Identifying the Effectiveness of Artificial Intelligence as a Transformative Tool for The Teaching, Learning and Assessment of The French Language

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Abstract
The rapid development of Artificial Intelligence (AI) has transformed educational practices by introducing innovative approaches to teaching, learning and assessment. In foreign language education, particularly French language studies, AI offers opportunities to improve instructional delivery, enhance students' linguistic competence and provide personalized learning experiences. This paper examines the effectiveness of artificial intelligence as a transformative tool for teaching, learning and assessing the French language. It explores the application of AI-powered chatbots, automated translation systems, speech recognition software, intelligent tutoring systems and adaptive learning platforms in French language education. However, challenges such as inadequate technological infrastructure, unreliable internet connectivity, limited digital literacy, financial constraints, data privacy concerns and overdependence on AI-generated responses may affect its effective implementation, particularly in Nigerian educational institutions. The paper concludes that artificial intelligence has considerable potential to transform French language education when appropriately integrated with effective teaching strategies and professional teacher guidance. It recommends investment in digital infrastructure, regular teacher training, responsible AI usage, curriculum integration and the development of appropriate assessment policies to maximise the benefits of artificial intelligence in French language education.

Keywords: *Artificial intelligence, French language education, teaching, learning, assessment, digital technology, communicative competence, educational innovation.*

1.0 Introduction

Education is undergoing significant transformation as a result of rapid technological advancement and the increasing application of digital tools in teaching and learning. Among these technological developments, Artificial Intelligence (AI) has emerged as an important innovation with the potential to improve instructional delivery, support individualised learning and enhance educational assessment. Artificial intelligence refers to computer systems and digital technologies designed to perform tasks that traditionally require human intelligence, including learning, reasoning, language processing, problem-solving and decision-making. In contemporary education, AI is increasingly being applied through intelligent tutoring systems, automated feedback applications, conversational chatbots, speech recognition technologies and adaptive

learning platforms. These applications provide opportunities for learners to interact with educational content, receive immediate feedback and develop knowledge at their individual learning pace. The application of AI is particularly relevant to foreign language education, where students require continuous exposure, regular practice and opportunities to develop listening, speaking, reading and writing skills. French language education, in particular, requires learners to acquire vocabulary, understand grammatical structures, develop accurate pronunciation and communicate effectively in different social and cultural contexts.

In Nigeria, French language education occupies an important position because of the country's geographical, diplomatic, educational and economic relationships with neighbouring Francophone countries. Proficiency in French provides opportunities for international communication, regional integration, employment, tourism, diplomacy and educational advancement. However, the teaching and learning of French in many Nigerian educational institutions continue to encounter challenges, including inadequate instructional materials, insufficient language laboratories, limited exposure to authentic French communication and low student motivation. In French language education, AI-powered platforms can provide students with opportunities to practise conversations, listen to French pronunciation, develop vocabulary and receive corrections on written assignments. Applications such as ChatGPT, Duolingo, Busuu and speech recognition technologies can complement classroom instruction by creating additional opportunities for language practice. The emergence of artificial intelligence offers opportunities to address some of these challenges by providing innovative and interactive learning environments. Through AI-powered applications, students can practise French conversations, receive grammatical corrections, improve pronunciation and access personalized learning materials.

Zawacki-Richter et al. (2019) examined the application of artificial intelligence in higher education and identified important areas such as student assessment, profiling, prediction, intelligent tutoring and adaptive systems. Their work provides a foundation for understanding the educational possibilities of AI, although it also highlights the need for greater attention to pedagogical and ethical considerations. Artificial intelligence can also transform the assessment of French language learning. Traditional assessment methods frequently depend on written examinations, classroom exercises and teacher-based evaluation. Although these methods remain important, they may not adequately capture students' speaking proficiency, pronunciation, listening comprehension and practical communication abilities. AI-supported assessment tools can provide immediate feedback, monitor learning progress and assist teachers in identifying students' strengths and weaknesses. However, the effectiveness of artificial intelligence in French language education depends on the availability of technological resources, teachers' digital competence, students' access to devices and the ability of educational institutions to establish appropriate policies.

Against this background, this paper examines the effectiveness of artificial intelligence as a transformative tool for teaching, learning and assessing the French language, with particular attention to its educational applications, benefits, challenges and implications for Nigerian educational institutions.

2.0 Statement of the Problem

The teaching, learning and assessment of French in Nigeria are affected by challenges such as inadequate instructional materials, limited language laboratory facilities, poor exposure to authentic communication and reliance on traditional teaching methods. These approaches often provide insufficient opportunities for practical language development, individualised instruction and effective assessment of students' communicative skills. Although artificial intelligence offers

opportunities for personalised learning, immediate feedback and continuous assessment, its effective use is limited by inadequate digital skills, ethical concerns and overdependence on AI-generated responses. The major problem is therefore the gap between the availability of AI technologies and their effective integration into French language education in Nigeria. This study seeks to examine how AI can improve students' linguistic competence, teachers' instructional effectiveness and assessment practices.

3.0 Literature Review

3.1 Concept of Artificial Intelligence in Education

Artificial Intelligence refers to the development of computer systems capable of performing tasks that ordinarily require human intelligence. These tasks include understanding language, recognising speech, analysing information, generating responses, solving problems and making predictions. In education, AI is used to support instructional delivery, personalise learning experiences, provide automated feedback, monitor student progress and facilitate assessment.

Zawacki-Richter et al. (2019) identify four major areas of AI application in higher education: profiling and prediction, assessment and evaluation, adaptive systems and intelligent tutoring systems. The emergence of generative AI has further expanded these applications. Tools such as ChatGPT can generate explanations, respond to questions, create exercises, simulate conversations and provide feedback on students' written work. UNESCO (2023) explains that generative AI has significant educational potential but requires responsible implementation to protect learners, promote educational equity and maintain the central role of teachers. In French language education, artificial intelligence can serve as an instructional assistant that complements teachers' efforts by providing students with additional opportunities for language practice and personalised learning.

3.1.2 Artificial Intelligence and the Teaching of French

Artificial intelligence can improve the teaching of French by providing teachers with innovative instructional resources and methods of presenting linguistic concepts.

Through AI-powered applications, teachers can prepare lesson notes, generate vocabulary exercises, create conversational activities, develop comprehension questions and design interactive classroom assignments.

For example, ChatGPT can assist teachers in developing French dialogues involving greetings, shopping, travelling, introducing oneself and discussing everyday activities.

AI applications can also help teachers explain grammatical structures, including verb conjugation, gender agreement, sentence construction and the use of tenses.

The major contributions of AI to French language teaching include:

1. **Lesson preparation:** AI can assist teachers in preparing lesson plans, instructional materials and classroom activities.
2. **Content generation:** Teachers can generate French reading passages, dialogues, vocabulary exercises and comprehension questions.
3. **Differentiated instruction**: AI can help teachers prepare learning materials appropriate for different levels of student proficiency.
4. **Interactive teaching:** AI-powered conversational systems can provide opportunities for classroom discussions and simulated conversations.

5. **Instructional feedback:** Teachers can use AI to identify common grammatical errors and provide explanations for students' mistakes.
6. **Teaching efficiency:** AI can reduce some repetitive instructional tasks, allowing teachers to devote more attention to classroom interaction and individual student support.

However, AI should complement rather than replace the professional judgement, cultural knowledge and instructional responsibilities of French language teachers.

3.1.3 Artificial Intelligence and the Learning of French

Artificial intelligence provides opportunities for students to take greater responsibility for their language development through personalised and interactive learning experiences.

Unlike conventional classroom instruction, where learning activities are often organised around a common timetable, AI-supported learning can allow students to practise French at different times and according to their individual learning needs. Kasneci et al. (2023) explain that large language models can support personalised learning, facilitate dialogue and provide assistance with writing and problem-solving.

In French language education, AI can improve learning in the following areas:

i. **Vocabulary Development:** AI applications can introduce learners to new French words, explain their meanings, provide examples and generate vocabulary exercises. Students can also request synonyms, antonyms and sentence examples to improve their understanding of French vocabulary.

ii. **Grammar Acquisition:** AI tools can explain French grammatical rules and identify errors in students' written expressions. Students can practise verb conjugation, articles, adjectives, pronouns and sentence construction through generated exercises.

iii. **Pronunciation Improvement:** Speech recognition and text-to-speech applications can help students listen to French pronunciation and practise speaking. These applications may provide feedback on pronunciation and identify areas that require improvement, although their accuracy varies.

iv. **Listening Comprehension:** AI-supported audio resources can provide French listening exercises, conversations and comprehension questions. Students can listen to different recordings and practise identifying words, expressions and meanings.

v. **Speaking and Oral Communication**: Conversational AI systems can simulate interactions between French speakers. Students can practise greetings, asking questions, responding to situations and participating in everyday conversations without necessarily requiring a human conversation partner.

vi. **Reading Comprehension:** AI can generate French reading passages suitable for different proficiency levels and provide explanations of unfamiliar vocabulary and expressions.

3.1.4 Artificial Intelligence and the Assessment of French Language

Assessment is an essential component of language education because it enables teachers to determine the extent to which students have achieved instructional objectives.

Artificial intelligence offers opportunities to improve assessment through automated marking, immediate feedback, performance monitoring and personalised evaluation.

Its applications in French language assessment include the following:

i. **Automated Assessment:** AI-supported systems can assist in assessing objective questions,

vocabulary exercises, grammatical activities and selected writing tasks. This can reduce teachers' repetitive marking responsibilities.

ii. **Pronunciation Assessment:** Speech recognition applications can analyse students' spoken French and provide feedback on pronunciation and speech patterns. However, automated scores should not be treated as complete measures of oral proficiency.

iii. **Writing Assessment:** AI writing assistants can identify grammatical mistakes, spelling errors, punctuation problems and weaknesses in sentence construction. Teachers can use the feedback to guide students' writing development.

iv. **Continuous Assessment:** AI systems can monitor students' performance over time, identify recurring errors and provide information that teachers can use when planning remedial instruction.

v. **Personalised Feedback:** Students can receive feedback based on their individual learning difficulties. This can help them understand their weaknesses and concentrate on areas requiring improvement.

3.1.5 Major Artificial Intelligence Tools for French Language Education

Several AI-powered applications can support the teaching and learning of French.

1. ChatGPT: ChatGPT can generate French dialogues, explain grammar, create vocabulary exercises, simulate conversations and provide feedback on written assignments.

2. Duolingo: Design Icons that Drive 20% More Installs: Why Mobile App Icon Design Is a Growth Lever in 2026 | DesignRush Duolingo uses adaptive learning features, interactive exercises and automated feedback to support vocabulary, grammar and language practice.

3. Busuu: Busuu provides structured French lessons, vocabulary activities, grammar exercises and opportunities for feedback.

4. DeepL: DeepL supports translation and comparison of French and other languages, helping learners examine sentence structures and expressions. Its translations should be checked for context and accuracy.

These applications can complement classroom instruction by providing additional opportunities for language practice. Their effectiveness depends on appropriate selection, students' proficiency levels and teachers' guidance.

3.1.6 Challenges of Using Artificial Intelligence in French Language Education in Nigeria

Despite its potential benefits, the effective application of artificial intelligence in French language education may be affected by several challenges.

1. Inadequate technological infrastructure: Many Nigerian educational institutions lack sufficient computers, functional language laboratories, projectors and reliable internet facilities.

2. Unreliable electricity supply: Frequent electricity interruptions may prevent teachers and students from accessing AI-powered learning platforms consistently.

3. Inadequate digital literacy: Some teachers and students may lack the technical knowledge required to use AI applications effectively.

4. Financial constraints: The cost of smartphones, computers, internet subscriptions and premium AI applications may restrict access, particularly among students from low-income backgrounds.

5. Inaccurate AI-generated responses: AI systems may sometimes provide incorrect grammatical explanations, inappropriate translations or misleading pronunciation guidance. Such errors can negatively affect language acquisition if they are not identified.

6. Overdependence on artificial intelligence: Students may become excessively dependent on AI-generated answers, thereby reducing their opportunities to develop independent thinking, writing and communication skills.
7. Data privacy and security: The use of AI applications may involve sharing personal information, written assignments, voice recordings and other student data. Educational institutions must therefore establish appropriate privacy safeguards.
8. Limited teacher preparedness: Some French language teachers may not have received sufficient training in AI-supported pedagogy and assessment.
9. Cultural and linguistic limitations: AI applications may not adequately capture the cultural nuances, idiomatic expressions and varieties of French used in different Francophone communities.
10. Academic integrity concerns: Students may submit AI-generated assignments as their original work, making it difficult for teachers to determine their actual level of linguistic competence. These challenges indicate that the successful adoption of AI requires adequate infrastructure, teacher preparation, ethical guidelines and continuous evaluation.

3.2 Theoretical Framework

This paper is anchored on three relevant educational theories: Constructivist Learning Theory, Sociocultural Theory and the Technology Acceptance Model.

3.2.1 Constructivist Learning Theory

Constructivist Learning Theory is associated with the works of Piaget (1952) and other educational theorists who explain that learners actively construct knowledge through experiences, exploration and interaction with their environment. The theory emphasises active participation, problem-solving, discovery and independent learning.
In French language education, artificial intelligence supports constructivist learning by providing students with opportunities to explore vocabulary, practise conversations, solve grammatical problems and develop written expressions independently. For example, students can interact with ChatGPT to practise French conversations, request explanations of unfamiliar expressions and receive corrections to their sentences.
The theory therefore provides a foundation for using AI to encourage active learning and student participation in French language classrooms.

3.2.2 Sociocultural Theory

Sociocultural Theory is associated with Vygotsky (1978), who emphasises the importance of social interaction, guidance and collaboration in learning. The theory explains that learning takes place through interaction with teachers, peers and other supportive resources.
Artificial intelligence can serve as an additional learning resource by providing conversational practice, explanations and immediate feedback. Students can interact with AI systems while also participating in teacher-guided and peer-based learning activities.
For example, French language learners can use conversational AI to practise dialogues before performing similar conversations with classmates. However, AI should not replace the social interaction and cultural experiences that are essential to language development.

3.2.3 Technology Acceptance Model (TAM)

The Technology Acceptance Model was developed by Davis (1989) to explain the factors influencing individuals' acceptance and use of technological systems.

The model identifies two major factors:

1. **Perceived usefulness:** The extent to which individuals believe that a technology will improve their performance.
2. **Perceived ease of use:** The extent to which individuals believe that using a technology will require little effort.

The model is relevant to AI-supported French language education because teachers and students are more likely to adopt AI applications when they consider them useful, accessible and easy to operate. For instance, students may be encouraged to use AI language applications when they observe improvements in vocabulary development, pronunciation, writing and communication.

The Technology Acceptance Model therefore provides a useful framework for understanding the factors that influence the successful adoption of artificial intelligence in Nigerian French language education.

3.3 Empirical Review of Recent Studies

Recent empirical studies and systematic reviews have increasingly examined the effectiveness of artificial intelligence in language teaching and learning.

Kasneci et al. (2023) examined the opportunities and challenges associated with large language models in education. Their work identified the potential of generative AI to support personalised learning, provide feedback, facilitate writing and encourage interactive learning. However, they also identified concerns relating to inaccurate information, bias, academic integrity and excessive dependence on AI. Their findings suggest that AI should be integrated into education through appropriate teacher supervision. Li et al. (2025) conducted a systematic review titled Two Years of Innovation: A Systematic Review of Empirical Generative AI Research in Language Learning and Teaching. The researchers analysed 144 peer-reviewed studies published between 2023 and 2024. Their findings identified six major areas of research, including learner perceptions, cognitive development, teaching strategies, language skills, writing and feedback, and technological integration. The study found that writing received considerably more research attention than speaking, listening and reading. It also identified the need for more research across different languages and educational contexts. Lee, Choe, Zou and Jeon (2025) examined the use of generative AI in language classrooms through a systematic review of 49 empirical studies published between January 2023 and December 2024. Their findings indicated that AI applications serve several educational functions, including feedback provision, tutoring, cognitive stimulation, interaction facilitation and conversational practice. The researchers also identified concerns involving academic integrity, content bias, feedback quality and data security. Their study supports the integration of AI into language education while emphasising the need for responsible implementation. Albedah (2025) examined artificial intelligence in language education through a systematic review of 161 studies published between 2015 and 2024. The study found that conversational agents, speech recognition systems and AI writing assistants can support language learning through pronunciation practice, immediate feedback and reduced learner anxiety. It also highlighted differences in the performance of AI systems across languages, particularly languages with limited digital resources. This finding is important for African educational institutions because it raises questions about equitable access and the representation of different languages in AI technologies.

4.0 Conclusion

Artificial intelligence has emerged as a significant technological innovation with the potential to transform the teaching, learning and assessment of the French language. Its application provides opportunities for improving instructional delivery, promoting personalised learning, developing students' linguistic competence and strengthening assessment practices.

The discussions in this paper demonstrate that AI can support French language teaching through lesson preparation, instructional material development, interactive classroom activities and differentiated instruction. It can also improve students' vocabulary, grammar, pronunciation, listening comprehension, speaking and writing skills through personalised exercises, conversational practice and immediate feedback. Furthermore, AI-supported assessment provides opportunities for automated marking, continuous assessment, pronunciation evaluation, writing correction and the monitoring of students' learning progress. These applications can assist teachers in identifying students' learning difficulties and providing appropriate instructional support. However, the effectiveness of artificial intelligence depends on appropriate implementation, technological infrastructure, teachers' digital competence and students' responsible use of AI applications. Challenges such as inadequate electricity, poor internet connectivity, financial constraints, inaccurate AI-generated responses, data privacy and overdependence on technology must be addressed. The paper therefore concludes that artificial intelligence should be regarded as a complementary educational resource rather than a replacement for French language teachers. Its effective integration into Nigerian educational institutions can promote more interactive, flexible, learner-centred and effective French language education. With adequate institutional support, teacher training and appropriate educational policies, AI can contribute significantly to improving the quality of French language teaching, learning and assessment in Nigeria.

5.0 Recommendations

Based on the discussions presented in this paper, the following recommendations are proposed:

1. Integration of AI into the French language curriculum: Nigerian educational institutions should incorporate appropriate AI-supported activities into French language teaching and learning programmes at secondary and tertiary levels.

2. Teacher professional development: Regular workshops, seminars and training programmes should be organised to equip French language teachers with the digital skills required to use AI applications effectively.

3. Provision of technological infrastructure: Government and school administrators should provide functional computers, language laboratories, internet facilities, projectors and other relevant digital resources.

4. Improvement of electricity and internet services: Educational institutions should be supported with reliable electricity and affordable internet connectivity to facilitate uninterrupted access to AI-powered learning platforms.

5. Promotion of personalised learning: French language teachers should encourage students to use AI applications for individual vocabulary practice, grammar exercises, pronunciation improvement and conversational activities.

6. Responsible use of AI in assessment: Teachers should use AI-supported assessment tools to complement traditional assessment methods while ensuring that students' actual linguistic abilities are independently evaluated.

7. Development of teachers' AI literacy: French language teachers should be trained to identify inaccurate AI-generated information, formulate effective prompts and evaluate the educational quality of AI-generated materials.

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References

Albedah, F. (2025). Artificial intelligence in language education: A systematic review of multilingual applications, large language models, and emerging challenges. Language Teaching Research Quarterly, 49, 247–268.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–340. https://doi.org/10.2307/249008

Kasneci, E., Sessler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Günnemann, S., Hüllermeier, E., Krusche, S., Kutyniok, G., Michaeli, T., Nerdel, C., Pfeffer, J., Poquet, O., Sailer, M., Schmidt, A., Seidel, T., ... Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. Learning and Individual Differences, 103, Article 102274. https://doi.org/10.1016/j.lindif.2023.102274

Le, H. Y. (2026). L'usage de l'IAG pour l'enseignement/apprentissage de la production écrite en FLE/FLS : Une revue de portée. NEXUS: Connecting Teaching Practice and Research, 6(1).

Lee, S., Choe, H., Zou, D., & Jeon, J. (2025). Generative AI (GenAI) in the language classroom: A systematic review. Interactive Learning Environments, 335–359. https://doi.org/10.1080/10494820.2025.2498537

Li, B., Tan, Y. L., Wang, C., & Lowell, V. (2025). Two years of innovation: A systematic review of empirical generative AI research in language learning and teaching. Computers and Education: Artificial Intelligence, 9, Article 100445. https://doi.org/10.1016/j.caeai.2025.100445

Miao, F., & Holmes, W. (2023). Guidance for generative AI in education and research. UNESCO.

Piaget, J. (1952). The origins of intelligence in children. International Universities Press.

UNESCO. (2023). Global education monitoring report 2023: Technology in education—A tool on whose terms? UNESCO. https://doi.org/10.54676/UZQV8501

UNESCO. (2023). Guidance for generative AI in education and research. UNESCO.

Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Harvard University Press.

Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education—Where are the educators? International Journal of Educational Technology in Higher Education, 16, Article 39. https://doi.org/10.1186/s41239-019-0171-0