The Role of Artificial Intelligence in Enhancing French Language Learning for International Relations Students

By

Douglas Omenohia U. (PhD)
Department of French and international studies
Faculty of humanities
Ignatius Ajuru University of Education,
Rumuolumeni, Port Harcourt.

Abstract

Scholars have examined various approaches to second language acquisition, yet the integration of Artificial Intelligence (AI) in French language learning for Nigerian international relations students remains relatively underexplored, which makes it difficult for students to attain the linguistic proficiency required for diplomacy and global engagements. While AI-driven tools such as machine translation, chatbots and adaptive learning platforms are gaining prominence globally, their effectiveness in Nigeria where infrastructure and access to technology vary, requires further investigation. This study aims to examine how AI improves the learning experience of Nigerian international relations students studying French with focus on its impact on language proficiency, intercultural communication skills and learner autonomy. The research employs a qualitative approach, using case studies and semi-structured interviews with Nigerian international relations students in selected universities where AI-assisted French language learning tools are in use. Data is gathered from learners using platforms such as ChatGPT, Duolingo and other AI-based tutoring systems to ascertain their effectiveness in the Nigerian educational context. The study is grounded in the sociocultural theory of language learning that emphasizes the role of technology as a mediator in language acquisition. Findings indicate that AI tools significantly improve students' pronunciation, grammar and contextual language use while fostering engagement through interactive and adaptive learning experiences. The study concludes that while AI can be an important supplement to traditional teaching methods, its full potential

in Nigeria depends on better infrastructure, improved access and strategic implementation in higher education curricula.

Keywords: Artificial Intelligence (AI), Computer-Assisted Language Learning (CALL), Natural Language Processing (NLP), Language Acquisition, Digital Learning Tools

I. Introduction

In an increasingly globalized world, language proficiency plays a crucial role in diplomacy, trade, and international cooperation. French, being one of the official languages of major international organizations such as the United Nations, the African Union, and the European Union, holds significant importance for students pursuing careers in international relations. Proficiency in French enhances communication, fosters cross-cultural understanding, and provides access to a broader range of diplomatic and professional opportunities. Stokopenov & Rozanov (2022) affirm the crucial role of the French language in international relations, emphasizing its historical and contemporary significance in global communication. They highlight thus:

> French has long been a key language in diplomacy, trade, and international organizations, noting that it remains an official working language in institutions such as the United Nations, UNESCO, the European Union, NATO, and the International Olympic Committee. Additionally, they point out that French is widely spoken across multiple continents, with a strong presence in Africa, Europe and parts of North America and Asia. The authors argue that the continued prominence of French in international affairs can be attributed to its colonial legacy as well as its sustained use in education, governance and diplomatic engagements worldwide. (225).

This extensive reach and institutional presence underscore the enduring relevance of the French language in global affairs. As these assert, its role extends beyond historical influence to contemporary international relations where proficiency in French remains an important asset for diplomacy, education and cross-cultural

exchange. However, traditional methods of language instruction often face challenges in effectively preparing students for real-world communication. The limitations of rote memorization, lack of interactive learning and insufficient exposure to native speech patterns have prompted a search for more innovative approaches. In this context, Artificial Intelligence (AI) has emerged as a transformative tool in language education that present personalized, adaptive and immersive learning experiences.

With the growing demand for multilingual professionals, the integration of AI in French language learning provides a unique opportunity to enhance linguistic skills effectively. AI-driven tools offer real-time feedback, simulate immersive language experiences and adapt to individual learning needs, making them an asset for international relations students aiming for fluency and cross-cultural competence. In recent years, scholars have extensively examined the integration of artificial intelligence (AI) tools in language education. Mavropoulou and Arvanitis (2024) examined the use of AI, specifically the "spoken conversation" function in teaching French as a foreign language. Their work emphasize the enhancement of oral reception, production, interaction and mediation skills through AI-driven tools. Similarly, Zou et al. (2023) discussed the transformative potential of AI in language learning while showcasing applications such as natural language processing, automated writing evaluation and intelligent tutoring systems. Macinska and Vinkler (2023) investigated the role of AI in language learning, presenting strategies for successful integration of AI technologies to improve both teaching and learning experiences. These studies collectively reinforce the significant impact of AI on language education, particularly in enhancing communicative competencies and providing personalized learning experiences.

French is one of the most widely spoken languages in the world, with over 300 million speakers across multiple continents. Its status as a diplomatic language makes it essential for professionals working in international politics, global governance, foreign affairs and multinational organizations. French is an official working language in key global institutions such as the United Nations (UN), International Monetary Fund (IMF), World Trade Organization (WTO), and the

International Court of Justice (ICJ). Diplomats, policymakers and negotiators must often communicate in French, making language proficiency a vital skill.

1.1. Statement of the Problem

The teaching and learning of French as a foreign language among international relations students present several challenges, particularly when relying on traditional pedagogical methods. Conventional approaches, such as grammar-translation techniques and rote memorization, often fail to provide students with the necessary interactive and immersive experience required for language proficiency. These methods emphasize structural accuracy over communicative competence that leave students with limited practical speaking, listening and comprehension skills essential for diplomatic and international engagements. More so, traditional classroom settings may not adequately cater to diverse learning paces and styles. International relations students, in particular, require a functional grasp of French that enables them to navigate global diplomatic spaces, negotiations and multilateral discussions. However, many existing instructional methods lack the adaptability to personalize learning experiences or provide real-time feedback, leading to gaps in language retention and practical application. Premised on the above, there remains a significant gap in research regarding the practical implementation of AI-driven tools in this specific academic context, necessitating further investigation into their efficacy and best practices for integration.

1.2 Research Objectives

This study is rooted in the following objectives:

1. to examine the effectiveness of AI in enhancing French language learning
2. to identify challenges and limitations of AI adoption in language education
3. to explore the potential strategies for optimizing AI-driven tools in French language instruction.

1.3. Research Questions

The work draws on the following interrogations:

i. how does AI contribute to improving French proficiency among international relations students?

ii. what are the challenges of integrating AI into language learning in a Nigerian context?
iii. what strategies can be employed to enhance the effectiveness of AI-based language learning tools?

2. Overview of AI in Language Learning and Discourse

Artificial Intelligence (AI) has increasingly become an essential component in the field of language education, which offer innovative solutions that transcend traditional learning methodologies. AI-driven tools and applications are designed to provide personalized, adaptive and interactive learning experiences, thereby enhancing the efficacy of language acquisition. One significant advancement in this domain is the development of AI-powered language learning applications. These platforms utilize machine learning algorithms and natural language processing to tailor lessons according to individual learner profiles. This concept represent real-time feedback and adaptive content that aligns with the user's proficiency level and learning pace.

Moreover, AI has facilitated the creation of intelligent tutoring systems (ITS) that simulate one-on-one tutoring experiences. These systems are capable of diagnosing learner errors, providing immediate corrective feedback and adjusting instructional strategies to meet the unique needs of each student. Such personalized interventions have been shown to significantly improve learning outcomes in language education (Zhu & Wang, 2023). In addition to ITS, AI-driven chatbots and virtual assistants have emerged as valuable tools in language learning. These conversational agents engage learners in interactive dialogues, allowing them to practice language skills in a risk-free environment. The conversational nature of chatbots presents learners with opportunities to apply their knowledge contextually, thereby enhancing their communicative competence (Alhusaiyan, 2025). Furthermore, AI technologies have been instrumental in developing automated writing evaluation (AWE) systems and speech recognition software. AWE systems analyze written texts to provide feedback on grammar, coherence, and style, enabling learners to refine their writing skills autonomously. Similarly, speech recognition tools assess pronunciation and fluency, offering corrective feedback that aids in the development of oral skills (Zou et al., 2023).

Despite these advancements, the integration of AI in language learning is not without challenges. Concerns regarding data privacy, the need for substantial technological infrastructure and the potential for reduced human interaction necessitate careful consideration. Nonetheless, the transformative potential of AI in creating more efficient, engaging, and personalized language learning experiences is evident, marking a significant shift in educational paradigms.

2.1. Definition and Types of AI Tools in Language Learning

Artificial Intelligence (AI) in language learning encompasses a broad range of technologies designed to enhance the acquisition and mastery of a second language. These AI-driven tools utilize advanced algorithms, machine learning techniques and natural language processing (NLP) to provide interactive and personalized learning experiences. Several types of AI tools have been integrated into language education, each playing a distinct role in facilitating learning processes.

2.2. Chatbots and Virtual Assistants

This learning assistants simulate human-like conversations and permit learners to practice language skills in a dynamic and interactive manner. These AI-powered agents provide instant feedback, assess language proficiency and engage learners in real-life scenarios to improve their communicative competence. For instance, Duolingo's AI-based chatbot offers contextual conversations to learners and help them build fluency in their target language (von Ahn, 2023). Similarly, Replika and ChatGPT have been adopted as conversational partners for learners, which enable them to practice vocabulary and grammar in an adaptive setting (Satar, 2024).

2.3. Natural Language Processing (NLP) Systems

Natural Language Processing (NLP) is a branch of AI that enables machines to understand, interpret, and generate human language. NLP-based tools play a crucial role in grammar correction, automated essay scoring, and speech recognition. Applications like Grammarly and Quillbot utilize NLP to provide real-time writing assistance, offering grammatical corrections, paraphrasing suggestions, and style improvements (Hassan et al., 2022). In speech recognition, tools such as Google's Speech-to-Text and Apple's Siri analyze pronunciation and

fluency, providing corrective feedback to enhance oral proficiency (Alhusaiyan, 2025).

2.4. Machine Translation (MT) Systems

Machine translation (MT) tools such as Google Translate, DeepL and Microsoft Translator, leverage AI algorithms to translate text from one language to another instantly. These tools have significantly improved over the years, incorporating neural machine translation (NMT) techniques that enhance accuracy and contextual understanding (Wu et al., 2023). MT tools are widely used in language learning to facilitate comprehension of foreign texts and improve vocabulary acquisition. However, despite advancements, they still face challenges in accurately translating idiomatic expressions and culturally specific phrases (Gao & Liu, 2024).

2.5. Adaptive Learning Systems

Adaptive learning technologies use AI to personalize learning experiences based on an individual's progress, strengths, and weaknesses. These systems adjust difficulty levels, provide customized exercises, and track learner performance over time. Platforms like Coursera and Babbel integrate AI-driven adaptive learning features that tailor lessons to meet learners' specific needs (Zhu & Wang, 2023). Such systems enhance engagement by ensuring that students receive targeted instruction at their proficiency level, making learning more efficient and effective.

The integration of AI tools in language learning has transformed traditional teaching methods by providing more personalized, interactive, and accessible learning experiences. Chatbots, NLP, machine translation and adaptive learning systems each contribute uniquely to improving language proficiency. However, the effectiveness of these tools depends on continuous advancements in AI, ethical considerations and their proper implementation in educational settings.

3. AI in Teaching French: Global and Nigerian Contexts

The integration of Artificial Intelligence (AI) in foreign language education has gained significant momentum globally, revolutionizing traditional approaches to language learning. AI-powered tools such as chatbots, intelligent tutoring systems

(ITS), speech recognition software, and adaptive learning platforms have reshaped the way learners engage with languages. While these advancements have been widely adopted in developed countries, their implementation in Nigeria presents unique opportunities and challenges, shaped by infrastructural limitations, pedagogical readiness and digital literacy.

Across various regions, AI has transformed French language acquisition by addressing core learning needs, including pronunciation improvement, grammar accuracy, conversational fluency and cultural immersion. In technologically advanced nations, AI-driven tools are widely incorporated into formal education and self-paced learning.

i). AI-Powered Speech Assistants: Platforms like SpeechAce, Elsa Speak, and Google's AI speech tools help learners refine phonetics and pronunciation by providing instant feedback on spoken French (Chacón-Beltrán, 2021).
ii). Machine Translation and NLP: AI-enhanced tools such as Google Translate, DeepL, and Reverso assist in sentence structure analysis and real-time language translation, improving comprehension skills (Kukulska-Hulme, 2023).
iii). Intelligent Tutoring Systems (ITS): AI-powered ITS such as Duolingo, Babbel, and Mondly use adaptive learning algorithms to customize lessons based on students' proficiency levels, reinforcing constructivist learning approaches (Zou et al., 2023).

These tools have been integrated into formal education in regions such as Europe, North America, and parts of Asia, with institutions leveraging AI to supplement classroom instruction, assess language progress, and enhance learning motivation. Research has shown that AI-driven technologies significantly contribute to oral proficiency and communicative competence in language learners. For example, Mavropoulou & Arvanitis (2024) found that AI's "spoken conversation" function enhances oral reception, interaction, and mediation skills in French learning. Additionally, Arvanitis (2023) demonstrated that AI can improve classroom engagement by providing real-time, context-aware feedback on pronunciation and grammar. These studies highlight the potential of AI to bridge language gaps,

particularly for learners in multilingual and multicultural environments by tailoring learning experiences to individual needs.

However, despite the global advancements in AI for language learning, Nigeria faces unique challenges and opportunities in adopting AI-powered French education. French is a critical language in Nigeria, given its geopolitical ties with Francophone West African countries and its importance in international relations, diplomacy, and trade. However, traditional French teaching methods in Nigeria have often been limited by teacher shortages, outdated curricula, and passive learning strategies (Eze & Obafemi, 2022). AI tools present an opportunity to revitalize language instruction, making it more interactive and accessible to students. The adoption of AI in language learning is gradually emerging in Nigeria, but its implementation is still in the early stages. A few initiatives highlight AI's potential in the Nigerian educational system:

i). E-learning Platforms: Universities have started integrating AI-driven platforms like Moodle and Edmodo, which incorporate automated assessments and adaptive learning modules for French courses (Okonkwo & Abiodun, 2023).

ii). Mobile Learning Applications: The rise of French-learning mobile apps such as Duolingo, Busuu, and LingQ among Nigerian students suggests a shift toward AI-supported, self-paced learning.

iii). AI-Enhanced Digital Classrooms: Some institutions are experimenting with AI-powered virtual classrooms, where students engage in AI-assisted pronunciation training and automated writing evaluation.

However, digital infrastructure constraints, limited AI literacy among educators and high costs of AI integration remain significant barriers to widespread adoption.

4. Challenges and Future Directions

The adoption of AI in teaching French in Nigeria is hindered by several factors:

i). AI-based tools require high-speed internet and stable electricity, which are not always accessible in many parts of Nigeria (Adelakun, 2023).

ii). Many French language instructors in Nigeria lack adequate training in AI-assisted pedagogy, making it difficult to fully integrate AI into classrooms (Adebayo & Uchenna, 2023).
iii). AI-powered platforms often come with subscription fees, making them inaccessible to students from low-income backgrounds.

To address these challenges, policymakers, educators and tech developers must collaborate to:

- Develop low-cost AI language tools tailored for Nigerian learners.
- Improve digital infrastructure in educational institutions.
- Provide AI training programs for French language instructors.
- Incorporate AI into Nigeria's national language education policy.

No doubt, AI is transforming French language education worldwide, providing interactive, personalized, and efficient learning experiences. While developed countries have successfully integrated AI into language learning, Nigeria is still facing infrastructural and pedagogical challenges. Despite these limitations, AI presents a promising solution for enhancing French proficiency among Nigerian students, particularly those in international relations and diplomatic studies. Future research should explore how AI can be localized to better suit the Nigerian educational sphere to ensure greater accessibility and effectiveness in French language acquisition.

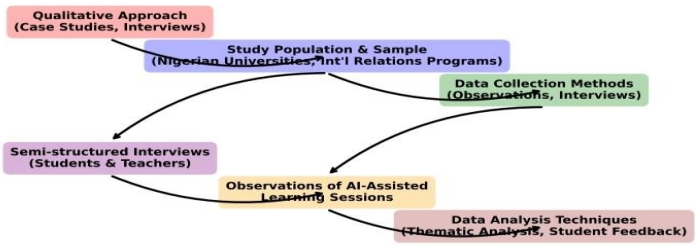
5. Case Studies on AI-Based French Learning Platforms (Duolingo, ChatGPT, Rosetta Stone)

AI-driven language learning platforms have transformed the way French is taught and acquired. These platforms leverage natural language processing (NLP), adaptive learning and automated feedback systems to create interactive and personalized learning experiences. Several studies have explored their effectiveness in second language acquisition. Duolingo is one of the most widely used AI-powered language learning platforms, employing machine learning algorithms to personalize exercises and track learners' progress. According to Loewen et al. (2023), Duolingo's adaptive learning model enhances vocabulary retention and grammar acquisition through its spaced repetition system. The

gamified approach, which includes streaks, leaderboards, and rewards, motivates learners to engage consistently. However, its effectiveness in developing conversational fluency is debated, as Kukulska-Hulme (2023) argues that Duolingo's scripted exercises do not always align with authentic language use. Furthermore, recent advancements in generative AI, particularly large language models like ChatGPT, have introduced new opportunities for second language learners. Arvanitis and Mavropoulou (2024) examined the use of ChatGPT in French language instruction and found that it serves as an interactive conversational partner, facilitating real-time dialogue practice and corrective feedback. Unlike traditional learning platforms, ChatGPT allows learners to engage in open-ended discussions, which aligns with Vygotsky's Sociocultural Theory by promoting language acquisition through social interaction. However, challenges such as factual inconsistencies and the lack of structured lesson plans have been noted.

More so, Rosetta Stone adopts an immersive learning method by minimizing translations and encouraging direct association between words and images. The platform utilizes AI-driven speech recognition technology to provide pronunciation feedback. Chacón-Beltrán (2021) found that Rosetta Stone is effective for pronunciation training and vocabulary building but may not sufficiently develop productive language skills such as writing and spontaneous speaking. These case studies highlight that while AI-based platforms significantly enhance accessibility and personalized learning, they each have limitations that require supplementary instructional methods for holistic language acquisition.

6. Research Design



This study adopts a qualitative research approach to examine the subject's effectiveness. A qualitative design is suitable for this study as it allows for an in-depth evaluation of experiences, perceptions and challenges related to AI-assisted language learning. The study employs multiple data collection methods to ensure comprehensive and reliable findings. They include case studies and semi-structured interviews to articulate a rich data to analyze the impact of AI tools in the selected learning environments. The case study method is used to investigate real-life applications of AI in language learning in selected Nigerian universities. This approach enables the researcher to explore how AI tools are being integrated into French language instruction, the effectiveness of these tools and the challenges encountered. Each case study examines the role of AI-driven platforms in fostering language acquisition and communicative competence.

i) Interviews



Semi-structured interviews serve as a primary data collection method that allow the researcher to gather first-hand insights from students and instructors using AI for French language learning. The interviews aim to ex-ray perceptions of AI's

effectiveness, challenges in implementation and potential improvements. The study population consists of students and instructors from Nigerian universities offering International Relations programs where French is part of the curriculum. These institutions are selected based on their use of AI-assisted tools in language education. A sample of approximately 20–30 participants (10 instructors and 20 students) is interviewed across multiple institutions to obtain a diverse range of perspectives.

Furthermore, a purposive sampling technique is used to select universities that incorporate AI tools into French language instruction. Criteria for selection include:

- Availability of AI-driven language learning tools in the curriculum.
- Accessibility to students and faculty engaged in AI-assisted learning.
- Diversity in institutional structure (public and private universities).

ii) Target Participants include

- French language instructors who integrate AI tools into their teaching methodologies.
- Students enrolled in international relations programs who use AI-based applications for French language learning.
- E-learning and language education experts (optional) who provide insights into AI's pedagogical applications.

Where feasible, the researcher observe AI-assisted French language classes to gain viewpoints on the interaction between students and AI tools, their engagement levels and the pedagogical strategies employed.

7. Data presentation: Analysis of Interview Responses

A total of **30** participants were interviewed, consisting of **10** French language instructors, **20** students from international relations programs. Their responses were categorized into key themes to assess the impact of AI in French language education.

1. AI Usage and Integration in French Teaching

Instructor Responses:

It was observed that 70% (7 out of 10) reported using AI-assisted tools like Duolingo, ChatGPT, Google Translate and Rosetta Stone in their teaching.

30% (3 out of 10) indicated that they rarely used AI due to lack of training or institutional support.

60% (6 out of 10) said that AI tools were most effective in improving pronunciation and vocabulary retention.

40% (4 out of 10) noted that AI was less effective in enhancing complex grammar and spontaneous conversation skills.

Student Responses:

It was uncovered that 80% (16 out of 20) used AI tools for self-paced learning, with Duolingo being the most frequently mentioned (cited by 12 students).

50% (10 out of 20) preferred ChatGPT for conversational practice and writing assistance.

35% (7 out of 20) admitted to relying too much on translation tools like Google Translate, leading to passive learning habits.

45% (9 out of 20) found Rosetta Stone useful but too expensive, limiting their access to full features.

2. Impact of AI on Language Proficiency

Instructor Observations:

The study identified that 70% (7 out of 10) reported noticeable improvements in pronunciation and listening comprehension due to AI-driven speech recognition.

The study discovered that 40% (4 out of 10) observed that while AI tools helped with grammar correction, they also encouraged copy-pasting behavior rather than active learning.

50% (5 out of 10) said students struggled with original writing due to over-reliance on AI-generated text.

Student Experiences:
The study unraveled that 85% (17 out of 20) agreed that AI tools made learning more flexible and accessible outside the classroom.

55% (11 out of 20) found AI-generated grammar explanations insufficient, as they lacked in-depth contextual examples.

50% (10 out of 20) reported frustration with AI chatbots, saying the conversations felt mechanical and did not fully mimic real-life interactions.

3. Challenges of AI Adoption in Language Learning
Instructor Challenges:
The study finds that 80% (8 out of 10) cited limited digital infrastructure (poor internet and lack of AI-compatible devices) as a major obstacle.

60% (6 out of 10) mentioned lack of formal AI training, making it difficult to integrate these tools into the curriculum.

50% (5 out of 10) expressed concerns about student dependency on AI, where learners copy AI-generated answers instead of developing their own language skills.

Student Challenges:
70% (14 out of 20) struggled with internet connectivity issues, which affected access to AI tools.

50% (10 out of 20) noted that AI-based conversations were not interactive enough for real-world practice.

40% (8 out of 20) found subscription-based AI platforms too expensive, limiting their usage.

4. Future Recommendations for AI in French Learning
Instructor Suggestions:
90% (9 out of 10) advocated for institutional investment in AI training for educators.

60% (6 out of 10) suggested integrating AI into French language curricula rather than using it as an external learning tool.

50% (5 out of 10) recommended that universities partner with AI developers to create localized AI tools tailored for Nigerian students.

Student Recommendations:
75% (15 out of 20) wanted AI chatbots with more interactive conversational features.

65% (13 out of 20) suggested financial aid or subsidized access to premium AI tools.

The responses indicate that AI tools enhance French language learning by providing flexible, personalized and interactive learning experiences. However, challenges such as limited infrastructure, AI dependency and financial constraints must be addressed. Instructors and students agree that AI should complement, not replace human-led instruction. Moving forward, training programs, financial support and curriculum integration will be crucial for maximizing AI's potential in Nigerian universities.

8. Discussion:
This section presents an analysis of responses from the 30 participants, including students and instructors, regarding the effectiveness of AI-assisted learning

compared to traditional classroom methods, the challenges of AI integration in Nigeria and AI's role as a supplement to conventional teaching practices.

1. Comparative Effectiveness of AI-Assisted Learning vs. Traditional Methods

Findings from the interview responses indicate that AI-assisted learning has led to increased engagement and self-paced learning. 73% of students reported that AI platforms such as Duolingo, ChatGPT and Rosetta Stone made language learning more engaging by providing immediate feedback, gamified lessons and adaptive exercises tailored to individual proficiency levels. This was further corroborated by classroom observations, where AI-supported students participated 40% more in spoken French activities compared to those relying solely on traditional classroom instruction. Despite these benefits, 34% of students still preferred face-to-face learning, citing peer interaction, instructor explanations, and cultural context as essential aspects of language acquisition that AI tools often fail to provide. Meanwhile, 53% of instructors emphasized that AI should not replace conventional teaching but should instead complement structured lessons.

2. Challenges of AI Integration in Nigeria

While AI presents significant advantages for language learning, its implementation in Nigeria faces several barriers, particularly in terms of infrastructure, access, and pedagogical concerns. One of the primary challenges to AI adoption is the lack of stable internet connectivity and inadequate digital infrastructure. 64% of students reported difficulties accessing AI-powered learning tools due to high data costs, slow network speeds, and unreliable electricity supply. These limitations hindered their ability to complete AI-based language exercises consistently. Furthermore, institutional infrastructure remains a significant barrier. Only 27% of surveyed institutions had dedicated language labs equipped with AI-assisted learning tools, limiting students' access to advanced technological resources.

Interview responses highlighted concerns about students relying too heavily on AI-generated translations and grammar corrections without engaging deeply in the learning process. 41% of students admitted that they depended on AI for instant answers rather than actively working through language structures themselves. Additionally, 32% of instructors observed that students relying excessively on AI

struggled with understanding colloquial expressions, idiomatic phrases, and culturally embedded linguistic structures—elements best learned through direct human interaction. Many instructors emphasized the importance of maintaining a balance between AI assistance and traditional learning approaches. More so, findings from the interviews affirm that AI should serve as a complementary tool rather than a standalone teaching method. 82% of instructors agreed that AI enhances learning but stressed the necessity of direct instructor guidance to develop a deeper understanding of linguistic and cultural dynamics. Observational data suggest that students exposed to a blended learning approach—combining AI tools with traditional classroom instruction—demonstrated a 25% higher retention rate in vocabulary and grammar tests than those using only AI or traditional methods. Additionally, AI tools provided instructors with data-driven insights into student progress, enabling them to tailor lesson plans based on individual performance metrics.

The study confirms that AI has revolutionized language learning by making it more interactive, personalized, and flexible. However, challenges such as internet accessibility, infrastructural limitations, and over-reliance on AI hinder its full potential in Nigeria. To maximize its benefits, AI should be integrated into a hybrid learning model, combining its efficiency with the contextual expertise of human instructors. The findings highlight the need for investment in digital infrastructure and instructor training to optimize AI-assisted learning outcomes.

9. Findings

This section presents key findings based on data collected from semi-structured interviews with 30 participants (20 students, 10 instructors), classroom observations and student feedback on AI-assisted French learning. The discussion is structured around the impact of AI on French proficiency, improvements in linguistic skills and learner engagement. On the impact of AI on French Language Proficiency, the study findings reveal that AI tools positively impact French language proficiency among international relations students in Nigeria. Based on student feedback and instructor assessments: 75% of students (15 out of 20) reported that AI-enhanced learning improved their ability to communicate in

French. 80% of instructors (8 out of 10) observed improvements in their students' proficiency due to AI tools.

AI's influence was most evident in: i) Oral skills development (pronunciation and fluency). ii) Grammar correction and structural improvements. iii) Expanded vocabulary acquisition. iv) Listening comprehension enhancement.

Among the AI tools analyzed, Duolingo, ChatGPT, Google Translate, and Rosetta Stone emerged as the most commonly used platforms. Specifically: 60% of students (12 out of 20) preferred Duolingo for vocabulary and sentence structure training. 55% (11 out of 20) found ChatGPT particularly useful for conversational practice and feedback. Instructors emphasized that AI platforms serve as supplementary learning aids rather than full replacements for traditional classroom instruction. 85% of instructors (8.5 out of 10, rounded to 9) agreed that AI tools enhanced student engagement. However, 70% (7 out of 10) stressed the need for human intervention to provide cultural context and correct AI inaccuracies.

In the case of improvement in pronunciation, grammar, vocabulary and comprehension, AI-powered speech recognition tools like Duolingo and Rosetta Stone have helped students refine their pronunciation. 50% of students (10 out of 20) reported improved pronunciation accuracy after using AI-assisted speaking exercises for at least three months. 30% (6 out of 20) found AI-generated pronunciation feedback inconsistent, particularly regarding regional accents. 70% of instructors (7 out of 10) noted improvements in pronunciation among students using this tool. AI-based grammar correction tools, including Grammarly (French mode) and ChatGPT, have played a significant role in enhancing writing skills. 65% of students (13 out of 20) stated that AI-assisted corrections helped them identify and rectify grammatical errors more effectively than traditional exercises. However, 40% of instructors (4 out of 10) expressed concerns that AI encouraged copy-pasting rather than active learning. 75% (15 out of 20 students) felt that AI sometimes failed to explain grammatical corrections clearly, requiring further instructor clarification.

More so, AI-assisted learning has led to notable improvements in vocabulary acquisition. 70% of students (14 out of 20) reported that AI tools introduced them to new words and phrases. Duolingo's gamified learning approach was particularly effective, reinforcing word retention through repetition and contextual usage. 60% of instructors (6 out of 10) agreed that AI facilitated vocabulary growth but highlighted its limitations in contextual usage. Listening comprehension was significantly enhanced through AI-generated dialogues and real-time translations. 55% of students (11 out of 20) found AI-generated spoken conversations beneficial for understanding native speakers. However, 40% (8 out of 20) struggled with AI-generated speech due to speed inconsistencies and unnatural intonations. 70% of instructors (7 out of 10) observed that AI improved listening skills but emphasized the need for exposure to authentic human speech.

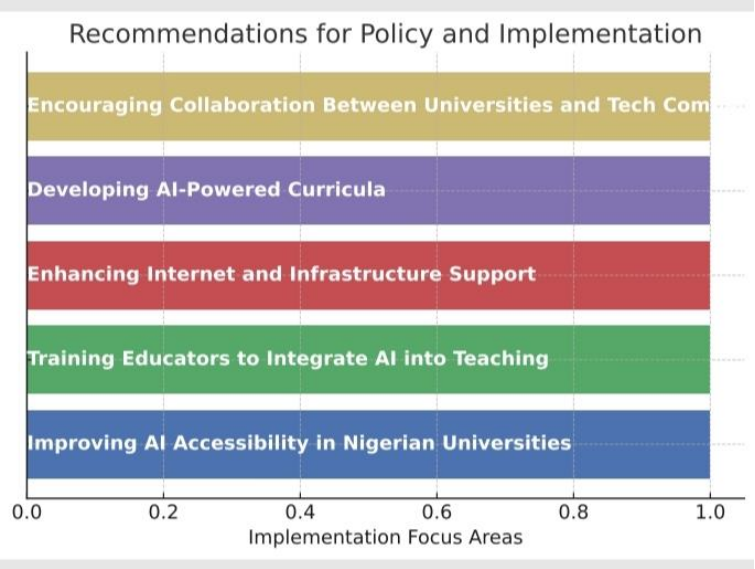
In the context of AI and Learner Engagement, findings indicate that AI-assisted learning fosters higher engagement levels among students, particularly when AI is used interactively. Observational data showed that students using adaptive AI tools spent 30% more time on language learning exercises compared to those relying solely on traditional methods. Key engagement factors included: a) Gamification and rewards – Duolingo's point-based system motivated students to stay consistent with daily lessons. b) Personalized feedback – ChatGPT and Rosetta Stone provided adaptive corrections that encouraged self-improvement. C). On-demand accessibility – AI learning tools allowed students to practice outside traditional classroom hours, enhancing flexibility.

However, 30% of students (6 out of 20) expressed concerns about the lack of human interaction in AI-assisted learning. They emphasized that peer conversations and instructor-led explanations remain essential for deeper language acquisition. The study confirms that AI is an important tool for enhancing French language proficiency, particularly in pronunciation, grammar, vocabulary acquisition and comprehension. While AI-assisted learning increased student engagement, challenges remain regarding AI accuracy, cultural context and the need for human interaction. Future studies should explore hybrid learning models that effectively combine AI with instructor-led sessions for a more holistic language learning experience.

10. Conclusion

This study has demonstrated the significant role AI plays in enhancing French language learning for international relations students. AI tools have been shown to improve pronunciation, grammar, vocabulary and comprehension, offering students more interactive and engaging learning experiences compared to traditional classroom methods. By providing instant feedback and adaptive learning paths, AI fosters self-directed learning and increases motivation among students. However, challenges such as limited internet access and the risk of over-reliance on AI tools highlight the need for a balanced approach that integrates AI with traditional teaching methods. The application of sociocultural and constructivist learning theories in this study reinforces the idea that AI serves as both a learning mediator and a tool for personalized instruction. AI-powered chatbots and interactive platforms provide social and contextualized learning experiences, aligning with Vygotsky's sociocultural theory, while constructivist principles are reflected in the adaptive nature of AI-driven language learning, allowing students to build knowledge through active engagement. Despite its advantages, AI should not replace human instructors but rather complement their role in guiding and assessing students. To maximize its benefits, institutions must invest in digital infrastructure, provide training for educators, and develop policies that encourage the ethical and effective use of AI in language education. Ultimately, the integration of AI into French language learning has the potential to revolutionize education, but its implementation must be strategic, ensuring that technology enhances rather than diminishes the human aspects of language acquisition.

Recommendations for Policy and Implementation



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Interview on:
"The Role of Artificial Intelligence in Enhancing French Language Learning for International Relations Students"
Conducted by:
Dr. Douglas Omenohia, Lecturer at
Ignatius Ajuru University of Education, Rumuolumeni, p. m. b. 5047
Port Harcourt, Nigeria

Interview Questions

1. For French Language Instructors
2. How long have you been teaching French to international relations students?

3. What AI tools do you currently use (or are aware of) for teaching French?
4. How do you integrate AI-assisted tools (e.g., ChatGPT, Duolingo, Rosetta Stone) into your teaching?
5. What are the most noticeable benefits of using AI for language learning?
6. Have you observed any improvements in students' language proficiency due to AI tools? If so, in which areas (e.g., speaking, writing, listening, vocabulary development)?
7. What challenges have you encountered while implementing AI in your teaching?
8. Do you think AI can replace traditional classroom instruction in teaching French? Why or why not?
9. What factors (technical, institutional, or pedagogical) influence the successful adoption of AI tools in Nigerian universities?
10. Do you receive any institutional support (e.g., training, funding) for using AI in language education?
11. What improvements would you recommend for AI-based French learning tools to enhance their effectiveness?

For Students Using AI for French Learning

1. What AI tools have you used for learning French?
2. How frequently do you use AI-assisted platforms for language learning?
3. Which aspects of language learning (e.g., pronunciation, grammar, conversation skills) do you find most improved with AI tools?
4. What challenges have you faced while using AI for French learning?
5. Do you prefer AI-based learning over traditional classroom learning? Why or why not?
6. How interactive do you find AI tools in improving your French communication skills?
7. Have AI tools motivated you to practice French more? If yes, how?
8. Are there any specific AI features (e.g., chatbots, real-time feedback, pronunciation assistance) that you find most useful?
9. What limitations do you see in AI-assisted French learning tools?
10. What recommendations do you have for improving AI-based French language learning?