

ARTIFICIAL INTELLIGENCE: THE EDUCATIONAL RELEVANCE IN THE TEACHING AND LEARNING OF FRENCH LANGUAGE IN THE 21ST CENTURY

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Abstract

This paper examines the transformative impact of Artificial Intelligence (AI) in educational settings, focusing on the necessity for AI literacy that is used to enhance critical thinking skills. The introduction of AI into education marks a significant departure from conventional teaching methods, offering personalised learning and support for diverse educational requirements, including students with special needs. It caters for comprehensive educator training and curriculum adaptation to align with societal structures. AI literacy is identified as crucial, encompassing an understanding of AI technologies and their broader societal impacts. The emergence of innovative technologies has an impact on the methods of teaching and learning. The rapid development of artificial intelligence (AI) technology in recent years, using AI in education has become more and more visible. This article examines the application of AI in the field of education, such as adaptive learning, teaching evaluation, virtual classroom, etc. And then analyses its impact on teaching and learning, which has a positive meaning for improving teachers' teaching level and students' learning quality. Artificial Intelligence's potential applications continue to expand as technology advances and new opportunities arise. The role of teachers is vital in leveraging AI effectively to promote holistic development in students and enhance learning outcomes. This paper examines the offer of artificial intelligence in foreign language education and more specifically in French language teaching. Based on insights from relevant studies, the study is trying to examine the effectiveness of artificial intelligence in enhancing foreign language skills.

Keywords: Artificial Intelligence, education, French Language, Learning Outcomes, Literacy

Introduction

In the world today, technology is rapidly evolving and affects nearly every facet of our daily lives, from the way we communicate, work, and learn, to the ways in which we entertain ourselves, manage our health, and interact with our environment. Chassignol et al (2018) explains that, the advent of innovative technologies has penetrated into our daily lives, especially since the outbreak of COVID 19, when individuals were forced to conduct their daily activities remotely from their homes. One of the areas that were greatly affected by this

development is education. Krystalui and Mavropoulou (2020) notes that during that time, a number of distance learning platforms (both synchronous and asynchronous) have been created or further developed. Likewise, within the realm of foreign language education, several self-paced language learning programs have been further developed.

According to Cui et al. (2019), the ability of a machine to imitate intelligent human behaviour is known as artificial intelligence (AI). Which is known as the science and engineering of creating intelligent machines, particularly

intelligent computer programs. AI is becoming a crucial component of contemporary educational system since it has the potential to improve teaching approaches, personalize learning experience and accelerate administrative processes. In actuality, artificial intelligence (AI) handles some of the most pressing issues like transforming methods of instruction and promoting the achievement. However, the quick advancement of technology always comes with hazards and difficulties. Therefore, with the development of global science and technology and advancement of digital technology, AI technology is continuously updated and widely used in various fields (Liang et al 2021).

It is an undisputable fact that AI has increasingly penetrated into the educational environment and teaching process going on in the schools. In the process of development, more and more people are paying attention to the importance of this technology in the field of education. Fu (2020) declares that AI has been widely used in the education field and has shown substantial application advantages, which has a profound impact on the teaching process and classroom management. AI can continuously optimize and improve the learning environment, stimulate the enthusiasm, initiative and creativity of students. Colchester (2017) explains that Artificial Intelligent tools and applications have grown increasingly sophisticated, making it viable to employ them both within and beyond the traditional classroom environment, spanning formal and informal settings, with the aim of enhancing student motivation. According to Eguchi and Okada (2018), it is highly important to note that foreign language learning software development is not merely a task

for developers or foreign language teachers, but it is a collaboration of both.

There is need for a smarter foreign language learning system which requires the collaboration of computer linguists, foreign language teachers, educators, psychologists, computer scientists, and interface designers. This will significantly improve the classroom management level of teachers and ensure that classroom management is more reasonable and efficient. Schmit and Strasser (2022) declare that with the rapid development of modern science and technology, AI technology is advancing. The research results in related fields have enabled AI to be further applied to the education field, and it has shown sound application effects, contributing to teaching reform. The application of AI in the field of education has realised the full integration of teaching and learning, this has provided an opportunity for the reform of teaching and learning. There has been a rapid growth in Artificial Intelligence in Education, due to the fact that it is an emerging field of educational technology.

The term AIED refers to the utilization of artificial intelligence technologies or software programs in the field of education, with the objective of providing assistance in teaching, learning and decision-making. In the evolving landscape of education, the integration of Artificial Intelligence represents a transformative shift that stipulates a new era in learning and teaching methodologies. The advent of AI in educational settings transcends mere technological advancement, reshaping the educational experience at its core. AI's role extends beyond traditional teaching methods; it offers personalised learning experiences and supporting a diverse range of educational needs. It

enhances educational processes; it develops essential skills such as computational and critical thinking and intricately linked to machine learning and educational robotics. Furthermore, AI has shown significant promise in providing timely interventions for students with special educational needs in order to enrich their learning experiences and daily life (Zawacki-Richter et al., 2019).

Integrating AI into education seems to have its challenges; however, it requires a systematic approach that takes into account societal structural conditions. Beyond algorithmic thinking, AI in education requires a focus on creativity and technology fluency to foster innovation and critical thought. This requires a paradigm shift in how education is approached in the AI era by moving beyond traditional methods to embrace more dynamic, interactive, and student-centered learning environments (Ghareeb, 2022). This paper is trying to explain the comprehensive exploration of AI's role in modern education; it underscores the need for an in-depth understanding of learning methodologies in the teaching and learning of French language. AI literacy involves critical thinking skills, examining its implications, challenges, and opportunities in shaping the future of education.

Crompton, (2022), explains that there are three prime skills necessary for the future of education in an AI-adopted world, these are learning skills, literacy skills and life skills. These are the skills that aid development in the use of artificial intelligence. Artificial Intelligence promotes the development of adaptive learning, in which data mining, intelligent teaching systems, learning analytics, and real-time analysis are applied in adaptive learning. An and

Xi (2020) note that, adaptive learning attempts to incorporate all aspects of testing, teaching, learning, and practice into the adaptive learning system to facilitate students' learning. The adaptive learning system can collect students learning behaviour data (Cui et al., 2019), plan the optimal learning path for students based on the analysis of student abilities. Therefore, complete the closed-loop learning process by pushing learning content as online teaching videos. There seems to be some problems that could be encountered and could be solved during and after class study; the human-computer interaction technology provided by AI could assist teachers in answering questions for students online (Goel & Polepeddi, 2016).

Importance of Artificial Intelligence in the Teaching and Learning of French Language

a) *Education as a field of experimentation*

Education has always been the testing ground for innovation. Artificial intelligence (AI) is a driving force in this present day. In the context of teaching French as a Foreign Language (FLE), the integration of AI offers revolutionary perspectives for making learning more effective, personalised and accessible. However, the emergence of certain tools like ChatGPT is controversial due to the misuse of some young students.

b) *Assignment Creation*

AI is used to generate ideas for assignments; based on student's interests or subject matter. An AI-powered tool could suggest different types of projects or assignments based on student's interest and how it relates to the topics covered in the course. This could help educators develop fresh and engaging ideas for assignments that are more likely to resonate with their

students; this would help them learn from the experience as the use artificial intelligence is introduced.

c) *Make Assignment Personal*

AI is used to develop assignments that are centered on the students. It aids them to write about their experiences in school. It encourages students to take an active role in their learning. The teachers should try to help them build their confidence and autonomy, which help the teacher to reduce students focus from relying on AI as a shortcut or a crutch.

d) *Student Performance Monitored*

Teachers should monitor students' performance to identify any instances of AI generated work. If students' performance suddenly improves dramatically, it could be as a result of using AI. Alternatively, if students writing style suddenly changes and their work become increasingly formulaic, it could be a sign that they are using AI to generate their content. These virtual entities can interact with students, answer their questions, and even simulate conversations in French. The AI therefore offers a virtual linguistic immersion which allows learners to perfect their mastery of French language in an interactive way.

e) *AI helps in explaining Students' Work*

Teachers should allow students to explain their work so as to help bring to light any instances of AI-generated content. If any student is unable to explain the concepts and ideas contained within their work, it could be a sign that they used AI alternatively, if students are able to explain their work in detail and demonstrate their deep understanding of the concepts, it is likely that the work would be original as AI might have helped in doing the work.

f) *Personalisation of learning*

One of the main contributions of AI in French Language Education teaching is its ability to offer personalised learning paths. AI-based systems are used to assess the skill level of each learner, identifying their strengths and weaknesses. Based on this data, tailor-made learning modules will be offered by teachers, allowing each student to progress at their own pace. Similarly, it helps to create assignments and create personalised learning experiences for students. AI algorithms analyses students learning style; their performances, and interests to provide customised study materials; exercises, and assessment recommendations. This approach helps students learn more efficiently and effectively, it enables instructors to tailor their teaching in order to meet individual student's needs. However, one should note that AI should not be used to complete students' assignments completely, as this would undermine the value of personalised learning.

g) *Automated correction*

AI is good at automatically correcting written exercises: natural language processing algorithms can evaluate grammar, syntax and vocabulary, providing accurate and instant feedback. This reduces the workload for teachers. It helps students to receive immediate feedback and driving continuous improvement.

h) *Artificial intelligence and adaptive learning*

AI-powered adaptive learning technologies are capable of providing instant feedback to learners, guiding them in a personalised way throughout their journey. Exercises and activities are adjusted in real time based on past performance, providing a highly individualised learning experience. Artificial intelligence could therefore

adapt French language teaching programs to the actual educational needs of students.

i) ***Accessibility and flexibility***

The integration of AI into FLE teaching makes learning the language more accessible especially for those who do not have access to traditional courses. Mobile apps, online platforms and AI tools enable learners to study anytime and anywhere, it eliminates geographical barriers.

j) ***Chatbots and virtual tutors***

Chatbots and virtual tutors have become tools used by many businesses from telephony to energy or real estate daily. Students are familiar with this technology which could also be integrated into the teaching of French Language Education. These virtual entities interact with students; it answers their questions and even simulates conversations in French. The AI therefore offers a virtual linguistic immersion which allows learners to perfect their mastery of French language in an interactive way.

k) ***Automated Grading***

AI has the ability to review students work. AI-powered systems could be used to evaluate students work such as essays, exams, and assignments. It provides feedback based on pre-determined criteria. This used to save instructors significant time and provide more consistent and objective grading. Furthermore, it is essential to note that AI could be used to grade students work, it should not be used to replace human grading entirely. Human oversight is still necessary to ensure accuracy and fairness under proper guidelines, AI would help lecturers' assignments which would be immensely helpful in evaluating classes that comprise large numbers of students.

l) ***Artificial Intelligence (AI) Detection***

However, it is important to note that while AI-powered detection tools can be helpful, they should not be relied on as the sole method for detecting AI written work. Unlike plagiarism, AI writing detection is not comparing the student's work to a database but rather looks for patterns in the grammar and structure. Some sites claim to be able to detect AI-generated content.

m) ***Plagiarism Detection***

The concern among educators is the issue of plagiarism and how it could be detected. This is a serious offense in academia; educators should ensure that their students are submitting original work. AI helps to be a valuable tool in detecting plagiarism, as it is used to analyse text and identify similarities between different pieces of writing. Different AI powered plagiarism detection tools could be available in the market, such as [Turnitin](#) and [Grammarly](#). These tools use algorithms to analyse text and identify potential instances of plagiarism. They compare students' work to a vast database of existing sources to determine whether it contains similarities or matches existing content.

n) ***Analysis of training data***

AI systems analyse large data sets to assess learning trends. This analysis allows FLE teachers to understand common blocking points; it adjusts study programs accordingly and identifies the most effective teaching strategies.

o) ***Pedagogical/ethical challenges and consideration***

There are challenges while using AI in FLE [teaching](#). Ethical issues such as the protection of students' privacy, the transparency of algorithms, and the management of sensitive data require

special attention. Moreover, it is essential to maintain a balance between technological innovation and the need for human interaction in the learning process. Indeed, the use of technologies such as Chat GPT gives students the opportunity to offload their work on writing, correcting, and learning French in general, thus allowing the AI to act in their place; practice which would undoubtedly hinder the students learning abilities, knowledge by making institutions and [language teachers](#) essential to effective pedagogy.

p) *Teaching Evaluation*

AI technologies such as image recognition, prediction system and computer vision provide convenience for teaching assessment. In the teaching process, the assessment of students is an essential part. In traditional teaching, it takes a long time for teachers to complete the assessment tasks, such as question preparation, scoring, performance evaluation, and test paper analysis. AI makes teaching evaluation methods more diverse, the evaluation process more scientific, and the evaluation results more accurate. AI technology not only can generate exam questions (Rahim, Aziz, Rauf, & Shamsudin, 2018), but automatically correct the assignments and test papers (Li et al., 2018). Correcting homework and test papers are routine tasks for teachers. Correcting time is long; teachers are prone to fatigue when correcting homework and test papers for a long time. Therefore, there will be some errors in correcting test papers after a long time. Image recognition technology helps teachers to free themselves from the heavy work of correcting homework; scoring (Li, Cao, & Lu, 2017), and the error rate is low.

q) *Authentic Learning*

An authentic learning model focuses on providing students with real-

world, practical experiences that connect with their interests and goals. AI should be an excellent tool to support this model by enhancing the learning experience and helping students apply knowledge meaningfully. The following are the useful models that aid authentic learning:

- 1) Identify relevant applications of AI: Start by identifying areas where AI has practical applications. For instance, AI can be used in healthcare to diagnose diseases, in finance to predict market trends, or in environmental science to analyze climate data. Choose a few areas that align with your student's interests, and use them as the basis for authentic learning experiences.
- 2) Incorporate AI into projects and assignments: Assign projects or assignments that require students to use AI to solve real-world problems. The teachers should aid students to develop an AI powered Chatbots to help patients with mental health concerns or create an AI model that predicts the likelihood of wildfires in a specific region. By incorporating AI into their work, students will gain practical skills and experience in using this technology.
- 3) Encourage collaboration: AI can be complex, and students may need to work in teams to develop and implement AI solutions. Encourage collaboration by assigning group projects or creating opportunities for students to work together. This can help them develop teamwork and communication skills while solving complex problems.
- 4) AI tools are used to support learning: There are many AI powered tools available that help learning. By using these tools, students can receive personalised support and feedback

that enhances their learning experience. Adaptive learning platforms use AI to personalise learning experiences based on students' needs and preferences. Language learning apps can use AI to provide instant feedback on pronunciation and grammar.

- 5) Provide guidance and support: AI could be a powerful, complex, and challenging tool to understand. It provides guidance and support to help students navigate this technology. This could include providing tutorials on using AI tools, offering opportunities for students to ask questions, and encouraging students to reflect on their experiences using AI.

By using AI with an authentic learning model, the teacher can help students develop practical skills and gain real-world experience that prepares them for success in the workforce. With careful planning and guidance, AI could be an excellent tool for enhancing the learning experience and helping students achieve their goals. AI seems to have become an integral part of our daily lives, often in ways we may not even realise. From the personalised recommendations we receive on streaming platforms to the voice-activated virtual assistants that help us manage our schedules, AI is everywhere. It's in our smartphones, our cars, our workplaces, and even our homes. It's shaping industries, driving innovation, and transforming the way we interact with the world. As AI continues to permeate every facet of our existence, a new form of literacy has emerged as a necessity. In an age where AI is not just a technological tool but a significant societal influencer, understanding AI goes beyond the realm of computer scientists and data analysts. It is now becoming increasingly crucial for

everyone. AI literacy is not about turning everyone into an AI specialist. Instead, it's about equipping individuals with the knowledge and skills to understand, use, and interact with AI responsibly and effectively. It's about enabling people to make informed decisions about AI technologies, understand their implications, and navigate the ethical considerations they present.

Conclusion

With the development of AI technology in the dynamic realm of artificial intelligence, it is imperative to undertake systematic evidence-based studies within the domain of foreign language pedagogy. This would aid in formulating empirically informed directives tailored for foreign language educators with limited prior experience. AI would be more and more used in the education field in the future. By analyzing the application of AI in education and the challenges faced by AI technology in education, people have an overall understanding of the situation of AI and education. These help teachers and students better to face by using AI technology in the teaching and learning process, improve teachers' teaching quality and students' learning methods, all these make students' learning styles more diversified and personalised. From the printing press to the internet, new technologies have transformed how people live, work, and learn. Technologically, change has been a constant throughout history, the emergence of AI is just the latest. AI is not disappearing, educators should adapt to this reality. Instead of fearing or resisting it, they should embrace AI's potential to improve the educational experience for students and teachers alike.

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