

EXPLORING THE APPLICATION OF GENERATIVE ARTIFICIAL INTELLIGENCE IN UNIVERSITY FRENCH TEACHING

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Abstract: This paper focuses on the teaching of French at the university level and explores the application of generative artificial intelligence (GAI) in various aspects of pedagogy, including classroom design, the creation of learning resources, grammar instruction, and interactive learning support. Using three representative platforms—ChatGPT (United States), Kimi (China), and Le Chat (France)—as case studies, the research systematically compares their models of application, advantages, and limitations in the context of university French instruction. A teaching experiment was conducted in the course “Public French as a Second Foreign Language” at a certain university. The experiment was supplemented by questionnaire surveys and statistical analysis via SPSS to compare the performance of students who used GAI platforms and those who did not in listening, speaking, reading, and writing. Results show that students who used generative AI exhibited significant improvements in both language proficiency and learning motivation. However, challenges persist in areas such as cultural depth, accuracy of generated content, and the need for teacher guidance. Based on these findings, this paper proposes strategies such as optimizing instructional design, enhancing teachers’ technological competence, and strengthening data privacy protection. It aims to provide evidence-based references and innovative approaches for reforming and improving university French teaching, thereby cultivating more competitive French language talents.

Keywords: Generative artificial intelligence; University French teaching; Application comparison; Teaching reform

1 INTRODUCTION

Against the backdrop of globalization and deepening digitalization, foreign language proficiency has become an essential component of higher education talent cultivation. As one of the six official languages of the United Nations, French holds an irreplaceable role in diplomacy, academic research, international cooperation, and cultural exchange. However, the current system of French language teaching in Chinese universities—especially for French as a second foreign language (L2)—faces multiple challenges. On one hand, instructional hours are limited, with most students only taking a few courses during their sophomore or junior years. On the other hand, there is a shortage of qualified teachers, making it difficult to meet the growing demand for cross-cultural communication and applied language training. Moreover, many students lack sufficient motivation, interest, and autonomy in learning, which leads to unsatisfactory outcomes. The question of how to improve students’ linguistic competence and intercultural communication skills under limited teaching conditions has become a pressing issue[1].

In recent years, the rapid development of artificial intelligence (AI) has opened new possibilities for language education reform. Generative Artificial Intelligence (GAI), in particular, with its powerful capabilities in natural language processing and text generation, can simulate authentic communication scenarios, produce personalized learning materials, and provide instant feedback, thereby compensating for the shortcomings of traditional pedagogical approaches. The emergence of large language model-based platforms such as ChatGPT, Kimi, and Le Chat has brought new technological support to higher foreign language education. Existing studies show that GAI has been applied in several key aspects of language learning: (1) generating comprehensible input to enhance learners’ understanding; (2) promoting language output through interactive simulations; and (3) providing instant feedback to correct errors, thereby improving learning effectiveness.

However, most existing research has focused on English, producing a rich body of findings, while studies on smaller languages such as French remain relatively scarce. Many of these studies are limited to theoretical discussions or case analyses, lacking systematic empirical validation[2]. Furthermore, platforms developed in different countries exhibit noticeable variations in corpus selection, language style, and cultural embedding. Whether these differences affect the effectiveness of French language teaching at the university level remains underexplored.

More importantly, the application of GAI has transcended the scope of classroom practice to become a matter of educational policy and national strategy. For instance, France’s 2024 AI Committee Report explicitly emphasized the integration of AI into education and included dedicated projects for digital and intelligent education under the “France 2030” national strategic plan. Similarly, the Chinese Ministry of Education’s 2024 policy guidance called for the exploration of new “AI + Foreign Language” models in higher education to enhance students’ cross-cultural communication and autonomous learning capabilities[3]. These developments suggest that countries worldwide regard the integration of generative AI into education as a crucial pathway toward modernizing higher education.

Based on this background, this study takes the “Public French as a Second Foreign Language” course at a Chinese university as its research site and selects three representative GAI platforms—ChatGPT (United States), Kimi (China), and Le Chat (France)—for comparative analysis. Through teaching experiments, questionnaires, and statistical methods, the study aims to answer the following questions:

1. Can generative artificial intelligence effectively improve university students’ French learning outcomes?
2. What similarities and differences exist among the three platforms in their application to French teaching?
3. What challenges and coping strategies do teachers and students encounter when using these tools?

2 LITERATURE REVIEW

2.1 Technological Evolution: From General Large Language Models to Education-Oriented Models

The development of generative artificial intelligence is closely tied to the progress of large language models (LLMs). From the release of GPT-3 in 2020 to GPT-4 in 2023 and GPT-4o in 2025, models have made remarkable advances in parameter scale, reasoning capability, and multimodal processing. Studies have demonstrated that innovations such as instruction tuning, reinforcement learning from human feedback (RLHF), and retrieval-augmented generation (RAG) have significantly improved the stability and efficiency of LLMs in educational settings.

Beyond OpenAI’s GPT series, numerous localized models have emerged worldwide. In China, for instance, platforms such as Kimi, ERNIE Bot, and Tongyi Qianwen emphasize multilingual support and adaptation for Chinese learners; in France, Le Chat and Mistral AI are built on native French corpora, reinforcing deep linguistic and cultural integration. These technological advances not only enhance the quality of language generation but also expand the possibilities for personalized and intelligent foreign language education.

In the field of language education, a transition is taking place from the use of general-purpose models to education-specific ones. Some research teams have attempted to fine-tune LLMs for educational purposes, developing AI systems tailored to foreign language learning[4]. For example, Chinese scholars have constructed a French essay evaluation system based on ChatGPT that provides multidimensional feedback at the syntactic, lexical, and discourse levels. Similarly, the French education sector is experimenting with Le Chat-based teaching platforms for classroom interaction and intercultural communication training. These explorations indicate that generative AI in language education is evolving from a supportive tool to an integrated pedagogical system.

2.2 Educational Applications: Second Language Acquisition Theory and Generative AI

Within the theoretical framework of second language acquisition (SLA), generative AI demonstrates distinctive pedagogical advantages. According to Krashen’s Input Hypothesis, language acquisition depends on the availability of comprehensible input. Generative AI can automatically generate reading materials and grammatical examples that align with learners’ proficiency levels, providing controlled and personalized input.

Long’s Interaction Hypothesis posits that language learning is facilitated through negotiation of meaning in communicative exchanges. AI-powered conversational systems can identify learners’ linguistic challenges in real time and suggest corrections or alternative phrasing, enabling progress through meaningful interaction[5]. For example, ChatGPT’s dialogue functions simulate everyday conversational contexts, Le Chat embeds French cultural elements in exchanges, and Kimi offers bilingual Chinese–French explanations to lower comprehension barriers. Empirical research supports these observations: Dupont’s study in French universities found that students using Le Chat improved significantly in fluency and cultural understanding, while Smith’s research showed that ChatGPT enhanced students’ lexical diversity and textual coherence in writing. These findings provide theoretical grounding for the empirical analysis of this study.

2.3 Advantages and Limitations of Generative AI in Foreign Language Teaching

Generative AI offers numerous advantages in foreign language education:

1. Personalized Learning Paths: AI can tailor learning tasks and feedback to each student’s level and needs, overcoming the limitations of one-size-fits-all instruction.
2. Multilingual Support: AI platforms typically support multiple languages, facilitating cross-linguistic learning—an especially valuable feature for students studying a second foreign language.
3. Increased Motivation: The interactive and engaging nature of AI enhances student interest and motivation.
4. Reduced Teacher Workload: AI can assist teachers in generating lesson plans, quizzes, and multimedia materials, allowing more time for in-class interaction and personalized guidance.

However, several limitations remain:

1. Accuracy Issues: AI-generated content sometimes contains grammatical or factual errors that require teacher verification.
2. Lack of Cultural Depth: Many platforms struggle to convey the nuanced cultural contexts of target languages.
3. Overdependence on AI: Excessive reliance on AI tools may weaken students’ autonomy and critical thinking.
4. Privacy and Ethical Risks: Data security and academic integrity remain concerns when students use online AI platforms.

2.4 Research Progress and Directions for Expansion

Existing studies on the application of generative AI in language education have achieved notable progress, particularly in high-resource languages such as English. However, research on smaller languages like French remains limited. Most current works are confined to theoretical exploration or individual case studies, lacking large-scale quantitative validation and cross-cultural comparative analysis. Furthermore, prior research often focuses on a single AI platform, leaving cross-platform differences underexplored.

2.5 International and Policy Context

At the macro level, the integration of generative AI into education has become a global policy priority. In 2024, the French Ministry of Education established the Artificial Intelligence in Education Committee, which called for the responsible use of AI in language teaching and highlighted its potential for lesser-taught languages[6]. The “France 2030” national strategic plan also listed digital education and AI innovation as key investment areas, encouraging universities to explore integrated “AI + Language Education” models. Likewise, China’s Ministry of Education issued policy guidelines in 2024 urging universities to apply AI in higher education and develop new AI-driven approaches for second foreign language teaching to address teacher shortages and low learner engagement[7]. These international and policy contexts underscore the strategic significance of applying generative AI to university-level French instruction. Based on the preceding review, this study aims to build upon existing findings by conducting a cross-platform empirical investigation of ChatGPT, Kimi, and Le Chat, comparing their effectiveness and differences in university French education and analyzing their respective advantages, limitations, and areas for improvement in specific instructional settings.

3 RESEARCH METHODS

3.1 Research Participants and Group Design

The research participants consisted of 158 first- and second-year undergraduate students enrolled in the “Public French (Second Foreign Language)” course during the 2023–2024 and 2024–2025 academic years at a comprehensive university. To ensure scientific validity and comparability, an experimental design with both an experimental group and a control group was adopted. The two groups showed no significant differences in gender or academic background[8]. The experimental group ($n = 40$) systematically used generative AI platforms—ChatGPT, Kimi, and Le Chat—throughout the course, while the control group ($n = 40$) continued with the traditional instructional model (teacher lectures plus textbook-based exercises).

3.2 Experimental Design

The instructional experiment followed a three-stage structure encompassing pre-class, in-class, and post-class learning activities.

3.2.1 Pre-class stage

Teachers used the three AI platforms to generate grammar explanations, listening exercises, reading comprehension materials, and writing samples. ChatGPT excelled at producing diverse resources efficiently; Kimi was best suited for generating grammar materials with Chinese explanations[9]; Le Chat specialized in producing culturally embedded content such as news summaries or excerpts from French literature. Teachers filtered and integrated the AI-generated resources to provide differentiated learning tasks for the experimental group.

3.2.2 In-class stage

Students used the AI platforms in several ways during class:

- Dialogue simulation: Students engaged in oral practice with ChatGPT or Le Chat, simulating authentic contexts such as shopping, booking tickets, or job interviews.
- Grammar instruction: Teachers demonstrated how ChatGPT and Kimi explained a given grammar point differently, prompting students to compare and evaluate the explanations.
- Cultural enrichment: Using Le Chat, teachers generated short texts on French history, geography, or customs to foster group discussions and enhance cultural awareness.

3.2.3 Post-class stage

Students completed two types of assignments:

- Writing tasks: Students wrote short essays of 80–100 words (e.g., “My Vacation”) and used ChatGPT or Kimi for feedback and revision.
- Self-study tasks: Students used Le Chat to explore French literary works, thereby cultivating cross-cultural reading competence.

3.3 Data Collection

To ensure comprehensive and reliable findings, both quantitative and qualitative data were collected.

- Language proficiency pre- and post-tests: Standardized formative and summative French assessments measured improvements in listening, speaking, reading, and writing skills.
- Questionnaire survey: A five-point Likert-scale questionnaire was designed, covering four dimensions—learning resources, interactivity, language generation quality, and overall satisfaction. The questionnaire contained 20 items, with key indicators including “richness of learning resources,” “smoothness of interactive experience,” “accuracy of generated content,” and “enhancement of learning motivation.”
- Interviews and classroom observations: After the experiment, semi-structured interviews were conducted with 10 students and 3 teachers to gather subjective feedback and experiences.

3.4 Data Analysis

Quantitative data were analyzed using SPSS 29.0 with the following procedures:

- Independent sample t-tests to compare performance differences between the experimental and control groups.
- Effect size (Cohen’s *d*) to measure the magnitude of observed differences.
- Reliability and validity analysis of the questionnaire, yielding a Cronbach’s α coefficient of 0.86 (indicating high internal consistency) and a KMO value of 0.79 (suitable for factor analysis).

Qualitative data were analyzed through thematic analysis summarizing recurring patterns in teachers’ and students’ experiences with the three AI platforms during the teaching process.

4 COMPARATIVE ANALYSIS OF THE THREE PLATFORMS IN FRENCH TEACHING

4.1 ChatGPT

ChatGPT, developed by OpenAI and launched in November 2022, is an AI-based conversational platform built on the GPT-3.5 architecture and trained on extensive multilingual text corpora. It supports conversation, translation, content generation, and even code debugging, becoming the fastest application in history to reach 100 million users. Its application in French language teaching can be summarized as follows.

4.1.1 Learning resource generation

ChatGPT can rapidly produce French exercises, reading passages, and grammar explanations at various difficulty levels. For instance, when teaching the imperative or subjunctive mood, a teacher may input “Generate 10 French sentences using the subjunctive mood,” and ChatGPT will instantly produce examples across diverse contexts, often accompanied by explanations. Compared with manual preparation, this greatly reduces teachers’ workload and preparation time[10].

4.1.2 Interactive simulation

ChatGPT’s dialogue feature provides students with a near-authentic conversational environment. When practicing speaking, learners can simulate real-life contexts such as ordering food, asking for directions, or job interviews. The AI provides immediate corrective feedback, allowing students to identify and correct grammatical or lexical errors in real time.

4.1.3 Writing support

In writing instruction, students use ChatGPT to receive guidance on paragraph structure, logical coherence, and lexical variety. Smith (2023) found that students who employed ChatGPT in writing tasks demonstrated significant improvements in vocabulary diversity and textual cohesion.

4.1.4 Strengths and limitations

ChatGPT’s primary advantages lie in the breadth of its linguistic resources, the fluency of its interactions, and its strong writing support. Trained on massive multilingual corpora, it generates diverse materials encompassing grammar, reading, and writing. Its swift response enables real-time alternative phrasing and corrective feedback, enhancing communicative efficiency[11]. In writing support, ChatGPT helps students improve organization, vocabulary choice, and coherence, thus elevating essay quality. However, limitations include occasional misuse of advanced grammar, superficial treatment of cultural context, and limited coherence in extended dialogues, sometimes leading to logical inconsistencies.

4.2 Kimi

Kimi is a Chinese generative AI platform focused on multilingual dialogue and content generation. Trained on extensive multilingual datasets, it performs well in cross-linguistic understanding and text production. Its integration with Chinese educational systems provides convenience for French learners in China. One of its design goals is to lower the cognitive barriers students face when using foreign-language tools.

4.2.1 Cross-linguistic explanation

When generating grammar explanations and exercises, Kimi frequently includes Chinese explanations. For example, in explaining the imperfect tense (*imparfait*), it not only provides French examples but also parallel Chinese interpretations. This is particularly valuable for learners of French as a second foreign language, enabling them to form clear interlingual connections.

4.2.2 Reduced cognitive load

Students often struggle with abstract grammatical concepts such as the subjunctive mood. Kimi simplifies explanations with concise bilingual annotations, reducing comprehension difficulty and alleviating learning anxiety.

4.2.3 Writing and translation support

In translation exercises, students can input a Chinese text, and Kimi generates the corresponding French translation with grammatical and lexical explanations. For instance, “I hope he can come tomorrow” is translated as “J’espère qu’il pourra venir demain,” followed by an explanation of modal and mood usage.

4.2.4 Strengths and limitations

Kimi’s strengths lie in its accessibility for Chinese learners. By providing Chinese explanations, it helps beginners quickly establish interlanguage correspondences and reduces cognitive load. Its detailed feedback in translation and writing assists comprehension of grammatical and lexical reasoning. However, Kimi’s accuracy declines with advanced grammar or literary texts. It lacks cultural depth, and its generated tasks are relatively uniform, with little focus on intercultural communication.

4.3 Le Chat

Le Chat is a French generative AI platform developed by Mistral AI and released in February 2024. Based on the Mistral Small and Mistral Large models, it relies primarily on French literary, journalistic, and educational corpora. Its distinctive features are cultural embeddedness and linguistic authenticity.

4.3.1 Cultural contextualization

When explaining grammar, Le Chat often references examples from French literature or news. For instance, in discussing relative clauses, it may quote sentences from Victor Hugo or Albert Camus. This approach helps students grasp grammatical structures within authentic cultural contexts.

4.3.2 Cross-cultural communication training

During conversational practice, Le Chat offers native-like expressions and culturally appropriate politeness formulas. For example, when asked to “simulate a café order dialogue in Paris,” it generates context-rich dialogues featuring authentic idiomatic expressions, which greatly benefit the development of intercultural competence.

4.3.3 Teacher support tool

Teachers can use Le Chat to generate short introductions to French society, history, or customs, enriching classroom content and enhancing cultural awareness.

4.3.4 Strengths and limitations

Le Chat’s major strengths are its linguistic authenticity and cultural integration. Drawing from native French corpora, it produces natural expressions aligned with real usage. Its contextualized grammar explanations, often linked to literature or current events, help students internalize language in meaningful contexts. It also enables teachers to efficiently generate culturally immersive materials. However, Le Chat has limited international reach and slower information updates. Its interface supports fewer languages, and some social or topical information may be outdated. Additionally, its support for academic writing is less comprehensive than that of ChatGPT.

4.4 Summary

In summary, the three platforms each exhibit distinct pedagogical advantages. ChatGPT excels in resource generation and writing support. Kimi is particularly suitable for beginners due to its bilingual explanations and reduced cognitive demands. Le Chat stands out for its strong cultural contextualization and authentic language expression. Teachers should flexibly integrate these platforms according to course objectives and learner proficiency levels. Combining their strengths can maximize teaching effectiveness and offer students a more comprehensive, engaging, and culturally enriched learning experience.

5 CHALLENGES IN APPLYING GENERATIVE ARTIFICIAL INTELLIGENCE TO UNIVERSITY FRENCH TEACHING

Although generative artificial intelligence demonstrates clear advantages in French language teaching, its implementation in practice faces multiple challenges. These challenges arise from technical, pedagogical, student-related, and ethical dimensions.

5.1 Technical Challenges

The accuracy of AI-generated content remains one of the most prominent technical issues. While platforms such as ChatGPT can quickly produce large volumes of text, they may still generate errors in advanced grammatical structures or highly specialized topics. For instance, when producing examples that contrast the subjunctive and conditional moods, AI systems may occasionally confuse voice or mood, which, if unchecked, could mislead students.

Another concern is the lag in knowledge updates. Because large language models rely on pre-trained corpora, their content may become outdated if the models are not refreshed regularly. For example, when addressing recent French social issues, the information generated by some platforms lags behind real-world developments.

In addition, platform stability and internet accessibility can influence teaching effectiveness. Some universities in China face unstable connections to overseas servers, limiting the use of ChatGPT, while domestic platforms such as Kimi, though more stable, still lack certain advanced functionalities.

5.2 Teacher-Related Challenges

Teachers' technical literacy and acceptance of AI tools play a crucial role in determining the effectiveness of GAI-assisted instruction. Some teachers remain skeptical, fearing that AI might weaken their classroom authority or instructional autonomy. Moreover, teachers who are unfamiliar with AI capabilities may misuse it as an "answer generator" rather than an "instructional assistant," preventing full pedagogical integration.

Another issue lies in the challenge of instructional design. Teachers must determine how to incorporate AI into limited class time without letting it overshadow human interaction. Achieving an appropriate balance between human and machine collaboration remains a pressing challenge. Some students directly submit AI-generated assignments without personal input, undermining their cognitive engagement and complicating evaluation processes. Additionally, several French instructors have expressed that "the pace of technological innovation far exceeds that of pedagogical adaptation," which limits their ability to integrate AI effectively even when they are willing to experiment. The questions of "how to use" and "when to use" AI thus remain key uncertainties for educators.

5.3 Student-Related Challenges

Students also face challenges when using generative AI tools. The most notable is overreliance. Some students depend entirely on AI-generated texts for writing tasks, neglecting independent thinking and creative expression. Over time, such dependency can erode their linguistic and critical abilities.

Learning anxiety presents another issue. While AI provides personalized feedback, some students feel pressured by the "ideal answers" produced by the system, fearing mistakes or constant comparison with AI's standard responses. This anxiety can reduce their confidence and willingness to communicate. In some cases, students develop excessive trust in AI outputs, assuming its suggestions are always correct, which discourages self-expression and hinders the internalization of language skills. Furthermore, digital inequality deserves attention: students with limited access to reliable devices or internet connections are disadvantaged in AI-assisted learning environments.

5.4 Ethical and Institutional Challenges

The integration of generative AI into education raises ethical concerns related to academic integrity and data privacy. Some students submit AI-generated essays or assignments without proper acknowledgment, violating principles of academic honesty. Moreover, the personal data and learning records entered into AI systems may be at risk of exposure or misuse.

Institutionally, most universities have yet to establish clear policies to regulate AI use in education. On one hand, strict prohibition could hinder technological innovation; on the other, a lack of regulation may lead to irresponsible use. Establishing clear ethical frameworks and operational guidelines is therefore essential to ensure responsible and sustainable adoption of AI in university-level French teaching.

6 DATA RESULTS AND ANALYSIS

6.1 Comparison of Student Performance

This study compared the learning outcomes of students who used generative AI platforms with those who did not, focusing on their performance in listening, speaking, reading, and writing. The results demonstrated that the introduction of generative AI significantly enhanced students' overall language proficiency.

Table 1 Comparison of French Learning Outcomes between Students with and without Generative AI Use (N = 158)

Learning Indicator	Without Generative AI (M ± SD) (M±SD)	With Generative AI (M±SD)	t value	p value
Listening Comprehension	72.5 ± 8.4	81.3 ± 7.2	3.12	0.003
Oral Expression	68.9 ± 7.9	79.7 ± 6.9	4.05	<0.001
Reading Comprehension	76.4 ± 8.2	85.6 ± 7.1	3.76	0.001
Writing Ability	65.2 ± 7.5	76.8 ± 7.4	4.22	<0.001
Overall Score	70.7 ± 6.8	80.6 ± 6.5	4.65	<0.001

As shown in Table 1, students in the experimental group outperformed the control group in all four dimensions of language competence. The most significant improvements appeared in writing ability and oral expression ($p < 0.001$), indicating that generative AI was particularly effective in enhancing students' productive skills. All Cohen's d values exceeded 0.8, signifying large effect sizes.

6.2 Student Satisfaction Survey

Table 2 Student Satisfaction with Different Generative AI Platforms (M $\pm$ SD)

Platform	Learning Resources	Interactivity	Language Generation Quality	Overall Satisfaction
ChatGPT	4.2 $\pm$ 0.6	4.0 $\pm$ 0.7	3.9 $\pm$ 0.8	4.0 $\pm$ 0.6
Kimi	3.8 $\pm$ 0.7	3.6 $\pm$ 0.8	3.7 $\pm$ 0.7	3.7 $\pm$ 0.7
Le Chat	4.1 $\pm$ 0.5	3.9 $\pm$ 0.6	4.5 $\pm$ 0.5	4.2 $\pm$ 0.5

Survey results revealed that students expressed generally high satisfaction with all three platforms, see Table 2. Le Chat scored highest in the authenticity and cultural relevance of language generation, ChatGPT was most favored for its diversity and richness of learning resources, and Kimi received positive feedback for its bilingual support and operational convenience. Overall, Le Chat achieved the highest ratings for language quality, ChatGPT excelled in resource generation, and Kimi performed well in learner accessibility though with room for improvement in interactivity.

6.3 Interviews and Classroom Observations

Qualitative findings from interviews and classroom observations corroborated the quantitative results. Students widely agreed that ChatGPT enhanced their writing competence, Kimi was particularly beneficial for beginners, and Le Chat improved their understanding of French culture. Several students reported that AI-generated feedback boosted their confidence. One student commented: “I used to feel discouraged about writing, but with ChatGPT’s suggestions and encouragement, I am now more willing to express myself.” These insights suggest that AI tools not only improve linguistic skills but also positively influence learners’ psychological engagement and self-efficacy.

6.4 Teacher and Student Satisfaction

The survey data showed that teachers and students both recognized the distinct advantages of the three platforms. Le Chat was rated highest for cultural relevance and authenticity; ChatGPT was valued for the richness of its resources; and Kimi was appreciated for its clear Chinese–French explanations suited to local learners. Many students reported that “Le Chat made them feel that what they learned was truly connected to French society,” while others referred to Kimi as a “starter’s companion.” Teachers acknowledged that AI-assisted teaching significantly reduced their preparation workload, though they emphasized the continued need for teacher-led lesson design and classroom control.

7 IMPLICATIONS

The findings of this study correspond with and extend existing domestic and international research. Smith (2023) demonstrated that ChatGPT effectively enhances vocabulary diversity and textual coherence in foreign language writing instruction. This is consistent with the significant improvement in writing scores observed among students in the experimental group of this study. Similarly, Dupont (2023) found that Le Chat played a unique role in improving students’ cultural understanding in French universities, and the present study further supports this conclusion through questionnaire and interview evidence. Unlike previous studies that primarily focused on English or a single platform, this research conducted a cross-platform comparison among ChatGPT, Kimi, and Le Chat, thereby providing new empirical evidence for the application of generative AI across multiple languages and cultural contexts.

The study’s findings also provide theoretical implications for second language acquisition (SLA). Results indicate that students using AI platforms achieved particularly notable improvements in both input and output abilities, aligning closely with Krashen’s Input Hypothesis, Swain’s Output Hypothesis, and Long’s Interaction Hypothesis. Generative AI not only provides learners with controlled and level-appropriate comprehensible input but also creates opportunities for authentic communicative output and immediate feedback during interaction. This continuous “input–output–interaction” cycle fosters meaning negotiation and linguistic refinement, positioning AI as an active and multifaceted facilitator within the SLA process.

From a pedagogical perspective, the integration of generative AI introduces both opportunities and challenges for teachers and students. Teachers’ roles are shifting from knowledge transmitters to learning facilitators and resource integrators. This transition requires educators to develop higher levels of digital literacy and instructional design competence to effectively employ AI as a supportive teaching tool. Meanwhile, AI offers students more personalized and flexible learning pathways but simultaneously places greater demands on their autonomy and critical thinking. Overreliance on AI-generated responses may hinder independent thought and creativity. Thus, achieving a balanced and ethical “human–AI collaboration” becomes a key concern for sustainable educational practice.

Notably, several institutions have already begun experimenting with such hybrid teaching models. At Sciences Po Paris, instructors have integrated Le Chat with traditional textbooks, resulting in higher student participation and improved comprehension of cultural context. Similarly, Harbin Institute of Technology in China introduced Kimi in second foreign language courses, where teachers observed more solid grammatical mastery but also noted cases of “translation dependence.” In Bordeaux, a group of educators jointly released a teaching guideline emphasizing that “AI should serve human learning rather than replace it.” These international practices collectively underscore that human–AI collaboration represents the central direction for the future of foreign language education.

Furthermore, this study highlights the need to address emerging challenges in the ethical and institutional dimensions of AI integration. Strengthening frameworks for academic integrity, data privacy, and educational equity is essential for the responsible use of AI in higher education. The observed cultural and linguistic differences among various platforms also suggest that blended or multi-platform approaches may offer the most comprehensive learning experience. By leveraging the complementary strengths of different AI systems, educators can provide students with more diverse, authentic, and culturally enriched opportunities for language learning.

Nevertheless, this research has certain limitations. The experimental sample size was relatively small and limited to a single institution, which restricts the generalizability of the findings. Additionally, the study duration covered only one semester, making it insufficient to assess the long-term impact of AI use on language acquisition. Subjective bias may also exist in questionnaire and interview responses. Future research should therefore expand the sample size, extend the observation period, and incorporate more diverse data collection methods to validate and refine the present findings. Despite these limitations, the results provide valuable insights for understanding the pedagogical potential and boundaries of generative AI in university-level French instruction.

8 CONCLUSION

Through empirical investigation, this study confirms that the application of generative artificial intelligence in university French teaching produces measurable and positive effects. However, several limitations must be acknowledged. First, the sample size was relatively small, encompassing only students from one university, which limits the generalizability of the results. Second, the research period was short, covering only one semester, making it difficult to assess the long-term effects of AI use on language acquisition. Third, questionnaire and interview data may carry subjective bias, as self-reported feedback cannot always reflect objective learning outcomes. These limitations indicate that future studies should adopt larger, longitudinal, and multi-institutional designs, incorporating diverse forms of data collection to validate and deepen the findings presented here.

The comparative analysis of the three platforms—ChatGPT, Kimi, and Le Chat—demonstrates that each possesses distinctive pedagogical advantages. ChatGPT performs best in generating learning resources and providing writing assistance; Kimi is most suitable for beginners, offering bilingual support and reducing cognitive barriers; and Le Chat excels in integrating authentic cultural and linguistic contexts. Despite these advantages, the implementation of generative AI in French teaching continues to face challenges at multiple levels, including technology, teacher readiness, learner autonomy, and educational ethics.

Future research and practice should explore multi-platform integration, intercultural competence development, and the establishment of ethical and regulatory frameworks for AI use in education. Generative artificial intelligence should not be regarded as a replacement for traditional teaching but rather as an extension and enhancement of it. Only through effective teacher guidance, pedagogical design, and institutional safeguards can AI's potential be fully realized to support intelligent, personalized, and internationalized French language education.

Ultimately, the integration of generative AI into higher education marks a transformative stage in foreign language pedagogy. By combining technological innovation with human-centered instruction, universities can foster a new model of language education that emphasizes efficiency, creativity, and cultural understanding. Such an approach will contribute to cultivating high-quality French language professionals equipped with global vision, intercultural communication competence, and innovative thinking—attributes essential for success in an increasingly interconnected world.

COMPETING INTERESTS

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