

Research on Interactive Model of Translation Teaching Based on Computer Aided Translation System

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Abstract

Translation memory technology is the most widely used core technology in the field of computer-aided translation. It makes full use of the powerful function of database to improve the reusability of existing translation materials. In the field of professional translation with high data repetition, it greatly reduces the repeated work of translators and avoids multiple translation results of the same sentence. This paper analyzes the characteristics of computer-aided translation technology and computer-aided translation course teaching at the present stage, and finds that computer-aided translation teaching is a subject with close combination of theory and practice and equal emphasis on knowledge and skills. This paper discusses the necessity of introducing computer-aided translation system into translation teaching. After giving a clear positioning of computer-aided translation system, this paper discusses its application objectives and strategies in translation teaching.

Keywords: *Computer-aided translation system, Teaching translation, Interactivity*

I . Introduction

With the development of social economy and the implementation and development of quality education policies, in order to effectively improve the comprehensive quality level and subjective initiative of students, it is necessary to explore some new teaching methods and teaching methods to be used in teaching activities [1]. In this way, the students' comprehensive quality level and subjective initiative can be effectively cultivated, so that the students can better participate in the socialist economic construction activities in the future, and then make outstanding contributions to the national socialist economic construction [2]. The interactive translation teaching model has a far-reaching impact on the improvement of students' comprehensive quality [3]. As a widely used tool, computer has played an important role in foreign language teaching for a long time [4]. Some scholars discuss the relationship between computers and foreign language teaching, or study the role of computers in foreign language teaching, or analyze the organization of foreign language teaching activities in the network environment [5]. Most researchers agree that the technology used in teaching as a teaching tool should be used to strengthen the effect of teaching and learning [6].

In recent years, translation teaching for English majors has been paid more and more attention [7]. A good computer-aided translation system can basically convert the written meaning of something or thing in one language into the written meaning of another language, and can also convert the expression of one language into the expression of another language [8]. Students' comprehensive achievements in translation have been significantly improved, greatly improving the quality and level of translation teaching [9]. Therefore, the construction of interactive translation teaching mode is analyzed and introduced below, so as to comprehensively improve the comprehensive level of translation of Chinese students [10]. With the rapid development of society and the accumulation, explosion, and change of geometric multiples of information, no one can be knowledgeable, no dictionary can cover everything, and it is impossible to complete an extremely large number in a short time with only a thin manpower. Translation work [11]. Therefore, the introduction of computer-assisted translation content into undergraduate translation teaching can not only prescribe the right medicine and alleviate the embarrassment of the translation market, but also has positive and vivid practical significance for improving the quality of the translation team [12].

II. Correct Positioning of Computer Aided Translation System

A. Limitations of the System

A good computer-aided translation system can basically convert the written meaning of something or thing in one language into the written meaning of another language [13]. It can also convert the expression of one language into the expression of another language. The quality of the translation results of the computer-assisted translation system largely depends on whether the corpus materials are sufficient, perfect and detailed [14]. The translation results of the computer-aided translation system are influenced by the algorithm and parameter setting of the translation system itself, which requires the translator to skillfully operate the translation system software according to the actual situation [15]. However, there is no human emotion in the computer software itself, so it is difficult to faithfully reflect the emotion, attitude and even personality of the original author in the translated language, and it is also difficult to accurately reflect the deep cultural connotation contained in the original text in the translated text [16]. The function of the machine-assisted translation component is shown in Figure 1.

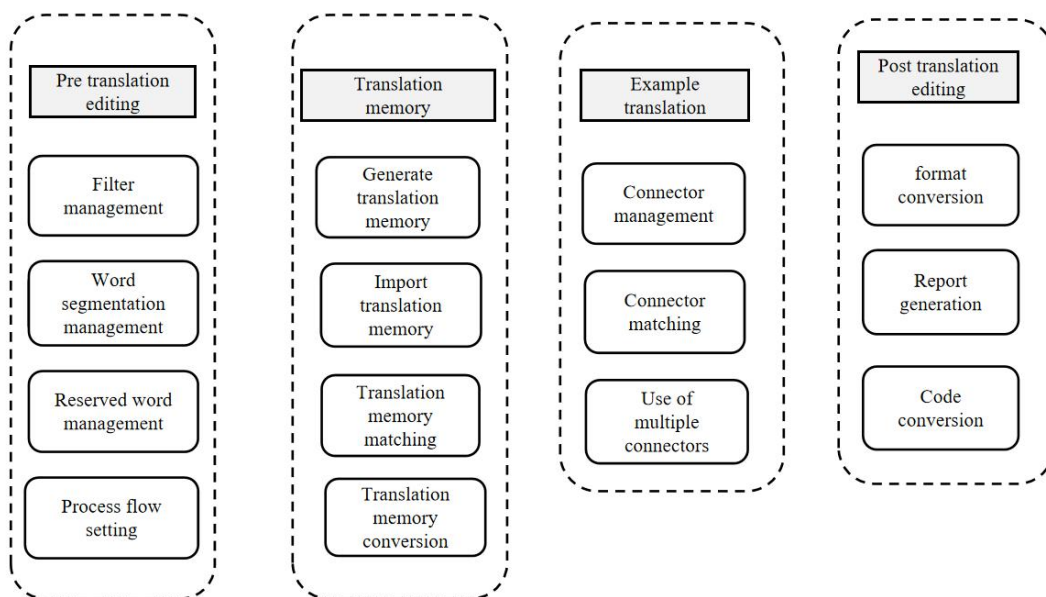


Fig.1 Fig.1 Functional Diagram of Machine-Assisted Translation Components

Before using computer translation, we must have a clear positioning for it. No matter how fast machine translation is, it can never replace human translation. The relationship between the two is not competitive, on the contrary, it should be a relationship of mutual assistance and complementarity. If we have high expectations for computer translation and think that any text can be directly input to produce authentic translation, this is undoubtedly a myth. This implication and the conditions and context they contain are incompetent for machine translation. Because ambiguity and polysemy are caused by the contradiction between language structure and language meaning, we can only pay attention to and identify its internal changes and external relations in different communication environments. This can only be judged by accumulated language knowledge. Machine translation itself cannot avoid and eliminate ambiguity and polysemy. The method based on the vector space model only considers the words or phrases appearing in the text, but does not consider the order relationship of words or phrases appearing. The improved vector space model represents sentences with the following three vectors:

$$V_1 = (d_{11}, d_{12}, \dots, d_{1n}), V_2 = (d_{21}, d_{22}, \dots, d_{2n}), V_3 = (d_{31}, d_{32}, \dots, d_{3n}) \quad (1)$$

B. Application Goal in Teaching

In the translation course, the teaching of the four application ways of computer-assisted translation actually complement each other. It is not difficult to see that the practice of computer-aided translation technology system in translation class will challenge the traditional translation concept. The focus of translation class should not be on the subject system itself, but on the students' activities. In other words, we should take students as the main body and emphasize students' initiative in learning. What it pays attention to is not what kind of content is presented to students, but to make students actively engage in various activities. From the perspective of translation course, it means that students should get rid of simple paper-and-pencil exercises, increase the learning content of computer-aided translation, regard the course content as learning experience, and emphasize students' interests and needs. The practice of computer-aided translation technology system in translation class will challenge the traditional translation concept. The following is the core part of an algorithm for calculating the semantic similarity of words based on a tree model:

$$sim_{\text{onto log}_y}(w_1, w_2) = \sum_{i=1}^n \theta_i \mu_i(w_1, w_2)$$

Among them, n is the maximum depth of w_1, w_2 in the domain model, θ_i is the i weight, usually $1/n$, $\mu_i(w_1, w_2)$ is the measurement coefficient, when the i parent classes before w_1, w_2 are the same $\mu_i(w_1, w_2) = 1$, when they are different $\mu_i(w_1, w_2) = 0$.

Translation teaching should not only help students understand and master various translation skills, but also cultivate students' ability to analyze, solve problems and apply what they have learned. The same is true of computer-aided translation teaching. In the final analysis, computer-aided translation research is to deal with problems with knowledge. Its research objects include the knowledge of natural language itself, the interchange knowledge between languages, objective and subjective background knowledge, contextual knowledge and special knowledge in related fields outside languages. In the teaching process, students can effectively master the theoretical basis, operating principles, operating methods and so on of the computer-aided translation system in a short unit time by combining theory with practice. Theoretical teaching is the guidance and foreshadowing, and the concrete practice and application of practice should occupy a considerable proportion in the course. Divide sentences into grammatical blocks and give different weights according to experimental data. The basic idea is that when storing, we divide the sentence into blocks according to the five basic sentence patterns. Each sentence is represented by four, namely subject block, predicate block, object block and supplementary block. The algorithm is as follows:

$$Sim(S, S') = \lambda_1 SimNB(S, S') + \lambda_2 SimVB(S, S') + \lambda_3 SimOB(S, S') + \lambda_4 SimCB(S, S') \quad (3)$$

Where $\lambda_1, \lambda_2, \lambda_3, \lambda_4$ is the weight of each block, $\lambda_1 + \lambda_2 + \lambda_3 + \lambda_4 = 1$ and $\lambda_1, \lambda_2, \lambda_3, \lambda_4 \geq 0$.

III. Interactive Teaching Mode in Translation Teaching

A. The Rationale of Interactive Teaching Model

Interactive teaching mode is an innovative teaching mode based on reflecting on the traditional teaching mode. The process of translation is the process of translating the first language into the second language or the second language into the first language. In this process, students' thinking will change. Therefore, translation teaching not only effectively cultivates students' language application ability, but also effectively cultivates students' thinking

divergence ability. Translation teachers need to teach students various translation strategies and skills, so that students can better play the role of language conversion ability. The specific operation flow of the traditional teaching mode is as follows: firstly, the teaching teacher explains some translation theory knowledge, and then arranges some translation-related exercises, so that students can consolidate and master translation skills through constant practice. Under the background of this teaching mode, it is not only detrimental to the cultivation of students' comprehensive quality and initiative, but also seriously hinders the improvement of teaching quality and teaching level. Therefore, by reflecting and analyzing the shortcomings and defects in the traditional teaching mode, this paper discusses the new teaching mode, and adjusts and reforms the shortcomings and defects in the traditional teaching mode, so as to develop a new teaching mode, which not only needs to cultivate students' subjective initiative and comprehensive quality ability, but also enables students to participate in teaching activities independently under the new teaching mode, thus effectively improving their comprehensive translation level. The translation workflow is shown in Figure 2.

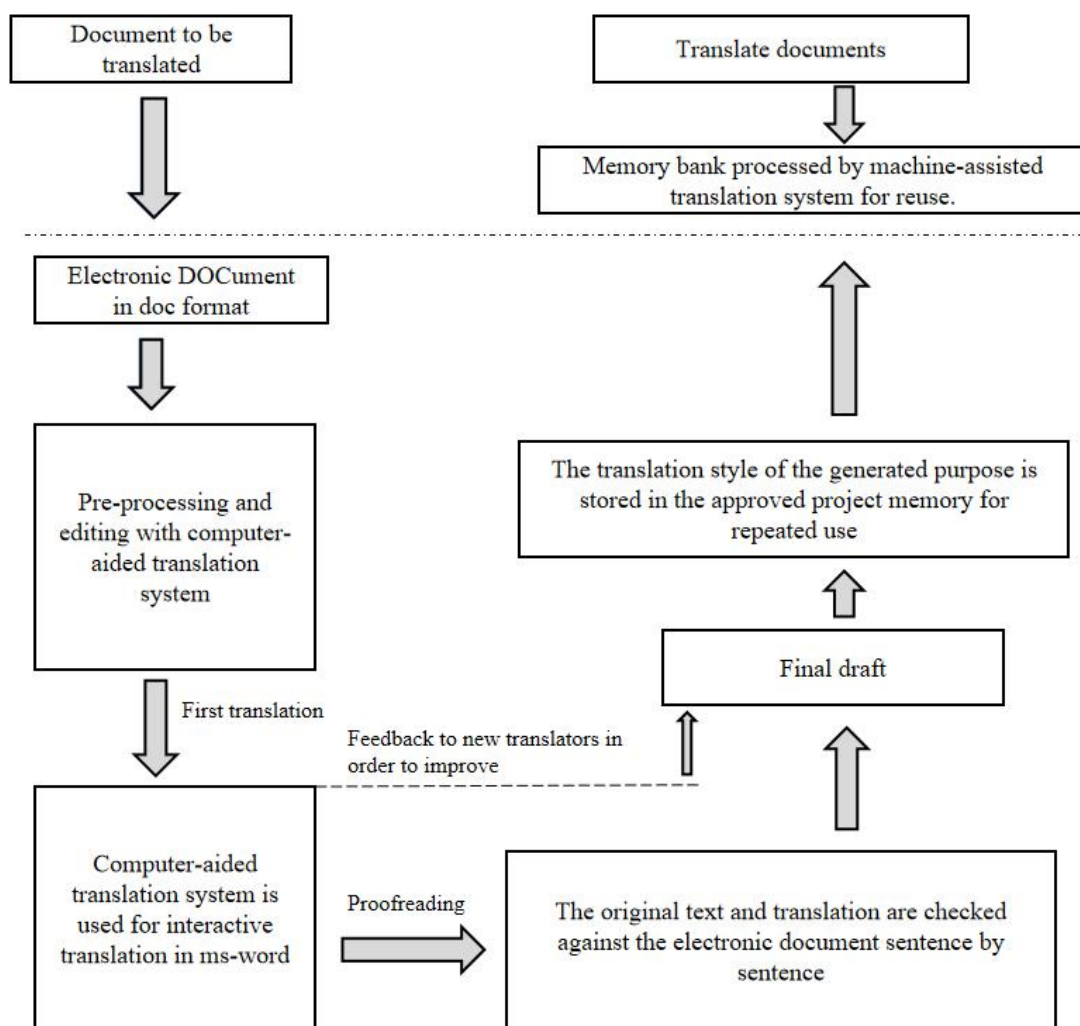


Fig.1 Ig.1 Flow of Translation Work

Interactive translation teaching model is a new teaching model based on constructivism learning theory, which emphasizes that individuals need to understand and construct the meaning of objective things according to their own experience. Therefore, in translation teaching activities, it is necessary to focus on the learning process and put an end to the simple teaching of ready-made knowledge. In translation teaching, the interaction between teachers and students and the cooperation between students can not only accelerate the construction of translation knowledge and

skills, but also eliminate students' nervous mentality, create a relaxed and pleasant learning environment, and then stimulate students' learning enthusiasm and creative passion.

B. Interactive Language Teaching

On the one hand, interactive language teaching method is guided by language acquisition and teaching theory; on the other hand, teachers should adopt flexible and changeable teaching methods according to their own characteristics, learners' individual differences and teaching situations. The arrangement of teaching activities is student-centered, fully arousing students' learning enthusiasm, forming the interaction between teaching path and teaching practice, between teachers and students, between teaching purpose and teaching activities, between listening, speaking, reading and writing, and constructing vivid teaching scenes. In translation teaching, teachers should encourage students to participate more in classroom teaching, form a good learning atmosphere through the interaction between teachers and students, and promote the conscious absorption of students' translation knowledge. The “interactive” teaching model in translation teaching follows the principles of constructivist learning theory, emphasizing the initiative and initiative of the learning subject, and attaching importance to the collaboration between teachers, students and students. In classroom teaching, teachers should emphasize the main role of students when explaining the three links of translation: understanding, conversion, and expression. As the guide of classroom teaching, teachers should make full use of students' initiative, guide them to actively interpret the text to be translated, and communicate with teachers and classmates. In each communication link, teachers should put forward different learning emphases for students, and constantly strengthen them in translation practice, so that students can gradually develop good translation thinking habits and cultivate the awareness of translation skills. In the stage of translation reorganization, the “interactive” translation teaching model pays attention not only to the interaction and communication between teachers and students, but also to the cooperation between students. After each student gives the translation, the teacher arranges the students to compare and judge the advantages and disadvantages of the translation in the form of group discussion. The “interactive” teaching mode in translation teaching is shown in Figure 3.

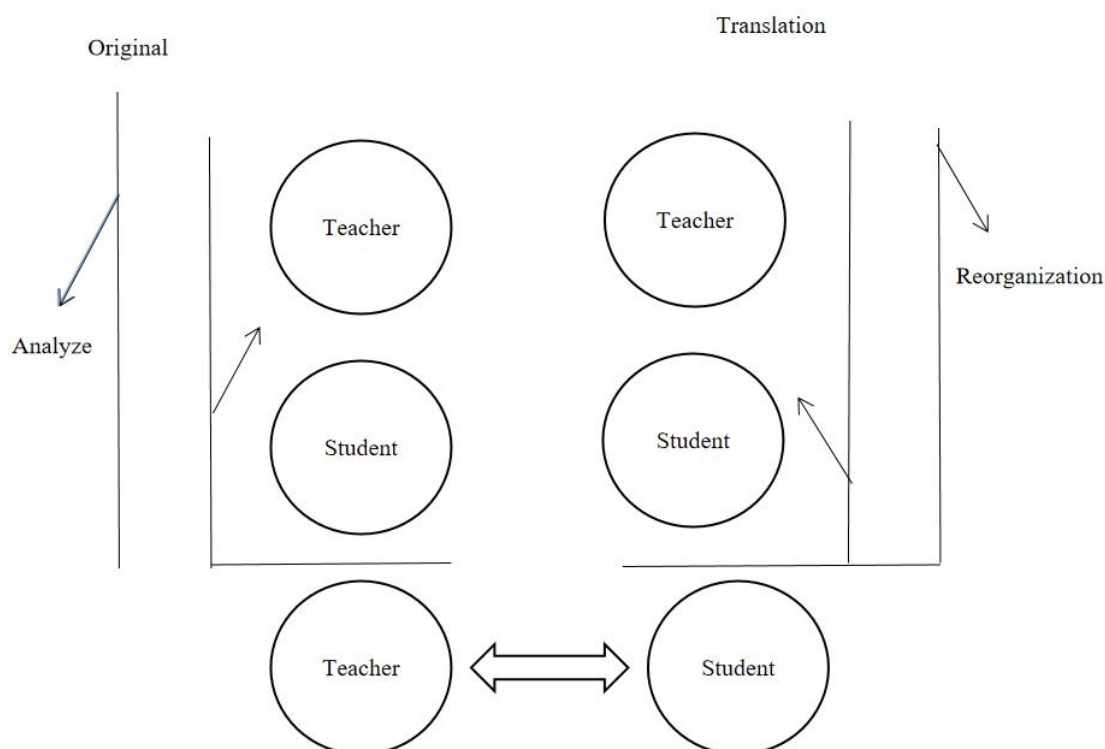


Fig.1 Ig.1 “Interactive” Teaching Mode

The implementation of interactive teaching mode in translation teaching activities is determined not only by the characteristics of the course, but also by the individual needs of students. This teaching mode mainly follows the principles of constructivist learning theory, which improves the feelings between students and teaching teachers, and makes students relaxed. In the vivid teaching environment, students learn translation knowledge and skills independently, so that they gradually master this ability, which greatly improves students' Comprehensive English ability, and then enable students to devote themselves to socialist economic construction activities in the future to create value better. This paper analyzes and introduces the relevant reasons for the application of interactive teaching mode in translation teaching activities, and comprehensively expounds the “interactive” teaching mode in translation teaching activities, so as to effectively cultivate students' translation ability and effectively improve students' Comprehensive English level.

IV. Conclusions

Computer-aided translation system has entered a stage of rapid development. Perhaps in the near future, the computer-aided translation system will enter thousands of households like today's word processing software and multimedia playback software, and become a powerful and common tool for language conversion processing. Therefore, the computer-aided translation system should also become an indispensable part of translation teaching with its popularity. Computers only provide a quick workplace, a huge knowledge base and a sensitive retriever, but the operators of these workplaces, knowledge base and retrievers must have solid knowledge of traditional translation, advanced knowledge of computer-aided translation system, flexible human-computer communication technology and dedicated dedication. The “interactive” translation teaching model is based on the laws of cognitive activities and based on the theory of constructivism. It is a way of thinking about the reform of translation teaching; it is aimed at the phenomenon of traditional translation teaching which is confined to textbooks or language and ignores the main body of students. The role of the proposed. It strives to overcome the shortcomings of traditional translation teaching, create an interactive teaching environment for teachers, students and students, and activate students' learning initiative in order to obtain the best teaching effect.

V. Acknowledgment

Researching Ability Improvement Project for Young and Middle-aged Teachers in Guangxi Universities in 2020 :A Study on the Inter-translation of Chinese and English Proverbs Based on Cognitive Linguistics(2020KY23011)

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