

Research on the Maneuverability of Computer-aided Translation Software

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Abstract. Under the context of globalization, communications between countries and cultures are becoming increasingly frequent, which make it imperative to use some techniques to help translation. This paper is to explore the requirements of computer-aided translation software during the translation practice, optimize the design of computer-aided translation software, and carry out a research on its maneuverability in translation.

1. Introduction

Here are roughly three kinds of translation software in the internet age. The first kind is the machine translation system which is used widely but produces bad translation as well as good translation, with the very translationese and rigid sentences patterns. The second kind is electronic dictionary that is easy and convenient to consult to but is only limited to words rather than the translation for sentences or sections. And the third kind is translation software which is also called as the computer-aided translation system that overcomes the shortcomings of the first two kinds of translation software and support the communication between human and machine, providing more choices for users. In translation practice, the application of computer-aided translation software is not only practical but also help to improve the translation quality, which greatly accelerate the translation speed and reduce translators' workload.

2. Computer-aided Translation Software.

2.1 Origin of the Conception.

Computer-aided Translation (CAT), a software using computer to help with translation, is working with the aid with the computer. CAT can help translators to translate better and help people to finish foreign language translation easily and effectively. CAT is a newly emerging study field, compared with other developed fields; the study on this field is relatively late. The broad CAT is made up by four major parts, including translation memory system, terms management systems, electronic dictionary and electronic vocabularies.

2.2 Application Advantages.

Compared with manpower translation in practice, using the CAT software can help to improve the translation quality as well as the efficiency. In the practice of translation, under the help of CAT, it is found that parallel corpus can compensate the losing meaning in the bilingual-dictionary, which can enrich the meaning of the words, and achieve the equivalence between the bilingual translations as well as provide the context of the paraphrase. In this age of network informationization, all sorts of new words come out unexpectedly, and some words lose their original meaning while some words gain new meaning because of somebody or something in a short time. The translation and communication of those words are certainly challenges to CAT. In teaching, applying professional CAT is conducive to the teaching idea that focus on students, helping students to "learn in translation" and "translate in learning" so as to enhance their translation ability. In short, the application of CAT can effectively improve translation quality, speed up the translation and save time, which avoid wasteful duplication of effort and reduce translators' workload.

The free nature of machine translation represents the biggest attraction for businesses with limited budgets. There is a myriad of free machine translation software available online, with

Google Translate is the most popular one. But through research, you can find many other more popular alternatives like MemoQ and Trados. According to our survey from the table 1 below, we can make a clear comparison between TS (translation software) and HT (human translation).

Tables. Table 1 It automatically displays the accuracy and suitability of translation according to the professional translation assessment software. Here we explain the definitions of TER and HTER slightly. HTD is the human translations with the help of dictionary (English majors as respondents). HTS refers to human translations with the help of the translation software Trados. In addition, we add up the pure CAT translation (Google Translate) as another reference.

Table 1 Comparison of the translation quality among HTD, HTS and CAT

	Chinese to English		English to Chinese	
	Accuracy[%]	Suitability[%]	Accuracy[%]	Suitability[%]
HTD	67.08	70.26	72.14	68.53
HTS	83.39	75.08	78.46	79.63
CAT	65.59	63.66	62.54	60.18

Tables. Table 2 For different translation software, we will definitely gain diversely comprehensive translation quality: accuracy is the main criteria for translation here.

Table 2 Comparison of the translation quality between Trados and MemoQ

(%)	Trados	MemoQ
50	88.97 ± .12	85.29 ± .13
60	93.46 ± .12	93.46 ± .12
70	96.46 ± .10	96.46 ± .10
80	98.16 ± .09	98.16 ± .09
90	97.80 ± .18	97.80 ± .18

3. Demand of Software Design in Translation Practice

In translation practice, in order to better the design of the CAT software application, it is necessary to accurately access the time and cost of the translation project, greatly reduce translation mistakes for the more coherent translation and build up the standardized processes for practical translation. In translation practice, the design of CAT, which is mainly aim at the targeted group with relatively good command of foreign languages, emphasizes on providing help in translation rather than replace manpower. As for this system design, it should include functions of the separable and recycle phrases and sentences, and combine the pre-recyclable phrases and sentences, phrases and sentences view and display mode. Most importantly, we can split the weight of the recyclable files according to the sign, pattern, special symbol, number arrays and so on. It can support the settings and buildings of management functions like recycle the project management, user management, the working group management. What's more, in this system design, its corpus supports the multilingual translation practices, making it possible to log on at any time in anywhere. The resources of the corpus database must derive from the real translation projects and stand the test of the professional materials that designed by the professional translators based on schools and offer proof, making sure the system design can meet the practical need.

4. Optimizing the Design of CAT Software in Translation Practice

4.1 The General Structure of the Software.

In the translation practice, the designation of CAT software not only supports the working mode of online B/S, but also avoids the rising miscellaneous problems that would rise when different translators recycle the database, reducing the duplication of effort. The design of CAT system

includes the sections of system management, teaching, and practice and corpus management. In translation practice, on this designation, the system management platform embraces the teacher information management, student information management, class information management and corpus information management; the translation teaching platform embraces the announcement management, curriculum management, courseware upload, homework management, test management, group practice, corpus management and the function of IM online instant communication; The translation practice section embraces the individual practice, group practice, term notes, individual translation practice function, while the corpus database consists of corpus, memory database and frequently-used words.

4.2 Application Advantages.

The system management functions: on the one hand, it is necessary to equip with the function of super administrators who owns the supreme right and the system administrators who is mainly responsible for the equipment and management of teacher information, student information and study materials. On the other hand, it must has the teacher information management function so that the administrators can revise and check the teacher and class information, as well as add information, deal with the demission and export tables of teacher information.

The teaching management function: firstly, it must include the announcement management curriculum management, courseware teaching, homework management, test management, group practice and corpus management. Secondly, it supports the announcement management function so that teachers can release notice and students can check it on the student client window. Thirdly, it supports the curriculum management function which helps to check the present and the previous classes, and teachers can deal with classes like to add, revise and copy. Fourthly, it supports the function of using courseware. Thus, teachers can edit the courseware and give lectures. Through the communication and share of the selective courseware during the lectures, elitism education can be attained.

The practice platform function: it must back up the function of web research. Once personal data is built on the internet and after the users audit the data, the data will be synchronous with the changes on the internet. This function need to support the function of the student practice section management during which students can operate under different roles like project manager, translator, auditors, and change roles freely. What's more, based on this function, the system can automatically research for the matched terms, translation memory or frequently used words on the server when students do the translation practice; the corpus database can be shared while a group of people are working.

The corpus management function: it can support the term database management. And the management platform can deal with the term database like to add, import or export information, revise, delete or check through the corpus database. Also, it supports the memory database management, through the corpus database management platform, the memory database and frequently used words can be added, imported, exported, revised, deleted and found out. And at the same time, self-built term database can be attained, and it is able to administrate several memory database. For one thing, the corpus database need to cover over 20 heated fields and has more than 2000 articles, meanwhile, it can continue to add more according to the school demands; for another, the resources of the corpus database must derive from the real translation projects and stand the test of the professional materials that designed by the professional translators based on schools and offer proof, making sure the system design can meet the practical need.

4.3 Translation Strategies.

In the designation of CAT software, the translation strategies are to aim at the users' demands in translation and help them with the practical translation through the aid of the software system and output from the translation software corpus database. In the design of CAT software, the corpus database of the translation strategies can support the aid alignment of large bilingual texts, be comparable to different file formats and word account. Besides, it has the perfect alignment tools. The relative research function which can give some transition suggestions for the consulting for words or phrases in the translation memory project are available. And it supports the select function

that can select the wanted sentences and make it convenient for translators to deal with the files. Project administrators can conduct the operations like allocating translation task, checking the implementation of the project. Exporting the translation or the consulting texts, strengthening the maneuverability of the system design.

4.4 Questions that May Rise behind the Optimized CAT Software.

First, though most translators have good command of languages and are good at translation, they are not very capable to use computers. Many translator who are used to their personal habits and the traditional aid software, may repel the optimized CAT software, and have difficulty in accepting it. Secondly, after many years of using the traditional aid software, translators have already built up their records and accumulation, so it would be hard for them to try with the new CAT software. Nevertheless, compared with the traditional ones, the optimized CAT software has very prominent advantages and good maneuverability in translation practice.

5. The Maneuverability of CAT Software in Translation Practice

In this age of rapid development, communications between people are becoming increasing frequent, which is sure to put forward some more strict requirements to the computer translation software. In translation practice, to optimize the computer translation software is to contribute to meet the practical translation requirements of the time and enhance the teaching ability in translation practice. Applying the CAT software in translation practice can improve the operability on the one hand and improve the translation practice quality on the other hand, promoting the translation communication between different languages and cultures and exerting the efficiency of the designation.

6. Summary

From what have been discussed, in the present situation of translation practice and translation teaching, based on the software translation vocabularies database and the translation strategies, applying the CAT on the translation practice, can improve the operability, improve the translation practice quality, speed up translation, and meet the demands of translation practice, accelerating the communications between different countries and different languages.

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