Challenges and Opportunities of College Students' Translation Education in the Artificial Intelligence Era

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Abstract: All crafts and professions have been impacted by artificial intelligence's explosive growth in the twenty-first century. The translation industry is no exception, by contrast, it's even more affected than others. Artificial intelligence has brought a variety of opportunities to the development of the translation industry but also faced unprecedented challenges. Students who are majoring in translation have to face the structural changes brought by machine translation to the language service industry. Under this change, educators must realize the importance of cultivating excellent college students' translation technology abilities. Therefore, this paper studies the opportunities and challenges of the cultivation of college students' translation technology ability in the context of artificial intelligence, as well as how to make appropriate responses to these opportunities and challenges. According to research, it found in the face of the impact of artificial intelligence, the challenges of cultivating college students' translation ability are mainly in the aspects of ethics and resource competition. However, the complexity and flexibility required by cross-cultural communication can't be replaced by machines at present, which is exactly the opportunity to cultivate the translation ability of college students. Translation is an important way of international communication. In the era of artificial intelligence, exploring how to make good use of the advantages of man-machine combination can not only improve their own ability but also build a more convenient and stable bridge for communication between countries.

Keywords: artificial intelligence, translation skills, translator education, challenges opportunities

1. Introduction

In the 21st century, people live in an era of the rapid development of artificial intelligence. Translation plays a crucial role in the increasingly frequent international political, economic, and cultural exchanges. At present, with the help of artificial intelligence, the technical degree of the translation process is constantly improved, making the translation technology ability become an indispensable part of the translation talent training. The progress of artificial intelligence technology has greatly promoted the development of the translation industry and led to the epoch-making change in the translation production mode. Under this change, educators must realize the importance of cultivating the translation technology ability of good college students.

Technology-driven translation has experienced three changes to the current interactive machine translation, which has developed under the language service demand, technological innovation, and

cultural and social factors. At present, the intelligent translation mode is more and more obvious, the translators' dependence on technology is also increasing, and the subjectivity and creativity are weakened and decreased. Making a good human-computer interaction is the key to the harmonious development of the interpreter and technology [1]. In the current society, cultivating college students' translation technology ability is faced with challenges such as students' excessive reliance on artificial intelligence technology and weakening of independent initiative and creativity. The efficiency of artificial intelligence in simple translation processing is much higher than that of human beings, but machine translation has not yet reached the level of understanding the natural language and the deep cultural deposits behind the human language. Understanding the differences in translation between artificial intelligent translation and human translation in efficiency, language ability, and emotional thinking, helps college students break through the translation dilemma and improve their translation technology ability [2].

At present, the cultivation of translation technology ability has been greatly explored in China. There is still a great gap between it and demands of translation practice. Cultivating 'the translation technology ability of college students must focus on this reality. Highly understand the importance of technical ability training, promote the construction of curriculum system, track the demand of language services, and actively create an immersive technology environment [3]. Artificial intelligence brings challenges to the cultivation of college students' translation technology ability, but also hides opportunities. The exploration of opportunities and challenges helps us to have a more comprehensive and objective understanding of the advantages and disadvantages of artificial intelligence in cultivating college students' translation technology ability, as well as the countermeasures behind the analysis of the advantages and disadvantages.

This study reviews the background of artificial intelligence, the opportunities, and challenges of college students' translation technology ability cultivation, as well as how to make appropriate responses to these opportunities and challenges.

2. The Current Situation of Translation Profession in the Era of Artificial Intelligence

2.1. The Development of Artificial Intelligence Technology in the Translation Field

With the development of economic globalization and the speed development of science and technology, the translation industry has undergone tremendous changes under its influence. Since the Ministry of Education approved the establishment of undergraduate translation programs (BTI) in 2006, translation programs have flourished. Since 2006, there have been 249 schools offering master's Translation (MTI) in China, with an annual enrollment of more than 10,000 students per year. The language pair has grown from English-Chinese to French-Chinese, Japanese-Chinese, Arabic-Chinese, Russian-Chinese, Spanish-Chinese, etc. Whether it is an undergraduate or master's degree, the establishment and rapid development of translation major marks that translation as a major direction has been widely recognized. However because of the short history of this major's setting, as a relatively emerging major, the academic research is relatively little and shallow. There are still many wrong understandings of how to cultivate translation professionals. Translation major is different from traditional disciplines. It requires students not only to master their own subject knowledge but also to pay more attention to the practice. The existing translation professional talent training mode "has not got rid of the old ideas and practices of translation talent training under the framework of foreign language talent training" [4], "it has alienated the connection between professional translation education and the translation industry" [5]. The cultivation mode is out of touch with the actual needs of the society. The need for social development and the unreasonable teaching and training mode still have a great gap in the demand for professional translation talents.

Cultivating students' translation technical ability needs to think about the problems of the current training mode, how to solve these problems under the disruptive impact of artificial intelligence technology, and make the corresponding adjustments and innovations to the training system. Practitioners of translation education should dynamically plan a feasible path in the wave of the trend [6].

In the development of translation technology, the construction of corpus and technical research serve as an important basis for its development. It is also an important concern. The rapid development of translation technology has improved the efficiency of the translation output. But good translation still mainly depends on manual implementation. Therefore, in order to pursue high efficiency and superior quality, the combination of translation and editing, machine translation, computer-aided translation, and artificial translation and editing has become the main translation working mode. Translation editing techniques and tools, evaluation, quality standards, and ability training also become hot [7,8].

In addition, the development of translation technology has made the translation services increasingly automated. In this process, the status and role of artificial translation, the correlation between automated translation and translation technology, the subjectivity of translation, and the optimization of the comprehensive translation mode, have more broader and profound thinking. It has gradually become a significant research focus in the realm of translation technology [9,10,11].

With the increasingly significant technical characteristics of the translation process, the translation service mode is also changing gradually and accordingly. the translation service mode has also changed accordingly. An important ability and quality needed to become a translation talent is the translation technology now. It has become a focus of research and attracted people's attention to know how to cultivate the application ability of translation technology [12,13].

2.2. The Influence of Artificial Intelligence Technology in the Translation Field

The rise and development of the translation industry are deeply influenced by various technical tools, networks, and cloud technologies. It also benefits from technological development and innovation. In particular, under the "Belt and Road" initiative, the demand is expanding and excellent professionals are emerging.

The idea of machine translation was formally proposed in 1949. The study of machine translation in China began in the late 1980s. In recent years, machine translation has been booming in China, with Baidu, IFlytek, Alibaba, Tencent, and other companies all launching their own machine translation systems [6].

With the continuous integration of artificial intelligence, neural networks, and deep learning technologies, translation technology has been developed to the neural network machine translation based on cloud technology and big data. The evolution of machine translation presents a trend of practical, multi-modal, multi-language, web end transfer to mobile end, and a closer combination of vertical fields. Translation technology is constantly innovating and iteratively changing [14]. Translation talents also use various translation skills in their translation skills. They improve their translation results with machines. At the same time, the translation technology is also widely used in the international conferences. It can see the great influence of artificial intelligence technology. All of these have important implications for the study of translation technology.

2.3. The Changing Trend of the Translation Education in the Era of Artificial Intelligence

Globalization is inevitable, and the demand for translators will only grow in the future. In order to meet the more frequent and deep international exchanges, the requirements for translators will also be higher and higher. Under the impact of artificial intelligence, some people will doubt whether the

demand for translation talents will be replaced by artificial intelligence. Growing artificial intelligence is bound to have a huge impact on the translation industry. However, it may not necessarily lead to a reduction in the demand for talent. Human innovativeness, humanity, and sociality will not be replaced by artificial intelligence. The cultivation mode and content of the technical ability of translation will be influenced by it. Driven by both social needs and artificial intelligence, translation major students will be required higher for core professional knowledge, innovation ability, practical translation ability, and interpersonal communication skills.

3. Challenges Faced by the Current Training Model for Translation Professionals in Artificial Intelligence Era

The development of artificial intelligence has caused a series of problems in the translation industry. It is mainly manifested in the competition for human resources, the challenge of human translation ethics, and the destruction of the translation market environment.

The challenge to the cultivation of students' translation technical ability can be looked at from two angles respectively: teachers and students. Cultivating an excellent translator talent, not only requires the hard cultivation of teachers to combine with the constantly developing artificial intelligence, select and adjust the appropriate training mode for students with different translation goals, but also requires students to have independent initiative and consciously exercise their own translation ability.

3.1. Challenges from the Student Perspective

From the student's point of view, take the most common translation in the translation industry for example. students before forming high-quality professional ethics, because of inertia, weak self-control, and difficulties, using the machine translation. They may through some simple changes, finish a translation. Without repeated reading, thinking, and modification, it greatly reduced the translation effect. Students' long-term use and dependence on machines that lack "authenticity" and "warmth", will lead to the decline or even loss of human social ability and group consciousness, and eventually affect the order of human relations. The indifferent and distant interpersonal relationships will reflect on human beings and restrict the development of human society [15]. Autonomy and innovation will also be reduced by the abuse of artificial intelligent translation. Students always look at the translation of artificial intelligence first and without their own thinking. It is easy to sink in the inherent thought, leading to rigid thinking, and difficult to create a breakthrough in the translation results. Translation requires people to not only one or two foreign languages, but also to have a deep understanding of the culture that breeds this language and a good humanistic quality and research ability simultaneously. The current level of artificial intelligence has not yet reached this depth. Students' too much reliance on artificial intelligence because of its convenience will only degrade students' translation skills.

3.2. Challenges from the Teacher Perspective

From the perspective of teachers 'teaching, the challenges faced by translation teachers in the era of artificial intelligence are not only in terms of teaching concepts and teaching methods but also reflected in teachers' technical teaching ability. First of all, the teaching concepts and teaching methods of translation in the era of artificial intelligence should be very different from the traditional teaching methods in the past. Making full use of human-computer interaction for reform can meet the current needs of translation talent training. Translation technology courses such as CAT in universities combine translation knowledge and information technology. It means that translation teachers in the new era should manage through language culture, information technology, and industry. Translation teachers should not only use intelligent information technology but also be

required to apply these technologies to classroom teaching. This is undoubtedly a great challenge for teachers' teaching ability.

According to the survey data by Murray Professor University translation teachers teaching Chinese translation research, some scholars have analyzed and concluded that "the teachers of translation major in universities are generally liberal arts. Many translation teachers teach translation from linguistics [16]. Translation teachers from liberal arts are relatively unfamiliar with the information technology related to computers, and they are at a loss to face the intelligent products in the classroom. Therefore, in the age of artificial intelligence, the training of translation talents is not only a challenge for students but also a challenge for teachers. When teachers are not clear about the use and utilization of artificial intelligence, it is obviously difficult to cultivate excellent translation students. Society needs "artificial intelligence + translation" compound top talents, and universities urgently need to complete the teaching task of artificial intelligence translation courses. If the teachers who are not qualified for the course are forced to teach, the teachers can only follow the subject according to the content of the textbook, still retain the traditional teaching mode and teaching methods, and can not give practical guidance to the students. Ultimately it leads to the waste of such courses and teaching resources. Therefore, in order to improve the modernization process of translation teaching, the problem of weak technical ability of translation teachers must be solved first.

4. Opportunities Faced by the Current Training Model for Translation Professionals in Artificial Intelligence Era

4.1. The Irreplaceability of Human Translation

From the perspective of international exchanges, due to various changes in the international situation, it has high requirements for the cross-cultural understanding ability, rapid response ability, and communication ability of high-end interpretation talents engaged in diplomatic work. In order to deal with all kinds of sensitive power disputes and relations, the knowledge structure and achievements of translators are more demanding. This states machine translation can't easily replace human translation. Secondly, from the translation work of literature and art, translation, editing, and research work in literary and humanistic academic work are highly creative and humanistic work [17]. Doing this kind of work requires both deep humanistic feelings and a profound understanding of different cultures and countries. It also requires these translators to dig out the causes and consequences behind the culture. At present, machines have no emotional and flexible communication skills, so this work is irreplaceable by machine translation.

4.2. The Convenience of Artificial Intelligence for Human Translation

The market demand for translation talents is mainly concentrated on composite full-time translation talents. The greatest demand for translation includes industry, computers and IT, management, banking, etc. Translation in these industries requires versatile, full-time translators to master both a foreign language and familiarity with a particular field. Translation in professional fields often involves a large number of terminology, special expressions, and sentence patterns. By constructing terminology libraries and a high-quality corpus of corresponding fields, existing techniques can train an industrial machine translation engine that can replace partial manual translation. This can help the translator to complete some tedious manual translation work to a certain degree. Use the convenience of artificial intelligence to improve translation efficiency.

Translators can use language assets such as term banks and memory banks built by artificial intelligence systems to quickly find the corpus they need during the translation process. This makes people less heavy and tedious repetitive labor and free from the tedious and mechanically repetitive translation labor. This greatly shortens the necessary labor time of society. Translators can use the

time saved to do deeper and more advanced translation research. They can explore other areas of the translation specialty in practice, such as Translation methods, translation strategies, translation technology, the accurate expression of the true emotion and value of the original work, the embedding and transmission of humanistic care, etc [18]. This also helps human translators to improve their professional translation level, constantly open up their own development space, and reach new widths and heights. Cultivate translators from the pursuit of accuracy to the pursuit of higher quality works. Restore the meaning of the original words itself as well as "localization" easy to understand and accept.

4.3. The Innovation for Translation Talent Training Program

Liu Heping, a professor at Beijing Language and Culture University, said at a high-level forum on "The Challenges of Artificial Intelligence and the Development of Translation major" in May 2019 that the era of AI is "irresistible and can only be embraced" [19]. Machine translation relies on to human translation to greatly expand the field of translation talent training in colleges and universities, promote to reform and innovate the training mode of translation talents in colleges and universities, and inject new ideas into the cultivation of college translation talents [20].

Because of the limitations of the current technology level of machine translation, a complete set of translation work still needs manual assistance. This also provides the practical demand and basis for the development of training courses such as translation and editing and localization technology management in universities. It's helpful to reform and innovate the translation talent training program.

It has been mentioned earlier, that teachers engaged in translation teaching are often not familiar with the use of artificial intelligence. These teachers can not give students a good demonstration and teach how to make good use of artificial intelligence to assist their translation work and cultivate their translation skills. This is a challenge for teachers, but also an opportunity. Teachers can take this opportunity to deeply learn about the use of artificial intelligence. From a learner or student's perspective, think about how other students can learn and improve efficiently in the same situation. It is more conducive to the reform and innovation of colleges and universities suitable for students and targeted training teaching programs. The focus of translation talent training changes from traditional translation methods, translation theories, and translation courses to professional ability training and skill training, and the focus is on strengthening students' practical ability. In addition, because of the development of artificial intelligence, the connection between disciplines is more close and mutually integrated. This helps students to enhance their cross-professional and interdisciplinary understanding, cultivate divergent thinking, and meet the needs of society for compound talents. Therefore, universities must seize the chance to reform a new translation talent training program suitable for the background of artificial intelligence.

5. Conclusions

In this era characterized by the rapid and continuous development of science and technology, In the current era of rapid development of science and technology, the translation industry is booming but also influenced by the influence of artificial intelligence. Machine translation has now entered the life and work of ordinary people. In the future, the demand for translation talents will only expand, and the requirements for them will continue to improve. Look at the challenges brought about by AI from the perspective of both students and teachers. On the one hand, it is mainly the destruction of students 'independent initiative, which leads to the thinking rigidity and inertia caused by students' excessive dependence on machine translation. On the other hand, the teachers engaged in translation teaching are not familiar with the use of artificial intelligence. As a result, the traditional teaching mode cannot meet the requirements of cultivating students' translation technical ability. At the same time, artificial

intelligence also brings a variety of opportunities to the cultivation of students' translation technology abilities. Machines are been unable to completely replace human creativity and humanity, but they can assist humans to complete high-quality translation with more time and effort. Teachers can also reform the existing teaching system through learning so that artificial intelligence for their own use and create higher value. With the inevitable development of scientific advancements and technological progress, the response to these challenges and opportunities is the key to using AI for human use. This research discusses the challenges and opportunities brought by artificial intelligence to the education of students' translation technology ability, but how to deal with these challenges and opportunities is still needed. Building upon the current body of research, teachers can also deeply study how to better integrate artificial intelligence into the teaching design, and reform the existing traditional teaching program, so that students can leverage the full potential of artificial intelligence.

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