

# A Diachronic Research of the Development of Foreign Linguistics in China

## A Knowledge Map Analysis Based on the National Social Science Fund Project Database (1996-2019)

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### ABSTRACT

The National Social Science Fund (NSSF) project titles of foreign linguistics (1996-2019) were segmented and processed with CiteSpace. The visualized knowledge map by CiteSpace intuitively displays the diachronic development trajectory of foreign linguistic research and the changing of research hotspots. The research shows: the development of foreign linguistics NSSF projects experienced three development stages in numbers; NSSF projects of foreign linguistics mainly includes translation studies, teaching research and language ontology research; the research topics concerned by scholars are widely distributed and dynamically developed, but the comparative research between English and Chinese languages, English language research and the research of English learners are always the hotspots of all time; as new research paradigms, researches concerning validity and typology are expected to be the focus of attention in the future.

**Keywords:** *diachronic research, National Social Science Fund, foreign linguistics, CiteSpace, hotspot*

### I. INTRODUCTION

Since its establishment in 1986, the National Social Science Fund of China (NSSF) has developed into strategic, global, guiding and cutting-edge fund projects, including a full range of disciplines. It reflects the research development trends of various disciplines in the field of philosophy and social sciences. NSSF is regarded as a vital indicator to measure and demonstrate the research level and capability of scientific research units. Accordingly, more and more scholars are studying the National Social Science Fund project database on both macro and micro levels. The author searched CNKI (China National Knowledge Internet) with the title of "National Social Science Fund" under the theme of "linguistics", and obtained more than 20 research papers. Most of these documents carried out statistical analysis of linguistics from different time ranges and different research levels in order to grasp the overall development status of linguistics and the changes in hotspots (Note: Linguistics includes foreign linguistics, Chinese linguistics and domestic minority linguistics in this paper). For example, Chen Meifen (2012) conducted a comprehensive analysis of linguistics projects from 1999 to 2011 from both qualitative and quantitative aspects [1]. Fang Luna and Yang Tingjun (2015) pointed out that the regional distribution of foreign

linguistics projects was extremely uneven. Normal universities, language colleges and comprehensive universities had the advantages in language research. Further, the research team of Chinese linguistics was far larger than that of foreign linguistics [2]. Jiang Yue and Qi Yuling (2016) also reached a similar conclusion [3]. Then, Su Hong (2018), using word frequency statistics and content analysis, studied the widest time span (1991-2016) and found that the majority of linguistic research was mainly in Beijing and its surrounding areas, esp. universities of "985" and "211" in central and eastern China, and Chinese Academy of Social Sciences. And the research focused mainly on two major languages: Chinese and English [4]. Liu Hao and Li Xiangnong (2019) found that applied linguistics in NSSF projects developed rapidly, especially in language teaching and translation studies, and research paradigms such as "corpus" and "typology" were valued and favored [5]. Wu Shan (2012) studied the current status and development trends of Chinese linguistics, and found research hotspots such as "dialect", "corpus", "grammar", and "teaching" [6]. Wu Jinshan (2015) used a corpus method, combining quantitative statistics and qualitative analysis, to analyze foreign linguistics projects from four aspects: languages involved, research objects, research types and research fields [7]. Some other scholars studied the NSSF of foreign linguistics particularly. For example, Wang Lifei and

Jiang Jinlin (2011) analyzed the hotspot distribution during the "11th Five-Year Plan" period, and found that the research hotspots were foreign language teaching, translation studies, language studies and functional linguistics [8]. Nian Xiaoping (2013) analyzed ten years' translation projects particularly and pointed out that translation theory research and literary translation were still traditional research priorities, and non-literary translation research and translation history research were becoming new hotspots [9]. In addition, Su Xinchun and Chen Wenge (2016) conducted a combined analysis of the linguistic projects in China's five major scientific research funds [10], which also opened up a new idea for conducting quantitative research.

However, most of the above literature studied the development of linguistics in China as a whole, and the few special studies of foreign linguistics projects are involved in only a short time span. Such a situation makes it difficult to fully display the complete development trajectory of foreign linguistic research and the changes in the research hotspots so far. Meanwhile, most studies are based on the measurement analysis with a single Excel table. There is no visual analysis of the NSSF data of foreign linguistics category in CNKI so far. Using the professional literature measurement tool CiteSpace to carry out atlas analysis, we can more intuitively display the development trajectory and the changes of research hotspots, and make tentative predictions of the future development trend of the foreign linguistic research in China.

## II. DATA SOURCES AND SCREENING

The data used in this paper is extracted from the National Social Science Fund database of linguistics category (1991-2019) (<http://fz.people.com.cn/skygb/sk/>). The linguistics category is divided into the Chinese linguistics and the foreign linguistics projects. The Chinese linguistics projects include the Chinese language (including dialects) research, the domestic minority language research and the related teaching research of Chinese as foreign language. The foreign linguistics research in this paper is defined as linguistics projects except the above research types, including theoretical and applied research, translation studies and language teaching research in English, Japanese, Korean, Russian, German, and Spanish. With this definition, the Chinese linguistics projects are altogether eliminated from the 4285 items according to the indications of the project titles. Those projects that are difficult to judge whether they are excluded from their titles are decided by tracking down the research information of the project applicants. Thus, the precision of the research data for this paper is ensured to the greatest extent. Finally, a total of 1279 foreign linguistics projects are obtained.

### A. Research tools and data collation

This paper mainly uses CiteSpace to analyze the 1279 NSSF foreign linguistics projects. CiteSpace visualized knowledge map analysis is a new data analysis method generated in the context of the development of information technology. It "can show the changing system concepts in certain spatial form and certain time range, and can reveal the relationship of different knowledge and the law of knowledge development" [11]. It "can display the evolution of a knowledge domain on a citation network map, showing the development process and structural relationship of scientific knowledge. And these complex knowledge relationships are gestating the generation of new knowledge" [12]. While the NSSF database only provides information of the project sponsors and titles, CiteSpace cannot be directly used to analyze the texts of the project titles, it can be used to analyze keywords contained in the project titles. First, I used the word frequency analysis software ROST-CM6 developed by Professor Shenyang from Wuhan University to perform word segmentation on the sorted project titles to obtain useful keywords. Each title of the NSSF projects was elaborated with the sponsor's careful and overall consideration, which definitely includes the most important keywords involved in the research project. The statistical analysis of these keywords will definitely reveal the development trend of foreign linguistic research. Then, after all titles were automatically segmented and manually checked and corrected, synonym substituting and merging were also done to ensure an accurate and scientific data analysis ("Table I"). Finally, the merged keywords were converted into identifiable data with another software for CiteSpace to process.

TABLE I. LIST OF MERGED SYNONYMS

Keywords before merging	Keywords after merging
翻译、译介、外译、英译、俄译、韩译	翻译(translation)
英汉、汉英	英汉(English-Chinese)
俄汉、汉俄	俄汉(Russian-Chinese)
日汉、汉日、中日	日汉(Japanese-Chinese)
中国、我国、中华	中国(China)
大学生、本科生、学习者、学生	学生(student)
对比、比较	对比(comparison)
视域、视阈、视野、角度、视角	视角(perspective)
建构、构建、建设	建构(construct)

### III. STATISTICAL ANALYSIS OF NSSF OF FOREIGN LINGUISTICS CATEGORY

Since there were very few NSSF projects of foreign linguistics category in the initial years, the effective data retrieved for this paper is from 1996 to 2019 ("Fig. 1"). "Fig. 1" shows that the numbers of the projects of foreign linguistics category were increasing unevenly but continuously throughout the years. The increasing process experienced three stages: from 1996 to 2006, the numbers of foreign linguistics projects increased slowly, less than 20 projects per year; from 2007 to 2012, the numbers increased significantly, from an average of about 40 projects per yearly to about 80; then, from 2013 till now, the numbers increased to a higher level, with an average of more than 100 projects per year. This development trend is positively correlated with the continuous increase in the total projects of the National Social Science Fund. The year-on-year increase in foreign linguistics projects has greatly promoted the development of foreign linguistic research.

Statistics show that most of the NSSF projects of foreign linguistics category are concentrated in the "985" and "211" universities and some well-known

local universities, indicating that these universities are far ahead in foreign linguistic research. The universities who obtained a total of more than 10 foreign linguistics NSSF projects from 1996-2019 are listed in "Table II". It shows that Beijing Foreign Studies University and Guangdong University of Foreign Studies have the most projects (42 and 39 respectively) and are the leading representatives of foreign linguistic research in China. Secondly, Shanghai Foreign Studies University, Heilongjiang University, Shanghai Jiaotong University, PLA College of Foreign Languages, Fudan University and Nanjing Normal University all have more than 20 projects, indicating that in these universities there are also a large number of first-class foreign linguistic research experts. On the other hand, there are still many universities who have only one or two foreign linguistics NSSF projects. That indicates there is a very obvious and great difference in the level of foreign linguistic research among universities. The breadth and depth of foreign linguistic research in ordinary universities are not comparable with the listed universities, because "the number of National Social Science Fund projects that a scientific research unit undertakes reflects, to a certain extent, its research capacity, academic status and research management level" [13].

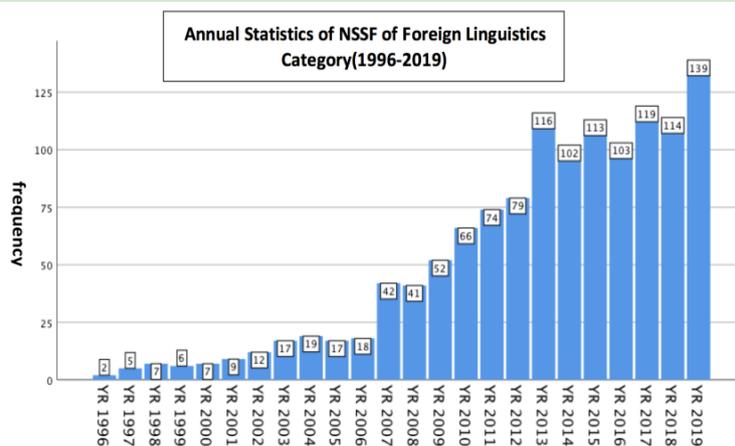


Fig. 1. Annual statistics of NSSF of foreign linguistics category.

TABLE II. STATISTICS OF UNIVERSITIES WITH FOREIGN LINGUISTICS FUND PROJECTS

University names and number of projects	University names and number of projects	University names and number of projects
Beijing Foreign Studies University (42)	Sichuan International Studies University (16)	Xi'an Jiaotong University (12)
Guangdong University of Foreign Studies (39)	Nanjing University (16)	Dalian Foreign Language University (12)
Shanghai Foreign Studies University	Central China Normal University (15)	Hunan Normal University(12)
Heilongjiang University (25)	Harbin Normal University(15)	Jiangxi Normal University (12)
Shanghai Jiaotong University (22)	Tongji University (15)	Qufu Normal University (11)
PLA College of Foreign Languages (22)	Huazhong University of Science and Technology (15)	Sun Yat-sen University (11)
Fudan University (21)	Beijing University (15)	Beijing Language and Culture University (11)
Nanjing Normal University (20)	Xiamen University (14)	Foreign Economic and Trade University (11)
Zhejiang University (19)	Yangzhou University (14)	Tianjin Foreign Studies University (11)
Ningbo University (19)	Xi'an International Studies University (14)	Nankai University (10)
Suzhou University (19)	Henan University (13)	Southwest University (10)
Hunan University (18)	Shandong University (12)	Shanghai Normal University (10)
Northeast Normal University (18)	Dalian University of Technology (12)	

#### IV. CITESPACE KNOWLEDGE MAP ANALYSIS AND DISCUSSION

##### A. Keyword co-occurrence analysis and research overview of foreign linguistics projects

First, import the merged identifiable keywords into CiteSpace (V5.6.R1), and set the "Time Slice" to "1996-2019", each slice is "1" year. Select "keyword" for the node type. Select "Pathfinding" for network cropping, check "pruning sliced networks" and "pruning the merged network" to simplify the network and highlight important structural features to increase the readability of visualization. Select the system default for the other parameters. Run the program and display the network visualization results. Then, continue to perform LLR clustering analysis on the visualized map, and set the names of the clusters by the index words. Last, the largest but meaningless node "research" is deleted, and the final result is obtained as "Fig. 2".

The parameters in "Fig. 2" show that the map after network cropping has a total of 154 nodes and 168 connections. The network density is 0.0143 and the maximum frequency of sub-network co-occurrence is 146. On the visualized map, each node represents a keyword, and the larger the annual ring of the node, the more the keyword appears in the NSSF project titles. That is, the more scholars who follow the keyword, the more academic influence and attention they have. The color of the node ring represents the corresponding time slice. The thickness of the line reflects the strength of the co-occurrence between keywords.

"Keywords are the essence of the main information of a paper. The content of the paper is all about the keywords. The analysis of the keywords will accurately reflect the research direction, research hotspots and

research trends of the paper" [14]. "Fig. 2" shows that larger keyword nodes include "China(中国)", "corpus(语料库)", "translation(翻译)", "cognition(认知)", "English-Chinese(英汉)", "student(学生)", etc., which are extremely important research topics. Table 3 lists the high-frequency keywords which appear over 30 times in the project titles. These keywords reflect the important research topics and research paradigms of foreign linguistics home and abroad, and therefore, are the focus of foreign language research. "Fig. 2" and "Table III" also contain high-frequency keywords such as "comparison(对比)", "perspective(视角)", "construction(建构)", "model(模式)", "theory(理论)", "development(发展)", "application(应用)" and so on. That means a large number of projects are research of comparison, construction, model, development and application based on a certain perspective or a certain theory. The result indicates that a large number of scholars are engaged in applied linguistics research. The comprehensive analysis of all the nodes and connections in the map shows that foreign linguistics NSSF projects comprehend a wide range of research topics, including not only theoretical research, such as cognition-related research, but also applied research, such as translation-related research; not only research of traditional themes, such as students and English teacher-related research, but also research of contemporary or emerging topics, such as *the Governance of China by Xi Jinping* and typology; not only topics on domestic issues, but also foreign issues, such as topics about United States, Russia, Japan and South Korea and foreign publicity translation; not only microscopic studies, such as vocabulary and syntax, but also macroscopic studies, such as language policy and cultural strategy; not only language ontology research, such as discourse and semantics, but also interdisciplinary research, such as military English and neural mechanism research.



from a multimodal perspective is a relatively new research focus that emerged in large numbers around 2010, and is widely used in scientific research in multiple fields. Multimodal deep learning has become a hot topic and deserves attention.

- Cluster # 2 (student) ( $S = 0.966$ ) Language learners or students are eternal topics in language teaching research. The research focus includes the development of students' abilities (discourse, cognition, spoken language, writing, pragmatics, motivation, skill, etc.) and diagnosis evaluation for learning. New research usually incorporates new technologies, new theories, and new paradigms in traditional research topics, and draws new conclusions and explanations, thereby further promoting the development of the relevant research.
- Cluster # 3 (corpus) ( $S = 0.935$ ) Research in this cluster is divided into two categories: corpus-based research and corpus construction research, and the former is more. For example, corpus-based text (ancient Chinese classics) translation, syntactic comparison, metaphorical comparison, cognitive comparison, discourse markup, automatic evaluation system, etc. This type of research involves English-Chinese, Russian-Chinese, Japanese-Chinese corpora. Corpus production research is mainly about parallel corpus and corpus index research. Corpus-based foreign linguistics research is also a routine research paradigm. With the help of various corpora, researchers can conduct applied research in many aspects such as language, teaching and translation. With the continuous emergence and improvement of new corpora, corpus-based research is bound to have new developments.
- Cluster # 4 (theory) ( $S = 0.939$ ) This cluster includes research and application of rhetorical criticism theory, translation theory, foreign language teaching theory, metalinguistic theory, meaning discovery theory, biolinguistic theory and learning community theory. The achievements of these theoretical research have enriched the connotation and depth of foreign linguistic research, promoted the progress of subsequent related research, and enriched the theoretical connotation of linguistic research.
- Cluster # 5 (pragmatics) ( $S = 1$ ) This cluster involves pragmatic and cognitive topics, including cognitive theoretical and applied research on pragmatics and grammar, pragmatics and syntax, pragmatic implicit, cognitive neural mechanism, cognitive pragmatics, cognitive grammar, cognitive comparison and cognitive control. Some of them are interdisciplinary research, which is very difficult but popular.
- Cluster # 6 (English teacher) ( $S = 0.931$ ) This cluster covers almost all aspects of English teacher research, including teacher discourse norms, professional development, language literacy, team building, classroom interaction ability, teaching and research ability, cross-cultural ability, etc. Teacher and student research are two key topics in the field of foreign language teaching research, and together constitute an important part of foreign linguistic research.
- Cluster # 7 (validity) ( $S = 0.762$ ) This cluster involves foreign language teaching-related topics, including teaching paradigm, flipped classroom teaching model, and English teaching model in the information age.
- Cluster # 8 (application) ( $S = 0.904$ ) Applied research is an extremely important field, corresponding to theoretical research, and the topics involved are also very common, including corpus construction and application, English ability scale application, linguistic theory application, language application rules, network translation, translation strategy, translation communication, translation quality evaluation and others.
- Cluster # 9 (influence) ( $S = 0.1$ ) This cluster is about research on the impact of translated texts, research on the impact of translation policies on cultural strategy, research on the impact of environment on learning motivation, research on the impact of translation on the Chinese language, and research on the influence of propagation of ancient Chinese classics or literary works.
- Cluster # 10 (acquisition) ( $S = 0.89$ ) This cluster mainly involves language form acquisition research from the perspective of typology. Typology, especially language research from the perspective of linguistic typology, is a newly emerged research paradigm. It has attracted the attention of many scholars.
- Cluster # 11 (translation) ( $S$  value = 0.973) This cluster covers ancient Chinese literature (masterpieces) translation, poetry translation, classics translation, modern and contemporary novel translation, Chinese humor translation and other conventional topics. In addition, some interdisciplinary translation studies are also involved, such as works on tea, Confucian thoughts, Tai Chi, Chinese national epics, and

anti-Japanese historical materials. Meanwhile, translation poetics, translation aesthetics, translation history, translation strategy, translation style, etc. are also important hotspots in translation studies. It is worth mentioning that the study of translation history is a new research topic in recent years.

To sum up, in terms of research fields, foreign linguistics NSSF projects mainly include translation studies, teaching research and language ontology research; as for research types, they include both theoretical research and applied research, and more is about the latter; considering research perspectives, there are both research under the guidance of linguistic theory, as well as research from the perspectives of corpus, typology, and information age; in terms of research topics, both traditional linguistic topics and current topics in the new era are included.

C. The diachronic evolution of foreign linguistic research topics

While the above visualized cluster map intuitively shows the main research fields of foreign linguistics, and the timeline atlas of each cluster can more clearly show the yearly status of keyword changing. Therefore, it can further visualize the diachronic evolution of

important research topics in foreign linguistics ("Fig. 3"). The timeline atlas shows that the keywords of each cluster before 2007 are very sparse, indicating that there were relatively fewer NSSF projects and consequently fewer foreign linguistic research projects at that time. However, after 2007, the keywords in each cluster became significantly denser, indicating that projects of foreign linguistic research are increasing rapidly. The map shows that bilingual comparative research, student-related research, corpus-related research, and the Chinese context almost run through the years. It is foreseeable that these research topics will remain the focuses of many scholars in the future. Cognitive and pragmatic research and translation became important research fields around 2004. Multimodal perspective research began around 2006, translation impact research began around 2008, research of various theoretical applications, English teacher-related research, research of effectiveness, and language acquisition research from typological perspective probably began to be concerned by a large number of scholars in 2010 or so. It can be seen that although the research topics of foreign linguistics at the micro level have been changing, the three macro research areas represented by each cluster have strong persistence, and almost all of them continue to nowadays. This is exactly the characteristic of linguistic research.

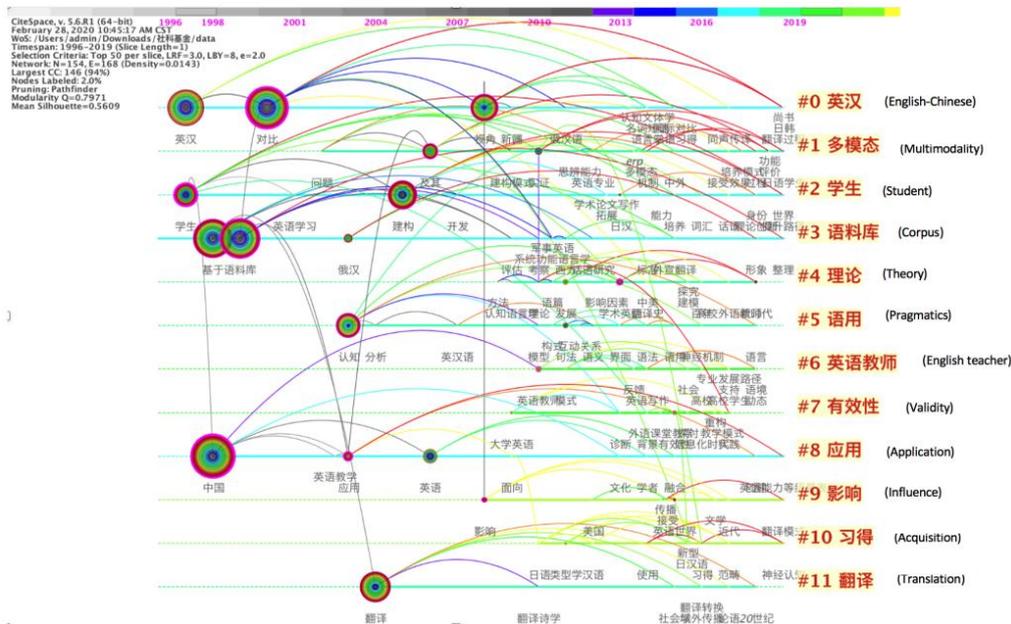


Fig. 3. Timeline atlas of keyword clusters.

D. Analysis of burst hotspots in foreign linguistic research

A research hotspot is one or more topics in a certain field that many scholars pay much attention to. The duration of research hotspots in a specialized field may vary [15]. "Fig. 4" shows the bursts of keywords in the

development of foreign linguistics NSSF projects from 1996 to 2019. The sudden increase in certain research topics reflects the degree of dynamics or emerging of a particular issue in a particular period. It can be seen that the research themes and research perspectives of foreign linguistics NSSF projects have been changing. Judging from the burst time, the first five keywords

burst are: 英汉(English-Chinese), 学生(student), 英语学习(English learning), 分析(analysis) and 英语(English). They represent the initial research focuses. The five newly generated keywords are: 有效性(effectiveness), 英语教师(English teacher), 日语(Japanese), 类型学(typology) and 信息化时代(information age). They represent current research hotspots.

Generally, the burst of a research hotspot can be defined by two attributes: burst intensity and burst persistence. In terms of burst intensity, the first five keywords are: 英语(English) (5.3), 有效性(effectiveness) (4.46), 分析(analysis) (4.28), 学生(student) (3.79) and 类型学(typology) (3.5). They represent the degree of

attention of researchers. The first five keywords that highlight burst persistence are: 英汉(English-Chinese), 学生(student), 英语学习(English learning), 英语(English) and 分析(analysis). They represent the duration of researchers' attention. To sum up, the key words that have both strong burst intensity and strong burst persistence are: 英语(English), 学生(student), and 分析(analysis). That is, in the development process of foreign linguistic research, English-related research and student-related research, as well as analysis research on problems are forever the most concerned hotspots.

Top 16 Keywords with the Strongest Citation Bursts

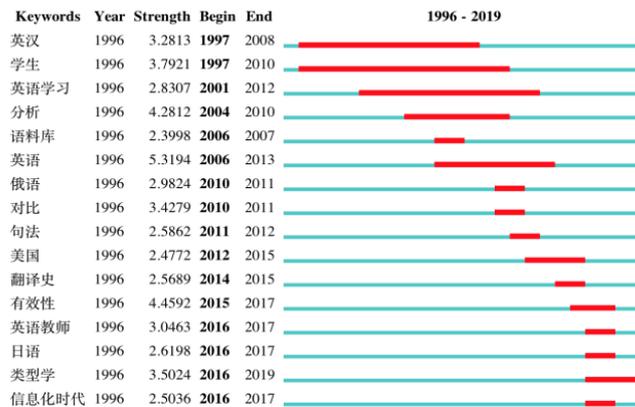


Fig. 4. Bursts of keywords.

TABLE IV. CENTRALITY OF NODES (≥0.1)

Node	Centrality	Node	Centrality	Node	Centrality
中国 (China)	0.79	认知 (cognition)	0.37	有效性 (validity)	0.14
学生 (student)	0.7	英语教师 (English teacher)	0.23	日语 (Japanese)	0.14
对比 (comparison)	0.63	高校 (university or college)	0.21	专业发展路径 (professional development)	0.14
语料库 (corpus)	0.59	英汉语 (English-Chinese)	0.17	理论 (theory)	0.13
应用 (application)	0.51	翻译 (translation)	0.15	中美 (China-America)	0.1
学术英语 (academic English)	0.46	语义 (semantics)	0.15		

In addition to the node size and burst of keywords, the analysis of node centrality is also an important way to investigate and study hotspot changes. "Centrality is an indicator to measure the importance of nodes from the network structure"[15]. The higher the centrality of nodes (generally ≥0.1), the stronger the pivot function, and the more information between the keywords it links,

the more important the position it occupies in the network structure, and the more research value it has or the more likely it will become a hotspot. "Table IV" lists the important node words with centrality greater than 0.1. In other words, a large number of foreign linguistics NSSF project titles include Chinese, student, comparison, corpus, application, academic English,

cognition, English teachers, college, English-Chinese, translation, semantics and other words with high centrality. The research topics or research paradigms associated with these highly central nodes are naturally concerned by many scholars.

*E. Future forecasts on the frontiers of foreign linguistic research*

CiteSpace can further explore the research frontiers through Sigma value. Sigma value is a composite index that combines centrality (importance in structure) and burst (importance in time) to measure the novelty of nodes. If the Sigma value of a certain node is very high, then the possibility of it becoming the research frontier

is very high. Compared with the hotspot analysis, the prediction of the research frontiers has more guiding and reference values for the future foreign linguistic research. "Table V" shows the 7 keywords with the highest Sigma value. They represent the frontier hotspots of foreign linguistic research. Among them, students, comparison, analysis, English, and English-Chinese are traditional research topics or research methods. The high Sigma value indicates that these keywords will continue to be valued by researchers in the future; while researches from the perspective of validity and typology are newly emerging research paradigms ("Fig. 4"). It is foreseeable that the research related to "Table V" will still attract the attention of scholars in the future.

TABLE V. KEYWORDS OF HIGH SIGMA VALUE

Sigma Value	Keyword	Sigma Value	Keyword
7.55	学生(student)	1.29	英语(English)
5.36	对比(comparison)	1.19	类型学(typology)
2.1	分析(analysis)	1.17	英汉(English-Chinese)
1.79	有效性(validity)		

**V. CONCLUSION**

The National Social Science Fund projects of foreign linguistics are the vane of China's foreign linguistic research and the specific carrier of its development and change. The knowledge map analysis results of foreign linguistics NSSF projects from the diachronic changes in the number of projects, the main research areas, the evolution of important research hotspots and the prediction of future research hotspots are as follows.

First, the number of foreign linguistics NSSF projects is on a continuous growth, and obtained two significant increases in 2007 and 2013 respectively. The key project units are mainly concentrated in "985" and "211" universities and some excellent local universities, and the research level between universities varies greatly.

Secondly, the visualized analysis and cluster analysis of keyword co-occurrence show that the National Social Science Fund of foreign linguistics focuses on three major research areas: translation studies, teaching research and language ontology research. Translation studies include various text translation studies, translation theories, translation poetics, translation aesthetics, translation history, translation strategies, translation styles, translation evaluation, translation communication, translation policy, interpretation studies and many other topics, among which translation history research is a relatively new research theme. Teaching research mainly involves three aspects: first, student-related research, such as learning motivation, learning strategies, ability

development, classroom interaction, etc.; second, teacher-related research, involving teachers' discourse, professional development, language literacy, teaching and research capabilities, team building, cross-cultural competence and other topics; third, classroom-related research, including various teaching reform experiments and the application of new teaching theories and teaching methods. Language ontology research includes a wide range of topics such as cognition, pragmatics, syntax, grammar, semantics, discourse, and metaphor. It includes both theoretical research and applied research. At the same time, foreign linguistics NSSF projects embody the characteristics of the times, and incorporate the latest research paradigms, important theories, social hotspots and major political policies in them and produce new research achievements, like researches in the context of the "information age", from the perspective of "typology", on the "Belt and Road" and "Xi Jinping's Governance of the Country", etc. In addition, the "English Proficiency Rating Scale" has also appeared in NSSF for 2 consecutive years. In all, there is more applied research and less theoretical research in foreign linguistics NSSF projects.

Thirdly, the clustering timeline atlas and keyword burst analysis show that English-Chinese comparison studies, English language studies, and English learner (student) studies are all the earliest research hotspots, and the ones with the highest degree of interest and the most persistent concerns. In other words, although the research theme in the field of foreign linguistics has been constantly changing, the research theme with the greatest attention has remained basically unchanged. In

addition, topics that last long include corpus, translation, and cognitive research. As the latest research paradigms that appeared after 2015, validity research and research from typological perspective are also expected to be the focus of attention of many scholars in the future. On the other hand, some "unpopular" research topics that open up new paths are also worthy of consideration and reference.

Finally, it must be pointed out that the keywords involved in the article are not taken directly from research papers, but generated by word segmentation software, supplemented by manual intervention. Human subjectivity may have a certain impact on the research process and results. However, because the data collection used in the analysis is well-founded and the word segmentation process has certain standard, especially the procedures and parameter settings of CiteSpace visual analysis conform to the specifications and requirements, therefore, the analysis results are generally rather reliable, which can help researchers to fully understand the overall situation and development track of the present foreign linguistic research in China.

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