Research on Deep Integration of Artificial Intelligence and Translation Teaching

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Abstract. The rapid development of artificial intelligence technology has brought profound changes to translation education field, which highlights the necessity of the deep integration of artificial intelligence and translation teaching. Based on that, in the study the challenges faced by the deep integration of artificial intelligence and translation teaching are analyzed, and the solutions are proposed, such as innovating teaching concepts, optimizing teaching methods, improving curriculum systems and enhancing teachers' technological literacy. This study is aimed to enhance the translation education informatization, to promote the sustainable development of translation teaching in the era of artificial intelligence, and to assist in the training of translation talents that meet practical needs.

Keywords: Artificial Intelligence, Translation Teaching, Integration.

1 Introduction

With the development of information technology, modern technologies based on big data and artificial intelligence have entered every field of human society, so the era of artificial intelligence is coming. Since OpenAI officially released ChatGPT in November 2022, generative artificial intelligence represented by ChatGPT has swept the globe and is considered a leap in the field of artificial intelligence from perceiving and understanding the world to generating and creating the world[1]. In December 2024, Hangzhou Deep Seeker Artificial Intelligence Basic Technology Research Co., Ltd. released the DeepSeek-R1 inference model, which caused a shock in the global technology circle and received close attention from major technology companies. DeepSeek-R1 performs well in programming, mathematics and logical reasoning, and its performance is comparable to the currently released strongest model Open AI O1. The prosperity of artificial intelligence has driven the emergence and upgrading of various new translation technologies and tools, such as computer-aided translation, translation memory technology, speech recognition technology, etc., promoting the transformation of traditional manual translation to human-computer interaction translation modes assisted by multiple technologies, and changing traditional translation modes and translation teaching methods. In this context, the translation industry mar-

© The Author(s) 2025
B. Majoul et al. (eds.), *Proceedings of the 2025 11th International Conference on Humanities and Social Science Research (ICHSSR 2025)*, Advances in Social Science, Education and Humanities Research 945,
https://doi.org/10.2991/978-2-38476-440-2_20

ket and talent training are facing unprecedented opportunities and challenges. Translation teaching should keep up with the pace of the times, embrace digital technology and innovate translation teaching paths. The deep integration of artificial intelligence and translation teaching has become an essential part of the high-quality development of translation education in the information age, and requires high attention. As General Secretary Xi Jinping emphasized, "China attaches great importance to the profound impact of artificial intelligence on education and actively promotes the deep integration of artificial intelligence and education." In view of this, this study focuses on the research of translation teaching in the era of artificial intelligence, taking the deep integration of artificial intelligence and translation teaching as the starting point, analyzing the advantages and challenges of deep integration, and building a translation teaching practice path on this basis, in order to guide the innovation of translation teaching research, improve the quality of translation talent cultivation and meet the demand for translation talents in the new era.

2 Challenges Faced by the Deep Integration of Artificial Intelligence and Translation Teaching

2.1 Outdated Teaching Philosophy

Artificial intelligence is undergoing profound changes in human society, and an endless stream of technological products are widely applied in university classrooms. The deep integration of artificial intelligence and education is the trend. As an important component of artificial intelligence, translation technology is closely related to translation teaching. To adapt to the reform of translation teaching in the new era, foreign language majors must establish the emerging teaching concept of deep integration of artificial intelligence and translation teaching. However, this poses a great challenge to traditional translation teaching concepts. Some traditional teachers do not recognize artificial intelligence technology and advocate that students should study textbook knowledge seriously, consolidate theoretical foundations and master translation skills, rather than being lazy and relying on machine translation. Moreover, the professionalism and complexity of artificial intelligence technology have deterred many translation teachers from learning translation techniques and they still adhere to traditional translation teaching concepts. The lag in teaching philosophy can lead to long-term difficulties for teachers and students to bridge the gap between translation teaching and artificial intelligence, resulting in the backwardness of the teaching model[2].

2.2 Outdated Teaching Methods

Although the training objectives and methods of foreign language majors in different universities are different, the translation teaching methods all present a clear feature, teacher centered. However, with the continuous development of artificial intelligence translation tools, traditional translation teaching methods have exposed many drawbacks. Students passively receive information transmission from teachers, unable to

exert subjective initiative for self-evaluation and self-monitoring. The deep integration of artificial intelligence and translation teaching may fundamentally change traditional translation teaching methods. Because in this new teaching method, if teachers and students cannot cope with the new changes reasonably and go too far, they may face the risk of teaching subject variation. Firstly, from the perspective of teachers, if they overly rely on artificial intelligence and lose their subjectivity, becoming the spokesperson for artificial intelligence, relying on machine generated translations and analyzing student translations, their teaching activities will degenerate into a mechanical output of artificial intelligence knowledge. Secondly, from the perspective of students, they only need to input the original text into artificial intelligence tools to automatically generate translations, which can easily lead to tool dependence and loss of learning subjectivity, ultimately affecting the improvement of professional abilities. Therefore, how to make the new teaching method of deep integration of artificial intelligence and translation teaching work is a key challenge faced by teachers in foreign language major.

2.3 Unreasonable Curriculum

At present, translation technology related to artificial intelligence is developing rapidly, and the industry requirements for translation skills are increasing accordingly. Universities also have corresponding requirements for training translation teaching talents. As the foundation of translation teaching activities, curriculum must introduce translation technology courses to meet the goals of talent training. However, this poses a major challenge to the traditional translation curriculum. At present, the majority of translation courses in universities adopt the traditional model of "language+related professional knowledge"[3]. This curriculum lacks translation technology courses. Although a few universities have offered translation technology courses, there are also many problems, for example, some universities only setting translation technology courses as minor courses, with a small allocation of class hours, and students' learning outcomes are not optimistic. Some universities have a low utilization rate of translation teaching platforms, with unsatisfactory results. Teachers' ability to use technology platforms is not up to par, and students' awareness of learning translation technology is not strong enough, resulting in low classroom efficiency. All of these have varying degrees of impact on the effectiveness of the deep integration of artificial intelligence and translation teaching.

2.4 Lack of Teacher Technical Literacy

In the era of artificial intelligence, the challenges faced by translation teachers are also reflected in their translation technology literacy, that is, their technical teaching ability, which is a key factor affecting the deep integration of artificial intelligence and translation teaching. Research has found that most teachers have insufficient understanding of the importance of translation technology, believing that technology has little to do with translation teaching, and that the fundamental ability of teachers still lies in their ability to teach translation. Although some teachers have realized that the

trend of translation technology is unstoppable and have participated in relevant training, they generally only focus on theoretical and technical explanations and underestimate the practical and operational aspects of translation technology. Their actual application ability is far from meeting the requirements of technical teaching, and they have not been able to integrate artificial intelligence technology with translation teaching well. Therefore, in order to accelerate the deep integration of artificial intelligence and translation teaching, it is necessary to first address the problem of translation teachers' lack of technical literacy.

3 Path of Deep Integration of Artificial Intelligence and Translation Teaching

3.1 Innovative Teaching Philosophy

Teaching philosophy is the prerequisite for teaching activities, and innovating teaching philosophy is an important driving force for promoting the deep integration of artificial intelligence and translation teaching. In the era of artificial intelligence, teachers must complete thinking transformation and conceptual innovation and establish a new teaching philosophy that is comprehensive in knowledge, profound in expertise, technologically advanced, student-centered and multi-dimensional in practice. In traditional teaching philosophy, knowledge mainly spreads along a one-way path from teacher to student. After the integration of artificial intelligence and translation teaching, students can easily obtain the translation theory, translation history, translation methods and other professional knowledge they need, ensuring that the knowledge obtained meets individual needs from the source of professional knowledge production. The knowledge supply has gradually shifted from a single teacher supply model to a multi subject human-machine supply model. Therefore, translation teachers should establish a new concept of translation teaching, integrate artificial intelligence technology into the classroom, comprehensively improve students' translation literacy and effectively achieve personalized and differentiated teaching. Teachers should attach great importance to the empowering role of artificial intelligence technology, train artificial intelligence thinking and improve the level of educational informatization through lectures and training, visiting and exchanging ideas, etc. Only by transforming from traditional teaching concepts to intelligent teaching concepts can we fundamentally achieve the deep integration of artificial intelligence and translation teaching.

3.2 Optimizing Teaching Methods

The traditional "teacher-centered" teaching method is obviously not in line with the requirements of the new era. American philosopher Dewey once said, "If we teach today's students the same way we taught the students of the past, we are depriving them of their future"[4]. The development of artificial intelligence technology has broken the traditional "teacher-centered" pattern in translation teaching, emphasizing

and highlighting the central position of students in translation teaching, laying the foundation for the "student-centered" teaching method in the digital twin world. The translation teaching method needs to shift from the traditional "teacher centered" approach to a "student-centered" approach[5]. Therefore, translation teachers need to adjust their own functions, such as shifting from mainly teaching translation knowledge and skills to emphasizing both knowledge and skill teaching and intellectual enlightenment, as well as value shaping, and shifting from teacher evaluation as the main focus to a combination of teacher, student and machine evaluations. In short, the transformation from single dimensional teaching and evaluation methods to a multi-dimensional approach that combines guided thinking and collaborative progress. Teachers should guide students to exert subjective initiative, actively learn translation skills and put them into practice, so that students can think and summarize in translation and improve their skills of translation theory and practice. Simulation teaching can be carried out through a combination of online and offline methods and artificial intelligence devices are used to achieve human-computer interaction and coupling, meet students' learning interests, stimulate learning enthusiasm and improve learning efficiency. Integrate artificial intelligence translation technology organically into the teaching process. In short, teachers will further optimize the traditional "teacher-student" dual subject teaching method into a "teacher-machine-student" tripartite interactive and collaborative teaching method, achieving a deep integration of artificial intelligence technology and translation teaching.

3.3 Improving Curriculum System

In the era of artificial intelligence, universities must keep pace with the times, pay close attention to the opportunities for deep integration of artificial intelligence technology and translation teaching, rely on the actual needs of market development, improve the curriculum system to adapt to the changes of the new era[6]. Therefore, it is imperative to combine translation teaching with language technology driven by artificial intelligence, keep up with the market demand for translation technology talents and innovate translation curriculum with the goal of compound, high-level and specialized talents. Translation technology courses should be introduced in addition to traditional general education courses, such as CAT courses, corpus construction and post translation editing, language computing and information retrieval, technical document writing and translation, Python and localization translation, etc., to lay a solid foundation for students' skill to adapt to digital translation and service market demand. The ultimate goal of the deep integration of artificial intelligence and translation teaching is to improve the curriculum system and meet the demand for translation talents in society.

3.4 Enhancing Teachers' Technical Literacy

The development of artificial intelligence puts forward new requirements for teachers' translation technology literacy. The professional knowledge structure of translation teachers needs to be changed. Their translation technology teaching ability is

slightly weak, and their translation technology literacy urgently needs to be improved. To address the challenges posed by the rapid development of artificial intelligence, the following measures can be taken. Firstly, teachers should exert subjective initiative, actively learn new technologies, pay attention to the forefront of intelligent technology research and carry out related research, participate in translation technology and project management training as well as relevant academic conferences, go to translation enterprises or translation universities for further studies, improve technical theory and practical skills, to contribute to translation teaching. Secondly, universities should encourage teachers to continuously improve their practical application ability of artificial intelligence technology, integrate artificial intelligence technology into teaching design, deepen students' understanding and application of artificial intelligence technology, to promote the improvement of students' translation skills. The above measures can effectively promote teachers to improve their professional technical literacy and achieve deep integration of artificial intelligence and translation teaching.

4 Conclusion

The era of artificial intelligence has created many opportunities for translation teaching, and modern technological advances have also posed unprecedented challenges to translation teaching. Therefore, the deep integration of artificial intelligence and translation teaching has become an inevitable trend in the translation industry. Universities must actively respond to challenges, improve the translation curriculum system and deepen teaching reforms. Translation teachers should establish teaching concepts that are in line with the times, enhance their technical literacy, fully utilize intelligent teaching equipment to optimize teaching methods and train high-end translation talents. In the future, there will be more new technologies that require teachers to explore and practice for a long time, constantly innovate translation teaching methods and think about how to deeply integrate artificial intelligence technology with translation teaching.

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