

Implications of Canadian Immersion Education for Bilingual Instruction in Chinese Kindergartens: From the Perspective of Critical Period Hypothesis

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Canada is one of the countries with the most developed bilingual education in the world, while China starts bilingual education late. Such program greatly takes the advantage of critical period hypothesis and reveals its effectiveness. Learning from the advanced experience from Canada, this study investigated problems of bilingual education in Chinese kindergartens and offered suggestions correspondingly. Only when there are qualified and professional preschool teachers, suitable teaching materials, specific teaching objectives and methods, cooperation between parents and teachers, can the bilingual immersion education in Chinese kindergartens be fully developed.

Keywords: Canadian immersion education, critical period hypothesis, bilingual instruction in Chinese Kindergarten

Introduction

With the popularization as well as universalization of the language English, and with parents' increasing expectation of their children, the age that students start learning English appears to be much younger. Currently, most Chinese kindergartens especially the private highlight the superiority and necessity of infant bilingual teaching programs. Canada, who also emphasized the role of English and who is one of the first countries in the world that implemented and developed bilingual instruction, experienced an extraordinary historical period of its immersion education (Wang, 2003). Previously most studies have explored how such immersion approach is beneficial for the improvement of college English instruction (Huang, 2006; Wei, 2015; Yuan, 2011). However, there are few studies on bilingual education in kindergartens and none on the combination of critical period hypothesis (CPH) and immersion programs. According to Stern (1999), the objectives of language education can be classified into proficiency, knowledge, affect and transfer, all of which are particularly depend upon the age of learners. Therefore, under the theoretical framework of CPH, this study strives to draw on the previously advanced experience of Canadian immersion education so as to further provide suggestions for bilingual implementation in kindergartens suitable for characteristics of children's psychological development.

Literature Review

Critical Period Hypothesis (CPH)

In the 1950s, through the observation of aphasia patients, neuropsychologists Penfield and Roberts (1959) proved that the optimum age for children's language education is under 10-year-old when they are more likely to accept the language input. Based on it, psycholinguist Lenneberg (1967) further developed this perspective and applied it to the field of second language acquisition (SLA), known as Critical Period Hypothesis (CPH).

Its theoretical foundations can be summarized as the brain lateralization and the Universal Grammar (Liu, 2003). The former highlights the Brain Plasticity Hypothesis from the perspective of neurolinguistics and neuroscience. It believes that the two hemispheres of the brain are evenly balanced, with two separate language regions, the left for storing the first language and the right for receiving the second (Chang et al., 2011). Both are actively involved in language acquisition within the optimum age. Being sensitive to such input, students are able to timely respond, easily acquire and accurately master a language in the natural setting without outside guidance or intervention (Lu, 2004). While when it comes to the puberty, brain lateralization occurs. And as brain plasticity diminishes, so does the critical period of language acquisition. During that time, children gradually form modular cognitive mechanism, and the ability to process certain language input becomes weakened, which brings adverse influence to human language comprehension (Yang & Cui, 2012). Lenneberg not only provides the theoretical basis for language acquisition from the perspective of neurolinguistics, but also draws scholars' attention to the research on the exact duration of critical period (Sun & Liu, 2016).

In terms of Chomsky's Universal Grammar which represents the mainstream in linguistics, one of its main purposes is to explore how and why children can master a complex language in such a few years (Andy, 2015). He not only regards languages as psychological objects, but also as biological objects for he believes language competence as organs determined by genetic factors (Vanhove, 2013). As a result of that, Language Acquisition Device, following the Universal Grammar, is presented. Though it is beneficial for children to actively learn their mother tongue in the preliminary stage, it gradually fades or fails to be triggered with the passage of time. This theoretical foundation also paves the way for CPH.

Previously, scholars hold different attitudes toward CPH (Singleton, 1995). According to Long (1990) and Patkowski (1994), the critical period is crucial for children to acquire a native accent of a second language. By combining behaviorism with electrophysiology, scientists found that the older learners start to acquire second language, the lower their semantic processing ability is (Weber-Fox & Neville, 1999). Granena, together with Long took 65 Chinese Spanish learners and another 12 native Spanish speakers to verify the critical period of phonetic acquisition, lexical collocation acquisition and morphological syntactic acquisition (2013).

However, though there have been many empirical studies that have proved and explained the existence of critical periods in second language acquisition, many researchers, who kept suspicious of such hypothesis, maintained that it is psychological factors that become fundamental causes of differences in the ultimate level of SLA such as language input and cognitive development (Andy 2015). Liu (2003) reexamined CPH from the aspects of linguistics, psychology, neurolinguistics, cognitive science, etc., and firmly stated that there is no critical period in second language acquisition, or at least there is not enough scientific evidence to testify this hypothesis. Additionally, some key concepts lack uniform definition such as language level and the age of

acquisition, and the control of research variables is not fully conducted (Jiang, Deng, & Ou, 2010). DeKeyser (2012) and Vanhove (2013) further critiqued the statistical fallacies as well as relevant analysis methods in CPH studies and indicated limitations.

Immersion Education

Immersion education originated from the experiment of French immersion teaching in Quebec province in the 1960s, which uses French as the language medium to teach English speaking children so as to achieve proficiency in both first (L1) and second language (L2) (Swain & Johnson, 1997). In this process, L2 behaves not only as the learning content, but also as the learning tool because teachers not only use the L2 to teach L2 itself, but also teach subject curriculum in the L2 (Xiong & Feng, 2020). It fully shows its characteristics of content-based instruction. Depending on the starting age, there exists a number of subcategories such as early, delayed or late immersions (Baker & Lewis, 2015). Similarly, according to the extent of the second language delivered in class, such program can be categorized into total immersion and partial immersion (Marshall & Bokhorst-Heng, 2020).

Krashen's input hypothesis provides the theoretical foundation for immersion education (Yuan, 2011). They coincide with each other for such hypothesis highlights that the prerequisite for students to acquire certain languages is to understand the comprehensible language input ($i+1$) based on the context which is a little above their current ability (Krashen, 1985; Krashen & Terrell, 1983). Additionally, Snow, Met and Genesee (1989) used cognitive hangers to explain that it is of great importance to put language structures in meaningful context. As a result of that, students can be familiar with target languages repeatedly and naturally just as if they were in the acquisition environment of their mother tongue. Though various communicative activities, the acquisition of the target language is promoted.

Previously, most studies have explored implications brought by immersion programs on college English teaching in China. By analyzing and comparing the characteristics of American structural immersion mode and Canadian French immersion mode, Wang (2007) came to the conclusion that bilingual programs in universities are closer to the American structure immersion mode, but it needs to be modified in accordance to the actual situation. Later, Luo and Jin (2012) held that solving the shortage of professional bilingual teachers is essential to ensure and guarantee the efficiency of bilingual education. Moreover, bilingual teaching materials need to be determined according to students' needs, actual language proficiency and their learning objectives, which textbooks between two different majors may be different (Wei, 2015). It is also of vital importance to emphasize students' affective experience and link teaching content to existing competencies, in which three fourths of the content involved should be equivalent to students' ability, so as to meet their psychological needs and to achieve their state of "immersion" (Du, 2018). In order to testify the validity of immersion mode in bilingual education, Tian and Zhao (2020) established an evaluation index system. However, using such method for references, few studies have conducted discussion upon bilingual education in kindergartens and none on the combination of critical period hypothesis (CPH) and immersion programs. Therefore, this study attempts to explore implications on bilingual programs in Chinese kindergartens by integrating theory of CPH and Canadian immersion education.

Problems of Bilingual Education in Chinese Kindergartens

Overemphasize Vocabulary Mastery

Currently, teachers together with parents simply believe that only after the mastery of vocabulary, can children in kindergartens fully be acquainted with the language English, which in their mind, vocabularies prior to the application. However, it is contrary to the requirements of the “Guidelines for Kindergarten Education (Trial Implementation)” issued by the Ministry of Education of China in 2001 (Chen, 2009). It highlights that children’s language ability is developed in the process of communication. So main teaching objectives for kindergartens are to promote children’s willingness to interact and communicate with others in English rather than cultivate rote memory of a large number of vocabulary. Additionally, parents usually regard vocabulary learning as the most effective method because they can check daily learning process at home and help children review new words. Indeed, compared with the oral expression, vocabulary learning process is more direct with more obvious results. While, interest is the best teacher and the communication ability lays the foundation for everything.

Lack of Language Environment

When children are completely immersed in a bilingual environment, they emerge a subconscious desire and motivation to learn and use two languages (Chaudron, 1985). During this process, children internalize the language knowledge and apply it to study, work and life. Unlike kindergartens in Quebec whose signboards are in both English and French, traditionally Chinese kindergartens have both Chinese characters and pinyin without English. Besides that, the frequency of teachers’ usage of English is not enough for children to get immersed. It is those invisible signals in the external environment that are beneficial for students to immerse themselves in a specific language environment, so as to further cultivate their language sense.

Lack of Professional Teachers

Nowadays, teachers in kindergartens are mainly graduates in English major, preschool education major graduates or foreign teachers. Though the former possess fluent spoken English as well as standard grammar knowledge, they lack of educational experience for children and are not familiar with children’s physical and mental developing characteristics because of not receiving professional and theoretical training. Those misused teaching methods bring about undesirable influences for children’s second language acquisition. However, teachers majoring in preschool education have a solid educational theoretical foundation, but their English competency and language proficiency is not competitive with the professional. Once those mispronounced words are formed, it is challenging for children to correct them in the future, and they are unable to take advantage of the “critical period” of second language acquisition. Moreover, those with sufficient funds usually employ foreign teachers, which seems more attractive and appealing for parents. Nevertheless, more problems come as consequences. Some of the foreign teachers are not native English speakers with thick accent and inaccurate pronunciation as well as intonation. Because of different cultural background, they are not acquainted with psychological development of children in China, which is not conducive to the acquisition of foreign language during the critical period.

Suggestions on Bilingual Education in Chinese Kindergarten from the Perspective of CPH

Recruit and Cultivate Qualified Preschool English Teachers

The quality of preschool English teachers greatly affects the quality of English education (Ye, 2019). Those who can successfully carry out immersion education are required to not only possess a sound knowledge of English language skills such as native pronunciation as well as intonation, but also get acquainted with the psychological characteristics and learning rules of children in kindergartens. As a result of that, teachers can efficiently design and conduct numerous activities to make contribution to students' English learning. For the moment, kindergartens can organize unified training of basic preschool teaching knowledge and skills for who are not from professional majors. Alternatively, those non English major teachers and those who excel at English can further explore proper English teaching methods suitable for certain groups, which all these two ways can solve the shortage of professional preschool English teachers in a short time.

Compile School-based and Student-oriented Teaching Materials

According to the characteristics of children's psychological development, psychologists and linguists have confirmed that the objectives for English education in kindergartens should emphasize on cultivating children's interest instead of the mastery of vocabularies or pronunciation (Zhu & Feng, 2018). Children generally choose their learning activities based on interest, while the continuous participation of such activities is much less than expected because of their physiological fatigue. Therefore, in infants' immersion education programs, it is of great importance to constantly replace and innovate the teaching content and methods, in order to stimulate and sustain their interest. Though organizing various games-based activities, bilingual teaching in kindergartens integrate children's English learning into daily routine.

Moreover, after fully understanding the specific teaching goals of different levels, teachers compile appropriate teaching materials by using relevant textbooks home and abroad for the references. Characteristics of each kindergarten and the actual source of students should also be taken into consideration. Such school-based textbooks greatly highlight their practicability with exquisite illustrations and vividly supporting video as well as audio materials, so that to reduce the difficulty of language interpretation.

Specify Teaching Objectives and Teaching Methods

Bloom separate teaching objectives into three subcategories: knowledge objectives, ability objectives and emotional objectives (Shi et al., 2020). As for English education in kindergartens, knowledge objectives can be refined as developing children's understanding as well as respect for multiculturalism and interacting with people from different forms of civilization with an open and tolerant attitude. When children are immersed their ability to think and communicate directly in English has been largely trained. And cultivating children's interest and stimulating their motivation of active participation finally refer to the emotional objectives. During this immersion process, it is to promote students' exposure to real English life rather than simply underline the the mastery of vocabulary. Only after repetitively learning, understanding and applying, can children have a good command of oral English and can use it in daily life.

In addition, from the perspective of teaching methods, kindergarten education follow the rules of children's physical and mental development and their learning characteristics, which usually take games as the basic activities. Game-oriented class, suitable for children's existing understanding and behavioral abilities, can

effectively achieve the anticipated effect. Moreover, it is essential for teachers to use different teaching aspects according to grades. For example, in the junior year, audio-visual and gaming methods can contribute to concentration and positive emotions, so does their cooperation as well as communication. Under such circumstance, children are aware of such active atmosphere, and their conscious participation greatly enhance their learning willingness. For the intermediate level, teachers strive to integrate students' listening and their action by conducting communicative and suggestopedia approaches. Nursery rhymes easily catch children's attention not only to the tune itself, but also to the lyrics, which are all carefully arranged by teachers. At the senior level, which is the time most closely to the primary school, students are curious about everything, and as a result of that, teachers highlight the situational instruction. It creates specific and intuitive situations to help children correctly understand the meaning of language based on the context, and children can also be provided with opportunities for miming.

For kindergartens that can afford small-sized classroom can emphasize on individual differences and focus on each child's teaching instead of the whole or the average. Small-sized classroom requires not only changes in the number of students in each class, but also reforms of teaching methods, which ultimately optimizes the quality of immersion instruction in Chinese kindergartens and meets the needs of parents for high-quality educational resources.

Promote Cooperation Between Parents and Teachers

Because of the limited time and energy, it is impossible for teachers to pay attention to every child at all times, so that it is difficult to accomplish bilingual immersion education only by the unilateral endeavor of the kindergarten. As a result of that, cooperation between parents and teachers reveals its necessity. Following children's learning process and life in the kindergarten, parents can raise some requirements and feedback as a kind of motivation for teachers to further enhance their teaching. For kindergartens, teachers can upload weekly teaching plan and relevant teaching materials, which parents obtain general idea and supervise the quality of teaching.

Additionally, necessary daily communication between parents and teachers contributes to parents' awareness of the importance of bilingual education. Kindergartens can also organize some training programs for parents on bilingual education in their spare time or conduct some after-class activities to further enhance students language use.

Besides that, parents can also create appropriate English learning environment for their children at any place and time. For example, they can play the original English cartoon during meals to help students immersed in such native pronunciation and intonation. Through all these efforts, both parents and schools can construct bilingual environment to improve students' oral expression.

Conclusion

Because of the integration of global economy and the competitiveness of China's development, English education especially bilingual education has become essential. Though the immersive bilingual programs in Chinese kindergartens has made steady progress, it is still in its infancy with many deficiencies. Learning from the advanced experience from Canada, this study investigated problems of bilingual education in Chinese kindergartens and offered suggestions correspondingly. The development of the bilingual education cannot be

achieved overnight. Instead it needs long-term persistence of exploration, cooperation and joint support from parents, students and the society. The importance of context-based, students-centered and progress-oriented teaching methods is also non-negligible. By making gradual as well as timely adjustments and combining with children's individual differences, teachers make great contribution to fully take advantage of children's critical period in the process of second language acquisition.

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