EDICIONES
COMPLUTENSE

A Critical Review of China's Foreign Language Program Development: The Perspective of Language Needs

Gong Tongxi 宫同喜[1]; Guo Yi 郭义[2]

Abstract. Recent years (2014–2017) have seen an explosive growth in foreign language undergraduate programs in Chinese universities, apparently in response to China's development needs. However, without a precise analysis of China's foreign language needs, it is impossible to evaluate whether the recent developments in foreign language education will be able to meet the nation's development needs. This article addresses this issue by calculating China's foreign language needs through a holistic assessment with 14 indicators. The calculation, mainly based on the practical use of foreign languages and China's international exchange requirements, identifies the top 10 foreign languages urgently needed by the country and demonstrates the different functions of these foreign languages. In light of China's national foreign language needs, this article ends with a critical review of foreign language program development in recent years.

Keywords: China's foreign language needs, foreign language planning, foreign language needs analysis

[zh] 中国高校外语专业大发展的冷思考：基于外语需求的分析视角

摘要：2014年以来，为满足国家发展需要，中国高校外语本科专业蓬勃发展。但是，中国到底优先需要哪些外语，尚未得到有效分析。本文从外语的使用价值和中国事务需求两个方面出发，利用14项具体指标，对中国国家外语需求进行测算，确定中国当前需求较大的10种外语，分析不同外语在不同领域的特殊功能。在此基础上，本文对近年来中国高校外语专业的发展状况进行了批判性分析。

关键词： 中国外语需求、外语规划、外语需求分析

Contents. 1. Introduction. 2. Literature review. 3. China's foreign language needs. 3.1. China's foreign language needs based on pragmatic value. 3.1.1. Top 10 foreign languages based on GDP. 3.1.2. Top 10 foreign languages based on population of native speakers. 3.1.3. Top 10 foreign languages based on number of countries(regions). 3.1.4. Top 10 foreign languages based on book translation. 3.2. China's foreign language needs based on international exchanges. 3.2.1. Top 10 foreign languages based on China's economic exchanges. 3.2.2. Top 10 foreign languages based on China's political exchanges. 3.2.3. Top 10 foreign languages based on China's cultural exchanges. 3.3. Overall analysis. 4. Discussion. 4.1. Needs analysis in light of supply. 4.2. Needs analysis in light of functional differences. 5. A critical analysis of recent foreign programs. 6. Conclusion. References.

_____

1 Shanghai International Studies University 上海外国语大学 (China). Email: 2002@shisu.edu.cn

2 Corresponding author: Guo Yi. Shanghai University of International Business and Economics 上海对外经贸大学 (China). Email: darrylguo@163.com

1. Introduction

Universities in mainland China have witnessed a rapid expansion of foreign language (other than English) undergraduate programs in the last few years. According to statistics from China's Ministry of Education (MOE), 292 foreign language (excluding English) undergraduate programs were approved between 2014 and 2017. Attempts to diversify the foreign languages taught at the higher education level are welcomed as they challenge the domination of English in China's foreign language education (Lu, 2012; Hu, 2011; Shen, 2014; Shu, 2013). The implicit English-only policy, as Shu (2012, 2013) argues, does not meet China's national interests and global exchange requirements. The recent introduction of foreign languages other than English in higher education is seen as a timely move to satisfy China's foreign language needs (Shen, 2015; Wen, 2016). However, it is still not clear what exactly China's national foreign language needs refer to. Without a clear definition, it is difficult to evaluate the recent foreign language program development in relation to China's developmental needs.

   "Needs" in foreign language education consist of individual needs and social needs (Shu, 2004: 20). "China's foreign language needs" in this study are closely related with the notion of social needs. They mainly refer to the foreign language capacity China wants to have, or expects its citizens to have, in order to transact international affairs smoothly. Previous studies of China's foreign language needs (Dai, 2016; Fu, Zhao & Gong, 2016; Lu & Zhang, 2012; Shu, 2012) have usually been conducted on the basis of individual responses or institutional data, and some studies that use national data are not immune to methodological concerns. To address this issue, this study proposes a new method to assess China's foreign language needs, using 14 indicators such as numbers of users, and then use it to critically examine foreign language program development in recent years. Although this study is anchored in China's specific situation, it is believed that the methods adopted in this study and the findings generated may have some implications for those who are interested in assessing foreign language needs in their own contexts.

2. Literature Review

The term "national needs" is often highlighted by policymakers when foreign language programs are developed or evaluated in China. Chinese scholars have largely adopted one of three approaches to estimate the nation's foreign language needs.

   The first approach is exemplified by studies that attempt to extrapolate China's foreign language needs on the basis of individual or institutional needs (Dai, 2016; Lu & Zhang, 2012; Shu, 2012). For example, Dai (2016) surveyed foreign

language learners, learners' parents or teachers to ask which foreign language(s) they wanted to study and which language skill(s) they wanted to improve most. He also interviewed managers of the human resource departments of corporations to identify situations where the use of foreign languages was needed, the objectives for which these languages are used, the mode of communication in which they are used, and the level of proficiency that was required. These studies accumulate detailed information about individual or institutional needs, which are claimed to be representative of China's national needs for foreign languages.

Notwithstanding the value of these results, one needs to bear in mind that particular findings about individuals cannot constitute a comprehensive picture of national needs. The sum of all individual needs and the sum of all institutional needs are not equal to national needs (Els, 1983; Kaplan & Baldauf, 1997). Although Shu (2012) investigated 80 companies in Shanghai and Dai (2016) investigated 50 institutions in Beijing, Shanghai and Guangzhou，their findings cannot easily be generalized to other parts of China or other types of institutions. Even if more sectors in larger areas are involved, a national pattern does not automatically emerge.

The second approach (Shen, 2015; Zhao, 2015) has attempted to identify China's national needs by analyzing China's political or economic policies. Since the launch of the One-Belt-One-Road (hereafter "OBOR") initiative, researchers have been quick to point out that languages in OBOR countries need to be taught more widely in China. Zhao (2015) states that people knowing languages from OBOR countries are in short supply, and China needs to increase investment in teaching those foreign languages. However, this approach may not be effective, especially when a large number of foreign languages are involved. For example, there are about 53 official languages and many more regional languages in OBOR countries (Wang & Wang, 2016: 14). Though it is well acknowledged that these languages vary in pragmatic value, there has been no principled way to prioritize them in foreign language planning in China. In addition, relevant arguments are seldom based on empirical data. It might be intuitively true that China's international exchanges with OBOR countries will grow, which in turn will create additional demand for fluent speakers of the languages used in those countries. However, previous studies have not provided any data about either the related socioeconomic exchanges or the increasing demand for individuals with relevant linguistic competence. National foreign language needs can be neither represented by a few institutions, nor described by speculative arguments. They can only be studied via a thorough analysis of macro structural data such as international economic or political exchanges.

The study conducted by Zhang (2011) is a laudable attempt in this direction. Zhang (2011) tries to identify three categories of 'critical foreign language' against six factors such as political exchanges, economic exchanges and national security. To our knowledge and at the time of writing, this is the only study that uses comprehensive data to identify China's foreign language needs. Despite the innovative method used in the study, Zhang's (2011) research suffers from several limitations. First, Zhang has not considered that different weightings could be

given to different factors. Chadic is given one point because it is used in Chad, one of the 51 nations in the Forum on China-Africa Cooperation (FOCAC). English is given one point because it is used by the US, whose comprehensive national strength ranks first around the world. It is self-evident that Chadic and English are by no means equally important. Second, data from different periods are mixed together in the analysis. For instance, data about foreign students learning in China were from 2000 to 2006, data about national security was from 2009, and data about international trading partners dated from 2004 to 2008. For a more accurate estimation, the data periods examined need to be consistent. Third, subjective standards are used to adjust the final ranking. Zhang (2011) identifies three levels of critical foreign language, but Japanese, though it does not qualify according to the quantitative calculation, is still put into the 'primary category' because the author thinks it is important.

Furthermore, previous research on identifying the nation's needs for foreign languages must be modified in the following directions. First, previous studies only provide a final list of foreign languages, but do not examine the details of specific sub-categories. Shu (2012) finds that Japanese, English, German, French, Spanish, Korean and Russian are the most important, while Dai (2016) finds that English, Spanish, Russian, French, German, Japanese, and Vietnamese learners are in short supply. Such lists based on comprehensive data can provide important information, but they ignore the fact that different languages have different functions. A language such as Lao may be less important from a comprehensive point of view, but may be very important for tourism or the export of labor services. To claim Lao is less important than German apparently overlooks such functional differences, because in a tourism vocational school in Yunnan, China, for example, Lao might be more important than German. Therefore, detailed and in-depth descriptions of such differences will help course designers to plan appropriate language programs for developmental needs across the country.

Second, previous studies do not discuss foreign language needs in the light of supply. Need is always a relative concept which cannot be determined without considering supply. According to traditional needs analysis, Japanese is more important than Hindi in contemporary China. It might be true that Japanese is more useful than Hindi, but this argument ignores the fact that the supply of Japanese graduates was a thousand times larger than the supply of Hindi graduates in 2014. To be specific, there were 28,361 college graduates in Japanese majors, but only 21 college graduates in Hindi majors. Therefore, when supply is taken into consideration, Hindi turns out to be more urgently needed than Japanese. Of course, it is not easy to compare need and supply data directly, but it is worthwhile to discuss China's foreign language needs from this perspective.

To address these problems, this study will analyze China's foreign language needs by using 14 indicators, and will take supply into consideration. The needs analysis in this study will rely on nationwide data about China's economic, political, and cultural activities from 2011 to 2015.

3. China's Foreign Language Needs

As suggested in the first section, a prerequisite for the sensible selection of foreign languages other than English to be taught in Chinese colleges would be an assessment of their global significance on one hand, and their particular usefulness to China on the other.

Previous studies such as Weber (1997) tried to determine the world's top languages according to their significance globally. This approach fails to take into account China's specific needs. Although often overlapping, a foreign language's overall significance and its specific utility in China are not always identical. For instance, Vietnamese does not rank high in terms of its global overall significance, but it plays an important role in China's tourist industry.

In the present study, China's foreign language needs are examined against 14 factors in relation to the pragmatic value of foreign languages and China's demands in relation to international economic, political, and cultural exchanges.

3.1 China's Foreign Language Needs Based on Pragmatic Value

'Pragmatic value' in this study refers to the overall utility of a language around the globe. Both 'value' and 'utility' are restricted to their instrumental sense. This does not imply any subjective judgment in terms of symbolic or identity values, which would contradict our fundamental conviction that all languages are equal and each language is useful.

The pragmatic value of a languages depend on the population and wealth of its speakers (Ostler, 2005), the number of native speakers, the number of secondary speakers, the number of major fields (science, diplomacy, etc.) using the language internationally (Weber, 1997), as well as its international network (Ronen et al., 2004).

In this study, pragmatic value is assessed against the following indicators: the gross domestic product (GDP) of the country or countries (regions) where the language is spoken as a native language, the population of native speakers, the number of countries (regions) using this language, and the quantity of books translated into other languages from this language.

3.1.1 Top 10 Foreign Languages Based on GDP

The pragmatic value or influence of a language depends heavily on its national power, with GDP as an important indicator.

This study ranks the 195 economies by their GDPs in 2015, according to data obtained from the official website of the World Bank. The largest economy was the United States, followed by China, Japan, Germany, the United Kingdom, France, India, Italy, Brazil, Canada, the Republic of Korea, and so on.

Information obtained from the official website of the CIA is used to describe the language use in each economy.

Economy	GDP (Million $)	Language Use Description	Primary Language
United States	18,036,648	English 79.2%, Spanish 12.9%, other Indo-European 3.8%, …	English
China	11,007,721	Standard Chinese. Yue, Wu, Minbei, Minnan, Xiang, Gan, Hakka dialects …	Chinese
Japan	4,383,076	Japanese	Japanese
Germany	3,363,447	German (official)	German
United Kingdom	2,858,003	English	English
France	2,418,836	French (official)	French
India	2,095,398	Hindi 41%, Bengali 8.1%, Telugu 7.2%, Marathi 7%, Tamil 5.9%, Urdu 5%, …	Hindi
Italy	1,821,497	Italian (official), German, French, Slovene	Italian
Brazil	1,774,725	Portuguese	Portuguese
Canada	1,550,537	English (official) 58.7%, French (official) 22%, Punjabi 1.4%, Italian 1.3%…	English, French

Table 1: Primary language(s) of the major economies around the world

When the language use of each economy was described, it was found that there is no one-to-one correspondence between the economies and the languages they use.

To transform this economy list into a language list, the study determines the primary language(s) of each economy according to the following principles. First, if one language is used predominately in one economy, this language is considered to be the primary language. For example, English is considered the primary language of the United States. Second, if there is more than one official language, the language(s) used by more than 10% of the population is (are) considered primary. In Canada, both English and French are considered primary as both are used by more than 10% of the population. However, in Switzerland, of the four official languages only German and French are considered primary. Italian (8.1%) and Romansch (0.5%) are not selected because they are used not as widely.

In this way, the study identified the top 10 foreign languages on the basis of GDP. They are English, Japanese, German, French, Hindi, Italian, Portuguese, Korea, Russian, and Spanish.

3.1.2 Top 10 Foreign Languages Based on Population of Native Speakers

A language's pragmatic value is also determined by its population of native speakers. According to data obtained from the web edition of the *Ethnologue*, there are 23 languages with a minimum of 50 million first-language speakers. Among these, the top 10 foreign languages are Spanish, English, Arabic, Hindi, Bengali, Portuguese, Russian, Japanese, Lahnda, and Javanese.

3.1.3 Top 10 Foreign Languages Based on Number of Countries (Regions)

Besides the population of native speakers, the number of countries (regions) where a language is spoken is also an important index of its pragmatic value. Some languages, such as Japanese, although used by a large population, are mainly used in only one or a

few countries. The concentrated use of those languages in a small number of countries may reduce their pragmatic value worldwide, especially when contrasted with languages that are spoken internationally such as English and Spanish. The communication value of a language is determined by its centrality as well as its prevalence. According to De Swaan (2001), the communication value of a language is defined as 'the product of the proportion of those who speak it among all speakers in the constellation and the proportion of multilingual speakers whose repertoire includes the language among all multilingual speakers in the constellation' (De Swaan, 2001: 21). Therefore, the number of countries (regions) where the language is used was also chosen as an indicator in this study. According to the *Ethnologue*, English, Arabic and French are the three most widely used languages globally.
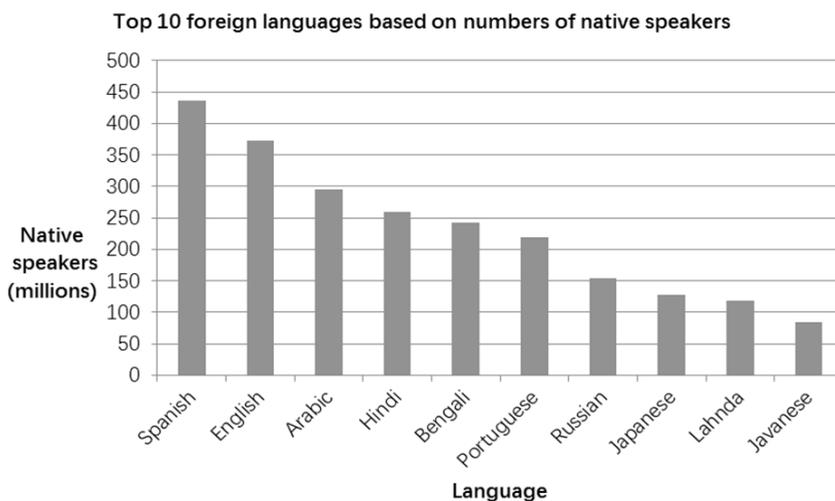
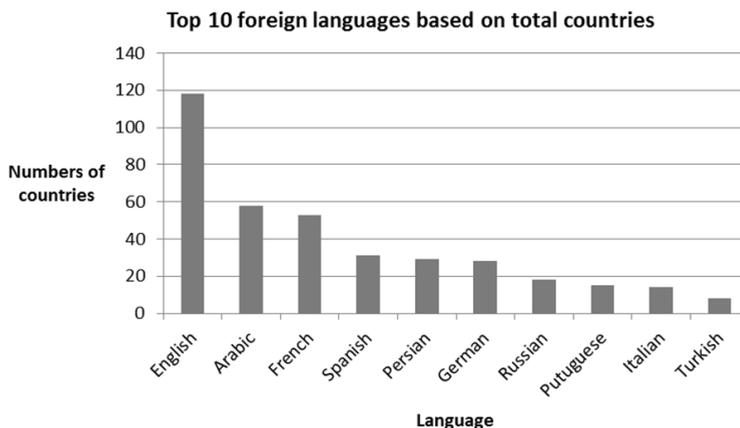Figure 1: Top 10 foreign languages based on population of native speakers

Figure 2: Top 10 foreign languages based on numbers of countries (regions)

3.1.4 Top 10 Foreign Languages Based on Book Translation

The global popularity of the cultural content produced in a language is also important to indicate the language's pragmatic value. Ronen et al. (2014) uses the structure of the networks connecting multilingual speakers and translated texts, as expressed in book translation, multiple language editions of Wikipedia.org, and Twitter.com, to provide a concept of language importance. As Wikipedia.org and Twitter.com are not popular in China, this study focuses on book translation only.

Of the 2.2 million translated books published in 150 countries and in more than a thousand languages, most translations are from English to other languages. Figure 3 lists the top 10 foreign languages that are most likely to be translated into other languages.
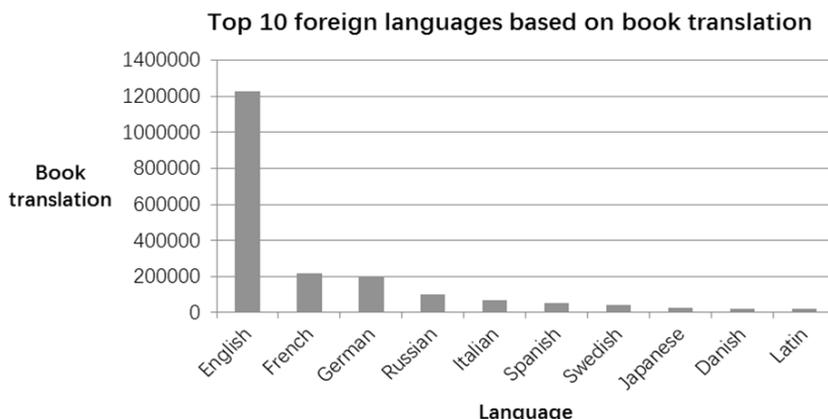

Figure 3: Top 10 foreign languages based on book translation

3.2 China's Foreign Language Needs Based on International Exchanges

China's foreign language needs are determined not only by the overall usefulness of a foreign language worldwide, but also by its significance in contemporary China. A foreign language that is not very important worldwide might be indispensable in China, and vice versa. This section will weigh China's foreign language needs in the light of the country's international exchange activities, which in this study refers particularly to China's economic, political, and cultural exchange activities with foreign countries.

3.2.1 Top 10 Foreign Languages Based on China's Economic Exchanges

The economic exchange activities examined in this study include export-import, foreign direct investment in China, China's outward direct investment, overseas contracted projects, and overseas labor cooperation in foreign countries. Data regarding such economic activities from 2011 to 2015 were collected from China's National Bureau of Statistics. This study identifies the top 10 foreign languages in each of these activities.

Taking export-import activities as an example, this study first listed all the economies that have trade relationships with China, sums the total export-import

value between each economy and China, and then ranked the economies according to the total export-import values from 2011 to 2015. In the same way as outlined in Section 3.1.1, this study identifies the primary language(s) of each economy and then identifies the top 10 foreign languages in export-import activities.

In the same way, this study determines the top 10 foreign languages in foreign direct investment in China, in China's outward direct investment, in overseas contracted projects, and in overseas labor cooperation respectively.

Ranking	Export-import	Foreign direct investment in China	China's outward direct investment	Overseas labor cooperation	Overseas contracted projects
1	English	English	English	Japanese	Arabic
2	Japanese	Malay	Malay	English	Portuguese
3	Korean	Japanese	Bahasa Indonesia	Malay	Bahasa Indonesia
4	German	Korean	Russian	Spanish	Lao
5	Bahasa Malaysia	Samoan	French	Arabic	Mongolian
6	Russian	German	German	Russian	Kurdish
7	Portuguese	Dutch	Korean	Portuguese	Kazak
8	Malay	French	Thai	Korean	Vietnamese
9	Thai	Creole	Vietnamese	Bahasa Malaysia	Bahasa Malaysia
10	Dutch	Portuguese	Japanese	German	Spanish

Table 2: Top 10 foreign languages in economic exchange activities

3.2.2 Top 10 Foreign Languages Based on China's Political Exchanges

'Political exchanges' in this study refers to official visits or state visits between China and foreign countries. Unlike economic activities, political relationships are difficult to quantify. Zhang (2011) tried to determine whether a foreign country is politically important to China by looking at whether that country and China are in the same international organization(s) such as the Shanghai Cooperation Organization or the G20. Such information is important, but it does not reflect the dynamic nature of political relationships. Therefore, this study uses 'official or state visits' as an indicator instead.

'Official or state visits' refers to both Chinese leaders' visits to foreign countries and foreign leaders' visits to China. 'Leaders' in this study only includes presidents, vice-presidents, premiers, vice-premiers, and foreign ministers (secretaries).

This study first collected information about leaders' visits from the website of the Ministry of Foreign Affairs of China, and ranked the foreign countries in order of the frequency of visits between 2011 and 2015. At the top of the list are the United States, Russia, the Republic of Korea, France, Thailand, the Republic of

Kazakhstan, the United Kingdom, Singapore, India, Germany, Pakistan, and Malaysia. In the same procedure as described in Section 3.1.1, this study describes each country's language use and identifies its primary language(s). This study finds that the most useful foreign languages in political exchanges are English, Russian, Korean, French, Thai, Kazak, Hindi, German, Lahnda, and Bahasa Malaysia.

3.2.3 Top 10 Foreign Languages Based on China's Cultural Exchanges

'Cultural exchanges' in this study refers to studying and traveling. Instead of focusing solely on Chinese citizens' studying or traveling abroad, as in Zhang's (2011) research, this study also takes into account foreigners who are studying or traveling in China. As there has been a dramatic increase in the number of foreigners coming to study or travel in China, it is important to know their languages in order to provide adequate public services accordingly.

Tourism information in this study was collected from the website of China's National Tourism Administration. Information related to foreign students studying in China was collected from the annual reports published by the Chinese Ministry of Education. Information not published and publicized, such as statistics about Chinese students studying abroad, was obtained by personal request from the relevant authorities.

From 2011 to 2015, most outbound Chinese tourists choose Thailand as their first destination, while the largest number of foreigners traveling in China was from the Republic of Korea. After collecting information in each category, this study ranks the countries in order of numbers of travelers (students), describes the language use in each country, identifies the primary language(s) and finally lists the top 10 foreign languages in each category.

Ranking	Chinese traveling abroad	Foreigners traveling in China	Chinese studying abroad	Foreigners studying in China
1	Thai	Korean	English	Korean
2	Korean	English	German	English
3	Japanese	Russian	French	Thai
4	Malay	Japanese	Russian	Japanese
5	Bahasa Malaysia	Thai	Japanese	Russian
6	French	Bahasa Malaysia	Dutch	Hindi
7	Vietnamese	Malay	Malay	Lahnda
8	English	German	Swedish	Bahasa Indonesia
9	Italian	French	Korean	Vietnamese
10	German	Bahasa Indonesia	Italian	Kazak

Table 3: Top 10 foreign languages in cultural exchange activities

3.3 Overall Analysis

After having discussed the most important foreign languages in each of the specific categories, this study is now able to identify the top 10 foreign languages in contemporary China. The overall computing process was as follows.

First, the top 10 foreign languages in each category were scored, starting with 10 points for first place, nine points for second place, down to one point for tenth place. These points were given different weights before they were used in the final computation. In contrast to previous studies, such as Zhang (2011) which places equal emphasis on each indicator, this study gives different weights to different indicators, as specified in Table 4. 15 professors specializing in foreign language education, international studies and economics were asked to suggest a weighting for each category. The final weightings used in Table 4 were the average of the 15 suggested weights.

Second, the original score in each category was multiplied by its corresponding weight to get a weighted score. After that, all the weighted scores for each foreign language were summed. Finally, all the final scores were ranked in descending order and the top 10 foreign languages identified.

Table 4: Weight of each indicator

	Indicators	Weight
foreign languages' pragmatic value	GDP	20%
	numbers of native speakers	8%
	numbers of countries	8%
	books translation	4%
China's international exchanges	total value of import-export	10%
	foreign direct investment in China	5%
	China's outward foreign direct investment	5%
	overseas labor cooperation	5%
	overseas contracted projects	5%
	political exchanges	15%
	Chinese traveling abroad	4%
	foreigners traveling in China	3%
	Chinese students studying abroad	5%
	foreign students studying in China	3%

According to this analysis, the top 10 foreign languages are English, Japanese, Korean, Russian, French, German, Hindi, Portuguese, Spanish, and Arabic.
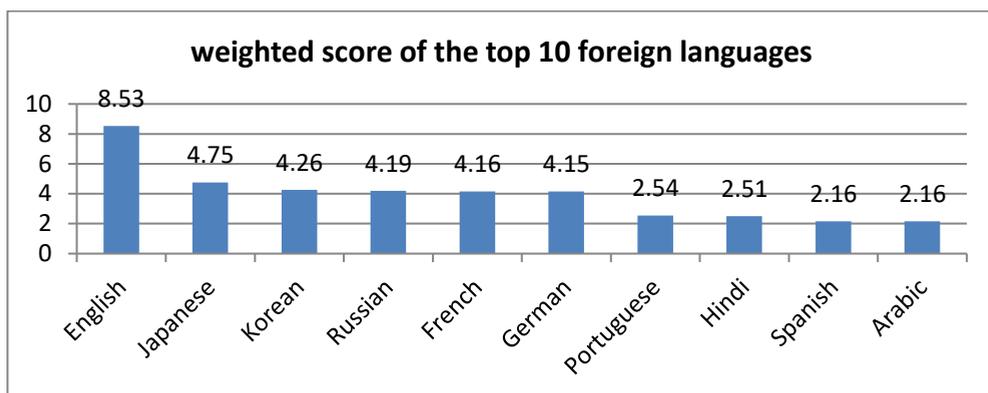
Figure 4: weighted scores of the top 10 foreign languages

4. Discussion

The results are discussed in this section. in light of college graduate supply and functional differences between foreign languages.

4.1. Needs Analysis in Light of Supply

As mentioned above, previous needs analyses (Dai, 2016; Shu, 2013; Zhang, 2011) failed to take supply into consideration. In fact, a foreign language should not be prioritized merely on the basis of its utility worldwide, or even in China. Priority should be given only when there is a great discrepancy between the need for the language and the number of learners already existing in China. We should not blindly expand the scale of Japanese language programs in Chinese universities because that language already has one of the largest populations of learners in China.

This section is devoted to a discussion of China's foreign language needs in the light of college graduate supply. Table 5 lists the number of undergraduates in major foreign languages in China from 2014 to 2016.

Table 5: Number of graduates in major foreign languages (2014–2016)

Foreign Languages	Number of graduates 2014	Number of graduates 2015	Number of graduates 2016	Total
English	144,677	145,216	143,551	433,444
Japanese	28,361	27,201	25,942	81,504
Russian	5,273	5,370	5,665	16,308
French	3,809	4,347	4,826	12,982
Korean	4,725	4,159	3,600	12,484
German	3,462	3,692	3,693	10,847
Spanish	1,774	2,078	2,694	6,546
Arabic	721	855	931	2,507
Thai	521	911	887	2,319

Vietnamese	334	482	440	1,256
Italian	334	361	407	1,102
Portuguese	255	286	338	879
Bahasa Indonesia	40	128	106	274
Burmese	52	44	129	225
Hindi	21	76	106	203
Lao	51	57	95	203

As is shown in Table 5, English graduates account for the largest share of all foreign language graduates. Japanese graduates take second place. Graduates in other major European languages such as Russian, French and German also make up large proportions of the total, and this has remained stable. Graduates of some Asian languages, such as Hindi, are growing rapidly.

A comparison of needs and supply, illustrated in Table 6, provides a deeper understanding of China's foreign language needs.

Table 6: A comparison of foreign language needs and supply

| Need		Supply	
foreign languages	final score	foreign languages	Graduate numbers (2014–2016)
English	8.53	English	433,444
Japanese	4.75	Japanese	81,504
Korean	4.26	Russian	16,308
Russian	4.19	French	12,982
French	4.16	Korean	12,484
German	4.15	German	12484
Hindi	2.61	Spanish	10847
Portuguese	2.46	Arabic	6546
Spanish	2.16	Thai	2507
Arabic	2.16	Vietnamese	2319

On the one hand, it seems that Chinese universities are teaching the right foreign languages. All the top 10 foreign languages are taught, and most of them have large numbers of learners. English and Japanese, the most useful foreign languages, have the largest numbers of learners. On the other hand, there are also some discrepancies between supply and need. Korean has played a more important role in recent years than Russian in China's international activities, according to our needs analysis. However, there are 25% fewer Korean language graduates than Russian language graduates. Moreover, the number of Korean learners even declined from 2014 to 2016. Another neglected foreign language is Hindi. It ranks seventh on the top 10 list, but there were only 203 graduates in total from 2014 to 2016. Similarly, Portuguese, the eighth most important foreign language according to our survey, has only about 250 graduates across China each year.

Admittedly, there is no systematic way to compare need and supply. Supply is usually measured in terms of graduate numbers, while needs are measured in terms of scores. There is no reliable way to compare supply and needs in the same unit. Nevertheless, it is necessary to consider data related to supply when needs are discussed.

4.2. Needs Analysis in Light of Functional Differences

As shown in the previous sections, some languages are pragmatically more useful than others. Apart from the final list of the top 10 foreign languages, the rankings in different domains also deserve further attention.

Foreign languages exhibit different pragmatic value in different domains. Although some foreign languages, such as English, are useful in almost every aspect of life, most foreign languages are more useful in some domains than in others. Take French and Thai, for example; our findings suggest that Chinese people prefer to study in French-speaking countries than in Thai-speaking countries, and French is more important than Thai in outward direct investment in contemporary China. However, there are more Thai-speaking foreign students than French-speaking foreign students in China. These graphs in Figure 5 are made according to original points of each language in the 10 international exchange activities. The foreign language ranks first wins 10 points while the foreign language ranks 10th win 1 point. Therefore, 0 in this graphs only means "below 10th" but not "none"。
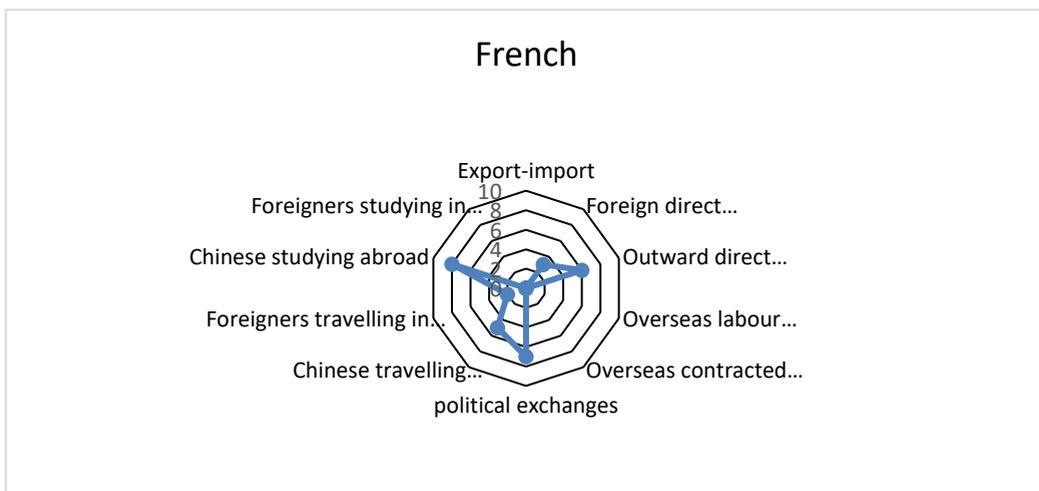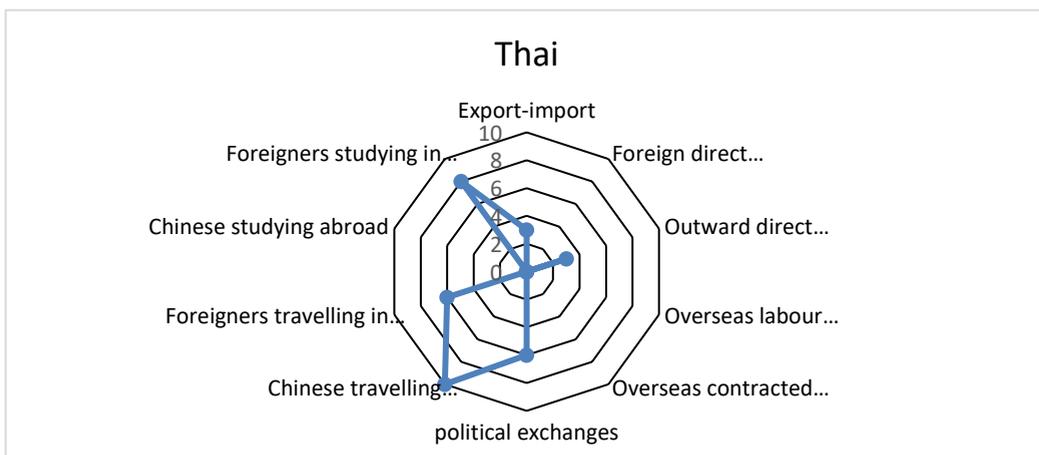
Figure 5: different pragmatic values of French and Thai

Due to limited data in domains such as studying and traveling abroad, this study only identifies the top 10 foreign languages. Detailed information about economic exchanges provides an opportunity to demonstrate this functional difference. Even in economic exchanges, languages play different roles in different activities. For example, Japanese ranked third in export-import activities from 2011 to 2015, but ranked 139th in overseas contracted projects in the same period.

These functional differences require different planning for different foreign language programs. In the example above, French programs and Thai programs should have distinct teaching objectives and curricula to reflect the differing functional outcomes.

5．A Critical Analysis of Recent Foreign Language Programs

The foreign language needs analysis in the present study serves as a yardstick to evaluate recently-launched foreign language programs. The following section will discuss whether recently taught foreign languages are urgently needed in the light of our need analysis. Programs in two prestigious foreign language universities, namely Beijing Foreign Studies University (BFSU) and Shanghai International Studies University (SISU), are included for case analysis.

First, the results of the analysis above indicate that the most commonly taught foreign languages are possibly not what China needs most. A large number of programs in major foreign languages such as Japanese and Russian are being developed in Chinese universities. Of the 292 foreign language programs, Spanish, Japanese and Russian are the most commonly taught languages, as evidenced by the number of undergraduate programs shown in Figure 6.
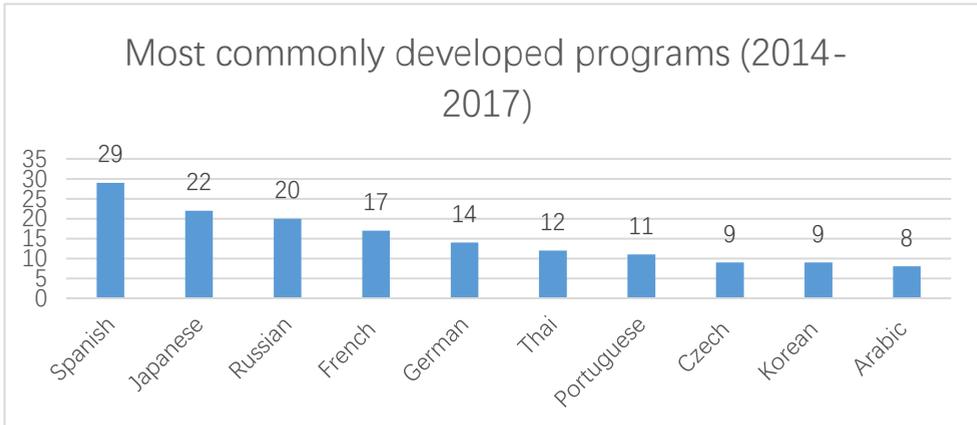
Figure 6: Most commonly developed foreign language programs (2014–2017)

Needless to say, Spanish, Japanese and Russian are useful foreign languages in China. According to our needs analysis, they rank tenth, second, and fourth respectively on the top 10 foreign language list. However, there are already large numbers of learners of the three languages in China. From 2014 to 2016 there were 10,847 Spanish graduates, 81,504 Japanese graduates, and 16,308 Russian graduates, taking the seventh, second and third places on the university graduates supply list respectively. A comparison of China's needs and current graduate supply shows that these three languages are not the most urgently needed.

This finding aligns with Shu's (2012) result that a large number of foreign language teachers think that Russian (20.5%) and Japanese (16%) are in excessive supply (p. 158).

Figure 7: Foreign languages that teachers believe are in excessive supply

On the other hand, although some previously overlooked foreign languages are receiving growing attention, a number of foreign languages are still neglected in the recent development of foreign language programs. Portuguese, which had only 879 college graduates in China from 2014 to 2016, has received adequate attention, with 11 new Portuguese programs approved between 2014 and 2017. However, Hindi is a useful foreign language which ranks seventh in the top 10 foreign languages list, but there were only 203 college graduates from 2014 to 2016. Hindi

deserves more attention in the development of new foreign language programs; of the total of 292 foreign language programs, there are only 4 in Hindi. This discrepancy is illustrated in Table 7, where needs, current supply and newly developed programs are compared.

Table 7: Needs, supply and newly developed programs

Needs		Current supply		Newly developed programs	
foreign language	final score	foreign language	graduate numbers (2014–2016)	foreign language	number of new programs (2014–2017)
English	8.53	English	433,444	Spanish	29
Japanese	4.75	Japanese	81,504	Japanese	22
Korean	4.26	Russian	16,308	Russian	20
Russian	4.19	French	12,982	French	17
French	4.16	Korean	12,484	German	14
German	4.15	German	12484	Thai	12
Hindi	2.61	Spanish	10847	Portuguese	11
Portuguese	2.46	Arabic	6546	Korean	9
Spanish	2.16	Thai	2507	Czech	9
Arabic	2.16	Vietnamese	2319	Arabic	8

Second, some newly-taught foreign languages are not urgently needed according to our needs analysis. Beijing Foreign Studies University (BSFU), China's most prestigious foreign language university, developed the largest number of foreign language programs between 2014 and 2017. Most if not all of the 36 foreign language programs it developed rank low in terms of the language's pragmatic value, since international exchanges with speakers of those languages are infrequent.

Comorian serves as a good example. First, this language has little practical value in the Chinese context. Comorian is mainly used by 130 thousand people in Comoros, one of the most underdeveloped countries in the world. In 2015 Comoros' GDP ranked 187 in 195 economies. The Comorian language is under threat, and its viability is estimated by Ethnologue to be 'developing' on the EGIDS. 'Developing' means that the language is in vigorous use, but is not widespread or sustainable. The EGIDS is a scale consisting of 13 levels, with higher numbers on the scale representing greater levels of disruption to the intergenerational transmission of the language (Lewis & Simons, 2010). 'Developing' is categorized as level 5. Two steps downward the scale will bring Comorian to 6b, 'threatened'. In other words, this language is likely to become endangered.

Second, Comorian does not play an important role in China's international activities. The total export and import volume between China and Comoros from 2011 to 2015 was 1,394.3 million US dollars, ranking 200th among 235 economies. It should also be noted that two international languages, French and Arabic, are official languages in Comoros. In other words, even if more frequent international exchanges develop between China and Comoros, Comorian may still not be used as the medium for communication. Comorian is not an exceptional case. Other newly-approved foreign language programs, such as Afrikaans, Tswana, Ndebele, Samoan, Sinhalese, and Shona, face similar problems.

Some foreign languages have higher pragmatic value but might still have been overemphasized. Compared with Comorian, Czech is more pragmatically useful. From 2014 to 2017 many schools, such as Shanghai International Studies University, Beijing Foreign Studies University, Guangdong University of Foreign Studies, Tianjin Foreign Studies University, and Hebei GEO University, developed new undergraduate courses in the Czech language. Data from 2011 to 2015 show that China's international exchanges with the Czech Republic were mainly limited to commodity exchanges. During this period, Czech direct foreign investment in China ranked 122nd, and China sent 3 people in total to undertake contracted projects in the Czech Republic. Czech is useful, but it does not follow that every school should take the first opportunity to teach Czech.

Third, the curriculum design of some foreign language programs does not reflect the different functions of those languages. The six newly developed foreign language programs in Shanghai International Studies University may illustrate this problem. Among the six foreign language programs approved by China's Ministry of Education from 2015 to 2017, three are in operation (Polish, Kazakh, and Hungarian) while the other three are under preparation (Uzbek, Czech, and Swahili). A comparison of the teaching guidelines for the three programs shows that they are almost identical in their teaching objectives and curriculum design. The descriptions of the teaching objectives in all the undergraduate programs are similar except for changes in the language names.

The teaching objective for Kazakh majors reads: 'Our teaching objective is to equip students with solid Kazakh skills and science and culture quality, to prepare them to become qualified professionals such as translators, researchers, teachers and managers in various social sectors such as foreign affairs, economics and trade, media and publishing, education, research, tourism" (SISU, 2017: 102). The teaching objectives of the other foreign language programs are similar, except that 'Kazakh' is substituted with 'Polish' or 'Hungarian'. Similar to the teaching objectives, the courses offered by different foreign language programs are also similar. Core courses mainly include Listening and Speaking, Grammar, Translation, Social Survey, Literature, and History. The major difference is that Kazakh majors are required to study Russian while Polish and Hungarian majors are required to study English.

Table 8: Main courses provided for majors of Kazakh, Polish and Hungarian

Kazakh	Polish	Hungarian
Basic Kazakh	Basic Polish	Basic Hungarian
Kazakh grammar	Polish grammar	Hungarian grammar
Kazakh extensive reading	Polish extensive reading	Hungarian extensive reading
Kazakh: viewing, listening, and speaking	Polish: viewing, listening, and speaking	Hungarian: viewing, listening, and speaking
Advanced Kazakh	Advanced Polish	Advanced Hungarian
Kazakh translation theory and practice	Polish translation theory and practice	Hungarian translation theory and practice
Kazakh conversation	Polish conversation	Hungarian history and culture
Kazakh society and culture	Polish history and culture	Hungarian national survey
Kazakh literature	Polish literature	Hungarian literature history
Kazakh newspaper reading	Polish newspaper reading	Hungarian newspaper reading
Kazakh interpretation	Polish interpretation	Hungarian interpretation
Kazakh writing	Polish writing	Hungarian writing
Research methods in regional studies	Polish economics and trade	Selected reading in Hungarian literature
Research methods in international studies	Polish geography	Basic English
Basic Russian	Basic English	Advanced English
Russian: viewing, listening, and speaking	Advanced English	English: viewing, listening, and speaking
Russian culture and society	English: viewing, listening, and speaking	
Russian conversation		
Russian interpretation		

Shanghai International Studies University is not exceptional in this regard. Foreign language programs in many other Chinese universities provide similar curricula. The similarity in the teaching objectives and courses offered is surprising when we consider that different foreign languages have different pragmatic value in different domains.

According to this study, some of the newly-taught foreign languages do not reflect China's national needs as claimed. Han, Gao & Xia(2019) has called this

enthusiastic development of foreign language programs as "great leap movement". It follows that graduates in these languages might not be in urgent need. Wen (2016) speculates that there are plenty of job opportunities for graduates in these foreign languages. To verify this opinion, we counted the job opportunities for graduates in newly-taught foreign languages on 51job.com on December 14, 2017, one of China's biggest recruitment platforms. This study only includes China's most developed cities, namely Beijing, Shanghai, Guangzhou, and Shenzhen. If these four mega-cities cannot provide a job, it is probable that smaller cities cannot either.

Table 9: Job opportunities for newly-taught languages on 51job.com

Newly-taught foreign language	Jobs available (original data)	Jobs available (repeated data removed)
Bulgarian	54	3
Hausa	52	3
Nepali	51	3
Lithuanian	50	1
Uzbek	50	2
Estonian	49	1
Byelorussian	49	1
Sanskrit	49	1
Sinhalese	49	1
Kiswahili	4	1
Tswana	0	0
Ndebele	0	0
Comorian	0	0
Kurdish	0	0
Maori	0	0
Samoan	0	0
Shona	0	0
Tongan	0	0
Tigrinya	0	0

At first sight, there seems to be some job opportunities for graduates of such languages as Bulgarian and Hausa. However, when repeated data are removed, job opportunities across all these languages drop sharply to no more than three. Even these few job opportunities are mainly offered by translation companies. It is

generally known that translation companies recruit translators in different languages not because they have real work opportunities but rather to recruit spare translators for their translator pool.

It does not follow that these foreign language graduates are entirely unnecessary, as our analysis is based on normal social circumstances, paying little if any attention to military or national security requirements. Some foreign language programs might be intended to prepare for national emergency situations. However, most foreign language graduates will have to earn a livelihood in the employment market. Financial returns, as Spolsky (2009) points out explicitly, are a primary consideration when students choose to study a foreign language, and market-related considerations prevail over historical, geographical, and other factors. Policy planners should be aware that learners of some foreign languages might have limited job opportunities.

In this study, foreign language programs were evaluated against China's foreign language needs. The research logic and methods are applicable to foreign language program evaluation in different parts of China. Different provinces, regions, or municipalities, with different geographical locations and levels economic development, are likely to have different language needs. For example, Shandong has frequent exchanges with Japan, while Yunnan has strong ties with Vietnam. Therefore, it follows that foreign language programs in different parts of China can and should be evaluated against their specific foreign language needs.

6.   Conclusion

By calculating China's national foreign language needs against 14 indicators from a macro perspective, this study identifies the top 10 foreign languages that China needs most. Based on the results, this study critically reviews the newly developed foreign language programs and finds that some language programs have not been adequately planned or designed.

This study presents a method for analyzing China's national foreign language needs from a macro perspective. Different from previous needs analyses based on individual data, this study relies on big data from national authorities. It is a first attempt at describing China's foreign language needs from a holistic perspective in a systemic way. Although this study addresses the situation in China, the method may also be applicable to foreign language education planning in other contexts.

References

Dai, M. 戴曼纯, (2016). 我国外语人才需求抽样调查 [Sampling investigation of China's foreign language talents needs]. 外语教学与研究 [*Foreign Language Teaching and Research*]. *48* (4), 614–624.

De Swaan, A., (2001). *Words of the world.* Cambridge: Polity Press.

Els, T. V., (1983). The determination of foreign language teaching needs. *European Journal of Education*. *18* (2), 109–120.

Fu, Q. 付棋, Zhao, J. 赵筠轩, & Gong, Q. 龚茜, (2016). 国家外语能力框架下的我国高校外语语种课程与学生需求状况研究 [Study of foreign language programs and students' needs in China under the framework of national foreign language capabilities]. 语文学刊[*Journal of Language and Literature Studies*]. *10*, 140–149.

Han,Y., Gao, X. & Xia, J., (2019). Problematising recent developments in non-English foreign language education in Chinese universities, *Journal of Multilingual and Multicultural Development*, DOI: 10.1080/01434632.2019.1571072

Hu，W. 胡文仲, 2001. 关于我国外语教育规划的思考 [Planning for foreign language education is imperative for China]. 外语教学与研究 [*Foreign Language Teaching and Research*]. *43* (01), 130–136.

Kaplan, R., & Baldauf, R., (1997). *Language Planning from Practice to Theory*. Clevedon: Multilingual Matters.

Lewis, M. P., & Simons, G., (2010). Assessing Endangerment: Expanding Fishman's GIDS. *Romanian Review of Linguistic*s. *55* (2), 103–120.

Lu, J. 陆经生, (2012). 大学非通用语种专业人才培养策略和实践[Strategy and practice of teaching minor foreign languages in college]. 中国大学教学 [*Chinese College Education* 中国大学教学]. *11*, 24–26.

Lu, Z. 鲁子问, & Zhang, R. 张荣干, (2012). 我国城镇居民外语需求调查与教学建议[A national survey of needs for foreign language skills in China: An urban analysis]. 外语界 [*Foreign Language World*]. *01*, 2–9.

Ministry of Education 中华人民共和国教育部, (2012). 2011 年来华留学生数据统计 [*Statistics of Foreign Students Studying in Chinese Universities (2011)*]. 北京：人民教育出版社 [Beijing: People's Education Press].

Ministry of Education 中华人民共和国教育部, (2013). 2012 年来华留学生数据统计[*Statistics of Foreign Students Studying in Chinese Universities (2012)*]. 北京：人民教育出版社 [Beijing: People's Education Press].

Ministry of Education 中华人民共和国教育部, (2014). 2013 年来华留学生数据统计 [*Statistics of Foreign Students Studying in Chinese Universities (2013).*] 北京：人民教育出版社 [Beijing: People's Education Press].

Ministry of Education 中华人民共和国教育部, (2015). 2014 年来华留学生数据统计[*Statistics of Foreign Students Studying in Chinese Universities (2014)*]. 北京：人民教育出版社 [Beijing: People's Education Press].

Ministry of Education 中华人民共和国教育部, (2016). 2015 年来华留学生数据统计 [*Statistics of Foreign Students Studying in Chinese Universities (2015)*]. 北京：人民教育出版社 [Beijing: People's Education Press].

Ostler, N., (2005). *Empires of the Word: A Language History of the World*. New York: Harper Perennial.

Ronen, S., Gonçalves, B., Hu, K., et al., (2004). Links That Speak: The Global Language Networks of Twitter, Wikipedia and Book Translations. *Proceedings of the National Academy of Sciences*. *111* (52), 5616–5622.

Shen, Q. 沈骑, (2014). 小语种，冷热之间[About minor foreign language learning enthusiasm]. 光明日报[*Guangming Daily*], 2014-12-18 (015).

Shen, Q. 沈骑, (2015). 一带一路倡议下国家外语能力建设的战略转型[Strategic transformation for the construction of our national foreign language competence under the guidance of the strategy of "One Belt and One Road"]. 云南师范大学学报（哲社版） [*Journal of Yunnan Normal University (Humanities and Social Sciences)*]. *47* (5), 9–13.

Shu, D. 束定芳, (2004). 外语教学改革：问题与对策 [*FLT in China: Problems and suggested solutions*]. 上海：上海外语教育出版社 [Shanghai: Shanghai Foreign Language Education Press].

Shu, D. 束定芳, (2012). 中国外语战略研究[*An Outline for Studies of Foreign Languages Policy and Planning in China*]. 上海：上海外语教育出版社 [Shanghai: Shanghai Foreign Language Education Press].

Shu, D. 束定芳, (2013). 关于我国外语教育规划与布局的思考 [On China's foreign language planning]. 外语教学与研究[*Foreign Language Teaching and Research* 外语教学与研究]. *45* (3), 426–435.

Spolsky, B., (2009). *Language Management*. Cambridge: Cambridge University Press.

Wang, H. 王辉, & Wang, Y. 王亚蓝, (2016). 一带一路沿线国家语言状况 [Languages used in One-Belt-One-Road countries]. 语言战略研究[*Chinese Journal of Language Policy and Planning*]. *1* (02), 13–19.

Weber, G., (1997). The World's 10 Most Influential Languages. *Language Today*. *7* (1), 81–84.

Wen, Q. 文秋芳, (2016). 一带一路语言人才的培养 [Producing Language-qualified Personnel for "the Belt and Road Initiatives"]. 语言战略研究 [*Chinese Journal of Language Policy and Planning*]. *2* (2), 26–32.

Zhang, Zh. 张治国, (2011). 中国关键外语探讨 [Critical foreign languages in China]. 外语教学与研究 [*Foreign Language Teaching and Research*]. *43* (1), 66–74.

Zhao, Sh. 赵世举, (2015). 一带一路的语言需求和服务对策[Foreign language needs in One-Belt-One-Road initiative and suggestions]. 云南师范大学学报（哲社版） [*Journal of Yunnan Normal University (Humanities and Social Sciences)*]. *47* (5), 36–39.