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The Application and Practice of Computer-aided Translation Teaching Platform Based on Corpus

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Abstract: Since the beginning of the 21st century, the use of information technology in translation teaching has become a common method in the process of foreign language teaching in Colleges and universities. We all know that translation teaching is inseparable from corpus, and translation teaching is also inseparable from some advanced information technologies such as electronic dictionaries. So, after entering the 21st century, translation teaching has become a popular method there are also many technological innovations in the field of learning. This paper studies and analyzes the application and practice of corpus based computer-aided translation teaching platform. Based on corpus, this paper studies the application and practice of computer-aided translation software teaching platform. Based on corpus, the application of computer-aided translation teaching platform greatly improves the quality and efficiency of translation. This paper also points out some problems existing in the process of development and application, and puts forward some thoughts and theoretical ideas for these problems. Under the principle of this idea, the author makes a summary through the analysis and research of cases in order to enhance its teaching function platform, and the current translation practice teaching has achieved good teaching effect. The research shows that the application and practice of corpus based computer-aided translation teaching platform has been studied and analyzed. We know that it has good teaching effect, but there are still problems such as copyright and language programming. Therefore, we should promote the development of the application and practice of corpus based computer-aided in translation teaching platform through effective innovation.

1. Introduction

1.1. Background Significance

Up to now, our research on corpus has been mainly from theoretical exploration and

experimental aspects. Most of the results can also reflect that he can play a positive role in the process of translation teaching. Therefore, for those who pay attention to the teaching, their focus is on the mode and method of translation teaching. The development platform and the application of the platform should be completed with the help of computer technology, which is also the guarantee of corpus teaching platform. After the application of corpus, we can find that the quality of translation and the efficiency of translation have been significantly improved, and the teaching of translation has also had a very positive impact, but some objective reasons, such as the limited teaching conditions. From a national perspective, many colleges and universities in our country do not attach great importance to computer-aided translation, and from the current point of view, many colleges and universities have not carried out computer-aided translation related courses. Based on the common cases at home and abroad, this paper expounds the characteristics and working principle of the corpus based computer-aided translation teaching platform, and introduces the role and significance of its application.

1.2. Related Research

Many scholars at home and abroad have carried out research and Analysis on the application and practice of corpus based computer-aided translation teaching platform. Zhu has combined the teaching platform with corpus and corresponding retrieval tools [1]. Langlais directly uses corpus as a basic resource for translation teaching [2]. Zhu believes that when the education platform uses corpus as a resource, such teaching can rely on corpus and a large number of corpus resources, and present it through retrieval tools, so as to realize translation teaching [3]. There is an English Chinese bilingual corpus, and the corresponding corpus is established. Through the development of software programming, such a computer-aided education translation teaching platform is developed, and this platform is based on the corpus as the basic resources.

In the process of translation teaching, Banos, a scholar, will use such a corpus resource retrieval tool, and the number of words in the corpus is extremely rich [4]. McEnery has done in-depth research in this area [5]. At the beginning, the corpus was very independent, and it had to rely on word to operate. However, through the research team's research, the resources of the corpus have been extended to the scope of finance. There are a lot of original contents of economics newspapers and periodicals and the corresponding translated contents. As the resources of corpus, they are included in the corpus, and the later platform is upgraded to the version that can be used in the network. And now this platform has grown into a long-distance education system, which contains quite a number of modules. Teaching in the Internet can be realized by combining a single knowledge point with repeated practice.

1.3. Research Contents of This Paper

Through the research and analysis of the application and practice of corpus based computer-aided translation teaching platform, based on the research of specific detection items or common structure, this paper makes a simple classification, which is carried out under the premise of taking corpus as the education platform, and puts forward a design idea, which is also based on the corpus under the network environment. Based on the actual situation of several application cases, this paper analyzes the usage and effect of platform users such as educators and students according to the experimental results.

2. The Application and Practice of Corpus Based Computer-aided Translation Teaching Platform

2.1. Methods and Techniques Used in This Paper

After the application of corpus method, great progress has been made in theoretical translation and application, such as translation generality, case-based machine translation and statistical machine translation. In the process of translation teaching, corpus is not only a resource but also a means [6]. In today's educational environment, corpus has been highly valued by educators. As a result, the bilingual corpus not only enables users to obtain bilingual strength, but also enables users to obtain multiple translations in multiple languages. This kind of bilingual corpus can improve students' understanding ability and become an important reference tool in the process of students' learning.

In the process of translation teaching, there are a variety of classifications existing in the computer-aided translation teaching platform. There are clear standards for the classification of computer-aided translation teaching platform [7]. According to the different teaching situation of facts, it can be classified into two types: teaching platform and research platform.

At the same time, in order to avoid the intersection of classification, but also to better reflect the advantages of the platform, the existing platform can be basically divided into three categories, one is for self-use teaching platform, one is for business training platform, the other is for school enterprise cooperation training platform. Corpus can be said to be a kind of rich resources, the more languages can reflect the rich resources. Users can choose different corpora according to the actual situation, so as to establish their own technical language database [8]. Corpus can also be transformed from translation memory. The study of the process and style is simple and direct for translation.

To master a core skill is to master corpus. At present, many corpus retrieval softwares on the market have become important tools for translation practice, researchers, educators, etc [9]. Translation and research are in great need of corpus, which can provide a new way of thinking and perspective for many fields. Especially in recent years, there are many researches on corpus. Although there are many researches, it is difficult for corpus to enter the classroom of translation. The reason we can understand is that there is no general language involved in cool situations. In order to enable the vast number of users to better adapt to the fields they are involved in, such as financial law, etc., many fields can be involved in translation tasks [10].

2.2. Application and Practice of Corpus Based Computer Aided Translation Teaching Platform

For the analysis and research of several typical teaching platforms, on the basis of several typical teaching platforms developed by translation researchers, we can observe the construction of these corpus resources. Compared with most platforms, they can meet some basic needs in the teaching class. In fact, the resources of corpus are more than that [11-12].

In this paper, corpus based computer-aided translation teaching platform is applied in three aspects: the platform developed by technical personnel for translation researchers, the commercial training platform developed by computer-aided translation software enterprises, and the translation simulation training platform developed by school enterprise cooperation. In the process of developing and updating the platform, researchers and teams pay great attention to the details of corpus, that is to say, they attach great importance to the content of knowledge annotation, especially the explanation of documents, skills or reasons, and remarks, which are very helpful for

junior students.

For teachers, they will be very handy in the process of explanation in class, but even if these annotations have been reviewed by experts, translation work, especially some translation involving literature, is not a single option, nor can there be only one answer [13]. Therefore, the results of translation should be diversified, and the annotation system is very complex in the process of using it, educators must learn to be familiar with it [14-15].

Translation training platform not only needs to improve the main functions of translation software, but also can meet the actual needs for subject teaching and scientific research projects in Colleges and universities[16]. Some practical functions have been developed, and these contents are more suitable for teaching practice in professional fields. In addition, these platforms can also participate in the research of machine-aided translation software. Therefore, the subsequent development and upgrading of corpus computer-aided translation teaching platform are carried out within the framework, and the functions of these platforms are also relatively complex [17]. It is impractical for educators to devote a lot of effort to their study. In addition, research and development of teaching units are not charged, if there is a need to buy units, not necessarily have sufficient budget funds for procurement [18].

This corpus is specially designed for the teaching platform, and has become an important corpus resource for teachers and students. In addition to the general functions of computer-aided translation software, the teaching platform also pays special attention to the function of organizing "multiple users with scattered space" to complete a translation task, that is, multiple translators cooperate with each other under the support of computer technology to help students accumulate team translation experience. On the whole, the advantages of the application and practice of corpus based computer-aided translation teaching platform are very obvious. Taking corpus as the basis of his attention to information shows the significance of the existence of corpus and its value in the process of education and Teaching [19].

2.3. Application and Practice of Corpus Based Computer Aided Translation Teaching Platform

(1) Platform design language

The design is for the teaching platform. In this process, the computer programming language is mainly open source, and then Java language and MySQL database language are selected. This is because in terms of portability, Java language has obvious advantages. Windows operating system can use the program written in Java language, and Linux and other operating systems can also use the program written in Java language. Therefore, the application of Java language programming in all teaching platforms has good compatibility.

(2) Modules and functions

For users, that is, students, teachers and other relevant personnel for the computer-aided translation teaching platform feedback content. The purpose of improving and optimizing the platform content to make its teaching function more prominent is to make it better serve the computer-aided translation teaching.

According to the feedback from users, students, translators and teachers to the computer-aided translation teaching platform and research platform, some functions of the platform are redesigned, especially to enhance its teaching function and better serve the practice. Through the research on the platform that has appeared in Colleges and universities, it is not difficult to find its modules and corresponding functions as follows:

1) Student side module. This module is relatively simple in function and application. Students can complete the translation tasks assigned by the teacher here after logging into the platform.

During the design, the text processing software and format are introduced accordingly, which enables students to format some key contents while meeting the translation requirements [20].

2) Teacher side module. This module is actually the core module of the whole platform, because education and teaching activities are basically carried out in this module. In addition, there is a link to the translation reference corpus. Different modules have different functions. For example, in the homework management module, teachers input the original text and exercise content. At this time, according to the actual needs of the students, the score is given according to the students' translation completion. For the module of class management, teachers can select students from the existing student information in the platform, and then form a class in the platform [21]. The teacher can choose according to the subject or the translation level of students. Such a teaching platform can provide translation exercises and assessment of different difficulties for students of different levels, so as to realize the difference of teaching [22].

The teaching platform can provide translation exercises or tests with different difficulties for students with different translation ability levels, so as to achieve differentiated teaching. The status column appears in the class management module. There are several states: not evaluated, being evaluated, completed and completed. In the state of not being evaluated, teachers can invite more than one person to score, and can also assign different weights to each participant. If there is a status of completing the assessment, students cannot continue to submit their assignments. The teacher can set the time for students to complete the assignment. If the time exceeds the set time, the submitted homework will be regarded as invalid. The marking module of homework reflects the teacher's assessment of students' translation level. The reference translation will appear in each translation unit, which is beneficial to teachers' review. In the module of student management, teachers have the right to increase or decrease, batch increase or decrease student accounts.

3) Corpus module. in MySQL database, there are translation reference corpora and student translation corpora respectively. Their file names are different, and they are all open, and relevant data need to be input by users themselves. Here, the rights of teachers and students are also different. First, teachers can input both the original text and the reference translation into the corpus of student translation. Second, combined with the actual teaching situation, we can input better translation content as corpus resources, and delete the content that is no longer applicable from the corpus.

The corpus is also input by students themselves and controlled by students. Students can also take the initiative to provide teachers with more quality and value of translation content. After the teacher reviews, they can also input them into the corpus. In addition, according to their own teaching situation, teachers input their translated content into the students' translation corpus. In order to improve the efficiency of query, register classification is applied in this, that is, the Chinese English sentence level alignment refers to the Chinese resource alliance, and the corpus is also accessible. Students and teachers can refer to specific websites through translation. For example, after inputting the query environment in the query interface of translation reference corpus, query results by register [23].

There are some precautions to be paid attention to. When adding resources to the corpus, teachers should clearly label the resources added to the corpus, that is to say, the added resources should be allocated to the specified corpus classification. The specific application of the translation version of the corpus in translation teaching is the translation version of the corpus. In order to be able to carry out better in the process of classroom evaluation, the teacher can completely in the curriculum the teachers' educational thinking and decision-making are the important embodiment of translation teaching methods. For as like as two peas, the standard of input is that if we put forward further assumptions, such as the input of corpora can enhance students' divergent thinking, the bilingual input corpus will be more suitable, and the contrast is the same text as that of the

translated text. The translation submitted by the students is the same as that of the reference text. If the source is input into the corpus of students' translation, the meaning of translation teaching will be lost [24].

4) Such a translation teaching platform is also maintained and operated by administrators. At the same time, the administrator has the highest right to audit the teacher's login account and password, which can ensure that the input and application of corpus are normal, and can export data from different corpora. What's more, with the continuous updating and upgrading of various Internet browsers, the teaching platform is also updated and improved. Therefore, administrators need to carry out daily maintenance on the platform in real time, and try to avoid the occurrence of some failures in program operation [25].

3. Experimental Research on The Application and Practice of Corpus Based Computer-aided Translation Teaching Platform

3.1. Experimental Background and Subjects

This paper combines the teaching platform with the corpus and the corresponding retrieval tools, and directly uses the corpus as the basic resource for translation teaching. In the process of translation teaching, such a corpus resource retrieval tool will be used. All the experiments are based on the teaching practice of educators, teachers and students as the experimental objects, through the in-depth development of the experiment and the experimental results are studied and analyzed.

3.2. Experimental Methods

(1) A platform developed by technicians for translation researchers

Combining the teaching platform with corpus and corresponding retrieval tools, a large number of users directly use corpus as the basic resources for translation teaching. In the process of translation teaching, well-known foreign language universities in China will use such a corpus resource retrieval tool, and the amount of food in the corpus is extremely rich. In the case of using corpus as a resource in the educational platform, such teaching can rely on the corpus and a large number of corpus resources, and present it through retrieval tools, so as to realize translation teaching.

Although the application of corpus in translation teaching is applied and practiced in the computer-aided translation teaching platform, in this process, it is completely controlled by the user, that is, the teacher, and the resources of the corpus are presented vividly in the teaching process. One drawback is that the classroom presented by the vocabulary database and the corresponding retrieval tools is monotonous and passive. In fact, this kind of classroom is not conducive to the development of students' subjective initiative. Universities in developed regions use corpus and data-driven software development and research.

(2) Corpus as a basic resource for translation teaching

Corpus is directly used as a basic resource for translation teaching. Machine aided translation teaching system is a platform for translation teaching as well as for students' translation learning and training. A system with two platforms has two functions. The translation of poetry has certain advantages. The level of one-to-one translation is still rigid. This is the disadvantage of word for word translation, which requires users to spend some time to refine and modify. In addition, the platform used by students has the function of example sentences. The user's database construction and search platform can allow the majority of users to add a lot of approved translation to the whole auxiliary teaching system, and these contents have become an important resource of the language

database.

(3) Translation simulation training platform

In the process of translation teaching, such a corpus resource retrieval tool will be used, and the amount of words in the corpus is extremely rich. In this regard, in-depth research has been done to promote the work of domestic school enterprise cooperation in developing translation simulation training platform. A computer-aided business translation teaching system has been developed. The system is mainly divided into four parts: Student platform, teacher platform, corpus and administrator platform. The student platform is based on practice and has the same functions as the AsiaInfo machine aided translation software system; the teacher platform has the characteristics of a general network teaching platform, covering the functions of teacher management, teaching interaction, scientific research assistance, etc., among which the most noteworthy is the 100 million word business English Chinese bilingual parallel corpus constructed by many business English majors.

3.3. Experimental Data Collection

In this paper, 50 students in the normal class and 50 students in the experimental class were selected as samples. The changes of students' scores, the improvement of students' scores after using the platform for many times, the change of exercise time after using the platform for many times, and the weak links reflected by the platform were obtained through the experiment Section.

4. An Experimental Study on the Application and Practice of Corpus Based Computer-aided Translation Teaching Platform

4.1. Theoretical Analysis on the Application and Practice of Corpus Based Computer Aided Translation Teaching Platform

We can understand that there are two essential aspects of the corpus based CAI platform. The first is the teaching module; the second is the corresponding teaching platform of corpus module. Combined with the idea of process translation and teaching method, the corpus method and resource utilization can be maximized to the extreme, and the subjective initiative of teachers, students and users can be brought into full play, which also greatly improves students' performance, as shown in Table1, table2 and figure1.

Table 1. Student achievement before platform application

Category	Sample size	Minimum	Maximum	Mean
Experimental class	50	62	80	70.88
Regular class	50	61	78	69.48

Table 2. Student performance after the platform application

Category	Sample size	Minimum	Maximum	Mean
Experimental class	50	68	87	78.65
Regular class	50	65	80	72.18

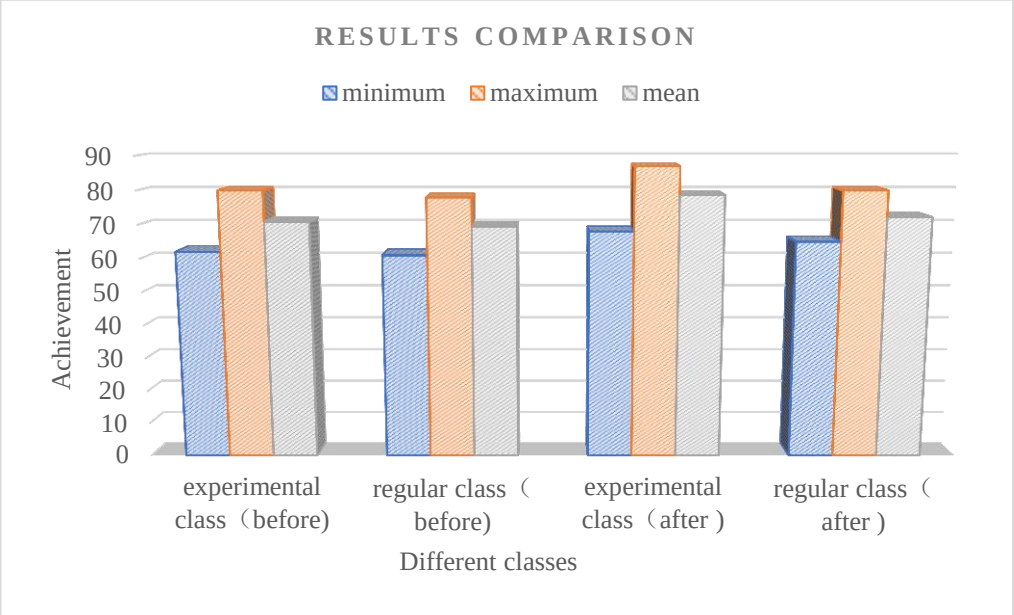

Figure 1. Results comparison

Through the comparison of Table1, table2 and figure1, we can see that students' scores have been significantly improved after using the corpus based computer-aided translation teaching platform. Therefore, we can conclude that the computer-aided translation teaching platform based on corpus is helpful to the improvement of students' scores.

Let students actively participate, but also let teachers more confident to enter the environment of translation teaching. In real life, for pure humanistic educators, the development of corpus based computer-aided translation teaching platform is not very realistic. When you buy the machine-aided translation teaching platform developed by enterprises or jointly developed by schools and enterprises, you will find that not all schools have enough funds to purchase. On the other hand, in the process of using corpus based computer-aided translation teaching platform, as shown in Figure2, students can find their problems and shortcomings intuitively.

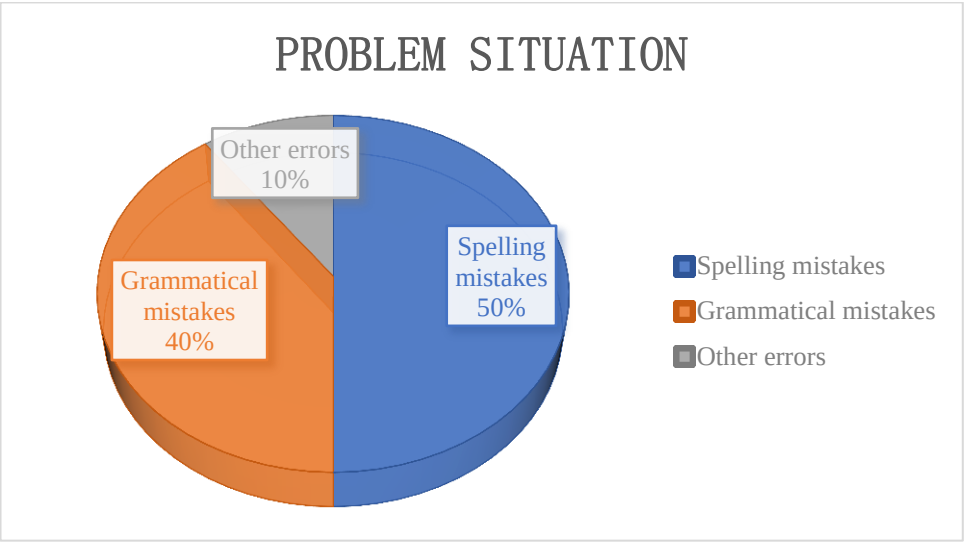

Figure 2. Problem situation

Through figure2, we can intuitively reflect the weak links and problems, so it is more conducive for educators to adjust the focus of translation teaching.

It is for this reason that in 2009, our school launched a computer-aided experimental research project on students' translation ability, a computer-aided translation teaching platform. This theoretical framework was formally put forward again, and this platform was also developed later. The platform is mainly used to collect students' translation data and assist translation teaching. As shown in Figure3, the time spent by students in translating exercises within nine times can be displayed intuitively.

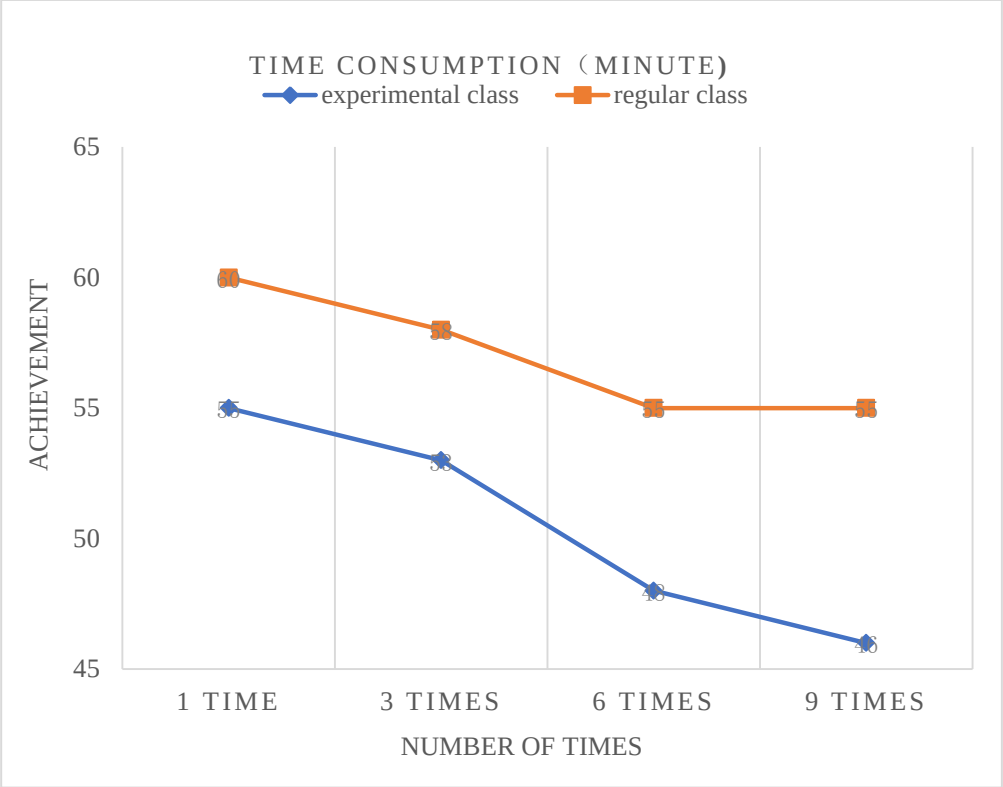

Figure3. Time consumption(minute)

From Figure3, we can clearly observe that after the application of the corpus based computer-aided translation teaching platform, the time spent on translating exercises is significantly shortened, which means that the efficiency of students' practice and learning is improved.

4.2. Practical Analysis of the Application and Practice of Corpus Based Computer Aided Translation Teaching Platform

For the sub data collection platform, it mainly aims at two different types of content collection, namely, the users who use the corpus, namely students, and the users who do not use the corpus, namely students. At the beginning, it was defined as a tool platform for translation teaching and research. In view of this situation, the computer platform is designed on the basis of corpus. This framework is more simple and clear, and there is no need to distinguish experimental objects in students' modules. In the teacher module, teachers' feedback and annotation functions are strengthened, As shown in Figure4, teachers can intuitively see the changes of students' scores after many exercises.

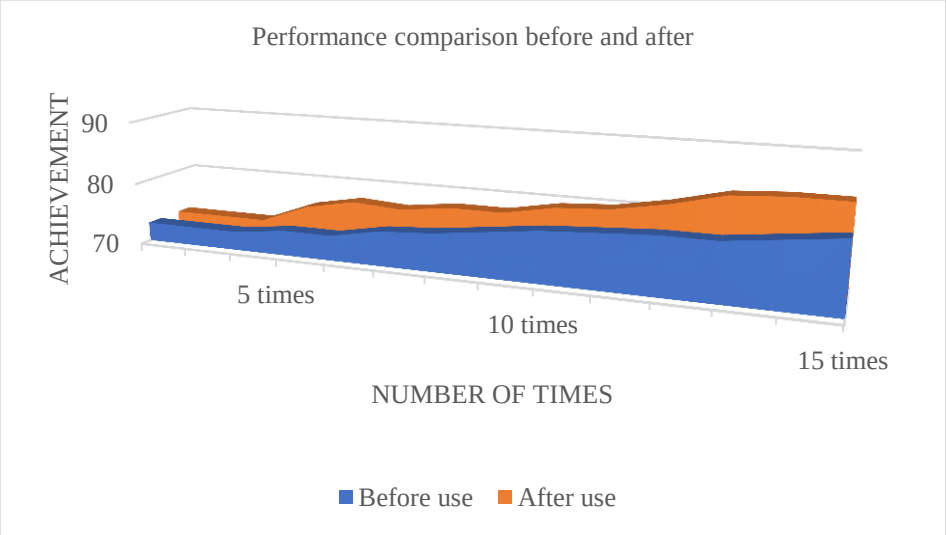

Figure4. Performance comparison before and after

As shown in Figure4, the scores of students in the first three times have not changed, but through the use of the platform, the scores have been significantly improved from the fourth time. Therefore, such data collection can better enable educators to master the situation of students' scores.

The platform has two advantages: first, as far as translation teaching method is concerned, it pays more attention to process, which is shown in Teachers' teaching logs and students' learning notes. The second point is a simpler module for the management of teaching platform, which makes it easier for administrators to carry out the management of teaching platform. Teachers log in the teaching corpus used by teachers and the learning corpus used by students, which is more conducive to the full use of resources.

5. Conclusion

This paper puts forward and analyzes the theoretical framework, which is based on the corpus of computer-aided translation teaching platform, in the process of application, and in the process of practice, objective analysis, hoping to make translation teaching have a better technical platform, but the current teaching platform, still need innovation. First of all, in terms of testing, it is necessary to test the computer in a large range, to truly achieve data security. On the other hand, the scoring method is relatively traditional, and the efficiency is relatively low, so we have to find a way to achieve automatic scoring and statistics.

Objectively speaking, the corpus based CAI platform has two different corpora, and the results are simple and clear, which can be easily mastered and used by both teachers and students. This function of annotation can make full use of it. In students' homework, teachers can explain some common mistakes and give students methods. Students can also complete the task according to the teacher's requirements, and take the initiative to learn the notes added by the teacher and the reference translation. Such a teaching platform has been applied in Colleges and universities in China. From the reaction point of view, students also show great interest, and teachers can timely grasp the difficulties students encounter in the process of translation.

If the platform is a non-profit translation teaching platform, it can be truly free from the copyright of corpus. The computer-aided translation teaching platform studied in this paper is based on the general computer-aided translation teaching platform under the premise of corpus, and cannot represent professional computer-aided translation software. For students, if they want to

achieve professional translation, they must learn as many as possible several kinds of machine-aided translation software, and try to understand its working principle, and as much as possible to accumulate memory and corpus resource information, in order to meet the needs of the future development of translation industry.

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Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Conflict of Interest

The author states that this article has no conflict of interest.

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