

A Study on the Application of Information Technology to Foreign Policing Translation

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Abstract: This study explores the problems of present foreign policing translation and the solutions to them. The application of information technology to foreign policing translation and the improvement of translators' translation technical competence are effective ways to enhance translation quality and solve existing problems in foreign policing translation. The establishment of dynamic monitor translation corpus and translation platform is essential for foreign police translation and can help translators generate efficient and high-quality translation.

1. Introduction

Since Warren Weaver, a pioneer of machine translation, suggested the application of computer technology to translation in 1949, more and more importance has been attached to the combination of information technology and translation. With the increasing application of information technology in translation, translation theory, translation process, translation object, translation method, translation teaching and training etc. have been greatly changed, and translation techniques have become a must for translators and interpreters in the information age. Especially in recent years machine translation, computer-aided translation and post-editing technique has been extensively applied to translation and interpretation with the emergence and advance of big data, cloud computing and artificial intelligence. As a result, translation modes have changed and translation speed and quality have been substantially improved [1]. Meanwhile, researches on the application of information technology into translation and interpretation has been booming. However, similar translation researches in foreign policing translation and interpretation have been up to now relatively rare. The main reason is that foreign policing translation is a relatively closed research field and translation data and process is, to some extent, restricted or forbidden to leak out to non-police researchers. This research tries to find a proper way to apply information technology to foreign policing translation and interpretation.

2. Translation in Information Age

In the information age the producing, processing, exchange and spreading of information has greatly changed people's living and production as well as researches. Under the influence of E-Social Science and E-Science, it is inevitable that information technology will be used in translation practice and cause substantial change in translation practice and translation research.

2.1 Translation Changes in Information Age

Lan pointed out that E-Translation Studies will become an important translation concept and field and the objects of translation research and translation research methods have altered in information age [2]. The translation of religious books, literature and philosophy have given way to the translation of science, technology and economy. The education function of translation has shifted to commercial service, and translation have changes from professionalism to civilianization. Information technology also has given rise to an unprecedented translation phenomena. Multilingual, instant and around-the-clock translation has come into being with the application of cloud translation, machine

translation, crowd sourcing translation. Huge amounts of translation tasks can be accomplished by fragmentation translation based on translation platform, and translation practice and translation product widespread unprecedentedly rapidly. In addition, traditional translation criterion "faithfulness, expressiveness and elegance" is losing its weight and the assessment of translation production is diversifying. Parameters of customer satisfaction such as terminology consistency, text quality, delivery time, cost, etc. have also become criteria for translation evaluation. Along with the development of E-translation research, computational linguistics, corpus technology has become a commonly used translation methods. Parallel corpus, translation corpus, multilingual corpus provide cross-language information retrieval platform and make translation data processing capacity far outnumber human reading, analyzing and processing, which makes impossible researches in the past possible.

2.2 Translation Techniques in the Information Age

The combination of modern information technology and translation activities produces translation technical tools. Translation techniques mainly refer to the diversified information technology used in translation activities. According to Alica [3], translation techniques are classified into the following five categories in a broad sense, computer, information exchange and retrieval tools, text editing tools, language resource management tools and translation tools. Obviously, the fifth type is the core of all translation techniques. In a narrow sense, translation techniques refers to the techniques specially used in translation. Of all translation techniques, terminology management system, translation memory system, machine translation are regarded as the three core translation techniques[4].

Terminology management system mainly refers to terminology database which stores information in a certain method, including comparison table of terminology, terminology definition, context, part of speech, etymology, synonyms. Almost all translation memory systems such as Trados and Multiterm contain the module of terminology function. When translation memory system is used to translate, it can use translation memory database and terminology database simultaneously. In collaborative translation projects, different translators can use the same terminology database, translators translate terminology according to the target translation provided by terminology database, which can save time and guarantee the consistency of terminology translation in collaborative translation project. Terminology needs to be maintained and updated by special process and the maintenance of terminology is a key work for translators.

Translation memory system is a computer-aided translation software designed and developed based on translation system. When creating a translation project, the translator mounts a translation memory database for the project. In the process of translation, the system automatically searches for the same or similar bilingual translation units stored in the translation memory database and gives the reference translation. In this way the previously completed translation can provide reference for the translator and save labor. With the progress of translation, the completed bilingual memory units are constantly stored in the translation memory database, which enlarges the memory of the database.

Machine translation, also known as automatic translation, is the process of transforming one natural language (source language) into another natural language (target language) by computer. End-to-end neuro-machine translation (ENNT) has developed rapidly recently, and its translation quality has improved significantly compared with statistical machine translation (SMT). Due to the improvement of the accuracy of machine translation, translation begins to shift from "machine-assisted manual translation" to "manual-assisted machine translation". In the language service industry, "MT + PE" (machine translation + post-translation editing) has been tried to replace the translator's labor with machine translation to a greater extent, which not only saves costs, but also greatly improves the translation output per unit time [4].

2.3 Translation Teaching in Information Age

The development of translation technique accelerates the reform and advance of translation training and teaching. Translation teaching and training shifts from classroom to online, from teacher's evaluation to public evaluation, from limited training sources to huge amount of training

sources. Of all translation techniques, corpus (including parallel corpus, bilingual corpus, translation corpus) and online translation teaching platform play a key role in translation teaching reform. Up to now several parallel corpus such as English-Chinese Parallel Corpus, International Relationship Parallel Corpus, LIVAC(Linguistic variety in Chinese communities) have been established for translation research and translation teaching.

However, to carry out corpus-based translation teaching practice, the development and application of translation teaching platform supported by computer technology is indispensable. Up to now several famous translation training platform have been established and put into practice in China such as Yaxin Computer-aided Translation Teaching System, Clinknotes, Transn Teaching and Practice Platform, etc.

3. Foreign Policing Translation

Foreign policing translation refers to interpretation activities in the environment of handling foreign policing affairs, including interpretation of handling police work or cases involving foreigners, interpretation of international policing exchange and cooperation, interpretation of foreign police training. The first type of interpretation is mainly conducted by police officers in charge of foreign cases or social interpreters employed by police organ, and the third type is now mainly conducted by English teachers from police college. The work of translators in foreign police training can be divided into three parts: Lecture (PPT) translation, classroom translation and daily translation. Lecture translation refers to the translation of teaching materials, lectures and slides in the process of foreign police training so as to help students understand the curriculum system and content accurately. Classroom translation refers to interpreting teacher's speech and class exchange between teacher and students in order to help teachers and students communicate smoothly. Daily translation refers to timely and accurate interpretation of the information conveyed by training managers and trainees as well as exchange of daily life.

China's foreign policing translation has the following features: limited preparing time; urgent and heavy task; confidential; relatively closed translation circle and limited resources; several translators responsible for translation of almost all policing disciplines; nonprofessional translators and interpreters (usually English teachers in police college or police officers in charge of foreign cases assume temporarily translation tasks); little application of translation technology such as foreign policing translation corpus or translation platform. Obviously, the features are non beneficial to generate high quality translation and interpretation. Therefore, it is an urgent work for translation researchers to find out solutions to lessen the burden of foreign policing translators and guarantee relatively high quality of translation. If foreign policing translation conditions such as multi-discipline translation, translators of dual identity, etc. cannot change in a short term, the introduction of translation techniques will be an effective method to solve the problems.

4. Solutions to Problems of Foreign Policing Translation

4.1 Establish Translation Corpus for Foreign Policing Translation

Corpus used in translation can not only provide a variety of bilingual examples for a particular search item or common structure directly, but also provide a variety of translations of the same source language text for the reference of learners and translation teachers [5]. In addition, corpus can enhance students' language and cultural awareness, develop learners' foreign language competence, and serve as an important reference tool for students in the process of revision of translation. Therefore, corpus-based translation teaching approach and method has now become the focus of translation teaching and research [6]. Unfortunately, there is no parallel corpus or translation corpus for foreign policing translation in China. Therefore, the first step is to build a translation corpus for foreign policing translation.

In view of the complexity and multidiscipline of foreign policing translation. Corpus for foreign

policing translation should at least contain the following contents as shown in figure 1. Alignment of Chinese and foreign language is the basic requirement for parallel corpus and more annotation can be added to the corpus according to different needs.

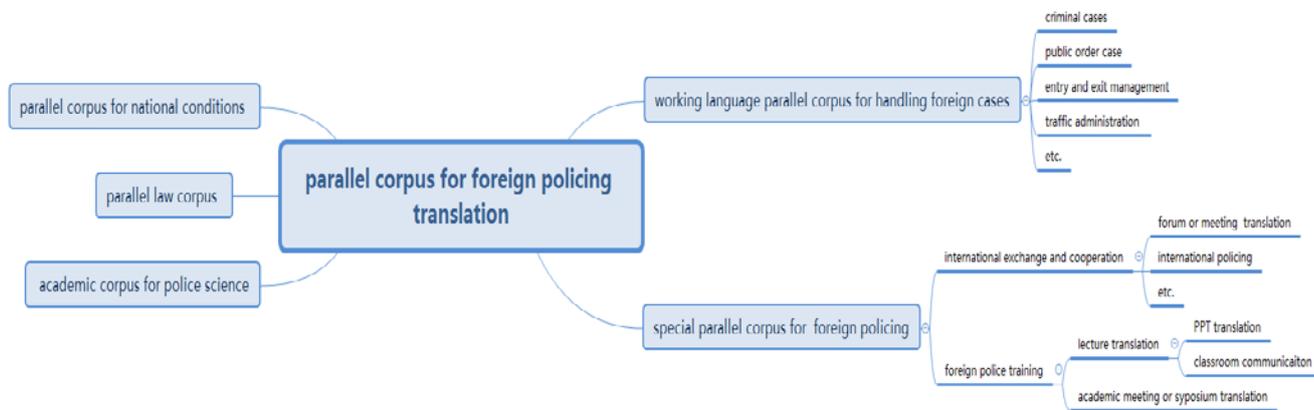


Figure 1. Parallel Corpus for foreign policing translation

4.2 Establish Translation Platform for Foreign Policing Translation

Translation platform or translation APP has become popular recently due to the development of cloud calculation, machine translation, parallel corpus, and they are extensively used in translation practice, translation teaching, translation training and translation examination. As portable interpretation machines such as IFLYTEK translation was invented and marketed, translators have been replaced by translation machines in common translation contexts such as daily conversion, business talk and tourism. However, translation practices testify that satisfactory translation results can not be generated when machine translator is used to do foreign policing translation. One of the main reasons is that no parallel corpus of foreign policing translation is built to provide big data for machine translating. Therefore, after building the parallel corpus for foreign policing translation, translators should collaborate to build translation platform or APP for foreign policing. Figure 2 is the design of translation platform for foreign policing.

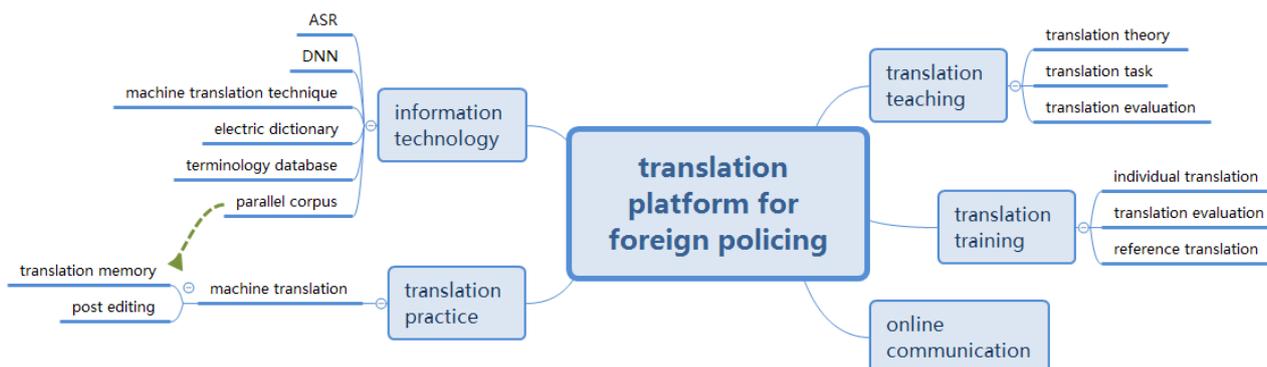


Figure 2. Translation platform

The core of the translation platform is the application of information technology to foreign policing translation. Although the platform is comprised of several sections, actually all the sections are closely connected through corpus because this corpus is a dynamic monitor corpus and new translation data from translation teaching, translation training and translation practice are constantly stored in the corpus and become translation memory data and new reference translation. So when similar source language needs to be translated, the platform will automatically offer reference translation, which is time-saving and labor-saving.

4.3 Improving Translator's Technical Competence

The PACTE team of the Autonomous University of Barcelona explored the acquisition process of translation competence through large-scale training projects and empirical investigations. It defined translation competence as the necessary and potential knowledge, skills and strategies for translators in the process of translation, and established a set of translation competence, which includes five kinds of competence and a series of psychological-physiological factors: bilingual competence, extra-linguistic competence, translation expertise, instrumental competence, strategic competence, psychological-physiological factors, attitude factors and psychological mechanism [7]. Here instrumental competence refers to technical competence for translators including computer applications, information retrieval, terminology management and computer aided translation. There is an inseparable relationship between the four competences. From the perspective of knowledge category and interpretation process, they overlap, link up and complement each other; from the technical level, basic computer application ability is the essential basic ability of interpreters, which provides the necessary information literacy precondition for the formation, cultivation and promotion of the other three abilities [8]. Information retrieval ability is a necessary skill for modern interpreters to collect scientifically and efficiently the specialized knowledge related to the subject matter of interpretation, which also involves the search and validation of terminology; terminology management and technology application are the professional ability for interpreters to systematically establish and accumulate the terminology knowledge base of interpretation; computer-aided translation application ability belongs to a higher level of comprehensive technical competence of interpreters. It can provide necessary, sustained and efficient technical support for the training of daily interpreting skills and the improvement of language conversion ability, the multi-links of on-site interpretation work, and the summary and quality evaluation of post-interpretation activities.

Although translator's technical competence is a complex concept, in fact it doesn't refer to the creativity and inventiveness but the application ability of different translation tools, translation APP and translation platform. Therefore, skillful use of the present translation techniques and proper application to foreign policing translation is of vital importance for police translators and interpreters. On one hand, police organs and police college should help police translators improve their translation techniques, on the other hand, they should invest and exploit translation tool and translation platform suitable for foreign policing translation with translation technology company. Only in this way can translation for foreign policing be of high efficiency and high quality.

5. Conclusion

With the vigorous development of information technology and translation technique, the mode of translation has been optimized, the environment of translation has been improved, the speed of translation has been accelerated, the cost of translation has been reduced, and the efficiency of translation production has been improved. Traditional manual translation mode and backward translation tools will soon be eliminated by information technology, and will gradually withdraw from the historical stage of translation. Information technology has penetrated into all aspects of translation work, and with the development of the times, the impact of information technology on translation will be increasing. Only by introducing and absorbing a large amount of information technology, establishing a large and dynamic corpus of foreign-related police translation, and vigorously cultivating the translator's translation skills, can foreign-related police translation be efficiently produced with high quality, meet the needs of foreign-related police translation and improve the quality of international police communication and training.

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