Article

Research on the Cultivation of MTI Talents and the Innovation of Teaching Models in the Digital and Intelligent Era

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Abstract: The world has entered an information age, significantly increasing societal demand for technologically empowered translation talents. High-efficiency, high-quality translation modes like machine-assisted translation, exemplified by tools such as ChatGPT, have become essential skills in contemporary translation practice. The development of AI technology has further sparked concerns among many Master of Translation and Interpreting (MTI) students regarding their future careers. While training mechanisms for MTI talents in Chinese universities are undergoing gradual reform, technological advancements continue to pose significant challenges for both translation and translation pedagogy. This article aims to analyze the current state of MTI talent cultivation models in China and explore innovations in training approaches, teaching models, and pedagogical strategies for MTI talents within the context of the digital intelligence era.

Keywords: digital intelligence era; artificial intelligence; Master of Translation and Interpreting (MTI); teaching model

1. Introduction

Under the backdrop of globalization, the demand for translation continues to grow. Machine translation, which can significantly reduce costs and improve efficiency, is increasingly meeting this vast market demand. Furthermore, the accuracy and efficiency of neural network systems have seen substantial improvement, leading to leaps in both fluency and precision. However, in this rapidly changing digital and intelligent era, the cultivation of Master of Translation and Interpreting (MTI) talents in many universities remains stuck in outdated, mechanistic, and monotonous models, lacking innovation and failing to keep pace with the demands of the times. The arrival of the digital intelligence era presents significant challenges to both the translation industry and traditional university translation pedagogy. In China, the cultivation of MTI talents is still in a period of ongoing exploration and faces numerous limitations, such as singular teaching models and outdated educational philosophies. To keep up with the pace of contemporary updates, many universities are compelled to research and explore new cultivation models for MTI talents in the new era. They are continuously innovating translation teaching methodologies, optimizing talent development frameworks, strengthening students' interdisciplinary integration capabilities, technological application skills, and practical innovation abilities. The goal is to cultivate high-quality, compound-type English translation talents, providing robust support for China's economic and social development and the enhancement of its cultural soft power [1]. Therefore, this article will focus on researching the cultivation of MTI talents and the innovation of teaching models within the digital and intelligent era.

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2. The Current State of Machine Translation Development

Machine translation, a crucial branch of natural language processing, has a developmental trajectory deeply intertwined with the evolution of intelligent translation technologies. This technology aims to achieve the automatic conversion of one natural language into another using computer science, representing a significant area of research within the interdisciplinary fields of artificial intelligence and computational linguistics. Since its inception, the translation quality of machine translation has seen remarkable improvement. This progress is attributed not only to the application of deep learning and neural network systems but also to the introduction of pre-trained models and self-learning technologies. The realization of machine translation depends not just on advanced computer algorithms but also on integrating capabilities for the automatic generation of natural language-a process that simulates and emulates human translation behavior. With ongoing technological advancements, machine translation has become a vital tool for facilitating cross-linguistic communication, offering substantial convenience to people from different language backgrounds.

2.1. The Advantages and Disadvantages of Machine Translation

As a bridge for contemporary language communication, machine translation technology demonstrates significant advantages. Particularly when handling massive volumes of text, it can substantially reduce labor costs and significantly improve work efficiency compared to human translation. However, machine translation also has limitations. It may struggle to accurately capture the nuanced differences and cultural connotations of the source language, especially when dealing with content containing puns, slang, or culture-specific expressions. Therefore, in translation practice, machine translation should be viewed as an auxiliary tool to enhance translation efficiency and accuracy, rather than a complete replacement for human translators. The evolution of machine translation technology not only accelerates work efficiency but also promotes the integration of global cultures. Yet, when confronted with cultural differences and linguistic subtleties, machine translation still requires prudent application. Consequently, in translation work, it is necessary to fully consider cultural context and linguistic characteristics to ensure the accuracy and readability of the translation outcome.

2.2. The Development Prospects of Machine Translation

Although the output of machine translation may not yet match that of human translation and can even contain factual errors, the continuous innovation of AI products has significantly advanced the development of machine translation, thereby providing new opportunities and options for translation pedagogy [2]. In the current era of rapid technological advancement, coupled with globalization and digitization, the development prospects for machine translation are remarkably broad, as an increasing number of companies require cross-language communication and translation services. Firstly, machine translation technology will undergo continuous optimization and innovation. Neural machine translation models will feature deeper layers and more complex architectures to better capture grammatical and semantic information, thereby enhancing translation accuracy and fluency. Furthermore, machine translation services may offer personalized translations based on individual user preferences and linguistic habits, providing more user-centric service. Improvements in machine translation technology will significantly expand its application scenarios. In the future, its applications will become more widespread, playing important roles in fields such as tourism, healthcare, education, and finance. For instance, in business and international exchanges, machine translation can assist companies in negotiations and communication, reducing the costs and time consumption caused by language barriers. In tourism and cultural exchange, machine translation will become a vital tool for travelers to understand foreign cultures and engage in daily communication, enabling barrier-free interaction with locals. In the

field of education, students, teachers, and researchers will be able to utilize machine translation technology to read and comprehend literature and materials in different languages, thereby broadening their academic horizons and research scope.

Whether machine translation technology faces insurmountable challenges remains uncertain. For example, it may still have limitations in handling complex contexts and cultural differences. Therefore, human-machine collaboration is expected to deepen further, with tighter integration between human post-editing and machine translation. In the translation field, the ideal future state involves the coexistence of humans and intelligent machines, where human translation and intelligent machine translation complement each other to jointly advance the evolution of the field [3]. In summary, the future development of machine translation is broad and full of potential, presenting both a significant challenge and a substantial opportunity for global translation professionals. We must confront the technological challenges and market opportunities head-on, continuously promoting the advancement of machine translation technology and the development of its applications.

3. The Current State and Challenges in Cultivating Master of Translation and Interpreting (MTI) Talents in China

In the rapidly developing digital and intelligent era, an increasing number of Chinese universities have established Master of Translation and Interpreting (MTI) programs. As of December 31, 2022, the number of higher education institutions in China offering MTI programs reached 316, with a cumulative enrollment of approximately 115,000 students. The rapid development of China's economy and the deepening of its opening-up have led to sustained growth in the translation market demand. The number of translation companies has increased year by year, covering an ever-widening range of fields. Many multinational corporations also require a large number of employees with translation competence to support their global business development. However, the talent cultivation plans for MTI students in most institutions suffer from various shortcomings. For example, aspects such as curriculum design and teaching philosophy have not undergone timely reform and innovation. These institutions still adhere to traditional translation talent cultivation models, emphasizing foundational knowledge education while neglecting the cultivation of extra-linguistic professional knowledge and translation technology skills. This results in insufficient interdisciplinary literacy and technical competence among students, causing them to fall behind the pace of the times. Consequently, these cultivation plans can no longer meet the demands of the international community for translation talents in the digital and intelligent era [4].

3.1. Lacking Practical Focus

Among the universities in China that currently offer MTI programs, the majority place excessive emphasis on academic research at the expense of practical training. From a traditional perspective, master's level education within China's higher education system has often focused more on the transmission of theoretical knowledge and the cultivation of academic research capabilities. However, for a highly practical profession like translation, pure academic research is insufficient to meet industry demands. Translation work requires substantial practical experience and cross-cultural communication skills. Currently, the teaching orientation and cultivation objectives for MTI talent development in many universities still lean towards theoretical explanation and the writing of academic theses, with a persistent focus on achieving academic accomplishments. The lack of sufficient practical components results in students lacking hands-on translation experience and struggling to stay abreast of the latest trends and technological developments in the translation industry.

3.2. Monotonous and Convergent Teaching Models

Within the current higher education system, the cultivation of Master of Translation and Interpreting (MTI) talents has become a subject of significant concern. The primary issue lies at the curriculum level. MTI programs in many universities exhibit outdated content and slow updates, failing to keep pace with the latest trends and technological innovations in the translation industry. These curricula often overemphasize the transmission of theoretical knowledge while neglecting the development of students' practical skills. Furthermore, some course structures are too broad, lacking distinct specializations or clear professional directions. This makes it difficult for students to gain in-depth mastery of translation knowledge and skills specific to particular industries. Consequently, the cultivated translation talents often lack market competitiveness in terms of their abilities and overall competency, struggling to meet the diversified demands of the translation sector. This also constrains the breadth and depth of students' individual career development. In addition, machine translation, due to its cost advantages, is widely applied in the language services industry. Proficiency in technology is gradually becoming an essential skill for language service professionals [5]. However, MTI education in many universities has failed to keep up with this trend in a timely manner, resulting in a significant gap in technological application skills among the cultivated translation talents.

4. Innovation in the Cultivation of MTI Talents and Teaching Models in the Digital and Intelligent Era

4.1. Reform of Teaching Content

4.1.1. Establishing a Diversified Curriculum System

With the continuous development of the translation industry and the emergence of new technologies, the curriculum for Master of Translation and Interpreting (MTI) programs in China also needs constant updating and innovation. Establishing a diversified curriculum system can help students master translation skills across different fields, cultivate their comprehensive qualities, and lay a solid foundation for their future career development. MTI curricula should not only cover traditional language skills such as linguistic foundations, translation theory, and cross-cultural communication but also include courses related to translation technology software. These may include foundational Computer-Assisted Translation (CAT) courses, machine translation with post-editing, and translation technology courses involving tools like ChatGPT and corpora. It is essential to actively introduce modern educational technologies, treating the reform of teaching methods and the application of modern educational technological means as a breakthrough point for curriculum development and the enhancement of teaching standards, thereby meeting the needs of students' holistic development [6].

4.1.2. Integrating Curriculum with Professional or Cultural Characteristics

The cultivation of MTI talents requires cross-cultural communication skills, a profound professional knowledge base, and a deep understanding of specific cultural contexts. Therefore, integrating the cultivation of MTI talents with a university's disciplinary strengths or local cultural characteristics is a key pathway to enhance the quality of talent development and strengthen the employment competitiveness of graduates. Three specific implementation strategies are summarized below:

First, adjust the MTI curriculum based on the university's disciplinary strengths by adding translation courses in related fields, such as literary translation, legal translation, or translation related to grain, oils, and foodstuffs. Second, establish collaborative partnerships with enterprises or institutions possessing specific professional or cultural characteristics to provide students with practical opportunities and internship bases. By participating in actual translation projects, students can deepen their understanding of

domain-specific knowledge and culture through practice. Third, invite experts and scholars with relevant professional or cultural backgrounds to serve as instructors or mentors for MTI courses. Through their guidance and sharing of experience, students' professional and cultural literacy can be enhanced.

4.2. Reform of Teaching Models

4.2.1. Constructing a Teaching Philosophy that Closely Integrates Theory and Practice

In MTI education, constructing a teaching philosophy that deeply integrates theory and practice is crucial. As a key stage in cultivating translation professionals, its teaching philosophy profoundly influences students' translation skills and future career development. Strengthening the close integration of theory and practice is central to enhancing the quality of MTI education. A solid foundation in linguistics, along with systematic knowledge of translation theory and methodology, forms the theoretical pillar of MTI education. However, theoretical learning must be complemented by practice. Translation practice is not only a vital means to verify the validity of theory but also a valuable opportunity to hone students' translation skills. In teaching practice, instructors should focus on cultivating students' practical abilities. Through diverse formats such as case analysis and simulated translation tasks, students can deepen their understanding and application of translation theory in practice. Simultaneously, teachers should stimulate students' thinking, guiding them to actively reflect on challenges and problems encountered during the translation process, thereby fostering their problem-solving skills. Furthermore, important measures for effectively implementing this teaching philosophy include building extensive practical platforms, optimizing curriculum design, improving assessment systems, and encouraging innovative exploration.

4.2.2. Student-Centered Teaching Model

In the MTI cultivation process, the focus should be student-centered. Teaching should revolve around students' needs, interests, and abilities, rather than being dictated solely by instructors' preferences or predetermined teaching plans. Universities should make full use of multimedia and other methods to simulate real-world translation scenarios, allowing students to experience the complexity and variability inherent in actual translation processes. By independently undertaking or collaborating on complete translation projects, students can familiarize themselves with translation workflows and master professional skills such as time management and quality control, laying a solid foundation for their future careers. This approach also helps cultivate teamwork skills, teaching students how to communicate effectively in multicultural environments-an essential aspect for intercultural translation-thereby fostering their cross-cultural communication competence.

4.2.3. Cultivating Multidisciplinary Composite Translation Talents with "Translation + Specialization + Technology" Skills

In the digital and intelligent era, traditional translation talents with only language skills can no longer fully meet market demands. Cultivating multidisciplinary composite MTI talents with "translation + specialization + technology" capabilities has become an urgent need of the new era.

First, translation competence is the fundamental and core literacy for MTI talents, serving as the foundation. It requires students to possess a solid linguistic foundation alongside profound background knowledge in literature, history, culture, etc. Such translators can not only accurately convey the meaning of the source text but also preserve its style and cultural connotations during translation, making the target text more idiomatic. Second, multidisciplinary composite MTI talents also need professional knowledge in one or more specific fields, such as law, medicine, or economics. Translators with domain expertise can more accurately understand specialized terminology and

industry context within the source text. They can also identify and correct errors in the source material during translation, providing valuable suggestions to the original authors. Third, in response to the rising trend in demand for technically skilled translation talents in the market, we must enhance the emphasis on translation technology courses [7]. In the digital and intelligent era, the emergence of new technologies such as Computer-Assisted Translation (CAT) tools and AI translation technology has significantly improved translation efficiency and quality, presenting considerable challenges for translation students. Therefore, multidisciplinary composite MTI talents must master these advanced technological tools, be proficient in using them for efficient and accurate translation, and continuously explore new translation methods and techniques to adapt to the ever-changing market demands.

Cultivating multidisciplinary composite MTI talents with "translation + specialization + technology" skills requires adopting a series of effective and innovative cultivation strategies. This approach trains students to quickly transfer their learned knowledge and skills to new, unfamiliar domains, significantly enhancing the market competitiveness of translation students [8].

5. Conclusion

Amidst the tide of the digital and intelligent era, the cultivation of Master of Translation and Interpreting (MTI) talents faces unprecedented opportunities and challenges. Through profound reflection and proactive reform of traditional teaching models, we have preliminarily constructed a talent cultivation system for MTI that aligns with the demands of the new era. In the future, digital and intelligent technologies will continue to empower translation education, providing even broader scope and possibilities for cultivating MTI talents. We should continue to deepen teaching reforms, fully utilize advanced technologies such as artificial intelligence and big data, optimize teaching content and methods, and enhance teaching effectiveness and efficiency. Simultaneously, it is crucial to strengthen exchanges and cooperation with the international translation community, learn from international best practices, and propel the cultivation of MTI talents in China to a higher level.

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