

A Study of Translation Searching Competence and the Use of Digital Tools: Review of A *Translator's Guide to Information Retrieval*



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Abstract: In the era of digital information, it is a great necessity for translators to equip themselves with extensive knowledge of information retrieval. Based on the book *A Translator's Guide to Information Retrieval*, this paper introduces eight major elements of translation retrieval and relevant digital tools. Beginning with the background of heightened digital information accessibility, it underscores the necessity for translators to cultivate robust retrieval skills. It discusses the reasons, significance and ways to master more applicable retrieval skills in the area of translation studies. The objective is to explore methods for mastering these skills within translation studies, emphasizing their significance and practical implications. Through an analysis of the book's content, it points out that this book can narrow the digital gaps and solve the search difficulties of translation practitioners in the era of big data and emphasizes its integration of information and management knowledge. By synthesizing these principles, the book serves as an advanced guide for efficient search and information identification. In conclusion, it asserts the value of the book as a reference and inspiration for translation professionals, enthusiasts, and editors, offering practical solutions in an increasingly digitized landscape and underscoring the importance of continual adaptation to evolving digital environments in translation practice.

Keywords: Information Retrieval; Translation Competence; Searching Skills

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1 Introduction

The knowledge mastered by translators is limited, but the knowledge needed for translation is unlimited. In the era of information explosion, information explodes, and translators need to constantly acquire new knowledge through search, quickly understand unknown areas, find appropriate and authentic expression methods, better exchange information, and complete the task of translation. In the context of irreversible globalization, translation is a

bridge of communication. With the rapid development of Internet and communication technology, digital information is the key for many industries, including translation business. According to Internet Data Center, the global data volume was 0.8 zettabytes in 2009, and the amount of data generated and replicated globally exceeded 35 zettabytes in 2020, 44 times that of 2009. Nowadays, the amount of global information is increasing ex-

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ponentially, the time, speed and quality requirements for translation are also constantly improving. How to obtain professional information per unit of time and improve translation efficiency and productivity becomes a serious challenge to the search ability of translators.

The available online resources are becoming increasingly abundant, including online dictionaries, databases, terminology libraries, translation memory libraries, corpora, online machine translation, and self-media [1]. Many reasons can be listed for learning information retrieval, and the following are several important ones:

Improving translation efficiency: the awareness and skills of information retrieval can help translators quickly find relevant parallel texts, terms, and expressions, avoiding repetitive work and wasting time. This can not only improve translation efficiency but also ensure the accuracy and consistency of translation.

Improving translation quality: information retrieval can help translators find better expression and terminology, making the translation more authentic, natural, and fluent. This can not only improve translation quality but also enhance the reading experience for readers.

Adapt to market demand: with the acceleration of globalization and the popularity of the Internet, the demand for the translation industry is growing. Mastering these skills can make translators more competitive, adapt to market demands, and gain more opportunities for better development.

The skills of information retrieval can also expand translators' knowledge domain and help them acquire more background information, as well as deepen their understanding and expression of the original text. This is very important for translators, as it is not only about language conversion, but also involves knowledge from multiple aspects such as culture, history, and society.

Therefore, the book *A Translator's Guide to Information Retrieval* (2022) [2] edited by Wang Huashu and based on the concepts of data-driven empowerment is committed to solving practical translation problems. Following the development of artificial intelligence, the book introduces many online tools, software and resources to reduce the burden of translation, improve translation efficiency, ensure text consistency and translation quality. It aims to deeply integrate the latest search technology with translation work needs, focusing on the translator's "search quotient" and trying to systematically enhance the search literacy of translation practitioners.

2 Trends and Key Elements of Information Retrieval in Translation Studies

In a highly informationized era with an increasingly maturing stage of AI technology, the topic of information search has received significant attention. From various aspects such as translation teaching and learning, academic research, and translation practice, the digital empowerment of translation has had a significant impact on the translation industry and field. Nevertheless, in general, the previous discussions on translation ability failed to reflect the objective requirements of the translation industry for translators' translation ability in the era of big data. Translation ability in the traditional sense focuses on the translators' ability of language, knowledge and critical thinking. There is insufficient discussion of search capabilities. In addition, some discussions on how search technology assists translators in translation work basically are not in-depth and systematic, which often focus on the specific practice of using search engines and academic databases to assist translation, and do not discuss the connotation and cultivation of translators' search ability in detail from the perspective of translators' translation competence.

This section provides an overview of relevant research both domestically and internationally and provides a detailed introduction to the book content that this article focuses on.

2.1 Literature Review in Information Retrieval and Translation Competence

Firstly, Translation search is essential in highly technical industries and professional fields. Technological texts have a vast amount of professional vocabulary, complex logic, and special writing structures. Translators often have to rely on computer-aided search technology to solve the problem of precise terminology queries, background knowledge understanding, and verification of phrasal combinations [3]. The application of search technology in semi-professional vocabulary translation is extensive and important. Through tools such as corpus search and online dictionaries, it can help translators perceive the meaning of semi-professional vocabulary and

improve the accuracy of its meaning [4].

In addition, the translation search engines used for different texts may vary. Commonly applied texts include technology, tourism, business, and current political affairs, which need to be distinguished and compared with multiple search engines to choose the optimal translation, and to be adjusted if necessary [5]. In China, Internet search engines are often used for computer-aided translation, such as Baidu Translation, Youdao Translation and other online translation platforms, which can facilitate translators to find resources and help them improve the accuracy and efficiency of translation [6].

Besides, in the process of translation teaching and training design, search ability, which enables translators to use information resources to solve translation problems, is an important component. In the process of translation teaching and training design, based on problem-solving and information search, task modules can be used as drivers to introduce translation machine tools, information systems, and information resources, enriching and improving the translator's prior knowledge [7]. Online information retrieval is one of the important links in translation practice, which requires a retrieval ability scale that has undergone reliability and validity testing. In translation teaching and research, factors such as translation training duration and motivation should be emphasized, as they can affect information search behavior [8].

Compared to traditional search engines, knowledge search engines have outstanding advantages in topic classification, including one-stop knowledge retrieval, interactive knowledge Q&A, and personalized knowledge base, which can play an effective role in translation practice [9]. To improve the quality of machine translation, scholars have proposed a neural machine translation improvement based on a new beam search evaluation function. It trains a translation evaluation system using reinforcement learning to select better candidate words for translation generation. In the experiment, CASIA corpus and 1000000 pairs of bilingual Chinese English corpus were used. The experimental results show that this method can improve the quality of English Chinese translation [10]. There is a strong correlation between translation search, information retrieval and the improvement of machine translation quality [11].

In short, the information literacy and search ability of translators are becoming increasingly important. Translators need to efficiently obtain materials from massive amounts of information, which is related to the quality of

their translation services.

2.2 Major Parts and Details of the Book

As a translation reference book, *A Translator's Guide to Information Retrieval* introduces in detail desktop search, terminology search, corpus search, operation methods and other important topics. It provides a large number of search tools and websites, which not only provide unlimited resources for translation practitioners, but also offer a means to improve the work efficiency of translation teachers, text editors, and even general secretarial work.

Specifically, the book consists of eight chapters, including search basics, desktop search, text search, dictionary search, terminology search, corpus search, Internet search, and academic search. It uses a variety of search tools, including search engines commonly used by translators and desktop searches. It elaborates on the ways of using search techniques with abundant pictures and tables. It shares different search resources, such as academic and professional databases, multi-lingual parallel corpora, etc.

Chapter 1, Search Basics, first discusses the relationship between search and knowledge management. It argues that translation is a kind of knowledge management and transformation activity, and translators in the process of storing, organizing, and analyzing data internalize their own knowledge. When the translator knows how to use it flexibly to solve problems, knowledge is transformed into personal wisdom. In order to effectively manage knowledge and build translators' own knowledge systems, searching for information is the first step. Secondly, the concept and the important role of search are introduced. Searching is the ability to effectively obtain resources and solve problems through tools, and in the era of information explosion, the ability to acquire knowledge is far more important than the knowledge itself. Finally, the basic logic of search and several simple and advanced search methods are demonstrated with examples and figures.

Chapter 2, Desktop Search, systematically introduces desktop search tools that perform searches on the user's local computer hard disk, such as FileLocator Pro, Everything, Search and Replace, and CAT tools, and it presents case studies respectively.

Chapter 3 is Text Search. The process of translation is not only about the conversion of text but also sometimes involves file management, downloading and processing text in a variety of different formats. Text search can be

divided into internal search, external search, and network download. This chapter introduces and demonstrates how to search in Microsoft Word, Microsoft PowerPoint, Microsoft Excel and other advanced search functions.

Chapter 4 Dictionary Search. Nowadays, information retrieval and access is no longer limited to web page search but has expanded to web page search, with the combination of desktop version and mobile application and other comprehensive search methods. In this chapter, three types of dictionaries suitable for different scenarios are selected: desktop version, online version, and mobile version. In the first section, it demonstrates the specific operation of the desktop version of the dictionary GoldenDict, MDict, and Euro Dictionary with examples. The second demonstrates online versions of The Free Dictionary, Glosbe, Collins, Visuwords, and Haizi Dictionary with examples. The third demonstrates the operation of the mobile version of the dictionary, such as the Cambridge Advanced English Dictionary, and the Longman Contemporary Advanced English Dictionary. These are designed to provide users with an accurate and fast way to search, improving work efficiency in practical life and work.

Chapter 5 Terminology Search. Terminology is a technical term used in various disciplines, and effective terminology management can help individuals or enterprises improve translation efficiency and quality. The first five sections of this chapter systematically introduce and demonstrate the search functions of the five platforms of UNTERM, TermWiki, WIPO IP PORTAL, Database of Key Concepts in Chinese Thought and Culture, and Terminology Online. The sixth section introduces the creation and search of corpora based on SDL MultiTer and SDL Trados Studio software, the terminology conversion process and the skills to extract terms.

Chapter 6 Corpus Retrieval. By searching synonyms, word collocations, sentence pattern comparisons, etc., on the corpus retrieval platform, translators can improve the quality of translation, making it more accurate and authentic. The first section of this chapter introduces and demonstrates the monolingual corpus COCA (also see example by Lee Chang-Soo [12]), Linggle, WebCorp, Sketch Engine, Beijing Language and Culture University Corpus Center, Modern Chinese Balanced Corpus and their specific operations with case studies. In the second

section, the system introduces and demonstrates the bilingual corpus, Peking University Legal English Network, CNKI Translation Assistant and its specific operations with examples. The third section demonstrates the common corpus JuKu and General Translation Dictionaries and their specific operations with examples. The fourth section introduces the creation and retrieval of homemade corpus.

Chapter 7 Internet Search. The network resources are updated in real-time and have a large amount of information, so to find information accurately and quickly from them, users need to have the ability to use search engines, search skills, and search resources. This chapter elaborates on Baidu search, Google search, Bing search, Yandex search, and featured search engines including WolframAlpha, YouGlish, Sogou search, and Internet Archive. It compares the advantages and disadvantages of different engines through case demonstrations, so as to help translators choose different engines to search quickly and accurately according to different needs.

Chapter 8 Academic Search. In order to obtain academic materials such as papers, books, and abstracts, readers often use browsers to search directly. However, because of the all-encompassing and uncertain quality of online resources, using traditional means to conduct academic searches is tantamount to looking for a needle in a haystack and is sometimes inefficient. This chapter focuses on introducing the six mainstream academic exchange platforms at home and abroad: CNKI, Web of Science, EBSCO, Google Scholar, Baidu Academic, and National Library, showing readers some core search functions by cases of these platforms, so as to help readers master academic search skills and improve search tactics, to better improve translation technology capabilities and serve the practice of translation.

Moreover, the book provides 9 digital resources in the appendix, including commonly used corpora, search platforms, and shortcut operation codes. In brief, this book revolves around the translator's search recognition and competence, analyzing the integration of translation and search technology through real cases. It aims to enhance the translation ability of translators through diversified search technologies and promote the formation of high-level search thinking logic for translators.

3 Further Discussion on the Features of the Book and Translators' Searching Competence

In terms of content arrangement, this book combines a detailed systematic introduction and case demonstrations to cover a variety of search tools and methods, providing a comprehensive and practical handbook for translation practitioners, thus helping translators to carry out information gathering and translation work more efficiently. In particular, the book is accompanied by hundreds of real search cases and rich graphic and textual introductions, and provides analysis and interpretation based on a large number of cases and operations related Chinese translation industry.

This book is conducive to promoting research and teaching related to academia and translation education. It provides a systematic and detailed reference for teaching in related fields, and helps to develop students' in-depth understanding of search tools and methods, as well as their flexible application in translation practice. Overall, this book has significant practical significance in improving translation efficiency, expanding the breadth of knowledge of translation practitioners, and promoting research and teaching.

As for the innovation points of the book, the authors comprehensively cover several search fields in the course of their research. They provide a variety of search tools and websites, offering readers an all-around guide to searching. The book is specifically manifested in the following aspects:

Firstly, it focuses on comprehensiveness and practicality. From basic concepts to specific search tools and methods, this book covers all aspects that translators may use in their practical work, providing comprehensive and practical guidance for translators' translation work. In the rapid development of information technology and communication technology today, the Internet with rich resources has had a great impact and occupied an important position in people's lives and learning [13].

Secondly, this book has a clear directory structure, and the author divides the chapters according to different fields of search. It emphasizes some key parts in each chapter and the sections incorporate specific search tools and methods, which provide readers with a framework for

systematic learning, and enable learners to learn various kinds of search skills in an orderly way.

Thirdly, it highlights real-case analysis and demonstrations. This book not only provides a systematic introduction to the relevant tools, but also provides specific case demonstrations in each chapter, inserting a large number of pictures to help readers better understand the practical application of theoretical knowledge and increase the practicality of learning.

Translation-related research inevitably involves different related knowledge in multidisciplinary fields, and the content of this book helps readers to deeply understand the use of various search tools, and also enables them to flexibly apply what they have learned in practice. This is of great value in adapting to the needs of different translation projects and improving professionalism.

Translation is always an omnivorous work that requires a wide range of knowledge. The broader the translator's knowledge is, the better he or she is able to cope with all kinds of complex and diverse translation tasks. As human society enters the information age, translators usually need to complete translation tasks involving many different industries and fields, and are usually subject to strict time constraints. In this case, the Internet search engine is of great help to the translation work [14].

However, the book has some shortcomings. This book wins in breadth of content, but its depth is slightly lacking. The overly broad coverage of the search field may result in the book being too shallow in its coverage of certain topics. The same point is also reflected in the fact that the case presentations may not be in-depth enough. Although there are case studies in this book, whether they are detailed enough to cover specific issues in different contexts, as well as in-depth analysis of case studies, still needs further optimization. This may be a potential drawback. Meanwhile, with the development of the Internet as well as technologies such as artificial intelligence, human beings have stepped into the digital knowledge society, and man and machine will once again face a great division of labor [15]. With the development of technology and search engines, some of the specific tools and methods in this book may be outdated, so the updatability of the book may also be a potential problem.

4 Conclusion

Learning the skills of information retrieval is very beneficial for translators, as it can improve translation effi-

ciency, expand knowledge areas, improve translation quality, and adapt to market demand. Therefore, it is recommended that translators actively learn and master these skills. The book provides a comprehensive introduction to different search fields, which helps translation practitioners broaden their horizons and improve their ability to comprehensive multi-disciplinary applications.

The book uses a variety of search tools, including search engines commonly used by translators and desktop searches performed on the hard drive of local computers. The book is proficient in using a variety of search techniques, introducing search syntax, induced word queries, wildcards, and regular expressions. It has a variety of search resources, using academic and professional databases, corpora, bilingual databases, etc. At the same time, it is also a further improvement of the translation education curriculum system in the era of artificial intelligence, and is of great significance for the reform of the translation education system and the adjustment of the capacity structure of language service talents.

In summary, this book is novel and rich in content, starting from three aspects: search tools, search skills, and search resources, which can meet the multi-level, multi-dimensional, and multi-scene information retrieval needs of readers. It also arouses readers' awareness and interest in enhancing their translation competence of information retrieval, especially in this digital and AI-powered new era. Of course, with the improvement and changes in translation technology, the requirements for translation retrieval and relevant abilities will become increasingly high, and learners still need to constantly update themselves according to the changes of the times.

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