



CHATBOTS AS A PEDAGOGICAL TOOL FOR DEVELOPING TRANSLATION COMPETENCIES IN STUDENTS: CASE OF CHINESE UNIVERSITIES

LOS CHATBOTS COMO HERRAMIENTA PEDAGÓGICA PARA EL DESARROLLO DE COMPETENCIAS DE TRADUCCIÓN EN ESTUDIANTES: EL CASO DE LAS UNIVERSIDADES CHINAS

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ABSTRACT

This study examines the pedagogical potential of chatbot technology for teaching written translation in universities of the People's Republic of China. The purpose of the research was to analyze how chatbots are used in translation instruction, identify their methodological possibilities, and evaluate the challenges associated with integrating artificial intelligence tools into university-level translation education. The study is based on theoretical analysis of Chinese and international literature, examination of regulatory documents on AI implementation in higher education, and a review of pedagogical practices involving chatbots in foreign language and translation training. The results show that chatbots offer several educational benefits: they support glossary creation, rapid lexical search, preliminary text drafting, grammar and style checking, and corrective feedback. These functions help students accelerate translation tasks and strengthen basic linguistic competencies. However, the findings also indicate notable limitations, including the generation of unreliable information, insufficient handling of cultural nuances, and the inability of chatbots to fully perform specialized translation tasks. The study concludes that while chatbots cannot replace professional translators or traditional teaching

methods, they represent a valuable supplemental tool, particularly for novice learners. Their effectiveness increases when combined with teacher guidance and thoughtfully designed translation training activities.

Keywords:

Education, language learning, translation education, artificial intelligence.

RESUMEN

Este estudio examina el potencial pedagógico de la tecnología de chatbots para la enseñanza de la traducción escrita en universidades de la República Popular China. El objetivo de la investigación fue analizar cómo se utilizan los chatbots en la enseñanza de la traducción, identificar sus posibilidades metodológicas y evaluar los retos asociados a la integración de herramientas de inteligencia artificial en la formación universitaria en traducción. El estudio se basa en el análisis teórico de la literatura china e internacional, el examen de documentos normativos sobre la implementación de la IA en la educación superior y una revisión de las prácticas pedagógicas que involucran chatbots en la formación en lenguas extranjeras y traducción. Los resultados muestran que los chatbots ofrecen



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diversas ventajas educativas: facilitan la creación de glosarios, la búsqueda léxica rápida, la redacción preliminar de textos, la revisión gramatical y estilística, y la retroalimentación correctiva. Estas funciones ayudan a los estudiantes a agilizar las tareas de traducción y a fortalecer sus competencias lingüísticas básicas. Sin embargo, los hallazgos también indican limitaciones importantes, como la generación de información poco fiable, el manejo insuficiente de los matices culturales y la incapacidad de los chatbots para realizar plenamente tareas de traducción especializadas. El estudio concluye que, si bien los chatbots no pueden reemplazar a los traductores profesionales ni los métodos de enseñanza tradicionales, constituyen una valiosa herramienta complementaria, sobre todo para quienes se inician en el aprendizaje de la traducción. Su eficacia aumenta al combinarse con la orientación del profesor y actividades de formación en traducción cuidadosamente diseñadas.

Palabras clave:

Educación, aprendizaje de idiomas, enseñanza de la traducción, inteligencia artificial.

INTRODUCTION

Translation teaching is a fundamental component in the formation of language professionals, as it requires the development of complex linguistic, cognitive, and cultural competencies. Traditionally, translation pedagogy has relied on classroom-based instruction, textbook exercises, and guided practice under the supervision of an instructor. These conventional methods, while effective in transmitting theoretical knowledge, often present limitations in terms of personalized practice, immediate feedback, and opportunities for autonomous skill development. Students may struggle to apply theoretical concepts to authentic translation tasks or to engage actively in real-time communicative scenarios.

In recent years, the rapid evolution of artificial intelligence (AI) and digital technologies has begun to transform the landscape of language education. Among these technological innovations, chatbots, computer programs designed to simulate human conversation using natural language processing (NLP), have emerged as a promising pedagogical tool. Chatbots are capable of interacting with learners in a dynamic, responsive manner, providing immediate feedback, guiding the learning process, and adapting to individual proficiency levels. In the context of translation teaching, chatbots offer a novel approach to bridging the gap between theoretical knowledge and practical application, allowing students to practice translating texts, negotiating meaning, and refining language choices in an interactive digital environment (León & Pire, 2025).

The use of chatbots in educational settings aligns with contemporary trends in technology-enhanced learning and digital literacy. Modern students are expected not only to develop strong linguistic and translation skills but also to navigate and utilize technological tools effectively. Chatbots provide opportunities for repeated, autonomous practice in a low-risk environment, simulating real-life translation scenarios that encourage experimentation and foster confidence. For example, students can engage in conversational exercises, test different translation strategies, or receive corrective feedback immediately, which is often difficult to provide in large classroom settings.

Moreover, the integration of chatbots into translation pedagogy promotes active, student-centered learning. Traditional instruction can sometimes be teacher-directed, limiting learners' opportunities to make independent decisions or explore alternative strategies. Chatbots, on the other hand, allow students to take a more proactive role, encouraging critical thinking, problem-solving, and self-assessment. This aligns with constructivist approaches to education, which emphasize learning as an active, contextualized, and reflective process.

The potential of chatbots extends beyond skill development to include professional readiness. As AI and machine-assisted translation tools become increasingly prevalent in the translation industry, familiarizing students with AI-based interactions prepares them for the technological demands of contemporary professional practice. Students who engage with chatbots develop not only translation competencies but also digital literacy and the ability to collaborate with AI tools in authentic contexts, thus enhancing their overall employability and readiness for the evolving labor market.

Given the growing interest in AI-powered educational technologies and the increasing demand for innovative teaching approaches, it is essential to explore how chatbots can be effectively implemented in translation courses. By providing a flexible, interactive, and technology-mediated learning environment, chatbots have the potential to complement traditional teaching methods, enhance students' translation competencies, and contribute to a more dynamic and engaging educational experience.

This study aims to investigate these possibilities, examining how chatbots can support translation learning, the pedagogical strategies that maximize their effectiveness, and the broader implications for language education in the digital era.

The integration of artificial intelligence (AI) in education has transformed traditional language learning approaches, offering innovative methods to develop both linguistic and translational competencies. Among AI-driven tools, chatbots have emerged as highly effective instruments for promoting interactive, learner-centered environments.

Polakova & Klimova (2024) conducted a pilot study exploring the use of chatbots in foreign language classrooms and found that these tools provide a unique platform for personalized, interactive practice.

Students can engage in dialogue with the chatbot in real time, receiving immediate corrective feedback that facilitates reflection and self-assessment. This approach enhances learner motivation by creating a low-pressure environment where experimentation and repetition are encouraged, addressing one of the main challenges of traditional classroom instruction, limited opportunities for individualized practice.

Complementing these findings, Abusahyon et al. (2023) conducted a comprehensive review of AI-driven chatbots in English language learning within the context of second language acquisition. Their study emphasized that chatbots not only improve linguistic competence but also foster critical thinking and problem-solving skills. By providing adaptive practice, chatbots enable students to test various translation strategies and refine their decision-making processes in real time. The authors highlight that learner benefit from a highly interactive learning environment that promotes engagement, autonomy, and confidence in language use, qualities essential for developing effective translation skills.

In the specific domain of translation education, Zhang et al. (2025) investigated university students' perceptions of generative AI tools in translation practice. Their research indicates that students view AI chatbots as valuable supports that can reduce cognitive load, enhance translation accuracy, and suggest alternative phrasing in target languages. While students appreciated the immediate assistance provided by chatbots, the study also noted that careful pedagogical integration is crucial. Overreliance on AI without critical evaluation could undermine the development of cultural sensitivity and nuanced linguistic judgment, which remain core to professional translation competence.

The Author, Wang (2023) similarly highlighted the pedagogical value of AI technologies in college-level English translation courses. By simulating authentic communicative situations, chatbots provide opportunities for students to practice translation tasks in controlled, interactive environments. Wang observed that the use of chatbots not only improves accuracy and speed but also facilitates collaborative learning, as students can compare and discuss chatbot-assisted translations. The study underscores that AI tools can help bridge the gap between theoretical instruction and practical application, enabling students to encounter real-world translation scenarios that require both cognitive and creative problem-solving skills.

The authors, Muñoz-Basols et al. (2023) expanded the discussion by exploring the broader potential of applied

translation in the AI era. They argue that AI-mediated learning environments, including chatbots, complement traditional teaching methods by providing learners with immediate access to large amounts of linguistic input and translation examples. This access not only supports the acquisition of target language structures but also promotes digital literacy and familiarity with tools increasingly used in professional translation practice. Their findings suggest that integrating AI technologies encourages a more holistic approach to language education, where students simultaneously develop theoretical knowledge, practical competence, and technological fluency.

Beyond formal classroom settings, chatbots have demonstrated potential for extending language learning into learners' home environments. An, Seplocha & Sung (2024) examined the use of generative AI tools to facilitate communication in families' home languages. Their study indicates that chatbots can support translation and communication in everyday contexts, helping students engage meaningfully with both source and target languages. This approach reinforces the idea that AI-driven tools are not only pedagogical supports but also bridges between formal learning, community interaction, and real-life application, promoting inclusivity and extended practice outside the classroom.

Finally, Koç & Sava (2025) conducted a systematic meta-synthesis of studies on AI chatbots in English language learning published between 2010 and 2024. Their analysis confirmed that chatbots consistently improve learner engagement, motivation, and skill acquisition. Importantly, they highlight the scalability and adaptability of chatbots, making them effective in diverse learning contexts, including large classrooms or institutions with limited instructional resources. The meta-synthesis also suggests that combining chatbot-mediated practice with teacher guidance yields optimal outcomes, as the human instructor can provide interpretative, cultural, and ethical insights that AI alone cannot deliver.

Taken together, these studies provide compelling evidence that AI-driven chatbots offer significant pedagogical benefits for language and translation education. They enhance students' autonomy, provide real-time feedback, simulate authentic communicative scenarios, and support the development of both linguistic and translation-specific competencies. Moreover, the integration of these tools aligns with broader trends in digital literacy, preparing students to engage effectively with professional translation technologies and AI-assisted workflows. Consequently, the literature underscores the importance of strategically incorporating chatbots into translation curricula to complement traditional instruction while fostering interactive, student-centered, and technology-enhanced learning environments.

The field of education in China is one of the most innovative areas for the integration of artificial intelligence technologies. The presence and influence of AI are steadily increasing within the academic environment. In 2025, the Government of the People's Republic of China set a national educational goal—to introduce compulsory artificial intelligence courses into the general secondary education system. In 2021, General Secretary Xi Jinping emphasized the need to improve the efficiency of international communication, highlighting the crucial role of translators in this process. With the expansion of international cooperation, the country is experiencing a structural shortage of translators across various fields.

For this reason, numerous regulatory acts have been adopted to support the introduction of AI technologies into the education system. The ongoing digital transformation is driving significant changes in the teaching of foreign languages. When it comes to foreign language education in Chinese universities, there is still no common understanding among faculty members regarding the goals, didactic potential, areas of application, and limitations of artificial intelligence in language learning. Consequently, there arises a conscious need to redistribute pedagogical functions between AI systems and teaching staff.

Among AI technologies used in translation studies, chatbots have become particularly popular among students. When working with chatbots in foreign language learning, it is assumed that students must initially possess a basic set of competencies enabling them to use chatbots effectively for text translation. Analysis of pedagogical practices by other researchers shows that students demonstrate significant interest in using AI technologies in their academic work. This trend creates a new agenda for both students and teachers and serves as an impetus for developing translation practice within university education.

Using AI tools to translate texts from foreign languages into Chinese allows students to quickly adapt to modern teaching requirements for translation studies. However, student interaction with AI in learning still faces numerous challenges (listening, reading, speaking, writing). Given the above, the research problem addressed in this article is of current importance and requires scientific reflection.

The purpose of the study is to analyze the features of using chatbots for teaching written translation in universities of the People's Republic of China.

MATERIALS AND METHODS

The reliability and validity of the research results are ensured by a theoretical analysis of scientific and methodological literature, the descriptive method, and the examination of Chinese and foreign pedagogical experience in teaching written translation with the help of chatbots.

Special attention is given to the official regulatory document of the Ministry of Education of the People's Republic of China — “Action Plan for Innovation in Artificial Intelligence in Higher Education”, which emphasizes the importance of scientific and technological innovation in artificial intelligence and the accelerated training of a new generation of professionals (State Council Of The People's Republic Of China, 2017).

The problem presented in the article constitutes a relevant issue for pedagogical practice and translation theory. Many practitioner-researchers focus their attention on this topic. Studies by Chinese scholars have been specifically devoted to the use of chatbots for translation purposes. Considerable attention to the same issue can also be observed among foreign researchers. Altogether, the analysis of different perspectives allows the development of an integrated understanding that helps to establish theoretical foundations regarding pedagogical trends and regularities in the use of chatbots for effective written translation training in universities of the People's Republic of China.

When studying current problems related to the use of chatbots for teaching written translation, it is appropriate to analyze the key conceptual terms. For the purposes of this study, the term “chatbot” is most closely defined by foreign researchers Sysoev & Filatov (2023). According to these authors, chatbot is a dialog-based didactic program whose capabilities enable the development of oral and written language skills through conversation and speech, based on natural language processing, machine learning, and behavioral algorithms. The core of this definition lies in the oral and written functions of chatbots. The authors emphasize that chatbots cannot serve as a full substitute for teachers, as they are characterized by a limited range of expressions and a reliance on templates.

Significant methodological possibilities of chatbots in teaching written translation are noted by Chinese researcher Liu (2025). According to Liu (2025), when training students in translation, particular attention should be paid to the following chatbot functions: compiling a glossary of key terms, conducting quick searches for word combinations, checking spelling, style, punctuation, and grammar during translation, and analyzing the translated text according to specific criteria. Thus, it must be acknowledged that chatbots create favorable conditions for translation work and activate students' personal and creative potential. As a methodological development, Liu (2025) proposes a three-stage translation training algorithm: preparatory, procedural, and final. The author details the pedagogical content of each stage, emphasizing that they can be adjusted depending on the learning objectives.

An international research team emphasizes that language models used in chatbots are not specifically designed to meet the needs of translation studies and may generate

inaccurate responses. However, according to the authors, they can be adapted for this function (Ouyang et al., 2022).

Russian researcher Artamonova et al. (2023), draws several important conclusions in her publication. In her view, the quality of translation produced by a conversational assistant may directly depend on the developer company. She notes that most of the tasks typically handled by a professional translator are performed inefficiently by voice assistants. The widely used language models implemented in most chatbots do not yet allow them to become a key tool for translation from foreign languages.

In teaching foreign languages at Chinese universities, the blended learning model, based on artificial intelligence, has become widespread. Drawing attention to this, Chinese researcher Yan (2023) emphasizes that it is possible to implement such a model under modern conditions through the well-known WeChat application for the purpose of studying Russian as a foreign language. For learning to be considered blended, it is sufficient to partially use an electronic educational resource with appropriate control over the pace, time, place, and method of study. This application extensively employs chatbots, including for didactic purposes, and also provides a platform for their development and integration. Chatbots are integrated into the WeChat ecosystem.

This idea finds a positive response in the research of Chinese scholar Huang (2019), who notes that WeChat, thanks to its interactive features, encourages students to learn foreign languages both consciously and unconsciously.

Exploring the practical possibilities of using chatbots in education, Chinese researcher He Yanli emphasizes the ability of chatbots to correctly interpret the specific cultural features of native speakers of foreign languages, which is crucial for teaching Chinese students high-quality translation. The author cites the example of ChatGLM, which better accounts for the specific features of the Chinese language. The language model used in the chatbot makes it possible to accurately translate words and phrases from Chinese into Russian and vice versa. Moreover, the chatbot's capabilities allow text recognition and the execution of more complex translation-related tasks.

At the same time, the author stresses that ChatGLM was developed in China based on English and Chinese dialogue structures; therefore, when translating into Russian, the chatbot's responses often require correction. He Yanli also highlights that chatbots make extensive use of strategies to overcome cultural and linguistic barriers in the translation process. The potential of chatbots enables users to correct errors, construct proper phrases, and clarify differences between Russian and Chinese translation cultures.

However, several shortcomings characteristic of chatbot performance also draw attention. Above all, this concerns the transmission of unreliable information when explaining the meanings of linguistic units. Therefore, in educational work with chatbots, the author recommends exercising reasonable caution (He, 2023). Cases occur where Russian words are translated incorrectly, or the chatbot provides excessive, unrelated information. In conclusion, the author states that the use of chatbots is appropriate for mastering basic language knowledge, whereas for in-depth study of a foreign language, chatbots are not recommended.

Continuing this discussion, Russian researcher Lavrinenko (2023) draws attention to several important aspects. The researcher advises against encouraging students to rely on chatbots as the primary source for developing translation skills, recommending instead that they be combined with traditional translation teaching methods. In addition, teachers should monitor the translation learning process using chatbots to assess their effectiveness in forming written translation competencies.

The potential of chatbots for teaching specific translation genres is examined by Chinese researcher Gao (2024). The author used the capabilities of ChatGPT to conduct a pedagogical experiment aimed at teaching the translation of political speeches from Chinese into English. During the learning process, students were able to compare the translations produced by ChatGPT with those created by professional translators. The comparative evaluation led students to conclude that the political translations generated by ChatGPT were very close to the original Chinese texts. Highlighting the advantages of ChatGPT, Gao (2024) points out its ability to reduce translation errors and employ advanced machine translation methods.

The study primarily concerns translation from Chinese into English. The author classifies the former as a low-resource language and the latter as a high-resource one. According to the author, ChatGPT can be useful for first- and second-year students learning translation, since its high processing speed allows future translators to create preliminary "drafts" for further text refinement. However, the author acknowledges that for translating political texts, the tool's capabilities remain limited, which reduces its practical value, as artificial intelligence cannot convey cultural and ideological nuances. The author concludes that ChatGPT-based chatbots increase only the speed of translation but cannot fully replace human translators.

An important methodological aspect of using virtual chatbots to solve pedagogical tasks is highlighted by a group of researchers (Lan et al., 2025). According to the researchers, special attention should be paid to the fact that this tool makes it possible to organize students' independent learning activities, including translation work. A necessary condition for this is the integration of virtual reality capabilities with chatbots to create an interactive environment

in which chatbots act as interlocutors on professional topics. After conducting dialogues, communication logs were subjected to pedagogical analysis, including an assessment of translation accuracy, which was examined in combination with other learning tasks in the study of Chinese as a foreign language. The analysis focused on identifying errors made by students in sentence construction. In this research, the specifics of medical discourse were also taken into account.

CONCLUSIONS

In summary, the analysis of this article indicates that the use of chatbots in Chinese universities for teaching written translation is a complex and multifaceted issue. While the current functionality of voice assistants requires critical evaluation due to certain limitations, several positive aspects have been identified.

Chatbots can reduce the time students spend on translation, facilitate quick searches for word combinations, support the creation of conceptual glossaries, assist in constructing grammatically correct sentences and correcting errors, and provide foundational knowledge of a foreign language. These features enable students to save time and generate preliminary “drafts” for further refinement, making chatbots particularly useful for junior students.

However, based on the perspectives of Chinese researchers, chatbots are not expected to fully replace professional translators in the near future. Their capabilities remain limited in specialized or sector-specific translation tasks, particularly in conveying cultural and ideological nuances. Nevertheless, when integrated into the teaching of written translation, chatbots can effectively support students' independent learning, and their pedagogical impact is further enhanced when combined with the interactive possibilities of a virtual learning environment.

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