

# The Development and Reform of Bilingual Education in China

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**Abstract:** *Over the past 20 years, English education in China has undergone pronounced changes, with Chinese-English bilingual education garnering considerable attention. China's accession to the WTO in 2001 and hosting of the 2008 Beijing Olympics have catalysed interest in bilingual programmes, seen by many as addressing the longstanding lack of effectiveness of English teaching. Bilingual education is expanding swiftly, especially in metropolitan areas, utilising English and Mandarin as languages of instruction across curricula. However, due to China's singular context, imported models of bilingual education cannot be directly implemented. Maintenance and transitional models predominate currently, but elite bilingual immersion is increasingly common. Major issues include suitability of materials, teacher capabilities and Chinese cultural attitudes. Though parents and educators are largely supportive, some argue priority should remain with Chinese language and culture. Tailoring bilingual education to China's socioeconomic environment can yield a uniquely Chinese model benefitting learners' language skills, knowledge and global integration. Further research could elucidate programme effectiveness regarding student outcomes.*

**Keywords:** Chinese-English Bilingual Education; Globalisation; Economic development; Educational policies; Teaching methods.

## 1. INTRODUCTION

In the past 20 years, English education in China has changed more accepted by educators and other stakeholders who are momentous to the country's international trade expansion and the advancement of individuals in society. The usage of Chinese and English as teaching language (Chinese-English bilingual education) has been attracting myriad focuses from researchers and educators, as it is regarded as the 'solution' to the long-standing dilemma of 'spending much time with little effect' in bilingual education (Wang & Wang, 2003). In order to boom its economy and meet the challenges of globalisation, China needs human resources with specific knowledge and strong foreign language competence and international talents. Bilingual education, particularly in metropolitan cities like Shanghai, Guangzhou and Special Economic Zones like Xiamen and Shenzhen, is apace developing, with foreign languages (mostly English) and Putonghua (Mandarin) utilised as the languages of instruction in curricula of schools. From kindergarten to higher education institutions, bilingual education has not only become the quotidian topic of educators, but ordinary citizens also talk about it. Catalytic factors, such as China's affiliating to the World Trade Organisation (2001) and its triumphantly hosting of the Beijing Olympic Games (2008), have played a requisite role in enhancing and stimulating Chinese-English bilingual education that seems to reshape the country's overall education system. This wide-ranging Chinese-English bilingual education is an entirely prevailing phenomenon, and more and more researchers and educators are getting involved in research of bilingual education with Chinese characteristics (Qiang & Zhao, 2001; Feng, 2003).

### 1.1 Background to Bilingual Education in China

Globalisation is predominantly a process of economy and localisation, and its impact has been extensively studied from political and socio-economic perspectives. Globalisation means a reappraisal of some primary human attitudes toward the language (Xiong & Feng, 2018). English is defined as the world's common language; the number of people who speak English has exceeded that of native speakers (Jenkins, 2006). The blurring of the line between learner and user has changed our sense of ownership of language. Meanwhile, this profound change also blurs the line between language students and any target language community (Hongchen, 2009).

Since the People's Republic of China was founded in 1949, the China's Ministry of Education (2001) has issued twelve pieces of advice on Chinese teaching. Bilingual education in colleges and institutions is an indispensable mean for higher education to meet requires of economic integration and technological revolution, training high-quality and versatile talents in the new century, all this has helped to promote the total quality of China's tertiary education (Ministry of Education, 2007). Bilingual education programs can support learners improve their

language levels, interpersonal skills, awareness of international cooperation and cultural diversity, which can ultimately help them adapt and integrate into the global marketplace (Feng, 2009). It is spaciouly believed that higher English proficiency assists development of technology and modernisation while at the same time improving China's competitiveness on the international stage, compared with traditional English teaching, Chinese-English bilingual education is not yet fully developed (Qiang & Zhao, 2000; Zhang, 2003; Huang, 2005).

## 1.2 Definition of Key Terms

**(1) The Canadian immersion mode:** In Canada, children come from English-Speaking families learning other subjects in French, which is a non-mainstream language in Canada (Lam, 2007).

**(2) The European school mode:** the goal of the European school is to retain the student's first language and develop the student's multilingual competence. Each student is taught at least 2 European language topics. Schools require students to acquire a third language and also encourage them to acquire a fourth language (Baetens Beardsmore, 1993).

**(3) California two-way bilingual immersion mode:** this type aims to "provide proficient bilingualism and multiculturalism for all participants" (Dolson & Lindholm, 1995 P.70). All students come from (a dominant or a non-dominant language) group, expected to learn topics and language lessons in their native and second languages.

## 1.3 Key Issues on Bilingual Education in China

What are the advantages and disadvantages of current bilingual education in China?

What are the existing dilemmas in the development of Chinese bilingual education?

How to reform bilingual education in China to solve the existing issues?

## 2. LITERATURE REVIEW

### 2.1 History of Bilingual Education in China

On the China mainland (Population: Approximately 1.405 billion 2019; Area: 9.6 million square kilometres), the Han is the majority of China's population who speak diverse Chinese dialects. There are two chief types: Southern and Northern dialects, Southern dialects are divided into six subgroups, and Northern dialects are divided into seven subgroups (Huang, 1987). These dialects differ significantly from Mandarin in terms of pronunciation and vocabulary. Chinese dialects (especially Southern dialects) distinctively differ in their syntactic, vocabulary and pronunciation (Feng, 2007). The Chinese have written the same language for about 3,500 years (Lam & Hornberger, 2008). Besides, more than 80 to 120 languages are spoken among the fifty-five officially recognised non-Han ethnic groups that make up 8.4 per cent of the mainland's population. Their language belongs to Indo-European, Austroasiatic, Altaic, Sino-Tibetan and Austronesian languages families (Zhou, 2003). The Hui and Manchu (two ethnic minorities) have largely integrated into Chinese culture (Lam & Hornberger, 2008)

After 1949, China has implemented 3 language policies: the nationalisation of Mandarin, the spread of foreign languages and the development of minority languages aiming to strengthen and unify the unity of the country (Lam & Hornberger, 2008). China's initial idea was to ally with the Soviet Union, so the first foreign language was Russian. However, as the international situation changed, relations between the two countries did not develop in the way they expected, so the Chinese government decided to replace Russian with English as the first foreign language in the 1950s (Feng, 2007). In 1971, China took the place of Taiwan becoming a member of the United Nations. In 1972, the American President Richard Nixon visited China as President of the United States for further exchanges between China and the west. In 1978, Chinese universities began to resume enrollment, and all work regarding the three languages policies were resumed (Lam & Hornberger, 2008). After 1978, China began to carry out the policy of four modernisations (modernisation of National Defence, Industry, Agriculture, Science and Technology). Meanwhile, working on all three language policies had been continuing (Lam & Hornberger, 2008)

In the late 1980s, China implemented free-market reforms and encouraged foreign investment, to begin with, foreign investment initially concentrated in the Pearl River Delta and slowly spread to other parts of China (Pang, 2002). China's economy was growing faster than ever, and it naturally entered 'the world factory' of the 21st

century (Kalish, 2003). Commercial success is not only forcing Chinese to rethink China's global role as an economic power, military power and contemporary cultural centre but also they need to consider the growth of the bilingual education to make a balance between economy and education (Wang, 2007; Ward, 2007; Liu & Lo Bianco, 2007). In 1982, the constitution of China officially confirmed the spread of Mandarin. In 1986, the central government confirmed the list of simplified Chinese characters which was first published in 1964. In 1982, the constitution reaffirmed the freedom of each ethnic group to develop and utilise their scripts and languages (National People's Congress, 1999). Between 1977 and 1990, the policy direction for the development of curriculum in college English teaching had also received strong support from English teaching experts in China and overseas countries (Lam & Hornberger, 2008).

In 2001, China entered the World Trade Organisation. In 2008, China successfully held the Beijing Olympic Games. The effect of this international orientation on language education is twofold: More and more foreigners are beginning to learn Chinese for interests; The Chinese want to improve their English proficiency (Lam & Hornberger, 2008). In the western mainstream media, learners learn Chinese for different purposes, some for business communication, some for social communication. Now Chinese is one of the most popular in the world, nearly 3 million people around the world are studying Chinese as a foreign language, and the number of learners is increasing (Collins, 2006). China's 'hard' power will be matched by China's 'soft' power expansion, and China's influence will be valued so that its prevalence of culture and linguistics in the world will become perceptible as its informal and institutional influence grows (Lo Bianco, 2009).

After China entered into the world trade organisation (WTO), it accelerated a long-term trend to expand and foster English learning. This has resulted in a gargantuan investment in English, and the issues and shared experiences of the majority and minority in bilingual education have led to an essential joint discussion (Lo Bianco & Lo Bianco, 2008). There are many causes for the growth of China's bilingual education, the most significant of which is the growing dissatisfaction of learners with the effectiveness of China's traditional English teaching. Educators have researched and debated several measures to address issues, including supporting the growth of bilingual immersion schools and utilising English as the teaching language in universities of China. China's law stipulates that standard Chinese is the legal teaching instruction, and the education with English as the teaching instruction is called bilingual education to emphasise the simultaneous use of Mandarin, thus gaining recognition from all levels of government (Gao & Ren, 2019). In 2001, the Ministry of Education of China had published an official directive that 10 per cent of the courses at Chinese universities could be taught in English. While the directive is only aimed at universities in China, it is broadly regarded as a policy aimed at supporting Chinese-English bilingual or immersion education in Chinese secondary schools and elementary schools (Yu & Hornberger, 2008).

Consequently, these initiatives aim to integrate English teaching into specific subjects known as bilingual education developed promptly in China, where bilingual education has become a common theme in the diurnal life of ordinary people and educators (Feng, 2005). Due to different cultures and policies, bilingual education with Chinese characteristics is distinctive from that of other countries, and some unique terms may be needed to describe this uniqueness and dissimilarity (Feng, 2005). This new model of education is regarded as a legitimate and ultimately beneficial educational practice and is suitable for the sociopolitical environment in which China participates in world affairs and the global economy (Tong & Shi, 2012). As of August 31, 2018, there were 1,309 international schools in China, the average number of students in each school is 392, and the total number of students is 513,000. Such international schools can exclusively be founded in metropolitan cities with increasing international populations, such as Hong Kong, Shanghai and Beijing, where learners would have ample opportunities to learn multiple languages because they would have real opportunities to use languages (Feng, 2007).

## **2.2 Previous Research into Bilingual Education in China**

According to historical records, Peking University was called the Beijing Jingshi Tongwen Guan, making it the first university in China to offer foreign languages course. The earliest bilingual education in China began in the early 20th century, and bilingual education was introduced to China by American missionaries to promote the exchange of eastern and western cultures. (Gil & Adamson, 2011). As a result, bilingual education started to burgeon gradually in China. The earliest renowned bilingual schools included school Yali middle school, which was the first school to provide bilingual education in 1910; St. John's University and its affiliated secondary and elementary schools in Shanghai were almost utterly taught in English, and the Chinese language arts course was taught in Chinese (Yu & Hornberger, 2008). After the 1970s, the Chinese government had begun to implement and reform opening-up policy to participate in international trade, English became the common language in many

official occasions (Tong & Shi, 2012). As a result, in China's coastal areas, the status of foreign language (English) has been improved as never before (Yang 2005; Yu & Hornberger 2008).

In 2001, the Chinese Ministry of Education proposed to carry out bilingual education in Chinese universities to foster the country's rapid economic development, official documents of the Ministry of Education stipulated that five to ten per cent of courses in such subjects as biology, statistics and technology can be taught in English or other foreign languages (Du 2002; Chen 2008; Han 2008). Bilingual education has been vigorously promoted. In vital cities such as Guangzhou, Beijing, Shanghai, abundant universities offer bilingual courses related to foreign languages, accounting, geography, biology, engineering and law (Pan, 2007). Brisk (2005) defined bilingual education: two languages are usually utilised in the teaching process. The core objectives of bilingual education are to stimulate cultural diversity, to make bilingual development sustainable, and to maintain a variety of bilingual modes (Cummins, 2000). In Canada and the USA, bilingual education has been actively discussed among students of diverse languages, and several bilingual researchers are working on a wide range of bilingual programs such as (one-way or two-way) dual language, (foreign or second) language immersion, maintenance bilingual education and transitional bilingual (Baker & Wright, 2017; Genesee 1999). Some literature has indicated that bilingual teaching has a noticeable impact on the English reading, writing ability and academic performance of children of language minorities (Thomas & Collier 2002; Slavin & Cheung 2005; Rolstad, Mahoney & Glass 2005; Tong, 2008 and August, Shanahan & Escamilla, 2009). However, these empirical and research analyses are mostly carried out in the primary school background, and English is the dominant language after class, which is intrinsically different from the actual situation in China. Bilingual education is well known in North America and Western Europe, bilingual studies in China need more attention from researchers, scholars, educators and bilingual teachers (Baker & Wright, 2017).

Hu (2008) summarises four paramount modes of China's bilingual education:

**Mode A:** The characteristic of this teaching mode is that the teachers basically teach in Chinese, and the usage of English in the classroom is limited, which is generally only used for classroom management. Sometimes, teachers also translate concepts and formulas and selected definitions in English (Huang, 2005; Pi, 2004; Zhang, 2003).

**Mode B:** In this model, Chinese is still dominant in teaching, but compared with Mode A, teachers utilise English more often to provide explanations and explanations regarding illustrations, descriptions and additional supplementary explanations in teaching (Wang, 2003; Feng, 2003; Song & Yan, 2004)

**Mode C:** English is the instruction of teaching, while Chinese is used to explain some complicated content (Zheng, Tian & Li, 2006).

**Mode D:** In this model, teachers utilise English to teach all subjects. This mode of teaching is prevalent in international schools (Qiang & Zhao, 2000; Wang, 2003; Song & Yan, 2004; Chi & Zhao, 2004; Zheng, 2006).

Due to the limited resources of utilising English as the teaching instruction, the language usage patterns of most bilingual teaching programs can be classified as Mode (A&B) categories. The Mode (C&D) categories can be found only in the bilingual programs provided by a few elite, resource-rich schools in socio-economic and metropolitan areas in China.

There are many dissimilarities between bilingual education in China and international bilingual education in terms of project objectives, classroom language use, target population and international environment because these discrepancies determine that many overseas bilingual programs cannot be directly introduced into China.

Numerous Chinese researchers assume that Mode A and Mode B belong to maintenance bilingual education (Zhao, 2002; Yang, 2003; Yang, 2004).

Mode C (and sometimes Mode B) is considered to be transitional bilingual education (Zhu, 2003; Feng, 2003; Yang, 2004; Zheng, 2006).

Mode D (and sometimes Mode C) is regarded as immersion bilingual education (Zhang, 2002; Yang & Dai, 2005; Zheng, 2006).

Unlike maintenance bilingual education in other parts of the world, maintenance bilingual education in China is

aimed at students of majority languages. This kind of education has nothing to do with the maintenance of minority languages. Its primary purpose is to maintain the diversity of culture and linguistics and to espouse the spread of international language (Hu, 2008).

Simultaneously, transitional bilingual education is quite different in China and other countries. The transition from minority language students to mainstream language students has a tendency of assimilation, the goal of China's education transformation program is to move the vast majority of students from mainstream Chinese education to elite education that utilising English more as the language of instruction (Feng, 2005). China's transitional bilingual programs are different from the most representative transitional bilingual programs in the USA, which aims to integrate students from linguistic minorities into mainstream English education (Hu, 2008). Unlike other multicultural countries, the problem of bilingual education in China is not a cultural identity but with language (Wang, 2003). It is well known that the concepts, terms, beliefs and theories of bilingual education originated in Canada and the USA. However, Chinese unique economic environment, social culture, heritage language and politics have reshaped the newly Chinese-style bilingual education, the theory of 'imported' bilingual education after being localised, will suit the current condition in China (Tong & Shi, 2012).

There are various provinces in China with distinctive levels of economic development, so there are copious differences in the educational planning, implementation, policy support, financial support and policy orientation of bilingual education in China (Tong & Shi, 2012). In special administrative regions like Hong Kong, bilingual education can be traced back to the colonial period. The highly developed economy and continuously increasing international population make bilingual education more feasible and effective in Hong Kong (Wang & Kirkpatrick, 2013). The enhance of students' English level can demonstrate the feasibility of bilingual education in China. In China's first-tier cities, bilingual education is an elite education regarding to family income and generally has a high social hierarchy (Tong & Shi, 2012). However, students who receive bilingual education always strive to promote their language competence and enrich their knowledge of subjects aiming to become the *Zhuan Ye Wai Yu Fu He Xing Ren Cai* (A comprehensive talent with professional knowledge and English competence) (Feng, 2007). In the west and less developed areas where China's ethnic minorities are concentrated, English is an unfamiliar language for ethnic minorities, and learners are supposed to master their first language completely before they can be proficient in English; therefore, bilingual education is not tremendously prevalent (Dai & Dong 1997; Zhou, 2000; Yang, 2005).

### **3. ISSUES AND DEBATES**

#### **3.1 Teaching Materials & Textbooks**

Bilingual education in China is facing colossal challenges and constraints due to the diversity of Chinese history, economy, social culture, politics, policy and educational background. Public primary and secondary schools in China's current education system have a hard time finding bilingual materials that are suitable for all students (Chang, 2006; Chen, 2008). Textbooks are required to use authentic English materials, but their prices are often not cheap, and it will be challenging to popularise them (Chen & Guo, 2005). The use of non-standard pronunciation and accented pronunciation can be assumed to be an extra obstacle for learners to acquire language (Pan, 2007; Jin & Zhuang, 2002). Students' lack of familiarity with the terms and concepts of the course may cause misunderstandings and affect the quality of the course (Wang, Zai & Cheng 2007; Ding & Zhang 2003). Some scholars point out that the chief translators must be proficient in two languages when translating teaching materials in a foreign language version because many contents cannot be translated literally since the culture is dissimilar, secondly, it takes time to translate. A lot of updated information may be missed (Han, 2008). Some English teachers write their teaching materials, which may be easier for local students to comprehend, but these textbooks lack creativity, academics, normalisation, and other unexpected factors (Hu, 2007).

As far as I can see, for Chinese public primary schools, high schools and secondary schools and, English teaching is a traditional teaching method, and virtually all English textbooks are from the People's Education Press. In pure international schools, the curriculum system is designed concerning international courses such as A-level, IB (International Baccalaureate) and other international courses. Therefore, teaching materials are directly introduced into original foreign textbooks, which requires students' English level is well. For bilingual programs in bilingual schools and public schools, the textbooks utilised by English teachers are generally revised and created based on local English textbooks, and the effectiveness of English textbooks is relying on the practical teaching experience of English teachers and the feedback of students in the class.

### **3.2 Bilingual Teachers**

Teachers' language capability in dual languages and their expertise is a prerequisite for furthering knowledge transfer (Hu, 2008). One effective way to solve the talent shortage is to recruit highly educated native Chinese speakers from English-Speaking countries (Jiazhen, 2007). These teachers possibly have not too much experience in teaching, but their academic English is eminently admirable (Cummins, 2000). Schools should provide teacher training in subject areas to learn language teaching approaches and provide theoretical training opportunities, and teachers can live abroad for one or two years in order to increase their exposure to English (Hu, 2007). Some supplementary English courses should be offered in normal colleges and universities across the country for teachers who want to become bilingual teachers to help learners acquire subject knowledge and enhance their English competence (Lu, 2001). From the long-term perspective of sustainable development, teacher training institutions should establish specialised bilingual departments and bilingual programs, and regularly invite foreign experts to teach bilingual students (Han, 2008; Ding & Zhang, 2003).

I assume that these strategies take much time and also should be supported by economic policy. China needs professional bilingual teachers who play a substantial role in bilingual education.

### **3.3 Bilingual Learners**

Bilingual education can aid students to cultivate their English capability (Gui, 2004). According to the international journal, ignoring students' motivation for language learning and overemphasising standardised test scores can lead to a mismatch between learners' English learning and competence over the years (Yu & Hornberger, 2008). In terms of the social environment, the mainstream language in China is Chinese, and the usage of English is limited to certain places such as bilingual schools, higher education institutions, international business organisations and so on, learners do not have adequate chances to contact and utilise English (Tong & Shi, 2012). According to the college English teaching objectives of the Ministry of Education of China, college non-English majors and English majors have divergent vocabularies. For most non-English majors, advanced English students should master a vocabulary of seven thousand six hundred and seventy-five words and one thousand eight hundred and seventy phrases; The corresponding vocabulary of intermediate English level is 6395 words and twelve hundred phrases; The vocabulary corresponding to the elementary English level is 4795 words and seven hundred phrases (Ministry of Education).

In order to assess and verify students' English levels, non-English majors will participate in the College English Test (henceforth CET) band 4 & 6. The higher education department of China organises the test in order to manage better the examination. The examination committee established under three test centres, respectively located in Beijing's Tsinghua University, Shanghai Jiaotong University and Wuhan University in charge of the college English test, and the test has been going on for 26 years, during this time, examination committee to revise the rectification many times. For students majoring in English, they have to take the exam TEM-4 & TEM-8 (Test for English Majors), which is much more arduous than CET 6 (Jin & Jin, 2011; Xiao, 2014). Some researchers analysed the data of CET 4/6 scores and their comprehensive English capability and found that only when the students' English score of CET-4 reached 80 per cent or CET-6 reached 60 per cent, they had the corresponding English level and could better benefit from bilingual teaching (Han & Yu, 2007).

In my opinion, excellent English proficiency can support them to obtain better career advancement and better individual bilingual communication skills, all of which avail from bilingual education and maintain them charmingly integrate into the global market.

### **3.4 Special emotions toward Chinese**

Chinese people have a unique complex of emotions towards the Chinese language. To some extent, bilingual education affects educational policies and the Chinese language (Feng, 2007). Some scholars mention that English is not the country's leading source of economic growth, and they counter that the earlier you learn English, the better (Chen, 2003; Li, 2005). Similarly, Dor (2004) claims that there is no clear link between national development and English proficiency. Bilingual education in China is a double-edged sword. Firstly, it can promote international communication; Secondly, it also threatens the growth of the first language and indigenous culture, hindering the growth of students' critical thinking skills (Xu, 2004; Liu, 2004). Although bilingual education has many potential advantages, foreign languages should not be developed at the expense of traditional languages (Hu, 2008). Nationalism has always given primacy to pride, unity, motivation and belonging, but

educators should be wary of vicious nationalism, which offers a static, mutually exclusive identity and provides cultural diversity in places of conflict (Feng, 2009).

Nowadays, many students spend much time learning English, and their Chinese Cognition and Academic Language Proficiency (henceforth CALP) are not good enough, which has aroused the concern of many Chinese researchers (Hu, 2008). Hu (2008) expressed deep concern about students' poor Cognitive and Academic Language Performance in Chinese proficiency (CALP) because students spend much time in acquiring English. He further warns against the explanation of the empirical results of a limited number of project assessments, which are methodological flawed, and criticises a pervasive and distorted "rosy picture" of academic discourse and bilingual education in English and Chinese. Some teachers assume that English is a course wasting educational resources, which can be better applied to other subjects, especially the teaching of Chinese modern classical language. They assert that not every Chinese is supposed to understand English, so not everyone needs to learn English; Some teachers claim that English is a beneficial course, which can help students broaden their horizons and enrich their knowledge, excellent English skills can also advance learners' ascendancy (Orton, 2009).

China has a history of more than 5,000 years. The language and culture permeate each other, and the Chinese people are inseparably connected with the Chinese language. It is also the duty of the Chinese to protect the national heritage language. The role of bilingual education in China is to protect the heritage language while spreading and developing students' foreign language skills.

### **3.5 Teaching Implications**

Based on some case studies I have read about bilingual education in China, I want to write something about my views on teaching implications of bilingual education in the Chinese context. Generally speaking, bilingual education refers to teachers who use two languages in teaching processes. Its essence is to try to help learners to enhance their English ability and acquire subject knowledge. This kind of teaching method is more meaningful than monolingual teaching. It insists on using students' target language in teaching activities, provides more language input information to students, makes students contact the target language unconsciously, and thus generates interest in language learning (Feng, 2007). Learning interest is the best catalyst. Bilingual teaching varies from country to country and from region to region. In Canada, bilingual education generally refers to the teaching model in which French is taught in schools in English-Speaking areas. In the USA, bilingual education generally refers to the subject of education conducted in Spanish. With the development of bilingual education, there are creating many other modes of bilingual education in the United States. One of the objectives of bilingual education is to enable many new immigrants to gain a new identity better, to experience cultural diversity and integration better. In Europe, bilingual education is more complex, involving mostly English and aimed at strengthening communication between countries, boosting economic growth and creating synergy. In China and some other countries and regions in Asia, bilingual education especially refers to the education system in which English is the teaching language of subjects (Hornberger, 2008).

Due to different historical reasons, bilingual education has developed in different countries, and China's bilingual education has its characteristics. Educators can firstly refer to other countries' bilingual education development when formulating education policies (Feng, 2007).

1) Canada. Bilingual education in Quebec (Canada) using an immersive model began in 1965. In the early 20th century, a massive influx of European immigrants led to demographic changes, with the French nation becoming a smaller and smaller part of the population. Later, in order to protect their language, the Quebec people insisted on using French as their first language, hoping that the children of French-speaking families could get French education. Bilingual education in Quebec came into being and developed in this historical background in order to protect the existing language and national culture and strengthen national unity. Then the Canadian government made English and French as official languages, with equal legal status. In this mode, teachers not only teach language culture classes in the second language but also professional courses in the second language, making the second language not only a tool for language learning but also a content of language learning to the maximum extent to preserve the culture of minority languages.

2) The United States. Bilingual education in the USA is also thriving. The USA is a multilingual country. Because there are so many immigrants in the USA, although English is the main language, most immigrants still speak their mother tongue. From the late 18th century to the mid-19th century, politicians and educational policymakers insisted that all Americans should be encouraged to speak English, and certainly not prevented from preserving

and using their language. America's first education act, enacted in 1978, obliges public schools to help the children of immigrants succeed academically, and new immigrants who are not familiar with English to adapt to the new environment. As a result of the act, the public education system has been challenged to create and implement a series of special programs to help immigrants and students adapt to American schools and education.

3) Singapore. Singapore seceded from the Malaysian union in 1965. Education policy was reformed from the 1960s to the 1990s, with the government proposing to become a bilingual nation for all. From grade 5 onwards, students are required to master English and one native language (Chinese, Malay or Tamil). A large number of language classes and its pivotal role in the college entrance examination results in all highlight the importance of bilingual education in Singapore. The fundamental purpose of bilingual education in Singapore is to enhance the quality of talents, and improve national strength and integrate into the globalisation of economy and culture. Singapore used to be a British colony, and English has been the official and school language for a long time. Such social and historical background and the high English level of many students' parents make up for the deficiency of students' learning in a second language environment to some extent.

The development of bilingual education cannot be separated from the support of national policies. Only when the national education system supports bilingual education that bilingual education can continue to develop. The choice of national language policy requires language policymakers, educators, family members and learners to make it together (Lam, 2007). Compared with other countries where bilingual education is well developed, the bilingual education of China starts relatively late, and China is a populous country, bilingual teachers in the present stage, need a lot of foreign English teachers and native English teachers' cooperative teaching is a more effective bilingual teaching model. In the Chinese education department may set up professional compiling bilingual education institutions, invited foreign experts to guide. The construction of a bilingual environment is also a concern. The school can organise some activities about learning English more, improve the interest of learning English. The school should provide the students with the environment to learn and use English as much as possible. For example, the school should set up an English corner, where students can choose to change the topic of oral English every week, and a teacher can participate in the students' free discussion flexibly every week. A survey on parents' attitudes toward bilingual education in China shows that parents largely support the development of bilingual education, many Chinese parents believe their children can benefit from bilingual education. Many of them hope their children can improve their foreign language competence through bilingual education (Wei, 2011).

As an English teacher, I assume that the development of bilingual education for students is significant, generally speaking, I think the bilingual teaching can provide students opportunities to learn and contact some attractive humanities social sciences subjects like English. People have different identities in different languages (Paltridge, 2012). Each language has its own culture, which is closely linked with the identification of identity. Bilingual learners can better adapt to the multicultural environment. Learners learn languages for different purposes, broadly speaking, the students can learn English to understand the different culture, help them expand horizons, enrich knowledge, learn to read some English literature and English journals. As for my teaching, I want to combine culture and language. I want students to acquire new knowledge and see different and colourful world through English learning.

#### **4. CONCLUSION**

In the 21st century, the global economy is developing rapidly. With the rapid development of the Internet, transportation, international trade and international education, there are more and more connections between countries. Today, English becomes a universal language around the world, and more and more people are learning and communicating in English. In the past 20 years, English education in China has been improving and developing. In recent years, Chinese-English bilingual education has become more and more common in coastal areas in China. The developed economy of the coastal areas and the growing international population continue to provide new energy for bilingual education. Many parents in China are also very supportive of bilingual education, especially the immersion bilingual education. They think that the immersion bilingual education can help children better to master a language, children in a bilingual immersion school can learn more different discipline knowledge such as history, geography and mathematics by learning a foreign language. The children acquire new subject knowledge while improving their English.

China's social and educational development needs international talents with a global perspective. They should be not only proficient in the language of their cultural heritage, but also be able to master a second language by bilingual education. Bilingual education helps learners to achieve career success in the future. Through bilingual



education, learners master a new language, which helps them to engage in scientific research in the future. They can acquire new scientific knowledge through the language they learn. There are many foreign companies and Sino-foreign joint ventures in China, and bilingual learners can adapt to the bilingual office environment. Bilingual education can help learners better integrate into the global market, where the language is no longer an obstacle. To a large extent, language also facilitates communication between cultures.

China's bilingual education has its advantages and characteristics. Many bilingual programs in China are combined with foreign education and local education. These bilingual programs can be better applied to the development of the bilingual ability of local students. Meanwhile, there are some issues and difficulties in bilingual education in China, such as language policy, education system, bilingual teaching materials, students, teachers and bilingual teaching environment. As for the academic research, the current research about Chinese bilingual education is not comprehensive enough, such as the relationship between Chinese bilingual education and children's age, the best time to start bilingual education for children's growth, and the impact of bilingual education on children's bilingual reading ability. Does Chinese-English bilingual education have more effect on children's vocabulary cognition? Are there significant differences in vocabulary cognition between bilingual and monolingual children? These problems need to be further studied and discussed in future research about bilingual education in Chinese and English.

Bilingual education in Europe, Canada and the USA started early and developed well. Therefore, Chinese educators can first refer to the causes, process and influence of bilingual education on learners in these countries when studying issues of bilingual education in China. The reform of bilingual education can effectively solve the existing issues of bilingual education. China's Ministry of Education can set up a bilingual education department, regularly invite foreign experts for training, carry out academic seminars, actively conduct academic exchanges with foreign schools, and extensively collect the ideas of Chinese bilingual education teachers, researchers and scholars to carry out bilingual education reform.

## REFERENCES

- [1] August, D., Shanahan, T., & Escamilla, K.. English Language Learners: Developing Literacy in Second-Language Learners—Report of the National Literacy Panel on Language-Minority Children and Youth. *Journal of Literacy Research*, 2009,41(4): 432–452. <https://doi.org/10.1080/10862960903340165>
- [2] Baetens Beardsmore, H. (1993). European models of bilingual education (pp. 121–154). Clevedon [England] : Multilingual Matters.
- [3] Baker, C., & Wright, W. (2017). Foundations of bilingual education and bilingualism (6th edition.). Bristol: Multilingual Matters.
- [4] Brisk, M.E. (2005). Bilingual education. In *Handbook of research in second language teaching and learning*(pp.7-24). Mahwah, N.J: L. Erlbaum Associates.
- [5] Central People's Government of PRC. 2001. The use of language and script law. [http://www.gov.cn/flfg/2005-08/31/content\\_27920.htm](http://www.gov.cn/flfg/2005-08/31/content_27920.htm)
- [6] Chang, J.. Globalization and English in Chinese higher education. *World Englishes*, 2006, 25(3-4): 513–525. <https://doi.org/10.1111/j.1467-971X.2006.00484.x>
- [7] Chen, P., & Guo, K. (2005, June). On teaching of bilingual journalism education in China. In *Symposium on English-Language Journalism Education*, Shantou University, China.
- [8] Chen, S. X. (2002). Language law bewilders bilingual educators. *China. org.* <http://www.china.org.cn/english/2002/Apr/31210.htm>
- [9] Chen, W. (2003). Shuangyu jiaoxue buneng yihong ershang [Don't rush bilingual teaching headlong into mass action]. *Xuhui Jiaoyu*, 2003-04.
- [10] Chen, X.. Theory and Practice of Chinese-English Bilingual Teaching in Circuit Course. *International Education Studies*, 2008, 1(4): 53-56.
- [11] Chi, Y. P., & Zhao, W.. Woguo xiaoxue jinrushi jiaoxue shiyan zongshu [A review of English immersion experiments in Chinese elementary schools]. *Bijiao Jiaoyu Yanjiu*, 2004,7: 13-18.
- [12] Collins, G. (2006). Can Chinese become a global language of networking and business. On WWW at <http://www.ecademy.com/node.php>.
- [13] Cummins, J. (1984). Bilingualism and special education : issues in assessment and pedagogy(pp.20-25). Clevedon, England: Multilingual Matters.
- [14] Cummins, J. (2000). Language, power and pedagogy bilingual children in the crossfire(pp.201-220). Clevedon [England]: Multilingual Matters.

- [15] Dai, Q. X., & Dong, Y.. Historical Development of Bilingual Education for Chinese Ethnic Minorities (zhongguo shaoshu minzu shuangyu jiaoyu de lishi yange). *Journal of Research on Education for Ethnic Minorities (minzu jiaoyu yanjiu)*: 1997,1: 50-61.
- [16] DING, W. J., & ZHANG, L. J.. An Analysis of the Current Status and Problems of Bilingual Education in China's Colleges and Universities [J]. *Journal of Guilin University of Electronic Technology*,2003, 2.
- [17] Dolson, D., & Lindholm, K.. World class education for children in California: A comparison of the two-way bilingual immersion and European School model. *Multilingualism for all*,1995: 69-102.
- [18] Dor, D.. From englishization to imposed multilingualism: globalization, the internet, and the political economy of the linguistic code. *Public Culture*, 2004,16(1): 97–118.
- [19] Du, X. H.. Chutan shuangyu jiaoyu jiqi shizi peiyang de tujing [Bilingual education and means of bilingual teacher education]. *Zhongguo Gaojiao Yanjiu*, 2002,1: 90-91.
- [20] Feng, A.. Bilingualism for the Minor or the Major? An Evaluative Analysis of Parallel Conceptions in China. *International Journal of Bilingual Education and Bilingualism*, 2005,8(6): 529–551. <https://doi.org/10.1080/13670050508669067>
- [21] Feng, A. (2007). *Bilingual education in China practices, policies, and concept* (pp.259-280). Clevedon: Multilingual Matters.
- [22] Feng, A.. Identity, 'acting interculturally' and aims for bilingual education: an example from China. *Journal of Multilingual and Multicultural Development*, 2009, 30(4): 283-296.
- [23] Feng, Y.. The Similarities and Differences between the Goals of Bilingual Education in China and the United States. *Online Submission*, 2005, 3(11): 48-52.
- [24] Feng, Z. J., & Ke, S. (2003). *Shuang Yu Jiao Yu Yu Zong He Ying Yu (Bilingual Teaching and Integrated English)*.
- [25] Gao, X., & Ren, W.. Controversies of bilingual education in China. *International Journal of Bilingual Education and Bilingualism*,2019, 22(3): 267–273. <https://doi.org/10.1080/13670050.2018.1550049>
- [26] Genesee, F. (1999). *Program Alternatives for Linguistically Diverse Students*. Educational Practice Report.(pp. 18–36).
- [27] Gil, J., & Adamson, B. (2011). The English language in Mainland China: A sociolinguistic profile. In *English Language Education Across Greater China* (pp. 23–45). Channel View Publications.
- [28] Gui, S. C.. *Wode shuangyu jiaoyu [My bilingual education]*. *Waiguoyu*, 2004,1: 47-51.
- [29] Hamers, J. F.. *Bilingualism and Special Education: Issues in Assessment and Pedagogy*. *Journal of Language and Social Psychology*,1985, 4(2): 151-155.
- [30] Han, J.X.. Guonei bufen gaoxiao shuangyu jiaoxue xianzhuang diaocha yanjiu [A survey on the bilingual instruction at the university level in China]. *Qiaihar daxue xuebao [Journal of Qiqihar University]* 2008, 5: 178-80.
- [31] Han, J., & Yu, L.. A study to determine Chinese college students' English proficiency required for bilingual education. *Modern Foreign Languages*, 2007,30(1): 65-69.
- [32] Hinkel, E. (Ed.). (2011). *Handbook of research in second language teaching and learning* (Vol. 2)(pp. 31-48). Routledge.
- [33] Hongchen, X. (2009). *Ethnic minorities, bilingual education and glocalization*. In *China and English: Globalisation and the Dilemmas of Identity* (pp.181–191). Channel View Publications.
- [34] Hornberger, N. (2008). *Encyclopedia of language and education* (2nd ed.). New York: Springer.
- [35] Hu, G. (2007). The juggernaut of Chinese-English bilingual education. In *Bilingual education in China practices, policies, and concepts*(pp.94–121). Clevedon ;; Multilingual Matters.
- [36] Hu, G.. The misleading academic discourse on Chinese–English bilingual education in China. *Review of Educational research*, 2008,78(2): 195-231.
- [37] Huang, A. Y.. *Shuangyu jiaoxue lilun tantao [Theoretical exploration of bilingual education]*. *Jiaoyu Tansuo*, 2005,4: 61-62.
- [38] Huang, H.-H. (1987) *Hanyu Fangyanxue [Chinese Dialectology]*(pp.33-45). Xiamen: Xiamen University Press.
- [39] Huang, Y. H.. *Zhongxiaoxue shuangyu jiaoxue celüe chutan [An exploration of strategies for bilingual instruction at the primary and secondary levels]*. *Jiaoyu Shijian yu Yanjiu*, 2005, 2(23): 6.
- [40] Jenkins, J.. *Current Perspectives on Teaching World Englishes and English as a Lingua Franca*. *TESOL Quarterly: A Journal for Teachers of English to Speakers of Other Languages and of Standard English as a Second Dialect*, 2006, 40(1): 157–181.
- [41] Jiazhen, P. (2007). *Facts and considerations about bilingual education in Chinese universities*.In *Bilingual education in China practices, policies, and concepts* (pp.200–214). Clevedon ;; Multilingual Matters.
- [42] Jin, K., & Zhuang, Y. X. (2002). *Shuangyu jiaoxue zheng liaoyuan [Bilingual education is spreading like a prairie fire]*. *Jiefang Ribao*, 4.

- [43] Jin, Y., & Jin, Y.. Fundamental Concerns in High-Stakes Language Testing: The Case of the College English Test. *Journal of Pan-Pacific Association of Applied Linguistics*, 2011,15(2): 71–83.
- [44] Lam, A.. The multi-agent model of language choice: national planning and individual volition in China. *Cambridge Journal of Education*, 2007,37(1): 67–87.
- [45] Lam, A. S. (2005). *Language education in China: Policy and experience from 1949: Policy and experience from 1949* (Vol. 1).(pp.8-10). Hong Kong University Press.
- [46] Lam, A., & Hornberger, N. (2008). Language Education Policy in Greater China. In *Encyclopedia of Language and Education* (pp. 405–417). [https://doi.org/10.1007/978-0-387-30424-3\\_30](https://doi.org/10.1007/978-0-387-30424-3_30)
- [47] Lam, A. S. L. (2007). Bilingual or multilingual education in China: Policy and learner experience. In *Bilingual education in China practices, policies, and concepts*(pp.13–31). Clevedon ;: Multilingual Matters.
- [48] Liu, G. Q., & Bianco, J. L.. Teaching Chinese, teaching in Chinese, and teaching the Chinese. *Language Policy*, 2007, 6(1): 95-117.
- [49] Liu, H. (2004). Shuangyu jiaoxue yao shenzhong [Bilingual education should be cautious]. On WWW at <http://www.sredu.net/Article/Xuexi/qwxy/yingyu/200409/862.html>.
- [50] Li, Z. (2005). Shanghai gaoxiao wei xuewei zhenshu jianfu, siji buguo zhaona xuewei [Universities in Shanghai reduce the load for the bachelor degree; students can obtain the degree without having to pass CET-4]. On WWW at <http://www.nen.com.cn>.
- [51] Lo Bianco, J. & Lo Bianco, J. Bilingual Education in China: Practices, Policies and Concepts. *Journal of Asian Pacific Communication*. [Online] 2008, 18 (1): 121–127. [online]. Available from: <http://search.proquest.com/docview/85711244/>.
- [52] Lo Bianco, J., Orton, J., & Yihong, G. (2009). *China and English : Globalisation and the dilemmas of identity*(pp. 294–309). Bristol, England: Multilingual Matters.
- [53] Lu, L. H.. Shuangyu jiaoxue tanxi [An analysis of bilingual education]. *Quanzhou jiaoyu* [Global Education], 2001, 4: 66-72.
- [54] Ministry of Education of the People’s Republic of China. (2001). *Guanyu jiaqiang benke jiaoxue gongzuo tigao jiaoxue zhiliang de ruogan yijian*.
- [55] Ministry of Education of the People’s Republic of China. (2007). *Jiaoyubu guanyu jinyibu shenhua benke jiaoxue gaige quanmian tigao jiaoxue zhiliang de ruogan yijian* [Recommendations on further reforming the college undergraduate programs and enhancing the quality of instruction]. Beijing, China:MOE. [http://www.moe.edu.cn/publicfiles/business/htmlfiles/moe/moe\\_1623/201001/xxgk\\_79865.html](http://www.moe.edu.cn/publicfiles/business/htmlfiles/moe/moe_1623/201001/xxgk_79865.html) (accessed July 5, 2011).
- [56] Orton, J. (2009). East goes west. In *China and English :Globalisation and the dilemmas of identity*(pp. 271–293). Bristol, England: Multilingual Matters.
- [57] Paltridge, B. (2012). *Discourse analysis : an introduction* (2nd ed.). London: Bloomsbury Academic.
- [58] Pang, J., Zhou, X., & Fu, Z.. English for international trade: China enters the WTO. *World Englishes*,2002, 21(2): 201-216.
- [59] Pi, W. B. (2004). *Zhongxue shuangyu jiaoxue de shijian yu sikao* [Bilingual education in secondary schools and reflections]. Unpublished Master’s thesis. Shanghai: East China Normal University.
- [60] Qiang, H. Y., & Zhao, L.. Jianada dier yuyan jinrushi jiaoxue moshi jiqi zai woguo shuangyu rencai zaoqi peiyang yanjiu de changshi [Canadian L2 immersion education and its application to early bilingual education and research in China]. *Jiaoyu Daokan*, 2000, 2(3): 19-22.
- [61] Qiang, H.Y. and Zhao, L. (2001) *Zhongwei Dier Yuyan Chengqinshi Jiaoxue Yanjiu* (A study of immersion models of second language learning in China and abroad). Xi’an: Xi’an Jiaotong Daxue Chubanshe (Xi’an Jiaotong University Press).
- [62] Rolstad, K., Mahoney, K., & Glass, G. V.. The big picture: A meta-analysis of program effectiveness research on English language learners. *Educational policy*, 2005, 19(4): 572-594.
- [63] Slavin, R. E., & Cheung, A.. A synthesis of research on language of reading instruction for English language learners. *Review of educational research*, 2005, 75(2): 247-284.
- [64] Song, Y. Q., & Yan, H. C.. Kaizhan shuangyu jiaoxue de kexingxing ji wenti tantao [A discussion of the feasibility of bilingual instruction and related issues]. *Jilin Gongcheng Jishu Shifan Xueyuan Xuebao*, 2004, 20(11): 20-22.
- [65] Thomas, W. P., & Collier, V. P. (2002). A national study of school effectiveness for language minority students' long-term academic achievement.
- [66] Tong, F., Lara-Alecio, R., Irby, B., Mathes, P., & Kwok, O. M.. Accelerating early academic oral English development in transitional bilingual and structured English immersion programs. *American Educational Research Journal*, 2008, 45(4): 1011-1044.
- [67] Tong, F., & Shi, Q.. Chinese–English bilingual education in China: A case study of college science majors. *International Journal of Bilingual Education and Bilingualism*, 2012, 15(2): 165-182.

- [68] Wang, B. H. (2003). Shuangyu Jiaoyu yu Shuangyu Jiaoxue: Zhongwai Bijiao [Bilingual education and bilingual teaching: A comparison of Chinese and Western concepts]. *Wen Hui Bao*, 10.
- [69] Wang, B. H.. Shunying shidai chaoliu yingzao nongyu de shuangyu xuexi fenwei [Follow the trend and create a favorable climate for bilingual education]. *Kecheng Jiaocai Jiaofa*, 2003, 25(6): 49-51.
- [70] Wang, H. H., & Wang, S. T.. Shuangyu jiaoxue yu gonggong yingyu jiaoxue de jiekou wenti [Problems in the interface between bilingual and EFL instruction]. *Waiyujie*, 2003,1: 26-31.
- [71] Wang, L., & Kirkpatrick, A.. Trilingual education in Hong Kong primary schools: a case study. *International Journal of Bilingual Education and Bilingualism*, 2013, 16(1): 100–116.
- [72] Ward, L. (2007). Never mind French and Spanish. *Education Guardian*, 4.
- [73] Wang, L., Qu, Z., & Cheng, K. (2007). Bilingual teaching reformation and practice in computer science major [J]. *IT Education*, 14.
- [74] Wang, S. C.. Building societal capital: Chinese in the US. *Language Policy*, 2007, 6(1): 27-52.
- [75] Wei, R.. Parental support for Chinese-English bilingual education: a survey of parents of primary and secondary students in Shanghai. *Journal of Multilingual and Multicultural Development*, 2011, 32(5): 481–496.
- [76] Xiao, W.. The intensity and direction of CET washback on Chinese college students' test-taking strategy use.(College English Test)(Report). *Theory and Practice in Language Studies*, 2014, 4(6).
- [77] Xiong, T., & Feng, A.. Localizing immersion education: A case study of an international bilingual education program in south China. *International Journal of Bilingual Education and Bilingualism*, 2018:1–14.
- [78] Xu, K. Q.. Shuangyu jiaoxue zhong ying guanzhu Zhonghua minzu wenhua yishi wenti [Loss of Chinese culture deserves attention in the bilingual education craze]. *Waiyu Jiaoxue*, 2004, 25(3): 86-89.
- [79] Yang, J.. English as a Third Language among China's Ethnic Minorities. *International Journal of Bilingual Education and Bilingualism*, 2005,8(6): 552–567. <https://doi.org/10.1016/j.jpba.2005.05.001>
- [80] Yang, S. G.. Zenyang de shuangyu jiaoxue zuixiyouxiao [What kind of bilingual education is most effective]. *Shanghai Jiaoyu Keyan*, 2004, 4: 15.
- [81] Yang, S. G., & Dai, Y.. Woguo shuangyu jiaoxue yanjiu xinjinzhan [New developments in research on bilingual instruction in China]. *Shanghai Jiaoyu Keyan*, 2005, 8: 48–52.
- [82] Yu, L., & Hornberger, N. (2008). English–Chinese Bilingual Education in China. In *Encyclopedia of Language and Education* (pp. 1627–1641). [https://doi.org/10.1007/978-0-387-30424-3\\_124](https://doi.org/10.1007/978-0-387-30424-3_124)
- [83] Zhang, W. J.. Shuangyu jiaoxue de xingzhi tiaojian ji xiangguan wenti [The nature and conditions of bilingual education and some related issues]. *Yuyan Jiaoxue yu Yanjiu*, 2002,4: 20-26.
- [84] Zhang, Y. P.. Shuangyu jiaoxue de yiyi he celue sikao [The significance and strategies of bilingual education]. *Leshan Shifan Xueyuan Xuebao*, 2003,18(6): 38-40.
- [85] Zhang, Z. F.. Shuangyu jiaoxue de yuanze moshi ji celue [Principles, models, and strategies of bilingual education]. *Zhongxiaoxue Jiaoxue Yanjiu*, 2003,2(15): 6.
- [86] Zhao, J.. Dili xueke jinxing shuangyu jiaoxue de shexiang yu shijian [Research and practice: Bilingual instruction in geography]. *Tianjin Shifan Daxue Xuebao*, 2002,3(4): 59-62.
- [87] Zhou, M. (2003). *Multilingualism in China: the politics of writing reforms for minority languages, 1949-2002*(pp.23–26). Berlin: Mouton de Gruyter.
- [88] Zheng, S. L., Tian, Z. H., & Li, Y. J.. Goujian xiaoxue shuangyu jiaoxue kecheng tixi de yanjiu yu shijian [Researching and developing a curricular framework for bilingual education at the primary level]. *Jiaoyu Lilun yu Shijian*, 2006,26(2): 62-64.
- [89] Zhou, M.. Language Policy and Illiteracy in Ethnic Minority Communities in China. *Journal of Multilingual and Multicultural Development*, 2000,21(2): 129–148. <https://doi.org/10.1080/01434630008666398>
- [90] Zhu, P.. Lun Shanghai zhongxiaoxue shuangyu jiaoxue shiyan [On experimentation with bilingual education in Shanghai's primary and secondary schools]. *Kecheng, Jiaocai, Jiaofa*, 2003,6: 52-58.