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Sci-tech Simultaneous Interpreter Education Based on Translation Universals Research

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The rapid evolution of scientific and technological advancements and industrial changes has profoundly interconnected countries and regions in the digital information era, creating a globalized environment where effective communication is paramount. Consequently, the demand for proficient interpreting skills within the scientific and technology sectors has surged, making effective language communication increasingly crucial. This paper explores the potential impact of translation universals on enhancing sci-tech simultaneous interpreter education. By examining the selection of teaching materials, methods, and activities through the lens of translation universals, this study aims to improve the quality of teaching content, innovate instructional approaches, and ultimately, enhance the effectiveness of interpreter education. The findings of this research are expected to provide valuable insights for curriculum development and pedagogical strategies in interpreter education.

Keywords: simultaneous interpreting, translation universals, interpreter education, sci-tech interpreting

Introduction

The "four new constructions" are the new liberal arts, new engineering, medical, and agricultural sciences, which have emerged in China in response to the challenges of the scientific and technological revolution and international competition. The interpreting profession has been granted a more comprehensive multidisciplinary and interdisciplinary perspective as a significant component of developing the new liberal arts. In particular, sci-tech simultaneous interpreting serves as a bridge for cross-cultural communication, integrating the characteristics of new engineering and new liberal arts. It is indispensable in advancing science and technology and collaborating with multinational enterprises. The cultivation of interpreters is relevant to the realization of national strategic objectives and the development of comprehensive national power in this context.

Interpreter education is highly regarded globally, with multi-level education systems for undergraduates and postgraduates firmly established. The systematic evolution of interpreting as a discipline reflects the societal and historical needs of our era, underscoring its crucial role in the exchange of civilizations. Prominent colleges and universities in the United States, the United Kingdom, Germany, and France have implemented advanced translation and interpreting programs. For example, the Monterey Institute of International Studies, established in 1955, is widely respected for its comprehensive interpreter education. In China, significant strides have been made in interpreter education. In 2006, three universities in China—Guangdong University of Foreign Studies,

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Fudan University, and Hebei Normal University—completed the audit and approval process to offer undergraduate translation programs on a trial basis. These institutions introduced advanced international teaching concepts and methodologies, fostering a new generation of high-quality translation and interpreting professionals. As the translation profession has developed rapidly, the role of interpreters has become increasingly professionalized and standardized. Subsequently, numerous Chinese colleges and universities have dedicated themselves to developing interpreters across various fields, leveraging their institutional strengths. The university where the author studied focuses on scientific and technological translation and interpreting, benefiting from the diverse disciplines offered by polytechnic colleges. This approach aims to cultivate applied foreign language skills that align with the nation's economic growth.

Nevertheless, quality issues are inevitable, even though the quantitative advantage has had a social impact and satisfied the requirements of specific industries (Mu, 2020). The study of translation universals is the foundation for a more comprehensive understanding of the nature of interpreting activities and developing a cognitive model of interpreting. Interpreting learning should consider enhancing interpreting skills, language proficiency, and comprehensive knowledge concerning the interpreting process. Consequently, this paper investigates the guiding significance of translation universals in developing scientific and technological simultaneous interpreting abilities at the three levels of material selection, method selection, and activity arrangement. The objective is to serve as a reference for the scientific and technological interpreting teaching process.

Literature Review

The interpreting profession has thrived across various sectors of society, and the discipline has been refined through the development of college and university curricula. A multimodal interpreting teaching system has been established at the undergraduate, master's, and doctoral levels after decades of growth in interpreter education. In recent years, the primary focus of foreign research on interpreting instruction has shifted from classroom teaching to interpreter education, with professional interpreter education becoming a mainstream trend. Relevant research primarily integrates interpreter education with the market, elaborating on perspectives, such as interpreter education and market demand (Stern & Liu, 2019; Vitalaru, 2022), employers' expectations (Zheng & Xiang, 2018), and working environment requirements (Ruiz Rosendo, 2021). In China, research in this field is primarily focused on teaching, with significant attention given to the teaching process, including discussions on the teaching system, teaching modes, teaching methods, and the construction of teaching cases (Mu & Li, 2019). Scientific and technical texts are distinguished by their high information density, strong logic, and extensive use of jargon (Montalt-Resurrecció & Shuttleworth, 2012). Consequently, scientific and technical interpreting standards must be more stringent in terms of professionalism and accuracy.

Translation universals are an assumption regarding the linguistic characteristics of translation that are "independent of the influence of the specific language pairs involved in the process of translation" (Baker, 1993). That is, the linguistic characteristics differentiate the translated language as a third language from the source text and the target language. Baker suggests six sub-hypotheses of translation universals: explicitness, simplification, normalization, avoidance of repetition, exaggeration of target language features, and specific distribution of certain linguistic features. In the past two decades, the research hotspot of translation universals has been

dedicated to the comparative analysis of translated texts of various language types using corpus-based translation. The objective is to investigate the regular features of translated language, represented by manifestation and conspicuousness, and to continuously enhance the doctrine of translation universals. The research is theoretically significant and practically applicable to the instruction of sci-tech simultaneous interpreting.

First, examining translation universals can enhance our comprehension of the similarities between various interpreting activities, thereby improving the quality of interpreter education. Second, the comprehensive application of translation universals research results in scientific and technological simultaneous interpreting instruction can facilitate the effective acquisition of simultaneous interpreting skills, reduce the learning cycle, and enhance practical proficiency. Ultimately, this research is crucial for advancing interpreting education and enhancing the cultivation of interpreting talents.

This paper employs the concept of translation universals to improve the current teaching model for sci-tech simultaneous interpreting, focusing on three key areas: teaching materials, teaching methods, and teaching activities. This approach is essential to meet the high demands of the modern interpreting profession, addressing the diverse types of texts, sources of discourse, and classroom activities involved in interpreting.

Application of Studies on Translation Universals to Sci-tech Simultaneous Interpreter Education

Selection of the Teaching Materials

Interpreting textbooks are essential instructional tools that reflect the teaching and research findings of interpreting studies and establish the knowledge system of interpreting for students. Research in translation universals is valuable due to its explanatory power, facilitating a more profound comprehension of translation and interpreting activities. The objective of interpreting learning is to transmit and receive information effectively. The interpreter acts are both the communicator and the receiver, making the process more intricate than monolingual communication. Students must establish an interpreting reasoning system and comprehend translation universals to develop a cognitive interpreting model.

In scientific and technological interpreting teaching materials, two categories of text can be distinguished: orality and literacy. Shlesinger (1989) identified the phenomenon of the oral-literate continuum in simultaneous interpreting. Baker proposed the concept of leveling among translation universals, which refers to the tendency of translated texts to gravitate toward the center of a continuum. Interpreter education in the European Union has revealed that it is crucial to organize the learning content gradually and make steady progress by phases when teaching scientific and technical interpreting. During the initial instruction phase, it is advisable to employ orality texts with a more straightforward structure and lower information density is advisable. This approach facilitates interpreting, enhances student motivation, and allows students to experience features of simplification in the interpreting language through various simple interpreting practices. By transitioning to literacy texts, students can further rationalize linguistic logic and improve interpreting that adheres to the norms of the target language (Ji & Wan, 2017).

Selection of Teaching Methods

The autonomous induction method has traditionally been the central focus of interpreting courses, designed to impart knowledge and develop skills. The primary objective of translation universals research is to investigate

the consistent characteristics of translated language by employing extensive parallel or comparable corpora. To summarize interpreting methods of general significance, students analyze the strategies, methods, and techniques employed by various translators in translating source language texts by examining the translated texts in the corpora.

The multimedia resource library and corpora provide essential methods and approaches for interpreting instruction. Currently, the research corpora encompass traditional literary domains and non-literary fields such as politics, journalism, science and technology, and tourism (Ji & Liu, 2022). For instance, Xiaowen Ji, the Chair of the 2022 Ministry of Education Industry—University Cooperation Collaborative Education Project English—Chinese Scientific and Technological Interpreting Curriculum Construction Based on Joint Practical Training Between Schools and Enterprises, developed a 100,000-word parallel corpus of the CP-400 Jack-up Drilling Rig Technical Specification in both Chinese and English. The corpus primarily consists of the technical specifications of offshore oil drilling platforms in the high-end equipment-manufacturing sector including specialized contents of ships, oil drilling, machinery, engines, and more. These corpora are a rich and authentic resource for exploring translation universals in the field of science and technology (S&T) and for teaching simultaneous interpreting in this field.

In the realm of simultaneous interpreting for scientific and technological fields, the use of translation universals is paramount due to the highly specialized nature of the content. Scientific and technical documents often contain fixed terminology and expressions with minimal variations. Consequently, proficiency in utilizing these established expressions and terms is crucial. Simultaneous interpreters must possess an in-depth knowledge of the subject matter, allowing them to accurately interpret technical details and specialized terminology swiftly. Translation universals, which are recurring linguistic patterns within a specific domain, provide valuable references for interpreters, enhancing both the efficiency and quality of their translations. Given the relatively unchanging nature of scientific and technical content, interpreters benefit significantly from the systematic analysis and accumulation of relevant corpora. By studying these corpora, interpreters can identify common linguistic patterns, facilitating smoother and more precise translations.

Students can employ the corpus-based search function to locate information in a targeted manner, thereby facilitating the acquisition of discourse features, such as formulaic language, in scientific and technological texts. In contrast, language learners can employ videos and transcribed texts in the multimedia repository to conduct phonological and listening training, learn the discourse features of S&T texts in specific contexts, and enhance their linguistic communicative competence and vocabulary use. Incorporating scientific research into the classroom, students may investigate the similarities between the target language versions or verify the preexisting assumptions of translation universals. Simultaneously, students can observe and contemplate translators' performance to comprehend the industry's practice standards, consider the similarities and differences in the interpreting strategies and techniques interpreters employ in various scenarios, and conduct self-, teacher-student, and peer-assessments to enhance their interpreting skills. Teachers should encourage students to develop a correct understanding of interpreting and to convert theoretical knowledge into conscious awareness. Ultimately, this method improves the quality of scientific and technical interpreting instruction.

Teaching Activities Arrangement

The interpreting program is designed to be both effective and applicable to real-world situations. Given the

interdisciplinary nature of interpreting, educators should incorporate encyclopedic knowledge, translation universals, and translation theory into the pre-interpreting, while-interpreting, and post-interpreting stages. This integration enhances students' language abilities and theoretical knowledge reserves.

Initially, educators may assign interpreting projects that involve genuine scientific and technological texts to provide practical experience in professional interpreting scenarios. Students will engage in authentic interpreting processes, assume specified roles, and select their projects.

Secondly, students should actively broaden their knowledge base, consult pertinent background information, and compile common terminology in anticipation of interpreting after selecting a project. Before translating, it is beneficial to anticipate the subject matter, become acquainted with the context, comprehend the speaker's perspective, and acquire a greater understanding of the availability of the languages. They should compile a list of proper nouns relevant to the project, including the names of individuals, locations, and institutions. Subsequently, students should attempt to organize the text colloquially, incorporate ideas in a logical order, and create a framework outline of the speech.

During the practical training of interpreting, students are required to extract, filter, and summarize critical information and actively output inert input content. During the speaking process, students should refrain from reading diligently and instead convey themselves naturally, observing the use of tone of voice, accent, pause, and eye contact. They should also develop the perception that the interpreter is the speaker. Throughout the process, students will discover that, although the interpreters are vastly different, they will inadvertently select similar techniques in comparable circumstances. Students can comprehend translation universals to varying degrees by considering various interpreters' knowledge reserves, cultural backgrounds, and text directions. For instance, numerous tendencies in texts necessitate specific knowledge or context to comprehend. One approach is to provide a comprehensive explanation that reveals all the implicit information and logic of the source language, known as explication. Alternatively, one may succumb to the curse of knowledge and pass over it in a single stroke or, due to a lack of knowledge reserves, be unable to explain or comprehend the original language, and can only pass over it in a general manner.

Lastly, teachers should instruct students to summarize pertinent interpreting methods following these practices, facilitate group discussions, encourage students to reflect on their omissions in pre-interpreting preparation by reviewing the strengths and weaknesses of their interpreting process, further investigate the background knowledge of the field, and enhance their capacity to integrate the content and prepare for the next practice. They should concentrate on the translation universals evident in the translated text and investigate the interpreting techniques that can be employed in similar situations. This approach will enhance students' comprehension and understanding of interpreting. By gaining a more profound understanding of the challenges and issues associated with interpreting practice, students can receive feedback on translation universals through practice, forming a virtuous circle resulting from the translation universals demonstrated in the translated text and the exploration of applicable interpreting skills in similar scenarios.

Conclusion

In conclusion, the teaching of scientific and technological simultaneous interpreting is guided by certain translation universals. This paper investigates potential recommendations from the perspective of translation universals, suggesting that distinct text types can be chosen at various stages of instruction, and explores the

integration of corpus-based learning with classroom instruction in interpreting. The study also examines teaching methods that incorporate translation theory into practice and combine interpreting classroom learning to enhance the efficiency of interpreting instruction, foster the comprehensive development of foreign language students, and cultivate talents for a robust scientific and technological nation. The demand for interdisciplinary interpreting talents in the new era should be met by higher education, and scientific and technological interpreting represents one of the practical means to promote the advancement of science and technology. Consequently, this paper is both highly relevant and instrumental in guiding the resolution of related issues.

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