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CHINESE AS A FOREIGN LANGUAGE IN THE K-12 EDUCATION SYSTEM OF THE  
UNITED STATES: CHALLENGES AND OPPORTUNITIES

SUBMITTED TO THE FACULTY  
OF BETHEL UNIVERSITY

BY  
JOSEPH C. MILLER

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF  
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BETHEL UNIVERSITY

CHINESE AS A FOREIGN LANGUAGE IN THE K-12 EDUCATION SYSTEM OF THE  
UNITED STATES: CHALLENGES AND OPPORTUNITIES

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APPROVED

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## Abstract

This paper examines the state of the Chinese as a Foreign Language (CFL) education system in the United States at the K-12 level. The approach to this research first demonstrates the importance of Chinese language expertise to the United States government as well as to private citizens in light of economic opportunities and national security interests. After establishing the relevance of engagement with China on multiple levels and therefore the appropriateness of learning Chinese (specifically Mandarin, but also Cantonese), the focus turns to the institutional and pedagogical aspects of K-12 Chinese education. On the institutional level, CFL programs are spreading across the nation. Problems with funding, teacher training, and underdeveloped curriculum are mitigating factors to program success in many cases. On the pedagogical level, differences between the educational cultures of Chinese teachers and American students can hamper classroom learning, along with inherent difficulties with Mandarin Chinese. Task Based Language Teaching (TBLT) offers a promising teaching methodology, although it remains an understudied and novel approach. While many CFL programs are successful, improvements are necessary across the board as student attrition due to structural problems prevents a sufficient number of Chinese language experts from entering relevant professional fields. A National Strategy to unify CFL program development and resources is proposed to help schools struggling with adequate Chinese language course offerings. Other practical measures can be taken to improve the quality and overall presence of CFL programs across the country, thus ensuring both economic opportunities and national security interests are satisfied.

*Keywords:* CFL, Chinese, Mandarin, National Strategy, National Defense Strategy, K-12 Education

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## CHAPTER I: INTRODUCTION

The United States and China have experienced historic levels of economic integration through international trade since China began reforming its socialist economic system in 1979 (Ren, 2013). China's *reform and opening up* (改革开放-gaige kaifang)<sup>1</sup> to international engagement through progressive market reforms culminated in the country's accession to the World Trade Organization (WTO) in 2001 (Wang, 2003). As a consequence of economic liberalization, Chinese citizens have been able to take advantage of opportunities to study and work abroad at unprecedented rates. While study of English has been a primary vehicle for international opportunities, the main vectors of those opportunities have been the American education (especially university) system, along with employment in multinational corporations (Ali & Guo, 2005). The knowledge gained and expertise learned by engagement with the United States and other western countries has contributed significantly to China's development over the last four decades, not to mention significant internal political economic shifts as a consequence of reforms.

### The Importance of Chinese

Growth of the Chinese economy and geopolitical influence has made China a comparable economic power to the United States, as China now boasts the world's second largest economy. Simultaneously, China has established its role as a strategic competitor and geopolitical rival (Mattis, 2018). While the Chinese economy is firmly established in trade partnerships and integrally linked to global supply chains, its success has derived from actions that simultaneously pose major security threats to the United States, such as economic espionage and intellectual property theft on a massive scale. The Chinese Communist Party (CCP) has used its influence

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<sup>1</sup> This is the Chinese name for the official central government initiative.



abroad to leverage neighboring countries and foreign institutions for its geopolitical agenda. As both an economic partner and a strategic rival, the demand for sufficient engagement with China on multiple economic and geopolitical fronts increases. Proper engagement on the part of the United States can be adequately achieved by marshalling national expertise about China, along with competent cross-cultural interfacing at diplomatic, economic, and cultural levels. Expertise and competent interfacing require linguistic mastery of Mandarin Chinese (as well as Cantonese,<sup>2</sup> though to a lesser extent), in order to acutely understand Chinese stakeholders and to effectively engage in the strategic partnership.

The United States government has developed initiatives specifically on the linguistic front to meet the needs of its National Defense Strategy (NDS) with regard to China (Mattis, 2018). Initiatives have been implemented by the Department of Defense to target critical language<sup>3</sup> needs by establishing programs and allocating resources to K-12 and postsecondary educational institutions to that end (Department of Defense, 2014). In addition to federal initiatives, Chinese as a Foreign Language (CFL) in the United States has been increasingly offered in K-12 and postsecondary educational settings in order to meet demand driven by China's increased influence on the world stage. Beyond national defense reasons, Chinese language programs have proliferated because of the economic opportunities that have become increasingly available through multinational corporations and academic institutions.

Since the 1980s, the Chinese government as well as citizen stakeholders have aggressively pursued economic development and the enrichment of human capital by focusing

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<sup>2</sup> Mandarin is the official language of the People's Republic of China. However, Cantonese is widely spoken in the south of China and in Chinese diaspora communities.

<sup>3</sup> Critical languages are those languages identified by the U.S. Department of Defense as critical to national security (National Security Education Program, n.d.). The category of critical languages includes over 60 world languages and are more often than not less commonly taught in American educational institutions.

on entrepreneurship and education, both domestically and internationally. However, while waves of Chinese high school and college students have gone overseas to study abroad as a means of gaining a competitive edge at home or to take advantage of opportunities not available in China, investment and interest in the opposite direction toward Chinese language and culture, while attaining measurable increases, has not been commensurate. Although the rise in popularity of Chinese language programs in the U.S. reflects the growing interconnectedness of the two countries' economies and the necessity for Chinese language and cultural expertise as a matter of economic as well as of national security importance, many language programs have failed to produce a sustainable cadre of interested or experienced Chinese language experts, or stakeholders. The retention of language learners in the field of CFL is often hampered by institutional structures at the secondary and postsecondary levels that render CFL either a hindrance to more industry-specific career tracks or that turn out to be ineffective at developing high linguistic competence for careers where Chinese is required.

As a matter of economic and national security interest, The American Academy of Arts and Sciences (AAAS) was commissioned by the United States Congress in 2014 to examine the parameters of a National Strategy for K-12 and postsecondary language education capable of addressing contemporary language needs (American Academy of Arts and Sciences [AAAS], 2017). The Academy created a Commission on Language Learning (CLL) in 2015 to respond to the Congressional request. The CLL found that while strides have been made to encourage the learning of languages nationwide, deficits exist in both access to language programs and in the numbers of qualified language speakers, including speakers of Mandarin Chinese. The shifting paradigm of China as a global economic power opens up new opportunities for positive engagement while also requiring a strategically competent answer to its assertiveness as a

geopolitical competitor and adversary. This research will explore the status of CFL education in the K-12 educational system and assess relevant efforts to increase the footprint and effectiveness of those programs.

### **The Nature of Mandarin Chinese**

This research focuses on Chinese as a Foreign Language, which can be delivered in either Mandarin or Cantonese (both are often simply called “Chinese”). CFL programs and initiatives may target either language since the application of CFL institutionally encompasses Chinese languages. However, Mandarin is more widely spoken and typically chosen as the primary Chinese language of study, especially in the United States. Therefore, special attention will be given to Mandarin even though a similar analysis could be conducted relative to Cantonese. In either case, the Discussion and Conclusion sections included in Chapter III of this research apply equally to Mandarin as well as to Cantonese.

The uniqueness of Mandarin Chinese adds complexity to efforts at developing CFL programs compared to other commonly and less commonly taught languages. The inherent challenge to language acquisition posed by Chinese, with its distinct phonological system (including tones), orthography (characters), and grammar render CFL programmatically complex. A brief linguistic overview of Mandarin will illustrate key elements of difficulty for English speakers and also provide insight as to why CFL may be more difficult for K-12 institutions to promote and develop (Ke & Li, 2011). These insights will provide additional context for the ensuing literature review and discussion.

The genetic relationship between English and Chinese is much farther removed than English is from other European languages.<sup>4</sup> The lack of cognates or a similar writing system

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<sup>4</sup> English is an Indo-European language and Chinese belongs to the family of Sino-Tibetan languages (Poole, 1999).

make the similarities even more scarce. Having English as a base when learning Spanish, for example, can benefit a learner since both languages have a wealth of vocabulary borrowed from Latin and Greek (Spanish being derivative of Latin). The historical and cultural interaction between the English and Spanish speaking worlds also provides a level of cultural exposure and linguistic interchange centuries old. No such relationship exists between Chinese and English. These realities make Chinese harder to learn and therefore mastery a far longer process compared to other European languages. One common starting point between Mandarin Chinese and English is their common Subject Verb Object (SVO) word order (Li, 2013). Beyond basic word order, however, Mandarin has many distinctive phonological, morphological, and syntactic features compared to English that highlight the genetic distance between the languages. A series of examples will help to illustrate.<sup>5</sup>

### **Conjugations**

One major morphological difference from English is demonstrated in the fact that Mandarin does not conjugate (change form) verbs to reflect the person, gender, or number of the Noun Phrase (NP, or subject) in a sentence. English does not have as many or as complex verb conjugations as, for example, Spanish, but the necessity of conjugations sets it apart from Chinese. For example, the English verb *to eat* conjugates depending on the grammatical person of the NP. So, “He *eats* pie” (third person singular NP “He”) manifests a different verb conjugation compared to “They *eat* pie,” (third person plural NP “They”).

Furthermore, Chinese verbs do not conjugate for tenses (including participles). An example of an English participle is the verb form in the present perfect tense, as with the verb *to*

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<sup>5</sup> The author of this thesis speaks Mandarin and received a BA in Linguistics from the University of Minnesota, along with a Minor in Teaching English as a Second Language (TESL). Examples are given from personal knowledge.

*see* in, “I have *seen*,” where *seen* is the participial form of the verb. The conjugations for *to see* are different in nearly all tenses, except for the future tense, in which the modifier *will* appends to the base form of the verb: *I see, I saw, I have seen, I will see*. In any case, the equivalent Chinese words for *to eat* (吃-*chi*) and *to see* (看-*kan*, pronounced as Khan) remain the same, undergoing no conjugations for person or tense. In other words, Chinese 看-*kan* is 看-*kan*, and 吃-*chi* is 吃-*chi*, in every case.

The lack of conjugations in Chinese makes it appear easier to learn. However, where English reflects person, number, and tense through verb conjugations, Chinese reflects those elements through adjectival and adverbial modifiers, such as time phrases (Li, 2013). For example, to express the past tense of 看-*kan* (*to see*), an adverbial modifier (such as the time phrase *yesterday*, or *earlier*) frames the tense while the verb remains unchanged. The aspect modifier 了-*le* also plays a role in completed action, though it is not always necessarily used to express past tense. So, “*Zuotian, wo kanle yiben shu*” (昨天我看了一本书), literally translates as, “Yesterday, I *see* (or read-present tense) a book.” Or, “*Sannianqian wo kanle ta*” (三年前我看了他), translates literally as, “Three years ago, I *see* him.” Thus, a novel grammatical system must be learned by CFL students.

## **Characters**

Two other defining characteristics of Mandarin that make it a difficult language for speakers of English are its “opaque orthography,” or writing system, and the tonal system, as noted by Yue (2017, p. 602). Yue (2017) pointed out that there are in effect four writing systems to choose from when teaching or learning Mandarin, of which two must be paired. Character type and phonetic alphabet constitute the pairings. The character type in Chinese writing can be

written either in the traditional 繁体字-*fantizi* form or the simplified 简体字-*jiantizi* form. For example, in order to make a Chinese character, there are a certain number of strokes that are drawn in a set order to create radicals. Radicals are simple characters that can stand alone or be combined to form other characters. Some Chinese characters may stand alone as a word or be combined with other characters to form other words.

In traditional Chinese, radicals, and therefore characters, have more strokes. Simplified Chinese uses the exact same set of radicals and characters, but the number of strokes is reduced (or simplified), making the character less graphically complex. Traditional characters are commonly used in Chinese societies outside of mainland China, for example in Taiwan and Hong Kong, as well as in Chinese diaspora communities (especially for Cantonese). Simplified characters are used in the mainland and most often taught in CFL courses abroad. While simplified characters are more widely used, a fully fluent student of Chinese would have to master both traditional and simplified characters to gain versatility in employment.

In order to express Chinese characters in a phonetic alphabet (as in the writing system of European languages, for example), the Roman alphabetical system called 拼音-*pinyin* (as seen in the translations above) is most commonly used. The other option is the 注音-*zhuyin* system, which uses a distinctly Chinese phonemic system and is largely used where traditional 繁体字-*fantizi* characters are common, as in Taiwan. Complications for the CFL classroom can arise particularly for Taiwanese teachers or for heritage Chinese classes in which a mismatch between what characters students are expected to learn and what characters teachers are used to teaching (or using themselves) can arise.

## **Tones**

The other acute challenge in learning Chinese for English-speaking students is the tonal system. Mandarin has four tones, plus a neutral tone, which is often not counted as a tone.<sup>6</sup> Each tone in Mandarin has a name, Tone 1 (T1), Tone 2 (T2), Tone 3 (T3), and Tone 4 (T4). Every radical (and therefore character) in Chinese has a meaning, pronunciation, and a tone. Tones are not, however, marked on the character, unless the character is spelled out phonetically using *pinyin*, but only when they are signified as diacritics<sup>7</sup> over the vowels.

Some Chinese characters function as affixes and must be paired with other characters to form words, such as the character 么 *-me*, which is commonly (though not exclusively) paired to form the word 什么 *-shenme*, or *what*. The 么 *-me* in 什么 *-shenme* is also an example of a character with a neutral tone. Chinese tones can be very difficult for learners of Chinese to master because English has no such system. Hearing and producing tonal sounds present one major challenge. Distinguishing the meaning of words with exactly the same pronunciation (phonetics) and tones, or with the same pronunciation but with different tones can be nearly impossible without context, especially for beginners.

Table 1 lays out the number of entries for the word *shi* in the Oxford Concise English-Chinese, Chinese-English Dictionary, illustrating the complexity of the tonal system (Manser, 1999, p. 401). Each word *shi* has sub-entries of words that result from pairing additional characters to create more words.

## Table 1

### *Dictionary Entries for Shi*

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<sup>6</sup> Neutral tone is not counted as a tone because it typically accompanies sentence-final modifiers like question markers, as with 吗? (*ma*), or sometimes in cases where joining characters to form a word neutralizes the tone of one of the characters (usually the second one) (Hao, 2012).

<sup>7</sup> Diacritics are marks over vowels that indicate additional information about how to pronounce the vowel, as with *u* vs. *ü*

<b>TOTAL</b>	<b>TONE 1</b>	<b>TONE 2</b>	<b>TONE 3</b>	<b>TONE 4</b>
Number of <i>Shi</i> Words of Same Tone but Distinct Character	9	9	6	23
Number of Subentries with <i>Shi</i> Words of Same Tone but Distinct Character	93	119	22	154

(Manser, 1999, pp. 401-412)

In total, the simple word *shi* can stand alone with different tones or combine with other characters to generate 435 distinct words. Not all Chinese characters are as prolific in their vocabulary generation, but many are. Without training or support, the added challenge of the Chinese language can render classes even more daunting than other language offerings. Proper training and program development are thus that much more critical for establishing stable CFL courses with resilient students and teachers.

### **Research Methods**

This paper analyzes the state of Chinese as a Foreign Language (CFL) education programs and shall answer the thesis question: How can K-12 Chinese as a Foreign Language (CFL) programs in the United States improve to better meet the demands of economic and national security interests?

Research shall be conducted via literature review as the primary research method, which shall synthesize scholarly articles, surveys, reports, and government sources. In the following section, background of the economic and security dimensions of the challenge posed by China will contextualize the need for linguistic competence, followed by an outline of the so-called National Strategy aimed at elevating Chinese language education. The literature review will then evaluate the primary dimensions of CFL educational programming at the levels of the institution and pedagogy. A discussion will follow the literature review, focusing on areas of strength and



weakness at each level of analysis. Policy recommendations as well as areas for further research will place the literature in a broader analytical context. A conclusion will then recapitulate findings.

### **Analytical Metrics**

In answering the thesis question, suitable metrics of analysis should be established to measure the term: *improve*. The geopolitical and economic situation necessitating Chinese (Mandarin) competency at the national level provides context for the thesis question. The federal response *vis a vis* the Strategic Plan for Language Skills, Regional Expertise, and Cultural Capabilities (LREC) of the Defense Language and National Security Education Office (DLNSEO) can provide a helpful baseline by which to assess similar efforts in the K-12 educational system (Department of Defense, 2011). Improvement in the K-12 system, therefore, will be assessed by comparison to federal strategies.

In the K-12 dimensions that will be investigated, namely the institutional and pedagogical, standards should be defined in order to assess improvement in each dimension. As will be seen, the federal response at the institutional level serves as an adequate baseline metric for the K-12 *institutional* dimension, primarily because the federal response is comprehensive in defining the purpose, scope, and implementation of CFL education. Measuring K-12 efforts against established federal policy proves reliable because of the clear guiding principles of the DLNSEO's Implementation Plan for the LREC Strategic Plan (Department of Defense, 2014). The LREC framework establishes a system of objectives and measures that allows the State Department to adequately assess the sufficiency of language program initiatives while laying out actionable improvement measures. Therefore, the DLNSEO offers a reliable analytical metric for the *institutional* dimension of K-12 CFL education.

The analytical metric for the *pedagogical* dimension does not as easily derive from existing federal initiatives because the LREC principles do not explicitly address pedagogy. A review of the literature, however, reveals strength and weakness in CFL pedagogy as discussed in the research. The measures used by researchers to make assessments and recommendations based on their own studies provide the best analytical standards for assessing the *pedagogical* dimension. While a fixed standard for pedagogy in its multifaceted dimensions cannot be concretely established (partly because of the doctrine of continuous improvement, which by definition denies perfection), relative measures of improvement are reflected in the research and shall provide the needed metric for analysis.

## CHAPTER II: LITERATURE REVIEW

The literature review was conducted using search engines to locate relevant articles, as well as websites that directly relate to the research topic. Scholarly articles were found using *scholar.google.com* as well as the Bethel University Library's search engine database: *clicksearch.bethel.edu*. Organizations such as the *ACTFL* (American Council on the Teaching of Foreign Languages), *AAAS* (American Academy of Arts and Sciences), and U.S. State Department agencies and programs, along with websites relevant to search terms such as *CFL in the United States*, *National defense strategy*, *Chinese organizations*, etc. were found using *google.com* or *duckduckgo.com*. Some websites and organizations were discovered in scholarly articles while others were located using the search engines. In Table 2 below, special search engines were consulted in order to find job postings using the terms described in that section. Those search engines were: *Ziprecruiter.com*, *Indeed.com*, and *Glassdoor.com*. These search engines, websites, and databases were the primary means by which the research pool for the literature review was developed.

### **The Economic Dimension of Chinese as a Foreign Language**

The opportunities arising as a consequence of globalization *vis a vis* integration and expansion of international economies has heavily influenced the language market. The demand for multilingualism has grown the market both for teachers of languages and for professionals equipped with sufficient language skills to meet the demands of myriad industries.

### **The Chinese Language Industry**

According to Damari et al. (2017), the growth of the "language industry" increases year on year between 5-7% and is expected to increase (p. 30). Even though its growth outpaces that of the global economy, the language industry lacks qualified linguists.

The disjunction between lagging supply and soaring demand can be interpreted as a gap in skill development. The complexity of developing competent language professionals who also possess industry-specific skills mitigates supply. Mandarin, for example, is key for success in “sales, marketing, customer service, project management,” and other business fields (Damari et al., 2017, p. 30). Yet, Mandarin education does not easily pair with skill development in those specific fields, given the time and program intensity required to master the language combined with lack of room in the curricular schedule of professional degree programs to learn another language. Despite such limitations in academic institutions, opportunities for Mandarin speakers abound (Corey, 2019).

Since China and the United States continue to be each other’s largest trading partners, the merging of language and professional skills will remain a necessity for years to come (Zhang, 2021). Ample time exists to adjust industry supply to market demand since demand will remain strong. This remains the case in spite of the global trade disruptions brought on by the COVID-19 pandemic and the ongoing so-called trade war between the world’s first and second largest economies, the United States and China, respectively.<sup>8</sup> Although both countries are seeking diversification of trade networks in order to alleviate the impact of trade barriers imposed upon one another, the nature of existing economic integration ensures continued engagement, whether cooperative or conflictual. As a result, the need for Chinese nationals learning English remains in the Chinese national interest (even beyond the purview of relations with the United States). In turn, Americans learning Chinese as a Foreign Language (CFL) fulfills the imperatives of American national, public, and private interests.

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<sup>8</sup> The trade war between the United States and China has been carried out primarily through mutual, progressive implementation of tariffs on select commodities worth tens of billions of dollars (Liu & Woo, 2018; see also Ajami, 2020).

## Employment Opportunities

In order to gain a sense of the number of jobs available in the United States related to Chinese, Table 2 displays online search results for job postings across the United States using a series of Chinese language-related search terms. Those terms are: *Chinese*, *Mandarin*, *Mandarin Chinese*, and *Mandarin Language*. Each search engine was utilized on the same day (March 3, 2021) in order to establish parity in job postings results.<sup>9</sup> There are a number of caveats when viewing the search results in Table 2, which will be discussed below.

**Table 2**

### *Online Job Search Results for Chinese-Related Postings, United States, March 2021*

Search Engine	Chinese	Mandarin	Mandarin Chinese	Mandarin Language
<i>Ziprecruiter.com</i>	20,606	6,774	1,071	1,602
<i>Indeed.com</i>	13,714	6,500	6,500	2,996
<i>Glassdoor.com</i>	12,570	6,493	1,978	536

The different search terms appear in postings at different frequencies depending on the search engines and their respective programming algorithms. Each search term can also represent different references in the pool of postings. *Chinese* could refer to people or to the languages of Mandarin or Cantonese.<sup>10</sup> Depending on the search engine's algorithm, results might include Chinese language jobs that refer to Cantonese specifically (or Mandarin); or indicate Chinese in reference to nationality or Chinese business relations for which the language skill is not required.

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<sup>9</sup> This survey was conducted on March 3, 2021 by inputting search terms into the home pages of each search engine website: ziprecruiter.com, indeed.com, and glassdoor.com. Terms were inputted into the Job field and applied to the region of the United States. All other search restrictions (e.g. salary range, employment type, posting date) were opened to encompass the broadest possible set of results.

<sup>10</sup> As noted above, Cantonese is the other primary Chinese language commonly associated with Chinese linguistics. Mandarin is by far the most widespread language in both language education and employment.

Any number of other industries unrelated to language or culture could appear as well (for example, jobs in Chinese restaurants or heritage organizations).

With respect to each search engine, the same jobs may be reflected in the search results of each website, so the amount of unique postings not shared by each website remains unknown. Another algorithm-dependent factor influencing search results is whether the search term (e.g., *Chinese*, *Mandarin*) occurs in the job title, company name, or job description of the search results. A job unrelated specifically to Chinese language could include a section in the description stating Chinese language skills are a plus, but not required. As a result, the posting may not actually require language skills. Results could also reflect the search term in the company name with no relation to a position in which Chinese language skills are required. Compound terms such as *Mandarin Chinese* and *Mandarin Language* are the most precise terms which narrow the search focus. Difficult to assess, however, is whether or not the search engines also yield results with just one word in the compound term (e.g., *Chinese*), thus broadening the set of postings. Also unknown in the survey is the amount of expired postings represented in the search results.

The largest set of job postings resulted from the search term *Chinese*. Compared to the other search terms, these results would seem to suggest that jobs unrelated to Chinese language skills are included in the search algorithm of the websites, or at the very least that job postings related specifically to Chinese language include more precise terms such as *Mandarin Chinese* or *Mandarin Language*. The search term *Mandarin Language* yielded the fewest results, with the exception of *Ziprecruiter.com*, indicating that the term likely narrows the field even more to jobs specifically related to language. While offering an incomplete picture of the Mandarin language

job market in the United States, Table 2 reveals important insights into the extent of the opportunities available through a cross-sectional analysis.<sup>11</sup>

According to Damari et al. (2017), in light of existing opportunities for Mandarin language experts to leverage their linguistic skills in a plethora of economic sectors, preparations to pair language experts with industry-specific positions require the following reforms, specifically in the education system:

(1) develop more relevant professional content, e.g., language for business, engineering, and health care; (2) encourage and incentivize students in other majors to study language; and (3) accommodate the scheduling and specific content needs of nonmajors who nevertheless seek to maximize their hiring potential by adding competencies in another language. (p. 31)

Without these changes, continued failure to connect Mandarin speakers to positions they are qualified for, or to ensure appropriate professional skills are developed alongside language expertise, will ensure a continued shortage of Mandarin experts.

### **The National Security Dimension of Chinese as a Foreign Language**

Mandarin Chinese is considered a critical language by the U.S. Department of Defense, meaning that it is critical to national security (American Academy of Arts and Sciences [AAAS], 2017).

### **The National Defense Strategy (NDS)**

The U.S. Department of Defense's (DoD) National Defense Strategy (NDS) covers the mission, vision, and operational goals of the United States' "global mission" in relationship to

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<sup>11</sup> Jobs related to Chinese language in other countries may be found using the same search engines, or possibly by searching a selected country's Ministry of Commerce website to locate employment for foreigners. Specific multinational companies may also have postings on their own websites.

other competitive nations (Department of Defense, 2011, p. 10).<sup>12</sup> The NDS highlights China as a “strategic competitor” (along with a few other nations) to the United States for its “predatory” economic policies against both its regional neighbors and the U.S. (Mattis, 2018, p. 1).<sup>13</sup> China’s assertiveness in military operations in the South China Sea, the Chinese Communist Party’s (CCP) incursion into Hong Kong’s politics, ongoing threats to Taiwan’s security, along with its expanding global footprint in international political economies have been tracked in the English-speaking news media for some time (Glaser & Price, 2021). The Summary of the 2018 NDS makes clear why China is considered a “principal priority” for the United States:

China is leveraging military modernization, influence operations, and predatory economics to coerce neighboring countries to reorder the Indo-Pacific region to their advantage. As China continues its economic and military ascendance, asserting power through an all-of-nation long-term strategy, it will continue to pursue a military modernization program that seeks Indo-Pacific regional hegemony in the near-term and displacement of the United States to achieve global preeminence in the future. (Mattis 2018, p. 2)

Furthermore, industrial (or economic) espionage in the form of intellectual property theft by Chinese companies (which in many cases are closely tied to or directly run by the Chinese government) is estimated to cost the US economy anywhere from \$225 to \$600 billion United States Dollar (USD) year on year (Huang & Smith, 2019, as cited in Athreye, 2020, p. 58). These and other challenges posed by China have earned its inclusion in the National Defense Strategy, instigating the response to develop a “globally competent workforce” equipped with Mandarin

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<sup>12</sup> See also Department of Defense (2014) for the Approved Implementation Plan.

<sup>13</sup> See also Liu & Woo (2018) for detailed discussion; note that some analysis is political/biased in nature (pp. 14-19).



language skills sufficient to enable citizen stakeholders to function effectively in public and private domains in relationship to China (Department of Defense, 2011, p. 5).

Under the terms of the National Defense Strategy, China is cast as an adversarial force on the international stage. The particular areas of threat posed by the authoritarian regime of the Chinese government prompts its designation as a rival. It is not the case, however, nor is it claimed to be in the NDS, that a strong and prosperous China is *ipso facto* problematic. Rather, in the areas where cooperation can occur, there is ample opportunity for cultural exchange and friendly intercourse. In those areas, Mandarin language expertise provides an important intercultural bridge along economic, academic, and sociocultural pathways. In the areas where China poses a direct or indirect threat as a strategic competitor, competent Mandarin speakers ensure the mitigation of China's adversarial operations while protecting U.S. national security interests.

### **The Strategic Plan for Language Skills, Regional Expertise, and Cultural Capabilities (LREC)**

The Department of Defense's broad approach to meet the challenges posed by countries such as China is contained in the Strategic Plan for Language Skills, Regional Expertise, and Cultural Capabilities (LREC), designed by the Defense Language and National Security Education Office (DLNSEO) (Department of Defense, 2011). The LREC Strategic Plan underscores the need for comprehensive readiness in all areas of strategic engagement with other countries and cultures. The plan sets forth a broad vision, goals, and objectives to establish management infrastructure, education, and operational capabilities in the specified areas of Language Skills, Regional Expertise, and Cultural Capabilities (Department of Defense, 2011, p. 6). The Implementation Plan (2014) authorizes the execution of the Strategic Plan in order "to

meet the national security challenges of the 21st century” (Department of Defense, 2014, p. 3). The LREC plan illustrates the comprehensive approach by the U.S. government to stand present, prepared, and willing to engage with adversaries, allies, and partners. The various federal language scholarships, fellowships, and programs illustrate practical features of the LREC plan, as discussed below.

### **Federal Chinese Language Programs**

The Department of Defense (DoD) has consistently taken action to meet the challenges and opportunities posed by China. Specifically, Mandarin language programs have been established with national security interests in mind. A few relevant programs sponsored by the DoD include the following. STARTALK is a program developed by the National Security Administration (NSA) that provides grants for critical language learning programs and is “administered by the National Foreign Language Center at the University of Maryland” (STARTALK, 2021, About section). STARTALK began in 2006 and also funds training for foreign language teachers (STARTALK, 2020). The goal of the program is to increase the number of American students and teachers competent in critical languages, like Mandarin.

From the years 2007 to 2019, some 48,474 kindergarten through university aged students participated in STARTALK programs. 42,805 of those students, or 64.8%, studied Chinese at some point in their language studies through STARTALK (STARTALK, 2020, p. 14). Students in the program can study more than one language over the course of participation, so the percent of students in Chinese programs does not represent only those students who studied Mandarin exclusively. Of the students surveyed in the 2020 STARTALK Longitudinal Impact Report, 68% of those who studied Mandarin stuck with the Chinese program for just one year, 19.8% for just two years, 7.8% for three, with even smaller margins of students who continued studying

Mandarin for four and five years (p. 16). A similar pattern can be observed with the other languages surveyed in the Impact Report. The tapering of commitment to mastery over several years suggests that the number of competent, market-ready Mandarin speakers is relatively low by comparison to how many students entered STARTALK sponsored Mandarin programs.

The National Security Education Program (NSEP) sponsors important federal language initiatives aimed at similar goals to STARTALK. The National Security Language Initiative for Youth (NSLI-Y) also began in 2006 and provides opportunities for secondary and post-secondary students to study abroad or participate in summer language programs (National Security Language Initiative for Youth [NSLI-Y], n.d.). Another federal language program designed to meet critical language needs for Mandarin Chinese is The Language Flagship. The Language Flagship began in 2002 as a grant program offering funds to universities to build their language programs. K-12 initiatives aim at working with schools to ensure students graduate high school with sufficient language skills to continue learning in college and ultimately to apply their linguistic competence and ensure “the nation’s well-being in the 21st century” (The Language Flagship, 2013a). The Chinese branch of The Language Flagship specifically can be found in 13 universities across the country (The Language Flagship, 2013b).

In total, the U.S. Department of State sponsors 21 fellowship, scholarship, and learning programs focused explicitly on language acquisition (United States Department of State, n.d.). Table 3 shows all federal programs as listed on the State Department webpage, All Language Programs, including each program’s targeted education level and program length. The programs in Table 3 all offer Mandarin language study, with a few exceptions. Five out of 21 programs do not offer Chinese at all; and only five programs are offered to K-12 institutions. Just three of the five K-12 programs offer Mandarin, and one of those is designed for teachers of Chinese.

**Table 3*****Federal Language Programs***

<b>PROGRAM</b>	<b>EDUCATION LEVEL</b>	<b>LENGTH</b>	<b>OFFERED IN K-12</b>	<b>CHINESE OFFERED</b>
Benjamin A. Gilman International Scholarship Program/Critical Need Language Award (CNLA)	Undergraduate	Summer, 2 Months or Less, Semester, Academic Year		X*
Boren Fellowships	Graduate	Summer, Semester, Academic Year		X*
Boren Scholarships	Undergraduate	Summer, Semester, Academic Year		X*
Congress-Bundestag Youth Exchange (CBYX) for Young Professionals	Undergraduate, Graduate, Professional	Academic Year		
Congress-Bundestag Youth Exchange (CBYX) High School Program	K-12	Academic Year	X	
Congress-Bundestag Youth Exchange (CBYX) Vocational Program	K-12	Academic Year	X	
Critical Language Scholarship (CLS) Program	Undergraduate, Graduate	Summer		X*
Foreign Language and Area Studies (FLAS) Fellowships	Undergraduate, Graduate, Higher Education Institution	Summer, Academic Year		X*
Fulbright Foreign Language Teaching Assistant (FLTA) Program	Undergraduate, Higher Education Institution	Academic Year		X*
Fulbright U.S. Student Program/Critical Language Enhancement Award (CLEA)	Graduate, Professional	Semester		X*
Fulbright-Hays Doctor Dissertation Research Abroad (DDRA)	Graduate, Higher Education Institution	Summer, Semester, Academic Year		X*
Fulbright-Hays Group Projects Abroad (GPA)	Graduate, Higher Education Institution	Summer, Semester, Academic Year		X*

John McCain International Scholarship for the Children of Military Families (Gilman-McCain Scholarship)	Undergraduate	Summer, 2 Months or Less, Semester, Academic Year		X*
Language Flagship	Undergraduate, Higher Education Institution	Summer, Semester, Academic Year		X*
National Resource Centers	Undergraduate, Graduate, Higher Education Institution	Academic Year		X*
National Security Language Program for Youth (NSLI-Y)	K-12	Summer, 2 Months or Less, Academic Year	X	X*
Program for the Study of Eastern Europe and the Independent States of the Former Soviet Union (Title VIII)	Graduate, Professional, Higher Education Institution	2 Months or Less, Semester, Academic Year		
Project Global Officer	Undergraduate	Summer		X*
Regional Flagship Languages Initiative	Undergraduate, Graduate	Summer, Semester, Academic Year		
STARTALK	K-12, Undergraduate, Professional, Higher Education Institution	Summer, 2 Months or Less	X	X*
Teachers of Critical Languages Program (TCLP)	K-12, Higher Education Institution	Academic Year	X	X*

(United States Department of State, n.d.)

\*Offers Mandarin and Cantonese (varies by program)

One major takeaway from the data in Table 3 is how few federal programs target K-12 education, with only two designated for students of Mandarin Chinese at that level (plus one designed specifically for teachers, re: Teachers of Critical Languages Program, or TCLP). Most State Department programming is geared to postsecondary educational opportunities.

### **The Commission on Language Learning: National Strategy**

The American Academy of Arts and Sciences (AAAS) Commission on Language Learning (CLL) determined in its most recent report on the status of foreign language in the

United States that a much more concerted effort is required at multiple institutional levels and from key stakeholders in order to meet 21st century language demands. The AAAS:

recommends a national strategy<sup>14</sup> to improve access to as many languages as possible for people of every region, ethnicity, and socioeconomic background—that is, to value language education as a persistent national need similar to education in math or English, and to ensure that a useful level of proficiency is within every student’s reach. (AAAS, 2017, p. viii)

The need for more widespread language education, including institutional access for as many students as possible, applies equally to specific language offerings as to the whole of languages offered. The K-12 system in particular stands in need.

Mandarin carries special priority because of its critical language status as determined by the US State Department’s National Security Education Program, or NSEP (National Security Education Program [NSEP], n.d.). The AAAS Commission pointed to existing DoD initiatives to promote critical language education as a matter of national security importance, already referred to above (AAAS, 2017, p. 3). The Commission’s National Strategy aims at a broader scope of goals, however, such as encouraging heritage speaker education as well as promoting languages outside the category of critical languages. The goals of the AAAS National Strategy can be summed up as follows: 1) “Increase the number of language teachers;” 2) Build partnerships among “schools, government, philanthropies, businesses, and local community members,” including promoting the technological integration of partner resources; 3) Promote immersion opportunities locally and internationally (AAAS, 2017, p. 31).

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<sup>14</sup> The AAAS Commission’s National Strategy is distinct and separate from the Department of Defense’s National Defense Strategy (NDS).

The National Strategy is ultimately a set of recommendations and proposals without legislative power. Its findings require the initiative of governmental agencies, private businesses, and schools to take action towards the recommended goals. For example, public and private schools have implemented Chinese language programs independently of prompting by the AAAS in order to meet demand from parents and to prepare students for future opportunities. As mentioned above, the US Department of Defense has developed programs independently of and long before the AAAS Commission's findings as well. While the National Strategy applies to as many languages as possible, some of which may benefit from explicit promotion by the AAAS, CFL is less impacted by the Commission on Language Learning's imperatives since it has already gained ground independently.

The importance of the National Strategy as articulated by the AAAS lies in its demonstration of national level imperatives for the promotion and funding of language education, which the AAAS envisions to be as critical as other core academic subjects. The implementation of programs and initiatives detailed by the CLL is a necessary step in meeting demand. Consistent with the AAAS report, Damari, et al. (2017) noted that while the Department of Defense has its own "capacity and supply system" (p. 31), both the private and public sector outside of the US government need to develop better, more robust and targeted language programming. Whether such programming develops further at the behest of the AAAS's recommended National Strategy or from federal prompting remains a task for private entities to assume.

Despite existing initiatives and program implementation, an adequate supply of program offerings through public and private institutions does not guarantee a commensurate output of qualified (or committed) Mandarin speakers who are also prepared for and interested in taking

advantage of career opportunities in relevant fields. However effective the supports designed to encourage the acquisition of Mandarin, and however many language speakers are produced in the CFL system, a disparity can arise between noble efforts and the outcome of where those speakers actually end up in their pursuit of or usefulness to national security or economic opportunities.

In addition, the specter of attrition by language learners and experts in areas of education and employment remains an issue. As seen in the STARTALK data above, over half of Mandarin program participants only spent a year learning the language, whereas a much smaller percentage made it through the fourth and fifth years (STARTALK, 2020). Perseverance in studies is critical to language acquisition (Krashen, 1982). Most students simply do not see their studies through long enough to make a measurable impact on their own mastery. A look at the dimensions of K-12 CFL education critical to ensuring students stick with their studies will shed important light on these critical considerations.

### **The Institutional Dimension of Chinese as a Foreign Language**

Until the beginning of the 21st century, Chinese as a Foreign Language (CFL) was largely a field of study in the post-secondary education system in the United States (Chinese Language Association of Secondary-Elementary Schools [CLASS], 2021). After China joined the World Trade Organization in 2001, interest in Chinese (Mandarin in particular) began to trickle down to the secondary and elementary levels as it became evident that China would become relevant again to international affairs. Without an established presence in the K-12 educational system, CFL programs did not contain the institutional memory for how program structures should be set up to best equip CFL learners. The history of CFL education, and thus the institutional memory backing effective programmatic strategies or administrative decisions,



lags behind more established language course offerings, such as Spanish, French, and German. Despite the time lag in program development, improvements continue apace.

### **The Growth of Chinese Language Programs**

According to the American Academy of Arts and Sciences (2017) report on American languages, an “estimated 300–400 million Chinese students are now learning English, compared with about 200,000 U.S. students currently studying Chinese” (p. 8). The difference in absolute numbers of language learners between the two countries should be considered in light of the total population differences, albeit the percentage differential of students learning each country’s respective language is still high. Despite the difference in the citizens of each country’s efforts to learn English or Chinese, Chinese language programs have been increasingly offered in the United States at all levels of education at unprecedented rates (Ke & Li, 2011).

### ***The Foreign Language Enrollment Survey (FLES)***

According to the American Council for International Education’s (ACIE) latest Foreign Language Enrollment Survey (FLES), 1,144 Chinese language programs (including both Mandarin and Cantonese) existed in American high schools as of 2017 (American Council for International Education [ACIE], 2017, p. 11). That number compares to 8,177 Spanish language programs, and a total of 17,778 programs for all language programs combined. In other words, 6.43% of total high school language programs in the U.S. were dedicated to Chinese in 2017, compared to 46% for Spanish (ACIE, 2017, p. 11). By contrast, the percent of schools from previous years (as surveyed in 1997 and 2008) that offered Chinese and Spanish is shown in Table 4. Important caveats are required when comparing the two data sets, as will be discussed below.

### **Table 4**

***Percent of High School Spanish and Chinese Language Programs in 1997, 2008***

<b>LANGUAGE</b>	<b>1997</b>	<b>2008</b>
<b>Spanish</b>	93%	93%
<b>Chinese</b>	1%	4%

(Pufahl & Rhodes, 2011, p. 265)

The large percentage difference in Spanish course offerings in 2017 (46% as noted above) when compared to Table 4 may be due to different sample sizes between the two survey pools.<sup>15</sup>

Whatever the underlying statistics, Chinese program increases were significant over the 20-year period shown in the data.

In contrast to high school course offerings in Chinese, the FLES also surveyed K-8 programs. Nationwide, only 34 elementary and middle schools had Chinese programs, compared to 112 for Spanish, most of which were offered in the middle school years from grades 5-8 (ACIE, 2017, pp. 28, 29). Thus, 1,178 Chinese programs in total existed in the U.S. as of 2017. To give a state-level example, Minnesota had a total of 22 Chinese language programs in its P-12 schools in 2017 (Minnesota Advocates for Immersion Network [MAIN], 2017). According to MAIN (2017), nine out of the 22 Chinese language programs were immersion programs. That means 13 of the 22 Mandarin programs in Minnesota (59%) were non-immersion exploratory programs (also known as “Foreign Language Exploratory programs,” or FLEX; see Lü, 2020, p.

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<sup>15</sup> FLES data for 2017 only included “formal education” institutions and not summer, community, or DoD programs; but also surveyed a larger set of schools, or 17,778 (ACIE, 2017, p. 6, 10). The larger denominator for overall programs in 2017 renders the percentage lower for Spanish. The data set from Pufahl & Rhodes (2011) for the years 1997 and 2008 in Table 4 included a wider range of program structures beyond the public education system, which would include programs explicitly geared towards a language outside of formal education programs (such as heritage or community-based programs), and also surveyed a smaller sample set of just 1,002 secondary schools (p. 260).

102). FLEX programs are not set up to prioritize the development of fluency, per se, as they are offered mainly on the basis of getting students exposed and interested in Chinese enough to carry on study or to fulfill language requirements for graduation. In contrast to the nine Mandarin immersion programs, 54 Spanish immersion programs were offered in the state of Minnesota as of 2017, out of a total of 167 Spanish language programs. 113 of the 167 Spanish programs across the state (67.66%) were exploratory, or FLEX.

The overall number of Mandarin language programs in the US P-8 school system is substantially less than the number in high schools. The disparity in the number of course offerings between P-8 schools and high schools can be explained as a multifaceted issue involving a greater or lesser degree of school resources, parental interest or awareness of language education for children at differing ages, and disparities of perceived need for language acquisition at lower and upper levels of K-12 education. The fact that K-8 schools lack comparative amounts of language offerings to high schools highlights a significant weakness in the CFL system: which is that from the standpoint of language acquisition, the early years of learning a non-native language are critical to developing fluency (Krashen, 1982). The fact that foreign language learning starts later for the vast majority of American students has major implications for linguistic readiness in real world opportunities as students grow up.

Some schools across the country may not offer programs for Less Commonly Taught Languages (LCTL), such as Chinese, but may make provisions for study at neighboring institutions, such as local colleges, other high schools, or heritage schools (ACIE, 2017). These outside offerings account for 214 of the total 1,144 high school level Chinese programs offered throughout the country, or 5.35%. Many schools simply lack the resources to offer Mandarin. The prevalence of Spanish language programs, on the other hand, signals the cultural and

geographic affinity that the United States has long had with its Spanish-speaking citizens and neighboring countries to the south. Even so, Chinese programs have been rapidly gaining popularity. Of the students who chose to learn Less Commonly Taught Languages (LCTLs) offered in American high schools in 2017, 80% of students chose Chinese (ACIE, 2017).

### **Language Program Structures**

The Foreign Language Enrollment Survey (FLES) highlights five program structures in which Chinese is taught in the U.S. The structures are: Traditional Classroom, Dual Language Immersion (DLI), Immersion, Online, and Hybrid (combining face to face and online) (ACIE, 2017). In the traditional classroom, different modes of instruction can exist. For example, Pufahl & Rhodes (2011) defined two categories of language programming: Exploratory (mentioned above as FLEX), which allows students to get exposure to a language to see if they enjoy learning it (instruction is primarily in English); and “Language Focus,” which emphasizes linguistic skill development and may be taught in the target language (p. 266). A Language Focus structure would be Dual Language Immersion, which involves teaching in both native (English) and target (Chinese) languages for roughly half of the instructional time in each language (STARTALK, n.d.). Immersion programs may be taught exclusively in Chinese or take on elements of DLI. Online and hybrid programs respectively offer language learning formats either completely online or partially online and in person.

For Chinese, the program structures for the 1,144 high school programs in the United States are laid out in Table 5.

**Table 5**

#### ***US Secondary Level CFL Program Structures***

<b>Chinese Program Structure:</b>	Traditional Classroom	Dual Language Immersion (DLI)	Immersion	Online	Hybrid

<b>Number of Programs</b>	764	53	59	252	70
<b>Percent of all program types</b>	66.78%	4.63%	5.16%	22.03%	6.12%

(ACIE, 2017, p. 13)

The majority of secondary level Chinese language programs are performed in traditional classroom settings. Traditional language classrooms typically focus on exploratory (FLEX) learning and do not involve subject matter as content, such as History or Mathematics. DLI programs rank the lowest in pervasiveness, possibly because they tend to be concentrated more in elementary schools (STARTALK, n.d.). DLI programs focus on subject matter as well as on building fluency, and therefore tend to be more effective than traditional classrooms. The lower prevalence of Chinese DLI and Immersion programs, whether considered at elementary (K-5) or secondary levels (6-12), masks its exceptional growth, especially in K-5 settings (Lü, 2020).

Part of the growth of immersion learning is owed to the effectiveness of the immersion paradigm. Xu et al. (2015) demonstrated how immersion programs in elementary schools yielded better results in reading Mandarin compared to high school traditional classrooms. Based on their findings, however, research showed that the immersion programs were not as effective with writing and speaking skills by comparison. Those results signify the difference in psychological developmental between the age groups surveyed more than disparities in the effectiveness of the respective program structures. Immersion programs offer the greatest amount and most intense kind of exposure to the target language, rendering them the most effective of all program structures.

### ***Factors Influencing Program Structure Effectiveness***

The foreign language program structures found across the United States often encounter mitigating factors that hamper program integrity and effectiveness. Several factors that can cause

problems include: district funding (Schulz et al., 2019), the degree of student and parent interest (and therefore comparable program availability), the supply of qualified teachers (Yue, 2017), student access issues, adequate curriculum, institutional priorities, and even issues with program articulation from elementary school programs to middle school (and to high school) (Pufahl & Rhodes, 2011). In light of these mitigating factors, it is clear to see why the more resource intensive immersion programs are harder to establish, even though they are the most effective.

### **Program Articulation**

Program articulation refers to the movement from one level of instruction to the next in the course of study, such as moving from the highest stage of beginning Mandarin to the lowest stage of intermediate Mandarin. Articulation can be affected by the type and continuity of program structures between progressive levels, in which the series of offerings may stop abruptly, or the gap between levels is too large and thus students suffer from inadequate preparation. The supply of teachers at differing levels can affect class sizes, limiting students' ability to advance due to lack of options. Lack of teachers at a given level can also downgrade the quality of instruction when too many students are jammed into a limited number of course offerings. Finally, articulation can be hampered by the disparity in competency levels among peers which affects the communicative environment of the classroom. Despite the setbacks due to weaknesses in program structures or Chinese language courses, the fact that schools continue expanding language offerings to include Mandarin and that they actively seek to develop effective programming demonstrates the resiliency of CFL education and its promising future.

### **Program Development Efforts**

Chinese as a Foreign Language education in the United States is relatively new and therefore suffers from late entrance into the K-12 system. More established languages such as

Spanish or German enjoy a first-mover advantage that includes well-established norms and models of effective teaching, along with strong networks between K-12 schools, cross cultural connections, funding, and teacher preparation programs at the university level. CFL education naturally lacks the luxury of the background factors which make more established programs successful. The focus on areas where CFL programs display institutional or programmatic weakness should not take away from the impressive efforts made at building up what is essentially a new industry in the United States.

While CFL programs offered at the K-12 level have increased across the country in the past two decades, many have not been able to retain student involvement or shepherd students into mastery of Chinese. Immersion programs beginning at younger ages are more effective at attaining those goals than exploratory or extracurricular language learning, as already discussed (Peng, 2016). The heterogeneous mix of programs, standards, and course requirements in K-12 schools has rendered the study of Chinese inconsistent across institutions in its purpose and result. Some schools have highly successful programs in place. Many schools offer CFL courses in a good-faith attempt to respond to growing demand. However, course offerings are still limited to exploratory programs in most cases, which soak up resources that could be allocated towards more effective long-term strategies, such as more intentional program development.

According to Peng (2016), newer CFL programs equipped with greater funding and resources, such as happens to be the case with many Chinese immersion programs (especially ones that begin in elementary school), have demonstrated success in producing competent Chinese speakers (see also Lü, 2020). The difficulty with many immersion programs, however, remains supplying them with enough qualified Chinese teachers, as well as deficiencies in curricular continuity capable of smoothly articulating the shift to higher language levels, and lack

of specific language requirements at the level of individual institutions. As schools marshal the resources to respond to the call for continuous improvement, CFL programs will continue to gain integrity and stability.

Resources at the national and district level should be directed at improving existing standards for CFL learning, including pushing existing programs beyond exploratory or interest-based offerings and more towards needs-based preparation determined by national and global demand. In other words, they should focus more on implementing immersion programs, where possible. Where the resources do not exist to support immersion Chinese, targeting curriculum and teacher training offers a practical means of program development. Although problems with continuity and program integrity challenge the effectiveness of Chinese programs, exposure to the language and fostering interest still make an impact on students, especially if they return to study Mandarin later while in college.

### **The Pedagogical Dimension of Chinese as a Foreign Language**

Learning a second language is widely understood to be a benefit to human cognition generally and to student achievement in non-language subject matter specifically (Lü, 2020, p. 110). The ability to acquire another language, however, depends heavily on the quality of instruction and the motivation of the learner. Programs differ in effectiveness partly due to their structure, as mentioned above, and partly due to the quality of pedagogy and how it coincides with the curriculum (Peng, 2016). Effectiveness can be determined by the degree to which best practices in instruction combined with organized curriculum taps student motivation (Wormeli, 2018). Beyond instructional concerns, however, Chinese itself can stymie learner performance due to the grammatical, phonological, and even orthographical technicalities, as explored in the Introduction. Each challenge to pedagogy should be recognized as particular to the institution



and faculty involved. The aspects highlighted here draw attention to the areas cited in the literature that are of greatest need in CFL education more broadly.

## **Curriculum**

Chinese as a Foreign Language curriculum varies by school district and state but much of the foreign language standards used follows the guidelines of the American Council on the Teaching of Foreign Languages, or the ACTFL (Lü, 2020). The state of Minnesota's Department of Education, for example, mandates that the ACTFL standards for world languages be used as the baseline for "locally developed" world language curriculum at the district and school level (Minnesota Department of Education [MDE], 2020). The ACTFL language guidelines encompass reading, speaking, listening, and writing, and provide definitions for levels of mastery ranging from the highest level to the lowest: from Distinguished, to Superior, to Advanced, to Intermediate, to Novice, which apply to each domain of reading, speaking, listening, and writing (American Council on the Teaching of Foreign Languages [ACTFL], 2012). In partnership with the ACTFL, the Chinese Language Teachers Association (CLTA) offers resources and support for Chinese language teachers, primarily in the form of publications and networking (Chinese Language Teachers Association, n.d.). ACTFL and CLTA resources for Chinese language teachers and programs in particular provide a useful framework for developing curriculum.

While national guidelines in the ACTFL standards along with the professional resources of the CLTA are available to CFL teachers, they are not specifically designed to provide lesson standards and objectives to guide daily instruction. Advanced Placement (AP) Chinese courses in high schools are supplied with curriculum by the College Board; however, unless a school district offers AP Chinese, these resources are hidden behind a paywall (Wang et al., 2018, p. 69). AP Chinese teachers also must undergo appropriate training in order for the program to

qualify for AP status, thus allowing students to take the AP exam for college placement. The cost associated with Advanced Placement programs can be more than a district is able to afford.

Factors such as district finances or school resources are typically lacking for non-AP courses, leaving Chinese teachers to search for ways to compensate for insufficient material support, either in curriculum, teaching materials, or with resources that would otherwise be paid for by the school. In a study of Chinese nationals who came to the U.S. to teach Chinese in high schools, Yue (2017) observed how the teachers surveyed reported that no curriculum was provided by their schools; rather, the teachers themselves had to develop the curriculum, including the highly detailed organizational units for lesson goals, objectives, resources, and assessments. In some cases, no help was provided in taking on such a daunting task.

For other schools, resources and funding are more than adequate to provide teachers with the required resources. Schools in higher income districts or immersion schools whose main function is to provide CFL generally follow this trend, such as Minnetonka Public Schools and Yinghua Academy in Minnesota (Minnesota Advocates for Immersion Network, 2017).

The Chinese Language Association of Secondary-Elementary Schools (CLASS) offers a set of 12 “professional standards” for Chinese teachers that assist teachers in targeting areas that will improve their instructional effectiveness (Wang et al., 2018, p. 71). While the CLASS standards can help teachers professionally, they do not provide curricular guidance or resources. Of the main professional Chinese language organizations present in the United States, only the Advanced Placement program sponsored by the College Board provides lesson planning and curriculum resources. In less developed school programs, Chinese teachers are left with few options, either inheriting (often incomplete) resources from previous teachers, buying expensive curriculum on their own, or designing the entire curriculum themselves. Merely getting a course

started can exhaust the opportunity cost of coming to the U.S. to teach, a challenge which can seriously undermine teacher retention.

### **Teaching Style**

The teaching strategies that seek to motivate learners, provide feedback, and balance direct language instruction with content through learner-centered education are considered best practices (Wang et al., 2018). However, research on the type and implementation of “instructional strategies” in CFL classrooms has been relatively limited (Lü, 2020, p. 118). Broadly speaking, cultural differences between Chinese and American teachers are evident by their respective practices. For example, there is a difference in how each group of teachers provides corrective feedback in classroom interactions.

Chinese teachers tend to make more corrections of students’ grammatical mistakes during instruction compared to English speaking teachers, often interrupting students for correct language production before moving on in the lesson (Lü, 2020, p. 119). This results from the way Chinese language teaching emphasizes rote memorization and proper grammatical output; whereas American language teaching emphasizes communicative output, which is less concerned with correct form than authentic usage, ignoring mistakes in favor of earnest production. The unique approaches that American-born teachers versus Chinese-born teachers bring to the classroom reflect cultural paradigms that American students respond to differently, as more examples demonstrate.

Expectations surrounding authority in the teacher-student relationship demonstrate unique dynamics between the two cultures. Neo-Confucian thought shapes Chinese educational culture in such a way that the teacher is assumed to have authority while the student is expected to automatically submit to that authority (Liu et al., 2019). This cultural attitude is both implicit

in classroom dynamics and explicitly taught to Chinese students in China. Respect for authority in the American classroom, by comparison, is not granted to the teacher in an equivalent manner. Rather, American educational culture places more emphasis on teachers earning respect as authority figures by demonstrating engaging teaching methods and showing care for students (Di Giulio, 2007). The assumed hierarchy in Chinese educational culture resembles the understanding in American education that teachers ought to be respected for their role as authority figures; however, American culture by comparison places much less emphasis on student respect for authority or on an implicit willingness to go along with what the teacher says by dint of that authority. Each cultural model engenders unique challenges and opportunities in the classroom.

Chinese teachers in American classrooms can face major classroom management issues when the assumed respect and attention from students that they are used to in China does not comport with student behavior (Yue, 2017). The “lecture-oriented” teaching style that characterizes Chinese pedagogy in K-12 settings in China can result in “boredom” and behavior issues in American classrooms (Yue, 2017, p. 608, 609). Thus, students may not pay attention, or they may simply refuse to go along with instruction they find uninteresting, which may in turn be felt by Chinese teachers as signs of great disrespect. When such classroom dynamics arise, teachers can be left feeling helpless about how to turn the class around to become more beneficial for themselves and students.

Teachers from China make tremendous efforts to adapt and benefit their students, but oftentimes they are not given the support by administrators and other teachers that would make the process less burdensome. Schools are slowly gaining awareness of the need to address cross-cultural differences through teacher training and professional development. Many teachers adapt

through years of experience and others proactively seek engaging methods beyond what they are used to. Much room for improvement remains across the board.

### **Task Based Language Teaching (TBLT)**

Despite the culture gap, promising alternative teaching methods are gaining ground, demonstrating that solutions to the mismatch in teaching style versus student culture are within reach. For example, in a study conducted in Denmark, CFL teachers from China used Task Based Language Teaching (TBLT) strategies that earned the enthusiastic approval of students (Bao & Du, 2015). The TBLT approach essentially focuses on breaking instructional periods into sets of small tasks that engage students in areas of listening, reading, speaking, and writing. Often, students are allowed to work in groups on tasks, which facilitates student to student learning and the desired goal of communicative (or practical and contextualized) language output (see Yue, 2017), as well as community building, making classrooms more engaging. An outline of TBLT principles is given in Table 6.

**Table 6**

***Methodological Principles (MPs) for Task Based Language Teaching (TBLT)***

MP 1	Use tasks, not texts, as the unit of analysis.
MP 2	Promote learning by doing.
MP 3	Elaborate input.
MP 4	Encourage inductive (“chunk”) learning.
MP 5	Provide rich input.
MP 6	Focus on form.
MP 7	Provide negative feedback.
MP 8	Respect learner syllabi and developmental processes.
MP 9	Promote cooperative and collaborative learning.

MP 10	Individualize instruction.
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(Doughty and Long, 2003, as cited in Han, 2018, p. 163.)

According to Han (2018), under the TBLT model teachers of Chinese take on different roles compared to traditional language teaching instruction in either American or Chinese contexts. In effect, teachers become “a leader and an organizer of discussion, a manager of group/pair work, a facilitator of task process, a motivator of student participation, a language advisor, and a language teacher” (p. 162). Task based learning has proven to be highly effective in language classrooms, resulting in lower “attrition rates” of students compared to CFL offered through traditional models of instruction, such as the lecture-oriented approaches seen in FLEX classrooms (Bao & Du, 2015, p. 292). However, the newness of TBLT and the added complexity to the teaching role it brings has rendered it a fairly novel approach in CFL education. And while TBLT offers promising results, especially in view of the cultural challenges which arise between American students and Chinese teachers, adequate research into its effects remains scarce, and it has yet to undergo widespread implementation in teacher training programs (Han, 2018). More experience and analysis of TBLT in the CFL world is needed.

### **Teacher Qualifications**

The demand for Chinese language education in the 21st century has grown faster than the supply of teachers can adequately meet. For many of the structurally varied K-12 CFL programs in the U.S., a shortage of licensed or otherwise qualified teachers means schools rely on teachers who may not have sufficient training (AAAS, 2017; see also Yue, 2017). The pool of qualified teachers narrows when schools require native Chinese speakers (typically from mainland China or Taiwan) to fill positions, leaving merely proficient or largely fluent non-native speakers out of the teacher selection process (Liu et al., 2019). Licensure requirements by state or district also stymie access to otherwise competent teachers.

Despite the lack of teachers in the U.S., Liu et al. (2019) noted that only about 10% of graduates in China from teacher training programs could find jobs in China, and only 1% of graduates found jobs overseas, indicating that over 90% of graduates are technically available to fill positions. However, the researchers noted that while supply would seem to be adequate, the quality of training and preparation is substandard in most cases. The graduates who cannot find employment in China suffer from a lack of available jobs in the field, or the ones who look overseas simply lack adequate qualifications for employment abroad (a major mitigating factor being the lack of proficiency in a foreign language, such as English). The already small set of teacher training programs further vitiates CFL teacher supply due to quality control issues. In fact, few universities in China even offer Chinese as a Foreign Language teacher training programs (Liu et al., 2019).

Other kinks in the qualified teacher pipeline from China to the U.S. exist on the American side. For example, the hiring process for teachers from China poses difficulties for institutions seeking ideal teacher candidates. One issue not always considered by hiring managers is that Chinese teachers may come from regions in China where the dialect differs considerably from standard Mandarin Chinese, which is based on the northern, Beijing dialect (Schulz et al., 2019). Dialects in China can often vary so widely as to resemble different languages. In addition, whether teacher candidates from China speak the standard dialect or not, their English levels may prove insufficient to teach in American schools, especially in non-immersion classroom settings. Even navigating the visa and immigration process can prevent teachers from finding positions or embarking on the journey overseas.

Another institutional barrier alluded to earlier that affects the quality of instruction once Chinese teachers finally get to the U.S. to begin employment centers on lack of institutional

support. Yue (2017) highlighted the fact that Chinese teachers in America often lack proper processing into their new positions and are left without adequate cross-cultural training, curriculum, or departmental support. According to Yue (2017), “Fundamental differences in [Chinese teachers’] philosophy of education and the lack of mentors, other CFL colleagues, curriculum guides, and up-to-date and engaging materials made their induction into K–12 teaching very challenging” (p. 613).

The effect of schools essentially leaving CFL teachers to their own devices can often be a frustration for Chinese teachers (Yue, 2017). Ultimately, unproductive learning environments for students is the end result. Oftentimes, student frustration with lack of organization along with the instructional deficiencies wrought from the lack of institutional support or cultural differences influences their decision to discontinue learning Chinese altogether.

### **Program Intensity**

The intensity of the Chinese program, aside from the elements of CFL instruction and institutional factors described above, introduces another critical aspect of the pedagogical dimension. In a study conducted by Xu et al. (2014), intensive Mandarin programs, such as summer courses, were found to be just as effective as semester courses. Face to face programs are by far the most widespread form of instruction, and one which facilitates traditional pedagogical practices most easily. Examples of online instruction, however, prove that the newer format of online programs can be effective as well, when paired with adequate pedagogy (Tseng et al., 2018). The intensity of short term and long-term programs is sufficient in most cases (and most formats) to make measurable increases in students’ language proficiency.

Studying Chinese can be exciting and challenging for many secondary students, based on the research of Diao & Liu (2020). Following a small research sample of five high school



students, the researchers were able to gain perspective on reasons why students fail to continue with long term CFL study. Although some students enthusiastically embraced learning Chinese and wished to continue after high school, the reality of college requirements worked against their ambitions. Students in STEM fields particularly had trouble continuing their CFL education because of a lack of emphasis on second languages or space in degree planning. Institutional structures, such as degree requirements and coursework schedules vitiate against priorities for second language study in STEM fields. Often, the STEM-specific degree lends little space for additional language coursework that also allows students to graduate degree programs on time, and thus free of incurring additional student loan debt.

Course offerings online, in which students are not required to attend classes on campus, can make Chinese study the only other viable option for distance learning. This option especially holds for the unique challenges presented by the COVID-19 pandemic. However, students often forgo online CFL courses because the online quality of CFL teaching suffers from issues of interaction with teachers and peers, as well as the fact that online interfacing for language learning does not provide the same interaction and means of feedback that in-person learning does. With language learning in particular, close-range, in person instruction plays a critical role in students' ability to mirror instructor language modeling and timing, as well as communicative practice with peers and small groups in real time.

In areas of study that end up being non-essential for high school graduation or that do not impact degree planning (and the bottom line of tuition costs), the vulnerability of CFL programs to multifaceted mitigating factors can mount high enough to discourage entry into or continued learning of the language. Unfortunately, even if students begin postsecondary education with ample K-12 Chinese coursework, they may not be granted college credit for those efforts if

secondary credits are not recognized, presenting yet another setback for even the most enthusiastic of learners (Schulz et al., 2019). It is therefore up to K-12 institutions as well as postsecondary institutions to find ways to grant credit where it can affect the CFL learning path.

### CHAPTER III: DISCUSSION AND CONCLUSION

As discussed in Chapter I, China presents myriad economic opportunities and national security challenges. Employment in jobs that require or utilize Mandarin Chinese are widespread and growing, indicating that acquiring language expertise in Chinese should be a priority for stakeholders, including students. National security challenges range from China's industrial espionage to military strengthening which have earned it an adversarial status in relationship to the United States. Increased military assertiveness and political economic expansion into regions across the globe present a complex horizon of possibilities. Direct threats and potential escalation of conflict remain possible, while cooperation through international business and trade remains necessary. Whatever the relationship between the U.S. and China was in the past, both countries and the stakeholders involved must engage. The critical need for Americans to learn Chinese (primarily Mandarin and to a lesser extent, Cantonese) will continue to grow.

The considerations that make Chinese a critical language from the standpoint of government and industry have rendered Chinese language expertise a necessity in the United States. The relatively short period of time in which China, and therefore Chinese language, has gained ascendancy exposes the range of deficiencies in attempts to meet demand for language expertise. CFL programs have spread significantly in the past two decades, but lack of institutional memory due to shortness of existence means many schools lack the knowledge and ability to offer fully developed programs. The National Strategy proposed by the American Academy of Arts and Sciences (AAAS) offered a call to action and an outline for the direction of foreign language learning in the United States more broadly, and by extension, for Chinese language education in particular.

In the Introduction to this research, analytical metrics were outlined that could be used to answer the thesis question: “How can K-12 Chinese as a Foreign Language (CFL) programs in the United States improve to better meet the demands of economic and national security interests?” The federal response to CFL education was established as an appropriate metric for assessing the *institutional* dimension of K-12 CFL education. The research on the *pedagogical* dimension demonstrated metrics of analysis internal to the research which illustrate the status and challenges of CFL programs in multiple areas. The following discussion addresses the specific areas of K-12 CFL education that are robust as well as those in need of improvement. The federal response provides a baseline metric for analyzing the *institutional* dimension, and the literature review provides a baseline metric for the *pedagogical* dimension. Each area will also include recommendations for improvement.

### **Professional Application**

The Introduction demonstrated the challenges posed by Mandarin which make it an inherently difficult language to learn, thus making the institutional efforts to promote and provide adequate CFL education more complex. The three areas most unlike English are the syntactic grammar, the character writing system, and tonal phonetics, including the multitude of vocabulary that similar or equally sounding words can produce. Since English and Chinese are genetically far removed from each other and share almost no similar words, these morphological, orthographical, and phonological differences make it especially difficult for American students to master. Many students simply give up because of such challenges, which are compounded by the fact that Mandarin takes years longer to master than, say, Spanish.

### **The Institutional Dimension**

The K-12 educational system in the United States, from private, to charter, to traditional public schools, represents a highly varied and often incomplete set of approaches to CFL education. In many cases, schools possess adequate funding and institutional resources to provide AP Chinese courses that are good for college credit, or to supply highly qualified teachers with adequate support to bridge the culture gap as well as offer effective instruction to students. In many cases, Chinese immersion programs exist because of high quality institutional resources and due to the superior program model that immersion learning provides. In those cases, students benefit the most linguistically. In other districts or local schools where CFL is offered, Chinese programs may lack sufficient funding for complete curriculum or qualified teachers, including the resources necessary for program articulation to more advanced levels of language mastery. Other schools may need to supplement their language programs with Chinese course offerings outside of the school itself due to low enrollment and budgetary restrictions.

The National Strategy proposed by the American Academy of Arts and Sciences (AAAS) Commission on Language Learning (CLL) presented a clear and potent case for a multilateral approach to meeting the nation's language demands. Many of the recommendations by the CLL for the National Strategy included the expansion of programs, organizations, and multilateral cooperation to promote the learning of languages other than English, which could also aid in the achievement of explicit goals for CFL. The goals of the National Strategy were highlighted as follows: 1) "Increase the number of language teachers;" 2) Build partnerships among "schools, government, philanthropies, businesses, and local community members," including promoting the technological integration of partner resources; 3) Promote immersion opportunities locally and internationally (AAAS, p. 31).

These goals largely define the efforts already being made in the K-12 education system to expand Chinese as a Foreign Language learning and program development. In other words, the CFL educational landscape in America is already on track with the National Strategy. More specific and targeted measures than the sweeping goals suggested by the CLL are needed, however. As evidenced in the literature review, existing efforts to promote CFL continue to grow and develop in key areas of program structure, teacher training and qualifications, as well as in curriculum and instruction. At the same time, CFL programs suffer from certain deficiencies when evaluated in light of how well the production of Mandarin experts meets market demand.

The federal government has put in place a comprehensive plan for competently engaging adversaries and allies through the Strategic Plan for Language Skills, Regional Expertise, and Cultural Capabilities (LREC) of the Defense Language and National Security Education Office (DLNSEO) (Department of Defense, 2011). The specific vision, goals, objectives, and actions of the LREC Strategic Plan allow for the appropriate allocation of resources to all facets of Defense Department priorities. With reference to CFL, language training is provided by the DLNSEO in order to direct linguists into critical employment positions. In addition, scholarships, fellowships, and language exchange programs directly extend from LREC principles. The majority of Department of Defense programs designed to support CFL education are, however, mostly confined to post-secondary education and do not filter down to K-12 institutions, except in limited capacity. Specific areas where the K-12 system can mirror and benefit from the federal response are discussed in the recommendations below.

### ***Recommendations to Improve the Institutional Dimension***

The areas which make the U.S. Department of Defense language efforts robust are both the Strategic Plan and the funding to allow its implementation. The LREC model offers an

effective standard by which K-12 schools can respond to language needs. Responses in the K-12 education system should include:

1. **Program Development.** More intentional program development, including teacher training and curriculum development at the level of districts and individual schools.
2. **Improved Course Articulation.** Clearer goals in the course schedule that usher students efficiently through the course articulation process all the way into (and ideally through) college.
3. **A Strategic Plan.** An organization such as the American Council on the Teaching of Foreign Languages (ACTFL) could establish a similar Strategic Plan to that of the Defense Department for K-12 Chinese learning. Other organizations could fulfill the same role if not the ACTFL. Some schools already go by ACTFL standards (the state of Minnesota, for example, requires K-12 CFL programs to meet ACTFL standards). A plan to offer a single organizational center by which CFL programs could access resources and guidance on a voluntary basis would allow for greater collaboration between schools across the country, thus unifying the haphazard approaches currently in place. National level systemization of CFL curriculum standards and program goals would also aid postsecondary institutions in assessing ways to grant college credit for non-AP Chinese coursework.
4. **Marketing to Students and Parents.** Marketing to students and parents the reasons why Chinese is critical to learn and making it a fundamental educational priority from the earliest grades through college will pay dividends for students' future success. This is an important element that should be included in program development initiatives (whether articulated by individual schools or offered as part of the proposed ACTFL plan). A Chinese language

Strategic Plan for K-12 schools would provide needed organizing principles and direction where certain current programs fall short.

5. **Government Sponsorship.** The Department of Defense provides many avenues for funding Chinese language study. Government sponsorship at the K-12 level, at least for select CFL programs, could make good use of governmental resources, not only for Chinese but also for other critical languages. Tying federal funding of CFL programs into incentives such as job placement or international experiences could motivate students to persevere in their studies as well.
6. **Funding for Immersion Learning.** Since the most effective program structure, immersion Chinese, happens to be the most resource intensive, more immersion programs could be offered on a higher budget. Funding in the K-12 educational system more broadly is a perennial issue; particularly with respect to competing institutional priorities. Regardless of district or school budgeting constraints, it remains the case that a greater proportion of funds directed towards CFL programs would enhance the credibility and effectiveness of those programs. Greater and efficiently used funding is simply a necessity for robust Chinese language programming.

More qualified staff, better professional development, and curricular resources would create a positive feedback loop in which more students would be attracted to Chinese, and demand for more qualified teacher candidates would increase the selection pool. Language partnerships and exchanges could develop from increased programmatic integrity. Without the vision, goals, and action plan that a K-12 Strategic Plan would articulate, schools will continue to lack a unified vision or direction. With adequate funding, the possibility of implementing a well-crafted Strategic Plan could become reality.



## **The Pedagogical Dimension**

This literature review covered a wide range of factors influencing the integrity of CFL programs across the United States. As seen in the FLES report, and in the STARTALK analysis, many programs focusing on languages other than Chinese suffer from similar issues, such as student attrition as progressive years of language education ensue. As with any language program, CFL programs boast success and positive program development. In many cases, however, CFL programs suffer despite the good intentions of schools to offer non-traditional or critical languages like Chinese. For example, schools may lack appropriate selection criteria for teachers from China, who may not hold proper qualifications or who do not speak the standard dialect. Lack of English proficiency for teachers leading instruction makes communication with beginner students difficult, especially in non-immersion classrooms.

The cultural differences in pedagogical style and in the relationship between students and teachers in China compared to the U.S. can also lead to classroom management issues and ultimately exasperation from teachers and students. Schools often lack sufficient teacher training that can assist Chinese teachers making the transition from China to the United States. Professional development along with staff support might not be a luxury many teachers experience. Absence of curriculum adds to the burden Chinese teachers can face.

The K-12 schools that offer Chinese as a Foreign Language display nonconformity in the program structures they support. The majority of CFL program structures follow the exploratory, in-person model (FLEX). While the interpersonal interaction and communicative language environment of the FLEX structure benefit language learning, little progress relative to other European languages can be made with a language as complex for English speakers as Chinese under the FLEX model. The majority of students may explore the language for one or two years

in high school but then lose interest and cease learning Chinese altogether. FLEX options may be necessary to help students discover a love for Chinese, but more intensive program structures would likely get them much farther in their CFL education, though obstacles exist for each model.

### ***Program Structure***

The most effective program structure for language acquisition is the immersion model. Major setbacks to immersion education are due to the fact that they are most effective and therefore more widespread in elementary schools, which leaves high school options fewer and farther between. Lack of high school immersion programs leaves students who have gained proficiency in elementary school with equally scarce opportunities to continue CFL study. In addition, the resource-intensive nature of immersion programs makes them an unrealistic option for schools or districts wrestling with budgetary constraints. Small schools rarely have the cohort of interested students or parents to justify setting up immersion programs compared to large, typically metropolitan schools. Ironically, therefore, the most effective program structure is often the least likely to be implemented.

Regardless of program structure, the transition to university can stymie progress if high school Chinese courses are denied credit or if the postsecondary degree program itself limits the space in which foreign language courses can practically coexist in the degree schedule. In light of the economic opportunities available to Chinese experts, the lack of space or incentive to continue studying Chinese in college forces students to choose one aspect of the critical pairing of professional skill with language skill. Deficits in one area can limit employment options when both areas of expertise are necessary.

### ***Recommendations to Improve the Pedagogical Dimension***

Solutions for the institutional dimension of CFL programming in the previous section came down to developing a K-12 Strategic Plan upheld by a unifying organization, along with proper funding. Related cascading effects would trickle down and naturally influence the development of the K-12 CFL system in other dimensions. Cascading effects from more precise organizational purpose and greater funding for implementing the Strategic Plan naturally filter into the pedagogical dimension. Suggestions for improving the pedagogical dimension of CFL education include:

- 1. Teacher Training and Support.** Greater funding for more qualified teachers who in turn have the institutional support for cross-cultural training and curriculum development would amplify the strengths and mitigate the weaknesses of existing instructional practices.
- 2. Task-Based Language Teaching.** More attention and research in the area of Task-Based Language Teaching (TBLT) could address the cultural mismatch between Chinese teachers and American students while also providing a model that makes a difficult language like Chinese more interesting and rewarding to learn. Additionally, program articulation represents both an institutional as well as a pedagogical problem. CFL program development paired with adequate resources could smooth the transition between language levels. Lack of qualified teachers or uniform curriculum can either reduce course offerings in the series of levels or generate competency gaps between levels.
- 3. Curriculum Development for Smooth Articulation.** Concerted efforts at building the appropriate scope and sequence for curriculum across levels while ensuring qualified teachers occupy appropriate positions would help to mitigate snags in articulation.
- 4. Postsecondary Credit Options.** The major articulation problem between high school and

college Chinese courses would have to be addressed through better cooperation between institutions to ensure high school students obtain college credit for Chinese (even if that necessitates implementing AP Chinese offerings in high schools).

5. **Degree Planning Accommodations.** Universities could also better incentivize students desiring to learn Chinese by combining linguistic and professional dimensions to degree schedules that do not financially penalize students' auxiliary linguistic ambitions.
6. **Incentivize Continued Learning in K-12 Years.** Due to the difficult nature of Chinese as a Foreign Language, additional support should be incorporated into K-12 programs that encourage students to persevere. One possibility would be to award college credit to students who successfully complete a certain number of years of Chinese (independent of AP programs), or to allow students to take the standard Chinese proficiency test, called the HSK, free of charge. Efforts commensurate with the realistic challenge of learning Chinese should be made to incentivize students to courageously begin and continue with CFL studies. Students may try to learn a foreign language for many reasons at many ages. Whatever reasons best tap into students' intrinsic motivation to learn languages more generally could be targeted and incentivized for Chinese specifically. If learning about another culture or wanting a certain job or seeking adventure are motivations, for example, those motivations should be tapped in as many ways as possible over the course of education.
7. **Extracurricular Interfacing.** Travel opportunities, language partnerships with Chinese international students at local universities, or school cooperation with Chinese heritage organizations would augment the CFL experience in critical ways.

Ultimately, addressing the setbacks in pedagogy, whether they center on instructional style or student motivation, should constitute the locus for areas of improvement in the pedagogical dimension.

### **Limitations of the Research**

This research covered a broad spectrum of issues relevant to the subject of Chinese as a Foreign Language education in the United States. Four broad issues were addressed in relationship to the importance of CFL: economic factors, national security concerns, the institutional dimension, and the pedagogical dimension. Each issue contained multiple aspects that helped illustrate the state of affairs in CFL education along with suggestions for improvement. Since so many topics were covered, one limitation of the research was the relatively surface-level treatment of the subject. Each area of study could be investigated through deeper analysis, greater explanations, and more data to support findings. This literature review, therefore, functioned as an introduction to a highly complex topic.

Another limitation was the lack of data in a few key areas. The growth of CFL programs and their distribution was difficult to locate. The most recent data from the Foreign Language Enrollment Survey (FLES) came from 2017. While useful, another, more recent survey would provide more relevant information. Data demonstrating the longevity of CFL programs or of factors that lead to success or failure (such as student and teacher attrition rates in certain schools or regions) would have bolstered the analysis. No such data could be found.

The fact that this research was conducted as a literature review presented an internal limitation, in that original research and potentially unique findings from the author's locale were not made possible. Attention to the program models, areas of success or struggle, and growth patterns at the local level would have provided valuable insights if the research had been

conducted as a case study or survey of local Chinese programs. Despite these limitations, a useful sketch that helped answer the thesis question provided insights into the topic that could lead to further research.

### **Implications for Future Research**

If the proposed recommendations for a unifying K-12 Strategic Plan for CFL education coupled with greater funding were to offer viable solutions for improving CFL programs, future research should focus on how to make that happen. A national survey of K-12 schools that offer CFL programs, including the programs themselves, would help establish a detailed picture of the key areas to target with the K-12 Strategic Plan. Finding out where schools are “getting it right” and for what reasons could be compared to areas where they are “getting it wrong,” so to speak, and for what reasons. Survey findings would inform an intelligent approach to a real National Strategy for Chinese as a Foreign Language.

In addition, connecting industry professionals with education programs would also help tailor responses of program development to real-world needs. Further research should focus on these areas, as well as the loosely explored aspects of pedagogy that make a demonstrable difference in student and teacher experiences with Chinese courses: namely, Task-Based Language Teaching (TBLT). Discovering what works best for CFL pedagogy and researching ways to improve instructional methods would provide valuable insights into improvement strategies and, ultimately, the expansion of successful language programs.

### **Conclusion**

This research explored a key set of factors which outline critical aspects of the Chinese as a Foreign Language (CFL) educational system in the United States. Those key factors provided both a synopsis of the economic and national security context in which CFL maintains critical

status and offers expanding opportunities, as well as a review of the institutional and pedagogical dimensions of CFL education that displayed strengths and weaknesses. On the broadest level, Chinese language education is relevant to the U.S. government as well as to US citizens because of the geopolitical and economic significance of China in relationship to the United States. On the institutional level in the K-12 education system, Chinese maintains an increasingly significant status. Ensuring schools provide adequate CFL education and that students are supplied with the resources necessary to become Chinese language experts ready for employment in national security or economic roles provides the primary justification for improving the K-12 CFL system of the United States.

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