Bilingual Corpus Construction in Financial Field and Its Influence on Translation Competence Acquisition from the Perspective of Translation Psychology

Hao Xing

Jincheng College NUAA, Nanjing City, Jiangsu Province, China

Abstract: As a leap forward development of science and technology, the correct application of artificial intelligence to translation can improve the efficiency and quality of translation, and various technical support of artificial intelligence can facilitate the translation process. Taking the corpus construction in financial field and translation competence acquisition as the research objects, this paper summarizes the research status from the perspectives of financial professional field and corpus, discusses the influence of financial corpus on the acquisition of translation competence according to PACTE model in translation psychology, analyzes the role of financial corpus in the quality and efficiency of translation in financial field, and looks forward to the future research on the relationships between bilingual corpus construction in financial field and translation competence acquisition from the perspective of translation psychology.

1. Introduction

Compared with the natural intelligence of natural people, artificial intelligence simulates, extends and expands human intelligence with artificial methods and technologies. Since the first definition of "artificial intelligence" in Dartmouth conference in 1956, artificial intelligence has made great development in theory and practice.

Using artificial intelligence technology, machine translation errors can be reduced by about 60%, and the accuracy of translation is improved. The development of machine translation has brought opportunities and challenges to the translation industry. With the continuous improvement of artificial intelligence translation in the future, the translation efficiency will be improved and the translation quality will be greatly improved. Artificial intelligence translation machines and systems are more suitable for the needs of the times and society, which is the organic combination of artificial intelligence and translation. With the continuous combination of artificial intelligence and translation, under the high-tech background, what kind of goal should be established for the training of translation talents, what kind of training scheme should be implemented, and what kind of training mode should be used in order to keep pace with the times and integrate with the society. These problems are worthy of further consideration and exploration.

As a major product of artificial intelligence, corpus construction is combined with translation

research to study whether the application of corpus in translation practice will benefit the efficiency and quality of translation, whether it will help to improve translation competence, and whether it will assist in the cultivation of applied translation talents, At the same time, whether it will contribute to the rapid development of theoretical and technical research on corpus construction is very important for both the development of corpus construction and translation related research.

What is the development of corpus construction? Is there an obvious gap between the construction of corpus at home and abroad? What is the current research status and level of corpus construction abroad? What is the trend and focus of corpus construction in China? These are the problems that researchers in corpus construction need to understand.

2. Research Status of Corpus Construction Abroad

In 1961, the world's first machine-readable corpus was born in Brown University in the United States, so it is also called Brown corpus, and then began the considerable research and development of corpus theory and technology application. Since the 1980s, with the development of computer technology, there have been various types of second-generation corpora, and the application of corpora began to rise to all levels. Since the 1980s, corpus linguistics has developed very rapidly. In addition to monolingual corpora, bilingual parallel corpora and comparative corpora have emerged one after another, and have become the main focus of corpus linguistics research.

In 1995, Baker proposed that bilingual corpora should be divided into three categories: Parallel Corpus (also known as "corresponding corpus"), multilingual corpus and comparable corpus [1]. By 1998, there were parallel corpora of English French, English Italian, English Norwegian and English German languages abroad. It can be seen that the construction and application of bilingual parallel corpora have been preliminarily developed from 1980s to 1990s.

Mona Baker (1993), in corpus linguistics and translation studies: implications and applications, elaborated the potential value of corpus method for the study of translation language commonalities, opening up a precedent for corpus translation research [2]. Subsequently, Laviosa (1998) clearly pointed out that corpus method can be used in translation research. The research paradigm with rich external forms can deal with the problems of translation theory, translation description and translation practice [3]. Tymoczko formally put forward the concept of corpus translation studies (CTS) in the same year. Since 2000, corpus-based translation research has been deepening its influence all over the world [4].

With the in-depth development of translation studies, bilingual parallel corpora have also had an important impact on translation practice. In today's globalization, there is a great demand for professional compound talents in various fields, and it also puts forward new requirements for the construction of parallel corpus of special-purpose language translation. At the International Conference on Corpus Linguistics in 2003, Sinclair pointed out that "while striving to establish a super large and comprehensive corpus, establishing more, more professional and relatively small ESP corpora will be a major trend in the development of corpus linguistics in the future." [5].

Roslina Abdul Aziz (2015) proposed that professional corpora have made important contributions to the global development and progress of English for special purposes (ESP) [6]. Since the 1990s, the research focus of ESP in economic related fields such as finance and business has been further refined and specialized. The research centered on discipline community or practice community has gradually become the focus of ESP research in economics. According to the survey of scholars, the specialized English corpora built in the world so far include Hong Kong Engineering corpus (HKEC), Hong Kong Financial Services corpus (hkfsc), Cambridge Business English corpus, Cambridge Legal English corpus and Cambridge Academic English corpus.

Corpus specialization or miniaturization, multimodality of corpus data and corpus localization are

the development trends of today's corpus. Under the influence and promotion of these three trends, the research on English-Chinese bilingual translation parallel corpora in the field of special purpose is not the end, but only the starting point.

Among them, there are few related studies on Bilingual Parallel Corpora in the field of finance. Both in the construction of corpora and in the theoretical research based on financial bilingual corpora, the development lags behind. Therefore, these reasons stimulate our motivation to build a financial bilingual corpus for universities and college students to use in translation practice and teaching.

3. Research Status of Corpus Construction in China

Compared with foreign countries, the construction of domestic parallel corpora is not too late. In more than ten years, from introducing foreign corpora and theories to creating their own corpora, and then to developing and applying corpora, the construction of domestic bilingual parallel corpora has followed the pace of foreign development.

However, translation studies based on parallel corpora started late. According to the survey, the earliest academic article on corpus and translation research in China is "corpus and translation research", which opens a new idea for domestic translation researchers. In the following ten years, some influential English Chinese parallel corpora have been built one after another, resulting in a large number of relevant research results [7]. Under the chairmanship and leadership of Professor Wang Kefei, Beijing Foreign Studies University established the general Chinese English correspondence corpus in 2004. As the first parallel corpus platform in China, it is of great significance to the development of domestic bilingual parallel corpus construction. After the establishment of the platform, it is mainly used for translation teaching and Translation research, and has played an important role in the development of domestic translation.

Over the past 40 years, domestic scholars have paid more and more attention to the construction of special-purpose English-Chinese parallel corpora, and some representative corpora in special-purpose fields have emerged one after another. The national language and writing working committee, the Foreign Language College of the people's Liberation Army, the foreign language teaching and Research Press have all contributed to the construction and development of bilingual parallel corpora in special fields in China, Bilingual corpora for computer majors, military English corpora and English Chinese literary works corpora are very representative construction achievements of English Chinese bilingual parallel corpora in the field of special use [8].

In recent years, based on the research on Corpus Based Financial English translation teaching, Chinese translation and annotation corpus of English financial reports, financial bilingual parallel translation teaching corpus and multimodal Financial English corpus have been gradually built in domestic academic and teaching fields [9]. Through the research on Corpus Based Financial English translation teaching, scholars have found that learners can complete self-learning based on the assistance of corpus Master the translation skills of Financial English texts; master the cutting-edge information of the financial industry, expand the knowledge vision of the financial field, and understand the use skills and application methods of Financial English in the professional field [10].

Although China has made some achievements in the research of English-Chinese bilingual parallel corpora in the field of special use in recent years, the domestic research on financial bilingual parallel corpora is still in the exploratory stage, and there is still a lot of research space in both theory and practical construction, especially in the theoretical research of financial bilingual parallel corpora, it is relatively backward. From the number of research literature, the total amount is low. There are relatively few articles in the construction of financial English-Chinese bilingual corpus, the application of corpus technology, or the practical application research based on corpus. Therefore, it can be seen that the theory and technology of English-Chinese Bilingual Parallel Corpus are applied

to English-Chinese translation in the field of finance In practice, it meets the requirements of today's social development for financial translation talents, and this just shows that there is still a lot of room for development in the theoretical research and practical application based on financial bilingual parallel corpus.

4. The Influence of Financial Bilingual Parallel Corpus on Translation Competence Acquisition

PACTE, whose full name is "Process in the Acquisition of Translation Competence and Evaluation", has been mentioned for the first time by Spanish Professional translators and translation teaching scholars in the Translation Department of Barcelona Autonomous University. In 1997, these translators and scholars organized a professional research team, and they first proposed its translation competence model structure in 1998 and proposed a revised new translation competence model in 2005, including five sub-competences (Bilingual Sub-competence, Extra-linguistic Sub-competence, Knowledge about Translation Sub-competence, Instrumental Sub-competence, strategic Sub-competence) and a series of Psycho-physiological components. The tests and survey for translation competence in financial field in this paper are designed according to the PACTE model.

4.1 Analysis of Factors Affecting Translation Competence

Aiming at the impact of financial bilingual parallel corpus on the translation competence acquisition, 112 undergraduates majoring in translation were randomly selected to test the quality and speed of translation in the financial field. The 30 samples have been tested twice, one of which is the traditional financial text translation, and the other is the translation test with the technical support of the financial bilingual parallel corpus. This paper compares the translation quality and speed of the two tests, and uses the paired sample t-test method to analyze the data. The results of paired sample t-test show that there is a significant difference between traditional text translation and translation with the help of database technology tools (t=-5.028, DF=111, P<0.05). The quality and speed of financial translation test under the traditional method are significantly lower than those under the technical support of financial bilingual parallel corpus (MD=-0.71).

Focusing on the four predictive factors of their own efforts, related courses, intelligent technology and language environment, this paper also uses the statistical method of multiple linear regression to investigate and analyze the influencing factors of the 112 undergraduates majoring in translation. Multiple regression analysis, also known as multiple linear regression, is a statistical method to test the prediction strength of multiple independent variables to a dependent variable and whether it reaches the significant level. The goal of multiple regression analysis is to determine the constant term and regression coefficient in the regression equation: $y = a + B^1 x^1 + b^2 x^2 + b^3 x^3 \ldots$, Finding the regression coefficient B is the key of analysis.

The main purpose of this test is to verify whether the four factors of relevant courses, self-efforts, intelligent technology and language environment can significantly predict college students' translation competence. The data used in this test meet the statistical premise assumption of multiple linear regression analysis (Fig. 1). The predictive variables were significantly correlated with the dependent variables (Table 2). The results of forced regression show that the four variables have a good predictive effect on College Students' translation competence (Table 3). R^2 is 0.547, that is, the combination of four predictive variables can explain 54.7% of the variation of "translation competence". Among the four predictors, the standardized regression coefficient of "self-effort" (beta = 0.411) and "intelligent technology" (beta = 0.378) ranks first and second. This shows that the higher the degree of their own efforts, the higher the translation competence of college students who are more interested in translation. The standardized regression equation is: translation competence =

0.411 * self-efforts + 0.378 * intelligent technology + 0.108 * language environment + 0.099 * related courses.

The above tests show that the correct use of intelligent technology tools has a positive auxiliary role and value for translation. Therefore, it further shows that the use of financial bilingual parallel corpus can help to improve the quality and timeliness of translation.
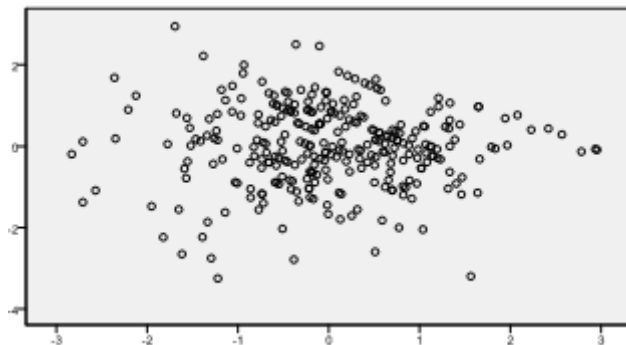

Fig 1. Scatter Diagram Dependent variable: Translation competence. Regression standardized expected value

Table 1: Model summary & Coefficients &ANOVA

Variable	R	R²	Adjusted R²	F(3, 217)	Beta	t(217)	Tolerance	VIF
Dependent V Translation ability	0.740	0.547	0.539	70.321*				
Independent V Related courses					0.099	2.250*	0.802	1.246
Language environment					0.108	2.150*	0.620	1.614
Self-effort					0.411	8.068*	0.600	1.665
Intelligent technology					0.378	7.102*	0.668	1.576

Table 2: Summary statistics and correlation matrix of variable

Summary statistics			correlation matrix			
Variable	M	SD	1	2	3	4
Dependent V Translation ability	3.54	0.73	0.238*	0.354*	0.660*	0.571*
Independent V 1 Related courses	3.74	0.67	…	0.187*	0.146*	0.220*
2 Language environment	2.71	0.90		…	0.249*	0.313*
3 Self-effort	3.71	0.69			…	0.673*
4 intelligent technology	3.68	0.79				…

4.2 Value Prospect of Financial Bilingual Parallel Corpus for Translation Talents Cultivation

With the continuous development of social economy and the deepening of machine translation

research, there are more and more cases of translation teaching and practice based on bilingual parallel corpus. Under the background of artificial intelligence, bilingual parallel corpora play an important role in the research of translation teaching and practice in the field of professional use. The application of bilingual parallel corpora in the field of finance to the cultivation of translation talents in colleges and universities will improve students' translation competence and effect, improve the efficiency of translation in the field of finance, and greatly improve the professionalism and quality of translation Accuracy has incomparable advantages over other methods. The construction of bilingual parallel corpus should follow the principles of practicality, simplicity and expansibility. The construction of corpus can effectively improve students' learning effect, standardize their translation behavior, provide students with more opportunities for translation practice, and effectively intervene in their translation process. At the same time, it can effectively improve the competence of both teachers and students, provide new methods of translation research, and help English-Chinese language communication.

For translation, we should apply it to the professional fields such as finance, and use modern technical tools to realize the practical value of translation and improve the efficiency and quality of translation. From the perspective of translation talent training, it is a unique way to improve the translation practice competence with the help of bilingual parallel corpus, which helps to improve the translator's understanding of the source language and help them translate in a more authentic language. However, the research on financial bilingual parallel corpus at home and abroad is still in the exploratory stage, the research on it is not deep and extensive, and the potential is still great.

5. Conclusion

Driven by the financial bilingual parallel corpus, this paper effectively cultivates the improvement of students' translation competence through three paths: the training mode of financial translation talents, the English-Chinese bilingual corpus for financial majors and students' financial translation practice using the corpus. Through the construction of financial bilingual parallel corpus, it is extended to college students majoring in English translation and finance, and the investigation and follow-up investigation are carried out according to their use of the corpus, so as to explore the value of financial bilingual parallel corpus for improving translators' translation competence and provide reference for the cultivation of compound talents majoring in translation in colleges and universities.

Acknowledgements

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