

Exploring the Empowerment of International Chinese Language Teachers through Large Language Models

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Abstract: Generative artificial intelligence, represented by large language models, holds vast application scenarios and significant development potential in the field of language teaching. This study employs large language models such as ChatGPT4o, ERNIE Bot, and Spark Cognition to explore how they empower teachers in international Chinese language teaching through practical cases. It focuses on various aspects of international Chinese language teaching and language skills training, examining the application effects of large language models in generating tailored teaching content and converting textual content into multimodal teaching materials. Finally, the study proposes that teachers should rationally recognize the opportunities and challenges that large language models bring to the teaching ecosystem, while acknowledging the models' efficiency in empowering teachers' instruction, it is crucial to fully recognize their essential tool nature, uphold teachers' subjectivity, and pay close attention to the boundaries of their development and application.

Keywords: Large language models; Empowerment; Teacher instruction

Online publication: July 31, 2025

1. Background

Generative artificial intelligence (GAI), exemplified by large language models (LLMs), possesses extensive application scenarios and immense developmental potential. As the “smart driver” leading the digital transformation of language education, artificial intelligence is increasingly impacting foreign language education and research. With rapid technological changes and advancements, we should embrace these new developments with an open mind, recognizing the challenges and opportunities they present to international Chinese language education. We should leverage these advancements, conduct rigorous research, and utilize new tools effectively to promote the digital transformation and high-quality development of international Chinese language education.

ChatGPT, a highly representative large language model in generative AI, has been widely acclaimed by educational researchers since its release in November 2022. “It is considered a ‘core foundation’ for intelligent

education, with the potential to empower teaching innovation and reshape the educational ecosystem,” according to the journal ^[1]. Scholars in the field of foreign language teaching have explored the application scenarios, efficacy, strategies, and ethical risks of AI in second language teaching, covering various languages such as English, Russian, Japanese, and courses like writing, reading, and speaking. Scholars in international Chinese language education are also actively exploring how to respond to these technological changes. In 2023, the journal *Language Teaching and Linguistic Studies* published 26 articles discussing “ChatGPT Arrives: New Opportunities and Challenges for International Chinese Language Education.” Current research in international Chinese language education primarily focuses on the macro-level impacts of AI technologies on the teaching ecosystem ^[2], with applications in teacher instruction and student learning ^[3], the digital literacy of teachers ^[4], classroom management and teaching administration ^[5]. This study aims to illustrate, through specific application cases, how LLMs empower international Chinese language teachers and the issues that should be addressed.

2. Practical exploration of LLMs empowering international Chinese language teaching

LLMs have demonstrated the capability to empower language teaching across multiple languages, various training content, and diverse proficiency levels. This study takes the teaching instruction of the comprehensive Chinese language textbook “Road to Success (Progress Level)” ^[6] as an example, summarizing the specific application scenarios and practical effects of generative AI from the perspectives of teaching content and skills training. “Road to Success (Progress)” is a widely adopted international Chinese language textbook, equivalent to the A1 level of the Common European Framework of Reference for Languages (CEF) or the Hanyu Shuiping Kaoshi (HSK) Level 4. This research primarily utilizes LLMs such as ChatGPT4o, ERNIE Bot, Spark Cognition, and their plugins.

2.1. Generating teaching content

Generally, the teaching content that teachers need to prepare before class includes basic components such as handling new words, introducing cultural backgrounds, or eliminating barriers to cross-cultural understanding, explaining and practicing important language points and expressions, guiding students to understand texts, and facilitating discussions. The following is a practical reflection on the utilization of LLMs for generating teaching content.

- (1) Practical reflection on utilizing LLMs in handling new words: LLMs enable the search, classification, pinyin annotation, translation, and provision of usage examples and discriminations for unfamiliar words. In terms of application effects, leveraging these models significantly enhances lesson preparation efficiency, facilitating the identification of new words, polyphones, homophones, and words of specific parts of speech within texts. It allows for the refinement of vocabulary lists, incorporating multilingual annotations, common collocations, adjusting the number of example sentences, or providing foreign language translations for those examples. It also facilitates advanced vocabulary learning tasks, such as vocabulary expansion, synonym discrimination, and meaning analysis. The generated outputs can be further edited in terms of formatting, item addition/deletion, or adjusting the difficulty level of example sentences. Both ERNIE Bot, ChatGPT-4, and Spark Cognition are capable of executing such tasks. However, even with identical prompts, variations emerge in the accuracy, formatting, and level of detail among the generated results. While the functionality and efficiency of LLMs far surpass electronic dictionaries or reference books, their authority and accuracy are inadequate, rendering their word

discriminations and categorization analyses merely as reference points.

- (2) Practice and reflection on cultural background introduction utilizing LLMs: LLMs can provide referential information on socio-cultural backgrounds. In terms of application effects, cultural backgrounds such as culinary culture, climate, and differences between Chinese and Western cultures presented in the texts can be comprehensively explained through LLMs and translated into various linguistic versions. Among these explanations, some are enlightening and of reference value, while others contain stereotypes or fabricated elements, which can only serve as a reference for teachers.
- (3) Practice and reflection on utilizing LLMs to explain language points: LLMs can simultaneously provide refined summaries and instructional schemes for language points, encompassing essential meanings, usage examples, sentence analysis, precautions, reinforcement exercises, and summaries. In terms of application effects, generally, if the language points, teaching targets, and example sentences presented in the texts can be clearly articulated, LLMs can generate comprehensive teaching reference materials and instructional plans that generally align with the receptive levels of students, including examples and exercises. Nonetheless, it is also necessary for teachers to further screen and modify these plans according to the actual conditions of their teaching targets.
- (4) Practice and reflection on utilizing LLMs to assess students' comprehension of text: By evaluating students' understanding of texts, teachers can tailor their instruction more effectively. LLMs can facilitate the design of exercises to assess text comprehension, encompassing pre-class preview questions, interactive questions during class lectures, and post-class exercises evaluating overall text comprehension. In terms of application effects, LLMs can generate questions according to text, accompanied by question intentions or reference answers. Teachers can supplement and modify these materials for assessing students' comprehension, which also aids in practicing key vocabulary and sentence patterns through answering questions. While the completion rate of designing text comprehension questions is quite high, the suggested words for summarizing text outlines are less satisfactory. Such tasks involve a degree of subjectivity, and LLMs are currently unable to accurately identify the key words that teachers consider instrumental in enhancing text summarization effectiveness.

2.2. Generating skills training content

Language skills are generally categorized into five types: listening, speaking, reading, writing, and translation. The following is a reflection on the practice of efficiently generating training content using LLMs.

- (1) Reading comprehension skills training: Reading comprehension is one of the core skills in language training. Despite the increasing abundance of reading materials, those that meet the specific requirements of reading training in terms of difficulty, length, themes, and genres, along with corresponding exercise design, still fall short of fulfilling the needs for targeted reading practice. LLMs excel in this aspect, demonstrating a high degree of completion in generating reading texts as per requirements. In terms of application effects, LLMs can create various forms of reading materials, including imitative writing based on textbook content, extended reading materials, as well as materials in the form of tables, dialogues, outlines, and more. In terms of application and practice, appropriate levels of difficulty and quantity of reading input are crucial for Chinese language learning. Utilizing LLMs allows for the rapid generation of reading materials tailored to students' Chinese proficiency levels or aligned with language and cultural teaching objectives. These models can impose constraints

on the themes, genres, difficulty levels, lengths, and linguistic styles of reading materials as needed. When generating reading comprehension questions, LLMs can produce exercises in multiple formats and with diverse assessment intentions in a single session. When adjusting the difficulty of reading materials, if the output results based on HSK levels are unsatisfactory, one can attempt to use the Common European Framework of Reference for Languages (CEF) levels corresponding to HSK. Furthermore, modifications can be requested based on the generated results.

- (2) Speaking training: The training of spoken language expression encompasses a series of issues such as oral communication demonstrations, scenario setting, and topic design. While spoken language expression appears flexible and casual, there are numerous fixed expressions that require extensive practice and accumulation. As foreigners, the specific scenarios and topics of spoken communication among international students differ from those in everyday Chinese conversations, and mere imitation of Chinese chat is insufficient. Additionally, new words and expressions are rapidly accepted, used, and disseminated in spoken communication, contributing to the varying degrees of inapplicability of spoken language textbooks. LLMs have the potential to address these shortcomings. In fact, LLMs have matured as technology that can serve as language partners, practicing spoken language with students and correcting pronunciation and expression errors, exemplified by plugins like iFLYTEK Spark, KIMI, Doubao, among others. This paper primarily focuses on practical explorations of how AI empowers teacher instruction, particularly on the application of LLMs to generate dialogue texts or topics for spoken language expression. In terms of application effects, LLMs can adapt texts into scripts or dialogues that maintain similar content but reflect the characteristics of spoken interactions among different personas, facilitating a more engaging practice and reinforcement of key vocabulary, sentence patterns, and other linguistic points. This approach also aids students in experiencing and mastering the nuances of spoken language expression. Furthermore, by omitting the latter half of a dialogue, LLMs can enable students to engage in “reading continuation speaking” exercises. The relevant expanded topics provided by LLMs are also of high reference value.
- (3) Listening training: LLMs can adapt reading materials into listening texts in the form of sentences, paragraphs, dialogues, etc., as per requirements. The specific approach is similar to generating reading materials, merely necessitating the formulation of corresponding format specifications for the listening texts. The design of listening questions by LLMs can also refer to the methods used in designing reading exercises, crafting exercises such as fill-in-the-blanks, multiple-choice, true-or-false, short-answer, and sequencing questions targeting specific information, main ideas, or the speaker’s identity, attitude, and intentions. The production of audio for listening can be accomplished using plugins that convert text into audio formats, allowing for customization of speech rate, volume, and voice timbre. Voice generation technology can produce voices of different ages and genders, while voice cloning technology can mimic an individual’s pronunciation characteristics. ChatGPT possesses video creation capabilities, and video generation and editing applications like CapCut can also produce videos, capable of generating audio from text or subtitles from audio, thereby facilitating audio-visual or audio-visual-oral training based on demand. In terms of application effects, utilizing LLMs and plugins to generate instructional materials in various modalities addresses the challenges of creating, updating, and modifying listening or audio-visual materials. However, there is still room for optimization in speech synthesis, as imperfections persist in areas such as sentence segmentation, polyphones, and erhua (a Chinese phonological phenomenon involving final rhymes). The technical threshold for

editing audio materials remains relatively high for some teachers.

- (4) Writing training: LLMs can generate model essays tailored to requirements, such as producing expositions, narratives, and argumentative essays on the same topic, which significantly aids international students in comparing and understanding different genres. They can also generate writing outlines for students to fill in with content. Furthermore, LLMs can produce writing materials and tasks in line with the “reading continuation writing” approach. For a specific topic, they can recommend commonly used words and expressions, thereby reducing the difficulty of writing or enabling more targeted assignment of writing tasks. Additionally, LLMs can generate images for students to complete writing tasks based on a single image or a series of images. Concurrently, LLMs possess robust essay evaluation capabilities, which can be utilized for students’ self-assessment and to assist teachers in revising essays and providing constructive feedback. In terms of application effects, LLMs demonstrate a high degree of completion in training writing skills, effectively enhancing teachers’ work efficiency. Nevertheless, writing is a highly creative and individualized skill, and while LLMs serve as a useful aid, the role of teachers remains indispensable, and their responsibilities cannot be overlooked.
- (5) Translation training: LLMs possess formidable multilingual translation capabilities, enabling the generation of translation tasks in various languages for international students from diverse countries. They can assist teachers in generating targeted translation tasks, reference answers, or model translations. LLMs can also produce translations in different linguistic styles, such as classical Chinese or modern Chinese, and showcase diverse translation strategies, including literal and free translations. Moreover, they facilitate efficient information retrieval for specific terms or related cultural backgrounds. Teachers have limited proficiency in or knowledge of foreign languages, and translation teaching materials for different languages are limited. Especially when facing the situation of mixed classes of international students from various countries, translation skills training is often difficult to carry out smoothly, which also leads to the fact that many teaching materials for Chinese international education do not contain special content of translation skills training. In terms of application effects, LLMs have effectively resolved these challenges by leveraging their robust foreign language capabilities to cater to students’ individual needs. They can generate translation materials tailored to scientific, business, and other specialized terminology, as well as current news, research reports, prose, poetry, proverbs, and more. Furthermore, LLMs aid teachers in designing translation exercises focusing on rhetoric and complex sentences, facilitating targeted training in translation skills between Chinese and students’ native languages.

3. Rational reflection on the application of GAI in international Chinese language teaching

International Chinese teachers can quickly grasp the skills of utilizing LLMs through short-term training or individual exploration. This is due to the fact that educational materials can be quickly generated through users’ use of natural language to dialogue or input instructions. GAI boasts remarkable capabilities in teaching text generation and the expansion of teaching modalities, offering high efficiency and quality. It can accurately control factors such as text length, difficulty, stylistic features, language style, and modality forms, thereby catering to individualized teaching needs. GAI holds vast potential for application in international Chinese language teaching, effectively enhancing the efficiency of curriculum development and design. Beyond the

scenarios discussed regarding GAI empowering international Chinese language teachers, educators can also leverage AI to compose syllabuses, lesson plans, and courseware (PPTs), efficiently assign pre- and post-class tasks, conduct intelligent evaluations, and perform smart analysis of test papers and results. This not only saves teachers considerable time and effort but also enriches the modalities of learning materials by harnessing multiple LLMs and their plugins or integrating them with other image, audio, and video production software, ultimately enhancing classroom teaching effectiveness and students' learning experiences. Teachers are encouraged to upgrade their digital literacy and actively explore and apply various GAI tools. Nevertheless, it is crucial for teachers to maintain a clear understanding that the purpose of using LLMs is not to create ever-more abundant teaching materials and modalities; rather, it is to fulfill teaching needs.

From the current technological standpoint, AI has demonstrated remarkable capabilities; however, teachers should not solely rely on LLMs for teaching. When employing LLMs, particular attention should be paid to the following three aspects:

- (1) Fully recognize the instrumental nature of GAI: While LLMs can significantly enhance teachers' efficiency, they are merely tools designed to assist in improving workflow. Teachers must be adept at using these tools while avoiding the so-called "tool trap." Facing a new thing, people often experience a process from skepticism, to eagerness to try, to proficiency through practice, and finally to rational understanding. Because most teachers believe that the application experience of LLMs is amazing, they should be more vigilant against excessive reliance on tools after mastering them. Although large language models have advantages in standardized language output, the emotional and cultural factors embodied in language are difficult for AI tools to accurately express or understand. Moreover, the actual process of language communication involves body language, facial expressions, as well as specific tones and rhetorical styles. As evident from the previous examples, while the language generated by LLMs meets the requirements and closely resembles natural language, issues such as material accumulation, information distortion, and inconsistencies in plotlines still exist. Even seemingly comprehensive and standardized language materials may not necessarily suit specific teaching objectives and target learners. Thus, we cannot fully rely on them. Furthermore, excessive reliance on tools can potentially lead to a loss of subjective initiative and a weakening of capabilities. LLMs can only play an auxiliary role in teaching. In the process of human-computer collaboration, humans are the users and controllers of the tools. The fundamental relationship between the two is one of service and being served. The role of tools is to enhance and highlight the abilities and functions of teachers. It is important to avoid weakening of teacher competencies, abdication of responsibility, or diminishment of value due to excessive tool usage.
- (2) Further leverage teachers' subjectivity: While LLMs can efficiently assist teachers in completing tasks, the role of teachers in teaching by words and deeds is irreplaceable, underscoring their core responsibilities and unique values. Teachers still play a leading role in setting and adjusting teaching objectives, verifying and assessing the rationality and pertinence of teaching materials, and evaluating the effectiveness of learning outcomes. Amidst the rapid proliferation of AI, teachers are confronted with heightened demands for insight, judgment, and communication skills, affording them time and energy to cultivate students' higher-order thinking abilities, such as independent thinking, comprehensive application, and innovation. Additionally, as teachers employ AI technologies, students also use LLMs, sometimes even surpassing teachers in their ability to adopt and apply new technologies. In such scenarios, teachers must enhance their learning capabilities, guide international

students in appropriately using LLMs, and instill in them a sense of responsibility, judgment, ethics, and independence.

- (3) Heightened attention to the boundaries of LLM development and application: In an era of rapid technological integration and innovation, LLMs will undoubtedly exert extensive and profound impacts on empowering teacher development, enhancing teaching quality, and promoting educational equity. Teachers must confront these challenges and elevate their digital literacy. Simultaneously, AI still has vulnerabilities in values, ethics, information security, and academic integrity, which may persist alongside technological advancements. Teachers must keep pace with the times while remaining vigilant, leading by example, and recognizing the limitations of LLMs with rationality. Consequently, teachers should voluntarily participate in assessing the reliability and validity of LLMs, engage in human-machine interactions, timely share experiences using LLMs, closely monitor students' AI usage, and contribute to the optimization and iteration of LLMs. Educational authorities should also strengthen top-level design, integrate educational resources, provide equipment and technical support, regularly conduct training and evaluations, establish oversight mechanisms to promptly assess and mitigate potential risks, reasonably manage the application of LLMs in schools, steadily advance their empowerment of teachers, and ensure the healthy development of the teaching ecosystem.

Disclosure statement

The authors declare no conflict of interest.

References

- [1] Xia L, 2023, Multiple Changes in Education Brought by ChatGPT. *Journal of the National Academy of Education Administration*, 2023: 9–12.
- [2] Yang Z, Wang J, Wu D, et al., 2023, Exploring the Impact of ChatGPT/AIGC on Education and Strategies for Response. *Journal of East China Normal University (Educational Sciences)*, 2023: 26–35.
- [3] Cui X, 2024, Artificial Intelligence: Opportunities and Challenges in Language Teaching. *Journal of the TCSOL Studies*, 2024: 20–29.
- [4] Xiang Y, Zhao X, 2024, Strategic Adjustments for International Chinese Teacher in Response to ChatGPT. *Journal of Zhejiang University of Science and Technology*, 2024: 142–150.
- [5] Kong L, 2024, Application of GAI in Foreign Language Teaching: A Case Study. *Journal of Foreign Language Education in China*, 2024: 11–18.
- [6] Mou S, 2008, *Road to Success (Intermediate Level 1)*, Beijing Language and Culture University Press, Beijing.

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