A Review of Domestic Language Service Research under the Perspective of Bibliometrics

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Abstract

This paper applies the bibliometric method, based on CNKI database, to screen and statistic the related literature published in the three major core journals system of China in the field of language service from 2008 to 2024, and statistically analyzes the literature in terms of the distribution of time, authors, journals, institutions, keywords and other aspects. It is found that under the current discipline system of language economics, language services have achieved certain research results. And the research results are analyzed and thought.

Keywords

language services; bibliometrics; CiteSpace.

As an important type of language economy, language service has great economic value and plays an important role in the social and economic life of China today[1]. One of the earliest doctoral dissertations on language services in China is Li Xianle'sLan guage Services and Service Language. He categorized the language service area into two types: instrumental and industrial, and described them macroscopically and microscopically respectively. Prof. Xu Daming pointed out that language services should refer to the language services provided by the state for the people, of which the most important language service is the use of the lingua franca in the economic and social fields. Specifically, it includes office services, translation services, training services, etc. of the common language, ontological norms of the common language, the construction of sociolinguistic norms, etc.[2]. Yuan Jun believes that language service is a service activity that helps people to solve the language barriers that appear in interlingual information exchange by directly providing language information conversion services and products, or by providing the technology, tools, knowledge and skills needed for language information conversion[3]. At present, society has not yet formed a clear understanding of the economic value of language services. The great economic value of language services has yet to be realized, and it is necessary to carry out an in-depth study of language services so as to draw the attention of the society to language services. Based on this issue, the author believes that it is necessary to summarize the domestic literature on language services, sort out the results of this research field over the years from it, and use quantitative methods to show the current status of current research and future development trends in the field of language services.

1.Research Methods and Data Processing

Bibliometrics is a method of applying mathematics and statistics to express more clearly the process of written communication and the characteristics and process of disciplinary development by calculating and analyzing various aspects of written communication. The basic purpose of bibliometrics research is to introduce the concept of quantity and quantitative analysis methods to further reveal the systematic structure of the literature and the law of change of quantity, to provide quantitative basis for the improvement of the literature system, and to achieve high-efficiency scientific management, so as to better solve the basic contradictions in the literature work, and to make the literature and intelligence work more effective for the service of science and technology, economic and social development.

There are three core periodical systems in China. The first one is CSSCI, the Source Periodical of Chinese Social Sciences Citation Index (CSSCI), which was founded by Nanjing University, and is also called C Magazine, and it is a periodical for liberal arts. The second is North Core, the Chinese Core Journal of Peking University Library. The third is AMI, which is the comprehensive evaluation report of China Humanities and Social Sciences Journal. In order to get the research status of language planning in China, CiteSpace(6.1.R6) is used to search CNKI (China HowNet) database, and advanced search function is used to search keywords. The search keyword is language service. Select core journals (including CSSCI, Chinese core journals and AMI core journals) as the literature types. The time span is from January 25th, 2008 to February 8th, 2024. Excluding non-academic articles such as book review, host language and report notice, 430 documents were obtained.

2. Data analysis

2.1 Time Distribution

As shown in Table 1. Judging from this statistical literature, the corresponding research can be divided into three periods. The first period is the research and exploration period (2008-2011). From 2008 to 2011, the overall situation of publishing articles in the language industry showed a relatively steady growth, but the number of published articles did not exceed 15, indicating that this topic attracted academic attention during this period. The second period is the research and development period (2012-2019), and the number of papers published in each year has increased significantly, exceeding 25. As a new industry, language services have gradually entered the field of vision of researchers. The third period is the peak of research. Due to time reasons, 2024 is not in the reference range, and the published amount of related documents fluctuates steadily, with an average of more than 25 articles. It reached its recent peak in 2022, with 114 articles. Combined with the background of that year, the topic is highlighted in the proposition of One Belt and One Road, New Arts and Rural Revitalization combined with language services. Since 2023, the research literature of language industry has shown a downward trend, and the reasons need to be further studied.

Table 1 Domestic Language Service Annual Document Scale
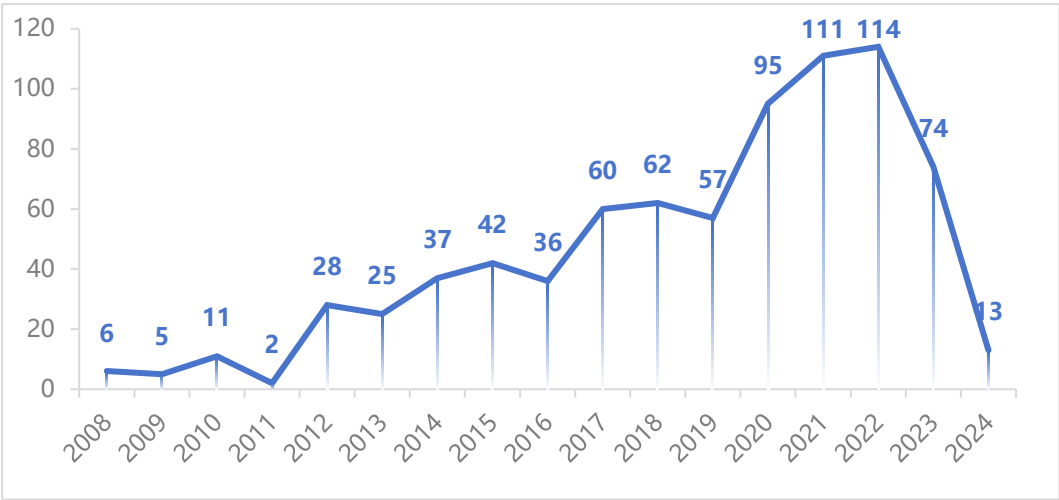
2.2 Distribution of Authors

According to Price's Law, authors with more than m papers are core authors.

$$M = 0.749 \times \sqrt{N_{max}}$$

In this study (the maximum number of articles published by the author) is 19 (the first author), and M3.26 can be obtained by calculation, and the rounding is equal to 3. Therefore, the number of core authors in the field of language planning research in China is more than 3. As shown in Table 2.

Table 2 Statistical Table of Core Authors of Language Service Research Literature

Ranking	Author	Quantity of documents issued	Ranking	Author	Quantity of documents issued
1	wang lifei	19	17	Li Yan	4
2	Wang huashu	17	18	Zhao Shiju	4
3	Cui Qiliang	17	19	Li Wen	4
4	Mu Lei	16	20	Su Jian	4
5	Qu sentinel	9	21	Li xianle	4
6	Shen Qi	7	22	Li Yuming	3
7	Wang Chuanying	7	23	Yu weiqi	3
8	Cui Can	5	24	Dang Lanling	3
9	Si Xianzhu	5	25	Feng Quanguong	3
10	Liu Heping	5	26	World Liu	3
11	Xu Jun	5	27	Liu Guohui	3
12	Zhang Huiyu	5	28	Liu Li	3
13	Zhang Weiguo	5	29	Yao Yazhi	3
14	Zhong Weihe	4	30	Sun Jiangwei	3
15	Xu Daming	4	31	Zhan Cheng	3
16	Wu Ping	4	32	Yu Jingsong	3

From 2008 to 2024, there were 271 researchers in the field of language planning in China (including only the first author), of which 32 were core authors, accounting for 11.8% of the total. The core authors have published 232 articles, accounting for 43.5% of the total number of articles. According to Price's theory, core authors exist only when they account for about half of the total number of publications, and 43.5% is lower than 50%, so strictly speaking, the core group of authors in the field of language planning in China has not yet been formed, and needs further sustained attention.

2.3 Journal Distribution

Understanding the distribution of journals in the research field and knowing the main sources of the literature is crucial for academic researchers. Therefore, in this paper, we have counted the top 20 journals about language service research publications, as shown in Table 3.

Table 3 Table of the amount of publications in journals about language service research literature (top 20)

Ranking	Journal Name	Number of articles	Ranking	Journal Name	Number of Articles
1	China Translation	62	11	Shandong Foreign Language Teaching	7
2	Shanghai Translation	38	12	Foreign Language Research	7
3	Language Application	30	13	Social Scientist	5
4	Journal of Yunnan Normal University	18	14	China Science and Technology Translation	5
5	Journal of Beijing Second Institute of Foreign Languages	17	15	Guangxi Social Sciences	4
6	Language Strategy Research	15	16	Journal of Xinjiang Normal University	4
7	Foreign Languages	14	17	Foreign Languages	4
8	E-learning of Foreign Languages	14	18	Jianghan Academic	4
9	Chinese Foreign Languages	8	19	Foreign Language Education Research Frontier	4
10	Foreign Language Teaching	7	20	Contemporary Foreign Language Research	3

The formula for calculating the number of Bradford's core journal zone is namely

$$r_0 = 2 \ln （e^E \times Y）$$

r_0 where denotes the number of journals located in the core journal literature zone, e denotes the natural constant (2.71828), E denotes the Euler coefficient (=0.5772), and Y denotes the number of journals of the journals with the largest number of loaded issues, and in this study, Y=31. According to the calculation, the number of core journals in this study is about 9.4082, which rounded up equals to 9, and from this it is concluded that the journals ranked in the top 9 are all in the core zone.

Table 4 Table of core journals' publication volume of language service research literature

Ranking	Journal Name	Volume of Publications
1	China Translation	62
2	Shanghai Translation	38
3	Language and Writing Application	30

4	Journal of Yunnan Normal University	18
5	Journal of Beijing Second Institute of Foreign Languages	17
6	Language Strategy Research	15
7	Foreign Languages	14
8	E-learning of Foreign Languages	14
9	China Foreign Language	8

From the above table, it can be seen that China Translation, as the journal with the largest number of articles, has 62 articles. There are only three journals with more than 30 articles in the core journal area. Although language services have been developed greatly in recent years, its related research is still not much in general. China Translation, Shanghai Translation and Application of Languages and Characters are the main position of the literature on language service research in China, and researchers can focus on them when searching for related literature.

2.4 Distribution of Institutions

The distribution of literature issuing organizations can reflect the distribution in the existing research, thus providing a new observation angle for the research of language industry. We also counted the top 30 organizations in terms of the number of articles issued, as shown in Table 5.

Table 5 List of issuing organizations of language service research journals

Ranking	Organization	Number of Articles	Ranking	Organization	Number of Articles
1	Guangdong University of Foreign Studies	31	16	Beijing Second Institute of Foreign Languages	4
2	Beijing Language and Culture University	15	17	College of Arts and Letters, Capital Normal University	3
3	Beijing Language and Culture University	14	18	College of International Exchange, Zhejiang University	3
4	University of International Business and Economics	11	19	College of Advanced Translation, Guangdong University of Foreign Studies	3
5	Shanghai International Studies University	10	20	Nanjing University Library	3
6	School of English, University of International Business and Economics	10	21	School of Information Management, Nanjing University	3
7	College of Foreign Languages, Tongji University	8	22	Beijing Jiaotong University	3
8	Nankai University	7	23	China Foreign Language Bureau	3
9	Peking University	6	24	Central South University	3
10	Institute of Economic Research, Shandong University	6	25	Northeast Normal University	3
11	Localization Service Committee of China Translation Association	6	26	College of Foreign Languages, Ludong University	2
12	Beijing Foreign Studies University	6	27	School of Chinese Language and Literature, Southwest University for Nationalities	2
13	Beijing Foreign Studies University	5	28	Hainan Normal University	2
14	College of Letters, Nanjing University	4	29	Zhejiang University	2
15	College of Letters, Wuhan University	4	30	College of Letters, Yangzhou University	2

It can be seen that most of the top 30 publishing organizations are institutions of higher learning, and there are two units related to language, which shows that the main position of language service research in China is institutions of higher learning. Colleges and universities have always been important places for scientific research, with favorable scientific research policies, professional scientific research talents and high scientific research enthusiasm. Therefore, colleges and universities will also be the research positions of language services in the future.

2.5 Keyword

Table 6 Key words list of language service research literature

Ranking	Organization	Frequency	Ranking	Organization	Frequency
1	Language service	122	11	rural revitalization	9
2	Language industry	19	12	Translation	8
3	Translation technology	19	13	Xinwenke	6
4	language planning	16	14	Language economy	5
5	personnel training	16	15	Language governance	5
6	machine translation	12	16	Language strategy	5
7	Language resources	11	17	ethnic minority area	5
8	artificial intelligence	10	18	Emergency language	5
9	the Belt and Road	10	19	big data	5
10	Language policy	9	20	Language management	4

Based on the statistics of the keyword frequency of the literature related to the language industry, it is found that language service ranks first in terms of the occurrence frequency of keywords, and its occurrence frequency reaches 122 times, far exceeding other keywords; Key words such as language industry, translation technology, language planning, personnel training and machine service rank in the top 20, as shown in Table 6.
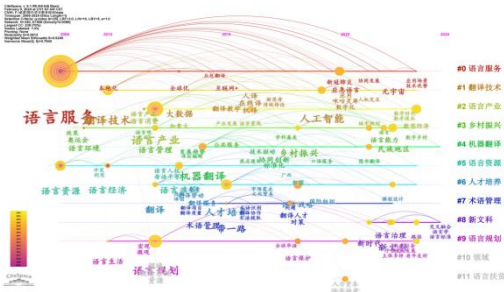

Figure 1 Time zone diagram of language service research literature

Figure2 keyword clustering diagram of language service research literature

On the basis of the above atlas, cluster analysis can be continued, and 10 cluster words can be obtained. These are hot topics in the field of language services, but the relationship between language services is different.

3. Research and Discussion

The development of language service research in China can be seen from the above literature statistics. Influenced by foreign linguistic theories and research, Chinese linguists realize that language can bring huge economic benefits, so on the basis of introducing foreign research angles and research theories, they gradually carry out closer exchanges and cooperation between China and the world languages and the study of language economics in China as a multi-ethnic and multilingual country. Generally speaking, the current academic research on the language service industry covers a wide range and has achieved certain results. However, under the background of the Belt and Road Initiative and rural revitalization, as an emerging industry with the premise of multi-country, multi-culture and multi-language, the development of China's language service industry should keep up with the development trend of the global language service industry, so as to better grasp the development opportunity.

In recent years, there has been an increase in related research, covering various aspects such as language service environment construction, language service talent cultivation, translation management, language service technology, and related theoretical construction. Scholars who were involved in the field of language services earlier mainly explored the scope, connotation, and extension of language service business. In terms of theoretical exploration of language services, Qu Sentinels' research is worth paying attention to. His theoretical research in this area mainly consists of two aspects: the theoretical construction of language services and the application of language service theory to reflect on language services in related industries[4].

Firstly, the impact of government and policies on the language service industry suggests that the Chinese language service industry should actively cooperate with relevant policies and strive for government resource support. The proposal of the the Belt and Road Initiative and the values of a community with a shared future for mankind reflects the policy trend, and is also a good opportunity for the development of China's language service industry. China's language services should take the the Belt and Road Initiative and the values of a community with a shared future for mankind as an opportunity to strive for policy support in a wider range while striving to complete government language service projects, so as to realize the transformation of enterprises from small to large, from weak to strong, and from low-end to high-end[5].

Secondly, Chinese language services actively assist universities in adding general translation courses related to healthcare, technology, law, and business, as well as technical courses such as project management, translation technology, and localization, to enhance students' interdisciplinary perspectives and technical literacy, in order to meet the dynamic talent needs of the language service industry. According to the report at the 2023 China Translation Association Annual Meeting, the number of translation talents in China continues to grow. In 2022, the scale of translation and language service practitioners in China reached 6.01 million, an increase of 11.7% compared to the previous year, providing good support for the overall opening up and foreign exchanges of the Party and the country. The language service industry excavates language service talent resources, integrates language service resources, expands business scope, and utilizes technological elements such as artificial intelligence to achieve efficient resource allocation. At the same time, it must consider how to optimize service business models, fully utilize language and economic resources, and demonstrate market advantages. For small-scale language service providers, the types of services and translator resources available are relatively limited. Therefore, whether it can provide more efficient and differentiated services through creating automation, introducing artificial intelligence

applications, optimizing process innovation, and other means will become a necessary condition for it to stand out.

Thirdly, Chinese language service providers should further expand their business coverage on the basis of consolidating traditional interpretation and translation services. In the digital age, customer demands are transforming towards digitization and intelligence. As service providers, they must keep up with the pace of customers, timely discover and meet their new business needs, and expand to language related personnel training, personnel configuration management, and other aspects. Language service providers should conduct timely needs assessments of customers and be able to expand existing services to create new strategic products. Language service providers should try to diversify their business and transform into content service providers.

Finally, language service technology is an indispensable part of emergency language services and plays a particularly critical role in the post-pandemic era. Therefore, language service enterprises must have the ability to develop or master the technology. However, compared to the increasingly diversified and sophisticated language technologies in the global market, Chinese companies need to strengthen their technological R&D capabilities. Translation tools and software have become essential translation aids, and these technology-related changes have put forward new requirements for language service talents.

4. Research Outlook

After more than three decades of development, language services have been increasingly emphasized by the state. in March 2022, the ministries and commissions of the Ministry of Commerce, the Ministry of Education, and the Foreign Languages Bureau of China jointly approved the establishment of export bases for language services with special characteristics, and 14 enterprises and institutions became the first batch of bases. in october 2022, the National Development and Reform Commission and the Ministry of Commerce issued Decree No. 52, which for the first time included the language services industry in the Catalogue of Industries Encouraging Foreign Investment (2022 Edition), specifying that the language service industry includes four major categories: translation, localization services, language technology R&D applications, and language resource services. The development of language service industry is in line with the development needs of modern service industry, which will be more conducive to the construction of scientific and harmonious language life, the rational implementation of language service policy, and the formation of an all-round and multi-level language pattern in China. In August 2021, Beijing Language and Culture University has applied for the establishment of a secondary discipline of "International Language Service", which is very helpful for expanding research horizons and grasping the frontier hotspots. In the field of language services, it is necessary to strengthen the research collaboration among researchers and organizations, and to build a reasonable assessment system for the discipline.

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