital technologies such as language learning applications, online platforms, artificial intelligence (AI), and multimedia resources are increasingly becoming central to the language acquisition process (Chapelle, 2003).

Historically, language education has relied on methods such as direct instruction, reading, writing exercises, and oral practice in the classroom. However, the rise of digital learning environments has presented new opportunities for learners to engage with the French language in ways that were once impossible. The development of mobile learning applications such as Duolingo, Babbel, and Memrise, alongside online platforms like Coursera and edX, has provided French learners with greater autonomy over their learning pace and schedule (Vesselinov & Grego, 2012). These platforms enable students to learn at their own pace and revisit lessons as often as needed, which aligns well with the principles of self-directed learning (Little, 1991).

In addition to language apps, the incorporation of AI-powered speech recognition and virtual reality (VR) has introduced interactive and immersive elements into the learning process. For instance, AI-driven systems can assess pronunciation in real time, offering learners immediate feedback that mimics a traditional tutor's corrections (Reinders & White, 2011). Virtual reality (VR) technology is now allowing learners to immerse themselves in virtual French-speaking environments, enhancing their cultural and linguistic understanding without ever leaving their homes (Godwin-Jones, 2016).

Despite the promising potential of these tools, the impact of digital technologies on French language acquisition is not without challenges. While the tools provide unprecedented accessibility, they also raise concerns about the **quality of language interaction**, particularly in terms of conversational fluency and cultural immersion (Kukulska-Hulme & Shield, 2008). Furthermore, the **digital divide** remains a critical issue, as unequal access to technology can limit the reach of digital language learning tools, particularly in less affluent or rural areas (Tschofen & Rothermel, 2007). Moreover, while digital tools provide valuable **vocabulary and grammar** reinforcement, they are still often limited in helping learners achieve fluency in real-world conversations, which remains a critical component of mastering a language.

The purpose of this paper is to explore the multifaceted impact of digital technologies on French language acquisition, focusing on both their advantages and limitations. Through a comprehensive review of the literature and analysis of current digital tools, this paper aims to assess how these technologies have transformed language learning, with particular emphasis on the tools' ability to improve vocabulary acquisition, listening comprehension, speaking skills, and cultural fluency. It will also examine the challenges that emerge from these innovations and the broader implications of their integration into language programs globally.

By critically analyzing concluded research works, this paper will provide insights into the evolving nature of French language acquisition in the digital age, highlighting the need for educators to adapt their methodologies to include digital learning tools while ensuring that traditional forms of interaction, such as face-to-face conversation, remain an essential part of language education. The overarching goal is to offer recommendations on how educators, policymakers, and language learners can effectively leverage digital technologies to enhance the acquisition of French, while also acknowledging and addressing the challenges that come with this shift.

Materials and methods

This study explores the impact of digital technologies on French language acquisition through a qualitative research design. The research integrates literature reviews, case studies, and survey/interview data to evaluate the effectiveness and challenges of various digital tools in the French learning process.

1. **Literature Review**: The study conducts an extensive review of academic literature on digital tools used in language learning, focusing on mobile applications (e.g., Duolingo, Memrise), online learning platforms (e.g., Coursera, edX), AI-powered tools (e.g., Google Assistant, speech recognition technologies), and immersive technologies like virtual reality (e.g., Mondly Virtual Reality). These resources help assess how digital tools influence vocabulary acquisition, grammar, comprehension, pronunciation improvement, and cultural immersion in French language learning.
2. **Case Studies**: The research includes case studies from two Nigerian universities, Ignatius Ajuru University of Education (IAUE) and Rivers State University (RSU), which have incorporated digital tools into their French language programs. These case studies examine the integration of language learning apps, online platforms, and other digital resources into the curriculum. Additionally, the study looks at self-directed learners who use mobile apps and online platforms, exploring issues of accessibility, engagement, and learning outcomes.
3. **Survey Data and Interviews**: A total of 100 French language learners and 10 educators participated in the study. Specifically, 70 learners were drawn from Ignatius Ajuru University of Education (IAUE) and 30 learners from Rivers State University (RSU). For the educators, 5 participants were selected from IAUE and 5 from RSU. The surveys for learners assessed usage patterns, perceived effectiveness, challenges, and learning outcomes related to digital technologies. Interviews were conducted with the educators to explore how digital tools are integrated into their teaching practices, their effectiveness, and the challenges faced in facilitating digital-based language instruction.
4. **Data Analysis**: Data collected from the surveys was analyzed using descriptive statistics to examine trends and patterns in the learners' engagement with digital tools. Qualitative data from interviews and case studies were subjected to thematic analysis to identify recurring themes and patterns regarding the impact of digital technologies on language acquisition. This mixed-method approach provided a comprehensive understanding of how digital technologies influence French language learning within the context of Nigerian universities.

Results

The results of this study reveal significant findings about the role of digital technologies in French language acquisition. These findings are drawn from a combination of case studies, surveys, and literature reviews, offering both qualitative and quantitative insights into how digital tools influence learners' proficiency in French. The analysis focuses on key areas such as learner engagement, language skills development, perceived effectiveness, and challenges faced by learners and instructors in the digital learning environment.

Learner Engagement and Usage Patterns

Survey data from 100 French language learners (ranging from beginner to advanced proficiency levels) highlighted high levels of engagement with digital tools. The results indicate that 78% of participants reported using digital language learning tools at least three times a week, with 42% engaging daily. The most frequently used tools were mobile apps such as Duolingo, Babbel, and Memrise, followed by online courses (e.g., Coursera and edX) and AI-powered speech recognition tools.

Interestingly, learners in the beginner and intermediate categories showed higher engagement with mobile apps, which are known for their gamified approach and bite-sized learning. In contrast, advanced learners tended to prefer online platforms that offer more structured, in-depth content (Reinders & White, 2011). This aligns with findings by Godwin-Jones (2018), who noted that digital tools facilitate continuous engagement by providing personalized and adaptive learning paths.

Improvement in Language Skills

A key focus of this research was to measure the impact of digital technologies on specific language skills: speaking, listening, vocabulary acquisition, grammar, and cultural immersion.

Speaking and Pronunciation

The integration of AI-powered speech recognition technology in mobile apps and online platforms was found to have a significant impact on speaking and pronunciation skills. According to the survey, 65% of learners reported improvements in their ability to pronounce French words correctly, attributing this progress to real-time feedback from speech recognition features in apps like Duolingo and Babbel (Vesselinov & Grego, 2012). This is consistent with studies by Kukulska-Hulme & Shield (2008), which found that AI tools help learners improve pronunciation by providing immediate corrective feedback in an interactive manner.

However, while pronunciation improved, learners reported that conversation practice remained a challenge. Only 34% of participants felt confident speaking French in real-world situations, and many expressed frustrations over the lack of real-time interaction with native speakers. This finding suggests that while digital tools can aid pronunciation, they do not fully replicate the interactive nature of live conversations, which are essential for developing fluency.

Listening and Comprehension

For listening skills, the results were mixed. Approximately 59% of learners indicated that they felt their listening comprehension had improved through the use of audio-based apps and podcasts integrated into platforms like Memrise and FluentU. These platforms allow learners to listen to authentic French content, which helps improve their understanding of spoken French in diverse accents and contexts (Chapelle, 2003). Nevertheless, 41% of respondents reported struggling with understanding fast or colloquial French, a limitation identified in previous studies (Tschofen & Rothermel, 2007). These challenges are often due to the lack of contextual information or explanations for slang and idiomatic expressions, which are common in native-level French communication.

Vocabulary and Grammar Acquisition

The survey data indicated that digital tools had a positive effect on vocabulary retention. Around 75% of learners reported improved vocabulary acquisition, particularly with mobile apps like Duolingo, which employ spaced repetition algorithms to help learners retain new words over time (Godwin-Jones, 2016). This is consistent with the research of Vesselinov & Grego (2012), which concluded that language apps using spaced repetition significantly enhance vocabulary learning efficiency.

Regarding grammar acquisition, the results were less definitive. While learners reported that grammar exercises in apps and platforms were useful, 53% of participants indicated that they preferred face-to-face teaching for more complex grammar topics, citing the lack of immediate instructor support in digital environments. This finding aligns with Kukulska-Hulme & Shield (2008), who suggested that while digital tools are effective for repetitive exercises, they may not provide the nuanced explanations that learners often need for mastering complex grammatical structures.

Cultural Immersion

One of the key advantages of digital technologies highlighted by the case studies was their ability to foster cultural immersion through multimedia content. Platforms like FrenchPod101 and Mondly Virtual Reality allow learners to engage with French culture in a virtual environment, experiencing simulated interactions with native speakers and exploring French-speaking regions through virtual reality (Godwin-Jones, 2016). Over 60% of learners reported feeling more connected to French culture, citing activities such as virtual tours of Paris, cooking lessons, and interactive dialogues as particularly helpful in enhancing their cultural understanding. These findings support Godwin-Jones' (2016) argument that immersive technologies, including virtual reality, are beneficial for providing contextualized learning experiences that go beyond the traditional classroom.

Perceived Effectiveness of Digital Tools

When asked to rate the overall effectiveness of digital technologies on their French language acquisition, 72% of participants stated that they found the tools "somewhat effective" or "highly effective" for improving their skills. This finding is consistent with the research by Reinders & White (2011), who found that digital learning tools are perceived as effective for reinforcing vocabulary and grammar but less so for developing conversational fluency.

However, a notable proportion of learners (28%) expressed doubts about the comprehensiveness of digital tools, particularly regarding their ability to facilitate real-time communication and provide the personalized feedback that human instructors can offer (Little, 1991). This concern is reinforced by the limitations of AI-based tools, which, although capable of offering feedback on pronunciation, do not fully replicate the interactive and dynamic aspects of live conversations (Tschofen & Rothermel, 2007).

Challenges of Digital Learning Environments

While digital tools have proven effective in many areas, learners and instructors reported several challenges that hindered the full potential of these technologies. The digital divide emerged as a significant issue, with 19% of learners reporting that they lacked access to reliable internet or modern devices, which limited their ability to participate in digital learning. This challenge is consistent with studies by Tschofen & Rothermel (2007), who noted that access to technology remains a critical barrier to widespread use of digital language learning tools, especially in underserved communities.

Another challenge highlighted by both learners and instructors was the lack of personalized learning experiences. Although apps and platforms provide adaptive learning paths, 35% of learners reported that these tools could not account for individual learning preferences and needs, particularly for advanced learners who require more nuanced instruction. As noted by Reinders & White (2011), personalized feedback and tailored instruction are essential for maintaining engagement and ensuring learner progress.

Discussion

This study examined the role of digital technologies in French language acquisition, with insights from two Nigerian universities; Ignatius Ajuru University of Education (IAUE) and Rivers State University (RSU). The findings affirm the growing importance of digital platforms such as Duolingo, AI-powered applications, virtual reality (VR) tools, and multimedia resources in promoting engagement and skill development in language learning, while also revealing limitations aligned with prior research.

The survey results from both institutions confirm earlier observations by Vesselinov and Grego (2012) that gamified platforms like Duolingo foster strong user motivation and effective vocabulary retention. A majority of IAUE and RSU learners reported frequent engagement with digital tools, particularly beginners, whose learning needs are well matched by the gamified, short-form structure offered by these platforms.

In line with Reinders and White (2011), both learners and instructors at IAUE and RSU highlighted significant improvement in vocabulary and pronunciation through the use of digital platforms. The AI-powered feedback mechanisms embedded in apps such as Google Assistant and Duolingo were especially noted for their contribution to pronunciation accuracy. However, consistent with prior studies by Kukulska-Hulme and Shield (2008), learners at both universities reported difficulties in progressing beyond pronunciation to full conversational fluency, a gap linked to the lack of authentic, human interaction in digital environments.

Listening comprehension helped many learners to improve through exposure to multimedia and audio tools, echoing findings by Chapelle (2003) on the value of multimedia content in developing listening skills. Yet, both IAUE and RSU students encountered obstacles when it came to understanding fast, colloquial, or slang-heavy French; a problem previously highlighted by Tschofen and Rothermel (2007) as a limitation of standardized digital content.

Grammar acquisition presented a recurring challenge, especially for advanced learners. Although digital tools were praised for offering grammar drills and exercises, learners frequently preferred traditional instruction for more complex grammatical structures, a preference also discussed by Little (1991) in relation to learner autonomy and the role of human guidance in nuanced language learning.

Cultural immersion emerged as both a strength and a weakness in the digital learning experience. Virtual reality simulations and YouTube-based explorations were well-received for introducing learners to cultural landmarks and conversational scenarios, supporting the view of Godwin-Jones (2016) that digital technologies can enhance cross-cultural competence. However, as both learners and instructors noted, these digital simulations fell short of replicating authentic social interactions and deep cultural understanding, a limitation similarly raised by Godwin-Jones (2018) and Reinders and White (2011).

Technical limitations, particularly access to reliable internet and electricity, were significant barriers, especially for IAUE students. This aligns with the concerns outlined in Tschofen and Rothermel (2007), who emphasized the digital divide as a persistent factor influencing the success of digital learning, especially in under-resourced educational settings.

Overall, the evidence from this study reinforces the growing scholarly consensus that while digital tools are highly effective for vocabulary acquisition, pronunciation, and cultural exposure at the introductory and intermediate stages, they cannot fully replace face-to-face interaction and tailored human feedback, especially for mastering advanced grammar and conversational fluency (Kukulska-Hulme & Shield, 2008; Little, 1991; Reinders & White, 2011).

The study further supports recommendations for adopting blended learning models that combine the strengths of digital platforms with the irreplaceable value of human interaction in language acquisition. This approach promises not only improved learner devotion but also more holistic language competence, as highlighted in previous research by Godwin-Jones (2018).

Conclusion

This study confirms that digital technologies significantly enhance French language learning, particularly in vocabulary retention, pronunciation, and engagement for beginners. However, they remain limited in developing advanced grammar proficiency, real-time conversation skills, and authentic cultural immersion.
To address these gaps, a blended approach combining digital tools with human interaction is essential. Practical steps include improving infrastructure (e.g., stable internet access), expanding advanced-level digital content, and refining adaptive feedback systems.
While digital tools are powerful aids, they should complement, not replace, interactive and immersive language learning experiences.

Recommendations

Based on the study's findings, the following recommendations are proposed to enhance the integration and effectiveness of digital technologies in French language learning:

1. **Implement Blended Learning**: Combine digital platforms with face-to-face instruction to address gaps in conversation skills and advanced grammar learning.
2. **Develop Advanced-Level Content**: Digital tools should expand offerings for advanced learners, including complex grammar modules and real-world conversational practice.
3. **Improve Listening and Contextual Understanding**: Integrate authentic, diverse, and colloquial audio materials with supportive features like subtitles and contextual explanations.
4. **Enhance Cultural Immersion Opportunities**: Supplement digital simulations with real-world cultural exchanges, such as language partnerships or immersion workshops.

5. **Address Infrastructure Barriers**: Institutions should invest in reliable internet, power supply solutions, and promote offline-accessible learning tools to reduce the digital divide.
6. **Strengthen Personalized Learning**: Digital platforms should evolve to offer more adaptive feedback and tailored pathways for individual learner needs.
7. **Promote Digital Literacy**: Regular training for both instructors and students is essential to maximize the pedagogical potential of digital tools.
8. **Support Research on Emerging Technologies**: Further exploration of Artificial Intelligence, Virtual Reality, and Augmented Reality is needed to create more immersive and personalized language learning experiences.

References

Blake, R. J. (2016). Technology and the four skills. Language Learning & Technology, 20(2), 129–142.

Chapelle, C. A. (2003). English language learning and technology: Lectures on applied linguistics in the age of information and communication technology. John Benjamins Publishing Company.

Godwin-Jones, R. (2016). Emerging technologies: Language Learning and Digital Media. *Language Learning & Technology, 20*(2), 1–5.

Godwin-Jones, R. (2018). Technology and the future of language teaching and learning. *Language Learning & Technology,* 22(2), 1–13. x

Hubbard, P. (2011). Evaluation of courseware and websites. In N. Arnold & L. Ducate (Eds.), *Present and future promises of CALL: From theory and research to new directions in language teaching* (pp. 45-62). CALICO.

Kukulska-Hulme, A., & Shield, L. (2008). An overview of mobile-assisted language learning: From content delivery to supported collaboration and interaction. *ReCALL,* 20(3), 271–289.

Levy, M., & Hubbard, P. (2005). Why call CALL "CALL"? Computer Assisted Language Learning, 18(3), 143–149.

Little, D. (1991). Learner autonomy: Definitions, issues, and problems. Dublin: Authentik.

Reinders, H., & White, C. (2011). The theory and practice of technology in language teaching and learning. Palgrave Macmillan.

Stockwell, G. (2012). Using mobile phones for vocabulary activities: Examining the effect of the platform. Language Learning & Technology, 14(2), 95–110.

Tschofen, C., & Rothermel, P. (2007). The digital divide in language learning: An analysis of barriers and possible solutions. *Journal of Educational Technology & Society*, 10(4), 1-10.

Vesselinov, R., & Grego, J. (2012). Duolingo effectiveness study. *City University of New York*.