

The Cultivation of Translators' Terminological Competence in the Era of Globalization: a Case Study of Translating "Well-positioned Seismic Measurements" in Oilfield Review

Yali Liu

School of Foreign languages, Xi'an Shiyou University
Xi'an, Shaanxi Province, 710065, China

Abstract—How to cultivate translators' terminological competence in the era of globalization has become a new topic in the field of translation practice and theoretical research. In this paper, the author makes some reflections on the translation process of "Well-positioned Seismic Measurements" in Oilfield Review and discusses on how to improve translators' terminological competence based on his own experience. Through the analysis of the present situation of term education and the presentation of the prospect of terminology education in translation industry, this paper shows the precondition of the cultivation of the translators' terminological competence lies in the establishment of the terminological consciousness and responsibility, while the terminological knowledge and terminological skills are fundamental. In the era of globalization, only translators have sufficient awareness, knowledge and technical skills of terms can they equipped with knowledge of terms or terminological competence. Only by moving from self-consciousness to self-determination can translators truly play the role of bridge between human cultural exchange and civilization communication.

Keywords—Terminological Competence; Well-positioned Seismic Measurements; Terminology Education; Translation

I. INTRODUCTION

In today's world, global economy integration, political multi-polarization and cultural diversity coexist. The cross-language application of terms has become a norm, and the influence of term translation has become increasingly prominent in the language service industry. In the practical language service process, indeed, many translators are not competent. Compared with the traditional elite minority translation period, the current mass translation era has its distinctiveness in the following several aspects: the translator team size, translation criteria, translation practice volume etc. (Xiangqing, Wei, 2016). From the perspective of curriculum design based on the EMT curriculum, Wei Xiangqing put forward the classification of terminological competence in translation, including four sub-abilities: the ability to distinguish terms, the ability to deal with terms, the ability to operate term tools, and the ability to manage terms. It inspires the author to plan the cultivation of translators' terminological competence closely.

II. THE PRESENT SITUATION OF TERMINOLOGY EDUCATION

In recent years, many scholars have written articles to discuss a series of terminology-related issues, such as the terminological abilities of translators, term translation and term management. There are several reasons contributing to these academic researches. On the one hand, terminology is a theoretical discipline that more and more scholars have realized the special nature of terms and the significance of abiding by terminology rules. On the other hand, with the development and application of many translation software term management tools, such as SDLTrados Multi-Term, the translation efficiency and quality are significantly improved. In addition, the development trend of language service industry also further expands the scope of terminology education and research, and the cognition level of terminological researchers keeps improving. At present, some universities in China have begun to focus on teaching MTI students terms, adding relevant content into the curriculum teaching system, with teaching hours range from 2 to 16 (Bingbing, Leng, 2013). Compared with foreign universities, the term education for MTI students is lagging behind. Although some colleges and universities have recognized the important role of terminology education and added terminology related contents to the class, the understanding of its important status is still insufficient.

Terminology is a subject of methodology, which is closely related to various disciplines. The terminology courses in foreign universities are compulsory courses, which are mostly arranged in the undergraduate stage, and taught by terminologists or professionals. Influenced by many foreign universities, many foreign language schools in China set up term courses. The course not only focuses on the theoretical teaching of terminology, but also strengthens the cultivation of practical abilities, such as mastering the skills of searching and collecting terms, and being able to independently create term databases. The current network survey data shows that the term education and teaching in China has not become a clear content of the translation major course, but in the process of translation teaching practice, teachers also gradually realize the importance of terms infiltration into education. Therefore, they began to pay attention to and attach importance to the explanation of the content of theoretical knowledge related to

terms, and combine modern teaching software to realize the integrated development of term education.

III. THE CULTIVATION OF TRANSLATORS' TERMINOLOGICAL COMPETENCE

Terms are the core of professional language, and professional translation mainly deals with professional vocabulary or mainly terms. It is said that 75% of the time spent by translators in translation was taken on term translation (Huanghai, Yang; Shupu, Zheng, 2013:1-2). Therefore, terminological competence is a basic requirement for professional translators. Without terms, there is no knowledge; without terms, there is no theory.

A. *Terminological Consciousness Depends on Term Education*

Terminological consciousness is a kind of academic consciousness that comes from the understanding of the nature and function of terms to treat professional terms rigorously and scientifically and to treat professional terms in other fields cautiously. Term education is a popular teaching and training activity based on the basic theory of terminology, which aims to cultivate the awareness of terms among students with professional background knowledge and professionals in relevant social sectors (Shupu, Zheng, 2009). It should be regarded as a necessary measure to improve the scientific and cultural literacy of people. Term education is of great significance to the cultivation of high-level translators. Furthermore, term education is an important part of national knowledge system construction. So the curriculum of terminology is designed to push the term education into practice, which is an important measure to meet the needs of social development and translation professionalism.

The formation of terminological consciousness depends on term education, which can be carried out through course training. To develop a sense of terminological consciousness is the basic aspect for every professionals. So do translators.

With the continuous production of new science, new technology, new materials, new equipment and new industrial art, new seismic measurement terms are emerging in large quantities. At present, it is difficult to meet the needs of scientific translation by using professional dictionaries of petroleum science and technology. Therefore, it is of great practical significance for translators in petroleum industry to master certain principles and methods of term translation. The terminological knowledge learned in class can exert a subtle influence on the cultivation of the translator's terminological awareness or consciousness.

For example, the author encountered a wide range of professional terms in the translation of Seismic Measurement While Drilling. The accumulation and translation of these terms increased the author's sensitivity to such terms. These professional terms are mainly concentrated on the following three categories: 1). profession petroleum terms: drill-pipe, drill-string, drill-stem, drilling rig, mud-pulse telemetry system and so on. When dealing with the following sentence---Deep-water drilling off the west coast of Africa has focused on the turbidite sandstone reservoirs of the Tertiary period. These sands were deposited in a series of sinuous

channels in deep water, as large amounts of sediment flowed into the Angolan margin from the African craton, the translator, if doesn't has the awareness of the professional terms, will face a dilemma definitely. So does the following sentence---An experimental multicomponent Seismic MWD tool was run on the BHA in combination with the ADN Azimuthal Density Neutron tool, ARC Array Resistivity Compensated tool and MWD sensors. 2).interdisciplinary terms: such as bit (different fields have different translation names, translated as "zuantou"---the main tool for breaking rocks in the process of oil drilling) etc. So when the translators deal with them, it is not only necessary to know its original meaning, but importantly, to choose a reasonable meaning according to its own characteristics or disciplines. 3). common words converted into terms: receiver is one of the tools for Seismic Measurement While Drilling (MWD), which is translated as "jianboqi". (Seismometer or seismic receiver is an electromechanical conversion device which converts the seismic waves transmitted to the ground or the water surface into electrical signals.) So the meaning of "receiver" as a professional term is quite different from that receiver in daily life. Instead of referring to "seam" commonly, a check slot is a borehole seismic measurement that provides an accurate time-to-depth conversion and an adequate velocity model. The translator encounters many such examples in the process of translation. In addition, acronyms were created on a large scale: in the Well-positioned Seismic Measurements field, many acronyms are introduced to express certain specific terms, such as VSP (Vertical Seismic Profiling), DST (drill stem test), LWD (Logging While Drilling) etc. This accumulation process of professional terms is based on the terminological consciousness. To study terminology knowledge, including economical law for the formation of terms etc., is helpful for the translator to establish terminological sensitivity.

B. *Terminological Knowledge is Based on Professional Knowledge*

The translation of professional terms involves not only language but also subject knowledge. The term concentration reflects the core knowledge of a particular field. The field of logging is a very specialized subject and has a lot of terms. In the article "Well-positioned Seismic Measurements", the applications of seismic-while-drilling techniques and seismic imaging in drilling wells are discussed. Techniques such as drill-bit and logging-while-drilling (LWD) sonic tools are developed. While-drilling seismic methods work in acquiring time-depth information in real time. Apart from these, case studies demonstrating the application of these methods during field-testing are also presented. In the first rough translation version, there are a large number of mistranslations, retranslations, omissions and other inappropriate translations. Common terms are often ignored and are not translated into terms of corresponding disciplines, which results in the omission of term translation. The reasons are largely due to the translators' lacking of relevant professional knowledge. Translators should have a better understanding of the relevant knowledge of the original text, and read the corresponding parallel text, in order to avoid errors in the translation, and improve the quality of the translated text.

In translation process, sometimes we have a good command of the meaning of two words respectively. However, at the same time when put them together, it may be not clear. So we have to combine professional knowledge with implications. For example, in English, first-break means "the first time to break something", and in "first-break detection system", it is translated as "chuzhibo". It is the preliminary wave. (Due to the different propagation velocity of various seismic waves, the time of propagation to the observation point will vary a lot. Generally, longitudinal waves travel the fastest, and the observers always receive them preliminarily. The focal depth and the distance from the epicenter can be calculated according to the different wave propagation velocities and the time-gap to the observation station.) In the translation of "three component wire-line VSP data", the meaning of the original text should be accurately conveyed based on specific professional knowledge background and understanding of the following context: The high - quality, three component wire-line VSP data provided a good benchmark for verifying the Seismic MWD data quality. Therefore, we must strengthen the learning of professional knowledge, in order to understand its real meaning in the specific field, so as to achieve the purpose of accurate translation. From the practical experience of translation, the author realizes that the lack of professional knowledge greatly hinders the translator's accurate understanding of the text, and also reduces the speed of translation and affects the accuracy of the translated text.

For example, when translate the sentence "Other wire-line VSP surveys include the walkaway VSP and walk-above VSP." The translator must know the professional meaning of walkaway and walk-above, or we may convey the inappropriate meanings. A good command of relevant background knowledge is needed. Walkaway VSP technology is a VSP exploration method in which the shot-point passes through a well (or several) in a straight line and the detector is arranged in the well to receive signals. This method has high coverage times and can obtain high-quality reflection wave imaging. Walkaway VSP can obtain high-quality imaging, formation velocity, absorption attenuation, anisotropy and other geological information. Walk-above VSP is a type of vertical seismic profile to accommodate the geometry of a deviated well, sometimes called a vertical incidence VSP. Each receiver is in a different lateral position with the source directly above the receiver for all cases. Such data provide a high-resolution seismic image of the subsurface below the trajectory of the well. Based on these fundamental specific information, translators can get the meaning of "walk-away" and "walk-above", then can do a better translation rich in accurate information.

Apart from these, in the translation process, the translator searched a large number of parallel texts and professional texts to help himself understand the wire-line borehole seismic methods so that can further understand the following sentence---Unlike wire-line borehole seismic methods that maximize data quality by using geophones clamped---mechanically or magnetically---to the borehole wall or casing, receivers in the Seismic MWD tool are part of the drill-string. Coupling with the formation therefore depends on hole deviation and is less predictable. Practically, there is no

doubt that terminological knowledge bases on professional knowledge. In the translation process, professional knowledge is indispensable. In another words, that is to say, term translation is a big problem for those translators who lacking of professional knowledge.

C. Terminological Skills is an Effective Complement to Terminological Competence

Terminological skills contains the ability to operate term tools, and the ability to manage terms. It also includes the use of the domain terminology database, which can be continuously accumulated by building a small glossary by translators themselves. Term extraction as a kind of terminological skills is often used in many knowledge acquisition processes and translation processes as well. Professional translators should not only understand language and culture, but also master translation information technology and translation project management. Term management is a key part of translation information technology and translation project management. Term management runs through the whole process of translation and is one of the important evaluation indexes of translation quality. Usually, a large translation project needs a professional translation team with a clear division of tasks. At this point, term management is particularly important to ensure consistent translation of terms in the project. For international enterprises, it is an important part of the language assets as well as the basic work for enterprise information development and technical writing. Effective term management can help enterprises reduce the cost of product design, avoid the risk of localization terms, reduce the cost on translation process, and maintain the accuracy, consistency, standardization and professionalism of the content. With the language service industry clustering, the degree of socialized division of labor gradually deepens. Consequently, language service talents tend to be diversified, and the social demands for term management talents will also increase. That is to say, term management is a kind of terminological competence. Lots of CAT software has accompanying with term management tools, such as SDL Trados, Deja vux, Wordfast, Star Transit and Yaxin, for translators and other relevant personnel to use in the translation process. All in all, term recognition and extraction, term management in translating the professional texts are very important for the cultivation of translators' terminological competence.

Terminological skills are helpful to optimize the term translation process in language localization services. Using the terminological skills improves the consistency of terms in projects and further the overall quality of language services, and promotes the standardization construction of language service industry as well.

IV. CONCLUSION

In the era of mass translation and the era of globalization, terminological consciousness or awareness, terminological knowledge and terminological skills complement each other and jointly constitute the terminological competence required by translators. That is to say, terminological competence is a comprehensive competence composed of multiple sub-competencies, including the theoretical competence,

application competence, literature competence, management competence, technical competence, thematic competence and language competence etc. As an indispensable professional competence of translators, terminological competence is characterized by its complexity and practicality, which runs through the whole translation process.

With the rapid development of the modern translation industry, the personal terminological competence of professional translators has become an important competence of professional translators. Terminology translation training should not be neglected. In the meanwhile, individual translators are encouraged to develop purposefully their own terminological competence. The cultivation of terminological competence plays an important role in the cultivation of application-oriented, practical and professional translators in China. It is necessary and feasible to cultivate students' terminological competence, which accords with the practical requirements of the current development of the translation industry.

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