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The Current Situation of Public Experimental Bilingual

Elementary Schools: The Case of Taipei City

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Abstract

In accordance with Taiwan's bilingual policy, the Taipei City Government has promoted bilingual experimental schools since 2017. However, the rushed schedule of implementing the bilingual experimental program, and the existing achievement gap in students' English academic performance, have put the teachers in a dilemma about deciding the depth of the teaching content. Data for this study come from interviews with teachers from nine public bilingual experimental elementary schools in Taipei. I found that students' achievement gaps in English were a considerable obstacle to bilingual teaching. Teachers worried that low achievers in English felt frustrated and gave up learning in the bilingual class, whereas high achievers increased their vocabulary, thus widening the achievement gap. The interviewees recognized bilingual education as a well-intentioned policy; however, more supporting measures are needed to improve its effectiveness. Only then, will implementing the bilingual policy fulfill its intended purpose: cultivating global talent and increasing Taiwanese youth's international competitiveness.

Keywords: bilingual education, achievement gap, socioeconomic status, primary education, teacher perspectives.

摘要

由於臺灣推動雙語教育政策，臺北市政府自 106 學年度開始進行雙語實驗課程學校的轉型，但因政府倉促讓雙語實驗課程上路，加上學生英語程度普遍存在雙峰現象，導致教師身為第一線教學者，難以決定教學深度。本研究以半結構式訪談九位雙語實驗課程國小教師，研究結果顯示老師在雙語教學中遇到最主要的問題是家庭社經地位及家長協助導致學生的成就落差。教師普遍擔憂雙語教學會導致低成就的學生備感挫折而放棄學習，而高成就學生英語字彙量增加，進而加劇成就落差。整體而言，雙語教師肯定雙語教育的立意，若配套措施更加完善，便能有效培育國際人才及提升台灣青年的國際競爭力。

關鍵詞: 雙語教育、成就落差、社會經濟地位、小學教育、教師觀點

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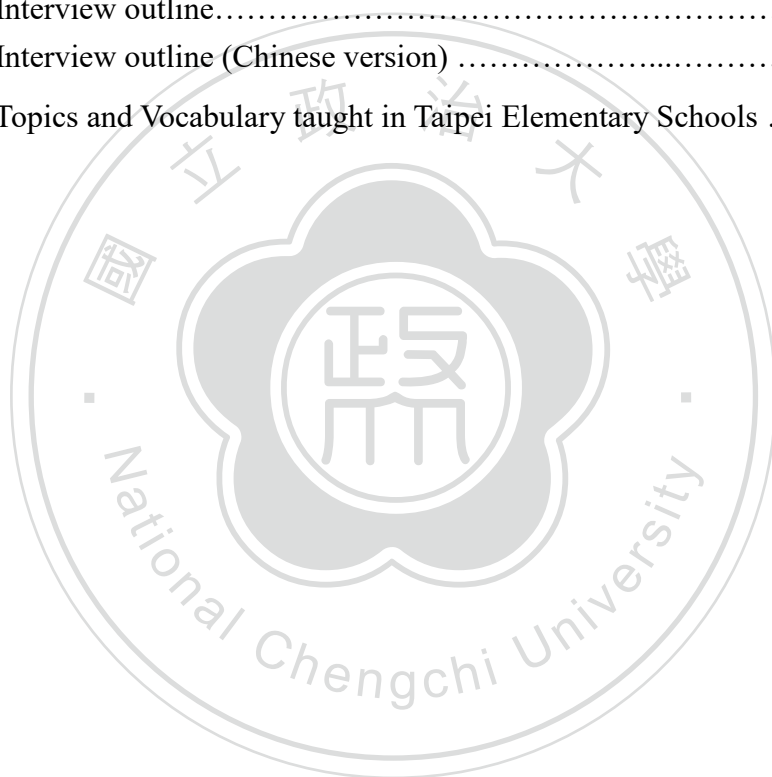
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1. Introduction

Globalization is a driving force behind changes in local educational practices and policies (Spring, 2008), an example of which is the adoption of English as a second language. Considering that English is an international medium of communication, in 2018, the National Development Council announced “The Blueprint for Developing Taiwan into a Bilingual Nation by 2030.” This policy highlights two goals of a bilingual Taiwan. First, the Taipei City Government seeks to improve the general public’s English proficiency. Second, the government hopes to enhance Taiwan’s global competitiveness. In implementing this policy, the Taipei City Government seeks to improve the city’s English education by using English as a medium of instruction to teach subject content.

Among cities in Taiwan, public bilingual experimental elementary schools in Taipei have the longest bilingual teaching hours, accounting for one-third of all courses. Thus, Taipei is the bellwether of Taiwan’s bilingual education. The following question will be discussed in this study: What challenges do Taipei’s bilingual experimental classes face?

Many studies have shown that parents’ socioeconomic status influences students’ academic performance (Coleman et al., 1966; Acemoglu & Pischke, 2001; Blanden & Gregg, 2004; Reardon, 2013). In recent years, the bimodal distribution in elementary schools’ English proficiencies has been problematic. Bilingual instruction is often used to construct an English learning environment (Cummins, 1980). However, uncertainty prevails concerning the success of the implemented programs in fulfilling the needs of all students. Moreover, the students’ achievement gap may exacerbate the needs assessment. In this study, I employ a purposive sampling method and interview nine elementary school teachers engaged in the bilingual experimental program in Taipei. I

focus on how parents' socioeconomic status influences students' English achievement gaps in bilingual classes.

2. Literature Review

2.1 Socioeconomic Status and Academic Achievement

Family socioeconomic status is the primary factor influencing academic achievement (Liu et al., 2019). Socioeconomic status includes factors such as parents' education, occupation, and family income (Chen, 2001). In 1966, the Coleman Report foregrounded the association between the family socioeconomic status and student achievement (Coleman et al., 1966). Students from higher socioeconomic backgrounds tend to have better academic performance. For instance, in the U.S., Acemoglu and Pischke (2001) found that a 10% increase in family income increases the probability of enrolling in college by 1 to 1.4%. In the U.K., studies show that a one-third reduction in family income from the mean, reduces the chance of securing a degree by around 4 percentage points. (Blanden and Gregg, 2004). Since the income gap has widened over the last three decades (Reardon, 2013), the achievement gap between poor students and their more affluent counterparts in the U.S. has widened as well (Phillips, 2001).

While Buchmann and Hannum (2001) reported that even though the income gap in Taiwan is not as wide as it is in many Western countries, socioeconomic status still affects students' academic performance. For example, Cheng and Kaplowitz (2016) found that parents' economic status has a significant effect on students' academic achievement in Taiwan. Furthermore, socioeconomic status affects students beyond high school in Taiwan. Han et al. (2003) found that students from high-income families have higher college attendance rates, and their families spend more on education. Additionally, students from middle and high socioeconomic families have a higher likelihood of attending elite national universities (Wu, 2009). Hung and Marjoribanks

(2005) found that family social status has an unmediated correlation with children's academic achievement. However, its correlation with educational aspirations and self-concept is mediated by children's perceptions of their more immediate learning environments.

To conclude, in the literature examining students' academic performance, scholars have attempted to quantify the contributions of students' families, schools, teachers and peers. However, schools have become the most powerful channel for the reproduction of family status (Baker et al., 2002). As such, pupils from low socioeconomic status families have found themselves at a disadvantage when competing for educational opportunities (Siu, 1988).

2.2 Socioeconomic Status, Academic Achievement and Learning Environment in Bilingual Education

Bilingual education, by its most general definition, involves "instruction in two languages and the use of those two languages as mediums of instruction for any part, or all, of the school curriculum" (Andersson & Boyer, 1970). Both socioeconomic status and bilingualism influence students' language performance (Calvo & Bialystok, 2013). Siu (1988) proposed a possible correlation between bilingual education and social class, and investigated this assumption along four parameters: inter-group relationships, target language usefulness, first language proficiency, and program quality. The findings show that due to different language learning environments, members from higher socioeconomic backgrounds are likely to learn more in a bilingual program than those from lower social backgrounds. Butler (2014) found that parents' socioeconomic status influences students' English-speaking proficiency at the fourth-grade level in China. Also, there is a statistically significant positive correlation between parental direct behaviors, such as direct assistance with their children's English studies, and socioeconomic status.

Many factors influence bilingual education effectiveness, including family socioeconomic status and students' academic achievement. Some of these factors can be managed by governments, while others, such as socioeconomic status, are difficult to change. Thus, before implementing bilingual education, governments should consider these factors.

2.3 The Role of Teachers in Bilingual Classes

It is challenging for primary bilingual teachers to develop contexts. “Bilingual teachers are expected to teach beginning literacy in the mother tongue, communicative language skills in the exogenous language, and curricular content in both” (Benson, 2004: 204). Bilingual teachers are under high expectations; however, it is challenging to balance both languages with basic literacy, communicative language skills, and curricular content. Bilingual education teachers have a special epistemological stance in learning. Most bilingual teachers recognize the importance of language and culture in learning (Belinda, 2001). Also, bilingual teachers need to bridge the linguistic and cultural gap between home and school, become respected members of their communities, and manage any opposition to educational use of the first language (Benson, 2004). High language proficiencies in both target language and students' first language are required for bilingual teachers. Teachers with high language proficiency can provide significant explanations, considerable language input for learners, and spontaneous and knowledgeable responses to their learners' language and culture issues (H. Richards et al., 2013). Bilingual teachers' code-switching frequently functions as translanguaging¹, in that it occurs as an intentional strategy for teaching in bilingual classrooms. They integrate the two languages to improve communication and learning

¹ Translanguaging is the act performed by bilinguals of accessing different linguistic features or various modes of what are described as autonomous languages, in order to maximize communicative potential (Ofelia García, 2009: 140).

engagement (Cahyani et al., 2016). To conclude, bilingual teachers need high language proficiencies and content expertise. Since teacher are one of most important factors influencing students' learning (Sanders et. al., 1997), bilingual teachers need to be properly selected. Most studies have focused on the difficulties of language use for bilingual teachers. In this study, I also reveal bilingual teachers' dilemma in the use of language, and I analyze the reasons behind these difficulties.

2.4 Bilingual teaching in Taipei

English education in Taiwan's elementary schools can be traced back to 2001. Since 2001, English has officially been a regular subject in Taiwan's Elementary School Curriculum. Since 2005, elementary school students have started learning English no later than third grade, and some cities have English classes for first graders, including Taipei, Keelung, New Taipei, Taoyuan, Hsinchu, Tainan and Kaohsiung.

Taipei was one of the first cities to implement bilingual education. In 2016, the "English Integrated in Other Subjects" program was implemented in six elementary schools in Taipei. With the same curricula, teachers would use English as the medium of instruction to teach subject content. In 2017, two elementary schools in Taipei (Wenchang and Dongxin) implemented bilingual instruction in various subjects for first graders. In 2018, Huaisheng, Yongi and Mindao Elementary Schools as well as Gezhi Junior High School enrolled in this program. As of 2019, twelve elementary schools and one junior high school had bilingual curriculums. As of 2021, a total of 28 schools had been incorporated into the program (see Table 1). All districts in Taipei have at least one public bilingual school (see Figure 1). These schools were converted into bilingual schools based on school willingness, the schools' preparation, their scale, and how many bilingual teachers they had (Taipei City Government, 2021).

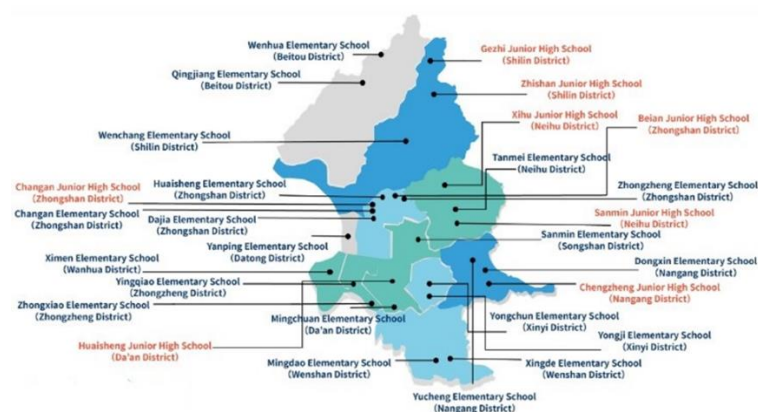
In public elementary schools in Taipei, English classes start in first grade. First graders spend the entire first year learning the alphabet. Not until third grade do teachers

ask students to memorize vocabulary words. Students are expected to know at least 391 English words before finishing elementary school (see Appendix 5). Unlike in English class, most bilingual classes today use teacher-edited teaching materials. The Taipei City Government has also editing its own bilingual materials which some teachers use.

Table 1: Schools with Bilingual Experimental Programs in Taipei

Academic year	Elementary School	Junior High School	Total
106 (2017.8-2018.7)	Dongxin, Wenchang		2
107 (2018.8-2019.7)	Dongxin, Wenchang, Huaisheng, Yongji, Mingdao	Gezhi	6
108 (2019.8-2020.7)	Dongxin, Wenchang, Huaisheng, Yongji, Mingdao, Ximen, Mingchuan, Sanmin, Yingqiao, Tanmei, Changan, Dajia	Gezhi	13
109 (2020.8-2021.7)	Dongxin, Wenchang, Huaisheng, Yongji, Mingdao, Ximen, Mingchuan, Sanmin, Yingqiao, Tanmei, Changan, Dajia, Zhongzheng, Xingde, Chunghsiao, Wenhua, Qingjiang, Yanping, Yucheng, Yongchun	Gezhi, Chengzheng, Sanmin, Xihu, Beian, Huaisheng, Zhishan, Changan	28

Figure 1: Academic Year 2020-2021 Bilingual Schools in Taipei



Source: Department of Education, Taipei City Government

3. Methodology

3.1 Samples and Sampling

I used purposive sampling to recruit the initial participants, and continued with the snowball sampling method because of the scarcity of bilingual teachers. The research included nine teachers: four third and fourth-grade teachers and five first and second-grade teachers. The research only included those teachers who taught first to fourth graders because the bilingual program was not implemented in fifth grade and beyond. The subjects that interviewees taught included science, art, physical education, life curriculum and health education. Only one interviewee was male because there are few male bilingual teachers in Taipei elementary schools.

This research included interviewing the teachers of six elementary schools in Taipei. These six elementary schools were in different districts. Sun Elementary School and Ocean Elementary School began implementing the bilingual experimental program in the academic year 106; Seed Elementary School and Wind Elementary School began the program in the academic year 107; River Elementary School and Rainbow Elementary school began it in the academic year 108. One of the research sites had about 550 students, two had around 400, and three had about 250. I found that the percentages of students from economically disadvantaged backgrounds at River Elementary School was similar to the average for Taipei, but other schools had higher proportions of disadvantaged students than the Taipei average. This rate was calculated with the school education special savings account program, a government project to help students in need (see Appendix 1).

Table 2: Interviewees

No.	1	2	3	4	5	6	7	8	9
Name	Crystal	Alice	Daisy	Olivia	Irene	Michelle	Jasmine	Helen	Jason
Gender	Female	Female	Female	Female	Female	Female	Female	Female	Male
Subject Taught	Science	Art	PE	Life Curriculum	Life Curriculum	Life Curriculum	PE and Health Education	Life Curriculum	Health Education
Teaching Grade	3rd and 4th	3rd	3rd	2nd	2nd	1st	1st	1st	2nd–4th
Seniority	3	1	16.5	7	14	7	12	6	11
Years of Teaching	1	1	1.5	3	2	3	1	1	3
Bilingual Courses									
Education	Bachelor's	Master's	Master's	Bachelor's	Master's	Master's	Bachelor's	Master's	Master's
Major	Earth and Life Science	Art Therapy	Education Psychology and Counseling	English	Curriculum and Instruction	Applied English	English	Natural Resources and Environmental Studies	English Instruction
School	Sun	Sun	Sun	Sun	Seed	Wind	River	Rainbow	Ocean
Interview Date	2020/3/28	2020/4/16	2020/4/9	2020/4/10	2020/5/26	2020/4/22	2020/4/28	2020/4/18	2020/4/13
Method	Personal	Personal	Personal	Online	Personal	Personal	Personal	Online	Personal
Time	56 mins	30 mins	57 mins	33 mins	53 mins	41 mins	52 mins	34 mins	38 mins

3.2 Data Collection and Interview Procedure

Between March and May 2020, I conducted in-depth, semi-structured interviews with the participants. I recruited the participants with the following procedures. First, I created a Google form, generated a QR code, and sent it to the participants with research invitations. The Google form included workplace, teaching subject, and contact information (see Appendix 2). After the participants had filled out the form, I would contact them through e-mail, Line, or Facebook Messenger. All but two of the interviews were conducted in-person. The interviews took place in coffee shops, schools, and online. The online interviews were due to participants' worries about Covid-19. I used video conferencing platforms, such as Line and Facebook Messenger, during the online interviews. The participants' online responses were not as direct as those of the in-person interviews. When responses were unclear, the researcher would repeat the question and allow participants more time (see Appendix 3 for an interview outline).

The interviews ranged from 30 to 57 minutes, and averaged 44 minutes (see Table 2). They were conducted in Chinese, which allowed the participants to express their ideas in their native language. Each interview was audio-taped and transcribed verbatim into Chinese, and then translated into English. To protect participants' confidentiality, all names are pseudonyms.

As an elementary school English teacher, the researcher not only knew the current state of English pedagogy in elementary schools, but also had a background in English pedagogy. As such, the researcher's teaching experience and education background helped the participants share their experiences and opinions without worry of the researcher misunderstanding them.

4. Interview Analysis and Discussion

This study focuses on socioeconomic status as a factor influencing English academic performance. This section will discuss the findings from the semi-structured interviews to address the research question. The chapter begins with a general description of the distribution of the students' English levels to delineate this serious problem in the achievement gap. Then, I analyze the socioeconomic status, achievement gap, parents' assistance, and outcomes of bilingual teaching via participant observation.

4.1 Socioeconomic Status

One challenge for bilingual teachers is choosing a method to teach students with different English levels. The achievement gap exists in elementary schools, especially in English. Based on the "Diagnosis and certification of English competency," developed by National Taiwan Normal University, the majority of sixth graders do not attain the required level for grade-specific grammar and sentence patterns. One of the reasons for the achievement gap is disparities in students' starting points for learning English. In Taipei, formal English teaching starts from the first grade. However, based on the Taiwan Young Students Education Survey (台灣兒少英語教育調查報告), 42% of children have learned some English before elementary school. Furthermore, 64.2% parents believed that taking English classes in school was not enough. Additionally, 29.2% parents spent more than 48 thousand NT a year on their children's English studies, including cram school tuition and English learning materials.

The schools in this study also had an achievement gap. Crystal, a science teacher who worked at Sun Elementary School, discussed the bimodal distribution of students' English proficiencies:

An “M-shaped” curve has appeared among students in terms of English proficiency. Some students always have a ready answer, and they can even speak fluently with foreign teachers. Nevertheless, some students do not know how to write the alphabet correctly. There is a big gap in their English levels. (學生的語言是 M 型化社會，有些學生已經可以和我對答如流了，甚至可以和外師對答如流，有些學生連 ABC 都不會，就是寫都不會，程度真的差很多。)

For students whose English performance was great, their English levels were higher than the average for grade levels. However, some students lacked any basic English skills. Crystal’s students were third graders. Still, some of them did not even know how to write letters, which they should have learned in the first grade. The curriculum in Taipei stipulates that third graders be able to write sentences in English. However, for those who were unfamiliar with the alphabet, sentence structures were advanced content that was difficult for them to learn. Alice, an art teacher and Crystal’s colleague, echoed Crystal’s concerns about students’ achievement gap:

Compared to other schools, the students’ attachment gap in this school is quite big. Some students have pretty good English skills, and some students do not understand what I am talking about at all. (我們學校會是能力落差比較大的，那有一些學生還不錯，有一些學生他可能是完全聽不懂。)

Alice discussed the problem of students having no clue what the teacher was talking about. She implied that when students were unable to understand teachers, they learned nothing in class. As such, the classroom achievement gap was a considerable obstacle to effective bilingual teaching.

Teachers also pointed out that differences in students' socioeconomic backgrounds were the main reason for the achievement gap. Since upper- and middle-class families were able to send their children to cram schools, their children learned English at an early age. When these children began elementary school, they could understand or interact with bilingual teachers. Jasmine, a life curriculum teacher who worked at River Elementary School, mentioned:

Some students with pretty good English have high motivation for learning, and you know that they studied in a bilingual preschool. (有些程度不錯的學生的話，他上起課來就會，就是那些你可以感覺到他是念雙語幼稚園的小孩，他們學習起來動機就會很強。)

K-12 tuition for bilingual preschools ranged from 7,000 to 20,000 NT a month. However, the average tuition for public preschools was 4,000 NT a month. Parents who could afford bilingual preschool tuition invested in their children's English at an early age.

Unlike families from higher socioeconomic backgrounds, low-SES households could not provide their children with a similarly advantaged English learning environment. Irene, a life curriculum teacher who worked at Seed Elementary School, mentioned:

I will not talk about high achievers because sometimes their families have more resources. In the school I work at, there are twenty students in one class and about half of the students are from low-income households. (那厲害的我就不講，因為厲害的有時候是他們家裡給的資源比較夠，因為我們學校，可能 20 個小孩裡面有一半，接近一半是低收的家庭。)

Among the schools in this study, Seed Elementary School had the highest percentage of low-income households (62%). By comparison, at Rainbow Elementary School, 22% students were from low-income households. Yet, in both schools, the students from low-income households could not afford cram school tuition fees. Helen, a life curriculum teacher at Rainbow Elementary School, summarized the difference:

Lots of students in my school are from low-income households. They have never learned English before. (因為我們學校低收的小孩非常多，那低收的狀況就是他們在家裡完全，從來沒有接觸過英文。)

Students from low-income households learned English starting in elementary school. Compared with those who had already learned English for years, the students from low-income households had few resources such as English learning materials. Irene mentioned the difference in academic performance between those who attended cram school and those who did not:

Students who went to cram school have better English marks. I think low achievers lack an environment to stimulate them to learn English. However, teachers cannot control whether or not students go to cram schools. (有補習的人成績就是高，沒補習的人成績就是比較低。我覺得成績較弱的小孩的英語刺激不夠多，那你說補習，因為補習這件事不是我們能控制的。)

Irene pointed out the positive correlation between attending cram school and English marks. Furthermore, Irene highlighted that teachers could not “control” whether students went to cram schools. This reflected teachers’ state of powerless when facing students’ achievement gap. In other words, they identified the achievement gap as an unresolved issue.

In addition to their lack of access to cram schools, students from low-income households had smaller vocabularies than students from middle-income households. Low-income students needed their teachers to spend more time and provide alternative teaching methods. Irene gave an example of using the term “water parks” in class:

The stimulation from students of common households and low-income households are different. Once, I talked about water parks. Only three students in the class had ever been to a water park. It was difficult for me to keep discussing water parks, so I showed a film about water parks and let them answer based on the film. (我覺得低收和一般正常的家庭刺激還是有差。像有一次水就在討論那個 water park，就是去什麼水上樂園，全班大概只有三個人去過，那我就有點討論不下去，所以我就找了影片讓他們看，那他們就會根據影片做一些回答，就是變成代替他們真正的生活經驗。)

In fact, for students from low-income households, the water park entrance fee would have been a significant cost. The average entrance fee for a water park is about 700 NT in Taiwan. It is likely that only middle-class parents who had leisure time and money would take their children to water parks. Thus, water parks were uncommon among the family leisure choices for low-income households.

These examples demonstrate the achievement gaps in the bilingual experimental program. From attending cram school to going to the water park, there was a disparity in students’ learning and playing environments, depending on their socioeconomic backgrounds. Teachers could not change students’ family backgrounds, and hence they were troubled by the fact that course content and teaching pedagogy were inevitably related to students’ socioeconomic backgrounds.

4.2 Students' Achievement Gap and Teaching Dilemmas

Achievement gaps influenced the teaching methods and content because teachers needed to consider all students' levels and use words that all the students could understand. The following are reasons for teachers' dilemma in deciding the proportion of English in bilingual teaching. On the one hand, the goal of bilingual teaching was to create a learning environment, in both subject content and English. On the other hand, too much, or too difficult, English instructions could be too challenging for students. Helen, a first-grade teacher, voiced her worries about the proportion of English used in the classroom:

Having English as a Medium of Instruction (EMI) in classes is too strenuous to those who have not learned English. Yet, using too much Mandarin in class is sacrificing the goal of bilingual teaching. (全美語對於沒有學過英語的孩子來講是太吃力的，那如果中文太多的話，等於就不是雙語。)

Helen considered students' acceptance of English instruction. Since students had varying English levels, teachers needed to consider the lack of English learning experience. Besides instructions, the method of presenting the subject content also put teachers in a dilemma. Olivia spoke about her dilemma of presenting new words and sentence patterns due to the achievement gap:

It is a big challenge to decide which sentence patterns and new words to present as subject content. The materials in the life curriculum are diverse and difficult. When I teach life curriculum in English, I am afraid that the sentence pattern and new words that I present are either too difficult or too easy. (語言的架構，光是這一節課要用哪些句子、單字，才可以呈現這

個學科的內容，就是一個很大的挑戰，因為生活課的知識是很多元的，而且很難的，那我們要用英文去教授，所以第一個就是單字、句型要怎麼呈現，怕它太難，又怕他太簡單。)

Olivia was worried that the lesson's difficulty was not appropriate; she was not sure how to balance the language and subject content in teaching. In other words, she had the difficulty of determining teaching objectives due to the achievement gap. Not every student could understand English instructions; however, the same lesson might be too easy for students with high English levels. Students were confused when teachers used complex words. Jason spoke about a situation when he had accidentally used words with his students that were too difficult:

The problem was you would not know when and how to use which words to teach. If you use too difficult of a word, but not on purpose, students might be confused. (問題可能會在於，你不知道什麼時候要用什麼樣的英語去做教學，然後不小心會去用太難的英語，這樣子可能就會讓小朋友在課堂上比較疑惑一點。)

Based on Jason's experience, teachers needed to be cognizant of their word choice, or students might misunderstand them. Similarly, Jasmine also mentioned her dilemma of using English to teach. According to Jasmine, too much English flustered the students:

In the first month, I used as much English as possible to teach. However, my students panicked due to listening to too much English. I revised my teaching methods immediately. I tried to relax myself. Too much English in the class not only stressed me out, but also put students under pressure. (我開始的前

一個月想說，在雙語課我要想辦法盡量用英文，然後用那麼多英文，你可以看到小孩臉上的驚恐跟慌張，對，就是會嚇到他們，還好那時候有即時修正，想辦法不要讓自己壓力那麼大，講那麼多英文，那樣其實自己壓力大，小孩壓力更大。)

Awan et al. (2010) observe that students' language anxiety and achievement are negatively correlated. For students, learning subject content in English was a source of pressure. Jasmine said that students felt out of place at the beginning of bilingual teaching. Students were afraid of English because they lacked the opportunity to listen to and to speak English. Therefore, they lacked confidence in their English. This also happened at Rainbow Elementary School. Helen narrated her students' reaction to her first class:

In the first class, I tried to use English as a medium of instruction. However, after five minutes, I found some students sluggish because they had no idea what I was talking about. For those who had not learned English, it was a challenge. (我第一堂課先嘗試用全美語，可是我大概五分鐘的時候，就會發現有人開始呆滯，因為他完全不知道老師在幹嘛，對於完全沒有接觸過英文的孩子來說，這個是非常大的挑戰。)

In Helen's class, some students could not understand the teacher's words. Accordingly, it was difficult for them to learn in English. However, it was a challenge to consider all the students' individual circumstances. Irene still does not have a solution to the achievement gap. She said:

The bimodal distribution of students' English proficiencies is an unsolved problem. I can only take care of most students. For students with lower proficiency, it was hard

to compensate. (英語雙峰現象在我的雙語教學自己其實也很難解，那我只能顧到大部分的小朋友，那些很弱的，坦白說真的比較沒有辦法。)

An achievement gap existed not because of school teaching, but because of students' social class and their access to extracurricular resources. Students from middle and high-income households were more likely to have better English proficiency due to cram school experience and family resources. Children from lower-income households needed more effort to catch up with their classmates who had already been learning English from an early age. Unfortunately, if the achievement gap is not addressed, the difficulty in teaching students of varying levels may persist.

4.3 Parental Assistance

Parental assistance has a positive influence on students' academic performance. With parental assistance, children are more likely to be exposed to an English environment. Jason discussed how students' family backgrounds influenced their English levels:

Some students have pretty good English because of their families. At their home, someone talks to them in English, or they go abroad regularly, or they need to use English. (有一些學生英文蠻好是因為家裡面的背景，可能家裡面是會和他講英文的，或是他們會定期的出國旅遊，或是有必須要使用這個語言。)

Jason pointed out that some students also used English after school—their families had created an environment for using English. Thus, they had acquired high English levels. The following is an example of how parents helped their children after school:

Daisy, a P.E. teacher at Sun Elementary School and a mother of two elementary school students, said that she would chat with her sons in English during their free time. Daisy had created an advanced English learning environment for her sons, which allowed them to learn English not only at school, but also at home. Daisy said:

If possible, parents should use more English at home. However, I know this is difficult for many families. I am an English teacher, and my sons study in a bilingual school. Sometimes, I practice English with them at home. I don't help them review their lessons. Instead, I know their English level by chatting with them. I know their understanding of grammar, sentence structure and words. Nevertheless, not all families are so lucky that parents are willing to practice English with their children. (如果可以的話，家裡盡量用英文，可是我知道對很多家庭很難，那因為我自己是英文老師，我的孩子又上雙語學校，所以有時候回到家我就陪我的孩子練，我不會幫他複習，但是我透過和他對話，我就知道他現在大概在什麼程度，他的文法大概在哪裡，句子的架構到底穩不穩，或是他的詞彙用到什麼程度，當然不是每個家庭都那麼幸運，爸爸媽媽願意陪他練。)

In Daisy's family, English was not only a subject, but also a language. Daisy's sons likely had fairly good English skills because they had studied in bilingual school and had a mother who was an English teacher. Compared to low-income households, Daisy's sons had far more resources that offered them opportunities to practice English in daily life. However, not all parents help their children learn at home. In Helen's experience, some parents care little about their children's learning. She said:

I created a Facebook group for parents. I posted all of the songs and videos that I use in class. Students could review at home. However, this required

parental cooperation. Students with parents who never joined, or who didn't care about the group, would learn little. (我就有幫我們的家長開 Facebook 的社團，我只要上課，我所有的歌曲、影片我都會放在那邊，孩子就會回家複習，當然這也是要看家長的配合度，因為有的家長可能從來沒有加入過，或是加入了他也覺得無所謂，那當然他的孩子能夠吸收學習的就有限。)

Although Helen provided a platform for students to review at home, not every student used it. Without parental assistance, those students had less opportunities to practice. Without practice, students were unlikely to succeed academically. It was a vicious cycle of less practice and poor academic performance.

Parents' assistance also influenced children's English academic performance. The children whose parents spent considerable time with them earned better marks. Bytler (2014) has shown that parents' direct behaviors, such as direct assistance with their children's English studies, are positively correlated with socioeconomic status at the fourth-grade level. Family background is emphasized because only middle-class families had time to assist with their children's studies.

4.4 Issues with Bilingual Teaching in the Classroom

Since the bilingual program had been implemented for three years, both the government and parents wanted to know whether students' English had improved through the bilingual instruction. The question was: Did all students, or only students with high English levels, improve their English? Most bilingual teachers believed that the bilingual program benefited all students. However, the bilingual experimental program seems to have widened the achievement gap between students with high and low English proficiencies.

Jason was a supporter of bilingual teaching. He believed that students' English proficiency, especially in listening and speaking, would improve since English teaching hours were increased:

In bilingual teaching, English teaching hours are much more than before. There is no doubt that students' English will be improved. Students' listening and speaking proficiency should improve from bilingual teaching, and based on my experience, students' listening and speaking proficiencies have shown great improvement. (在雙語裡面它的英語教學時數是變長，那當然他的英文一定會變好，他的聽說能力應該相對的會進步，我們學校的經驗目前來講，小朋友的聽說能力也都進步很多。)

Daisy expressed similar views. She argued that although students' marks might not have improved, bilingual teaching created a positive English learning environment, which offered students more experience with English:

I think the bilingual program benefits students. It was an improvement to be immersed in an English environment. It was great that more and more students in Taipei had the chance to learn in such an English environment. At least, we tried hard to create a better learning environment. (我們一直在營造一個比較大量的英文環境給他們，對孩子一定是有幫助的，要在以前傳統的英文課聽到大量的英文，沉浸在這樣的環境，我覺得很難，那我覺得很棒的是，越來越多臺北的孩子有這樣的機會，至少我覺得我們努力的在營造一個英文的環境。)

Daisy thought it would be preferable for more students have the chance to join the bilingual program, which was different from traditional English classes. Under the

bilingual program, students would receive more exposure to English. With teachers' effort to improve the English learning environment, students' English would gradually improve.

Students expected to improve their English proficiency via bilingual education. However, the achievement gap widened because the high-level students benefited from bilingual teaching, while the low-level students lagged behind. Teachers saw the improvement among students with high English proficiencies in their marks. In Michelle's class, high achieving students learned to use the words that she taught in class.

In the class, Michelle was teaching “water.” She taught “prediction and observation,” in the context of scientific inquiry. After Michelle told the story of “The North Wind and the Sun,” she let her students guess who would be the winner. She said, “That’s your prediction.” To her surprise, one student said, “No, that’s my ‘observation’.” (最近我在教水，水跟科學探究比較有關係，所以我就教了預測再觀察，我先講北風與太陽的故事，就請他們猜猜看，北風會贏還是太陽會贏，然後我就說 That’s your prediction，沒想到突然有一個小朋友說：「那是我的 observation」。)

“Observation” was an advanced word, which had not been included in the elementary school teaching guidelines. However, since the teacher had used it in class, the student had learned it. The students had picked up what Michelle had taught in bilingual classrooms. However, it is important to note the student who answered the question had exceptional English proficiency. While students who already had high English proficiencies could further improve with bilingual teaching, students with low English proficiencies suffered the negative effects.

4.4.1 Depriving the chance to learn

Students with high English levels would take a lot of the teacher's attention. In Jasmine's class, some students with high English levels caught the teacher's attention by sharing their ideas, and it was a way to "show off" their English proficiency. Jasmine stated:

Some students with pretty good English are highly motivated. You know that they studied in a bilingual preschool, and they were willing to share their ideas. You could say that they sorta showed off their English. (有些程度不錯的學生的話，他上起課來就會，就是那些你可以感覺到他是念雙語幼稚園的小孩，他們學習起來動機就會很強，就會覺得很樂於發言，然後可能也有點 show off 他的英文能力。)

In Jasmine's class, students with high English proficiency did not help others, but deprived others of the chance to share their ideas. By sharing ideas, teachers put more effort into teaching students who already had high English proficiencies. Since each class period had a time limit, teachers simply did not have enough time to pay sufficient attention to students who needed their help.

4.4.2 Frustration

Helen thought that the bilingual program primarily benefited students with high English levels because they were the only ones who could absorb both English and the subject content. Since the students with low English proficiencies could not understand the basic words, too much new subject content would be too challenging for them. Helen said:

In fact, students who benefit the most in bilingual teaching are the high

achievers. They have basic proficiency and big enough vocabularies. Thus, they can learn the content when new materials are added. For low achievers, when new content is added, they get frustrated because they do not understand the English, and the content is new to them as well. (其實雙語教學獲益最大的孩子是程度好的孩子，因為他已經具備了基本的能力，然後你教的東西，他英文單字也夠，也聽得懂，把知識的層面加進來的時候，他是完全很快可以接收的，可是對於能力很弱的孩子，當知識的東西介紹進來的時候，他就會覺得說，英文我已經聽不懂了，ABC 已經不會，然後你們又再介紹一些新的東西，對他們來說是很吃力的。)

Helen believed that high achievers benefited more than low achievers in bilingual teaching because they could absorb both the subject content and the language. For low achievers, who had not learned the basics, class materials were too difficult and advanced. As a result, low achievers were unable to learn the new subject matter because the language of instruction was a barrier.

Exacerbating the situation was that students with low English levels were also frustrated when they could not understand the subject content in English. The frustration in learning English led to a further unwillingness to learn other subjects. Daisy was worried that frustration in learning English influenced the students' motivation to learn other subjects in the bilingual experimental program:

In English class, students with low English levels were frustrated and had low grades. They were unwilling to learn. When more and more subjects were taught in English, they refused to learn. (在一般的所謂的傳統英文課，他(英語程度弱的學生)已經有一些挫折，沒有很多的興趣了，或者是一直以來英語拿到的分數都很不好，所以導致他真的沒有什麼意願，當他再

用英文去上更多的學科科目的時候，其實孩子的抗拒感就會起來。)

Daisy was concerned that bilingual teaching diminished low-achieving students' motivation to learn. Jasmine shared these worries about students giving up on learning due to bilingual teaching. She pointed out the divergent motivations between her students in the first and second grades, and the fifth and sixth grades:

My students are first, second, fifth and sixth graders. Their attitudes towards learning are different. First and second graders are motivated to learn; however, fifth and sixth graders sometimes give up immediately, even if (a task) is easy. They are not confident. Without confidence, they do not try, and they give up immediately. I fear that bilingual teaching produces bad results. (我現在的學生，雙語的學生是低年級，英語的學生是高年級，其實是相差比較大的，低年級的學生對學習還很有熱忱，無所畏懼。可是高年級，有時候我很容易理解的東西，他們會直接放棄，他們已經對這個科目，或是這項事物不具有信心，不具有自信心，他不去試，就直接放棄，我很害怕雙語的教學會讓學生有這樣子的結果。)

Jasmine expressed her worries about bilingual teaching. She pointed out that her students in the fifth and sixth grades would give up immediately, even on easy tasks. The students' lack of confidence in English influenced their motivation to learn any subject content related to English. When an increasing number of subjects were taught in English, students' low motivation to learn led to low achievement in many subjects. When students lost confidence in English, they simply lost interest in learning.

The bilingual experimental program was well-intentioned. Teachers saw students improve their English. However, when more subjects were taught in English, English

became a medium that determined students' learning outcomes. Students with low English proficiencies were unmotivated and felt pressured. This worsened their results in other subjects. Because of the vicious cycle between student frustration, low motivation, and low achievement, the low performers' academic performance went from bad to worse.

The teachers pointed to socioeconomic status as the primary reason for the widening achievement gap. Parents with high socioeconomic status created better English learning environments for their children. This included sending them to bilingual preschools and cram schools, and providing other learning resources. Students with parental assistance achieved considerable progress after school. Thus, teachers were stuck in the dilemma of deciding between teaching content and word choice, due to the achievement gap.

Most respondents pointed out that a widened achievement gap had been an unintended consequence of bilingual teaching. For students with low English proficiencies, the bilingual teaching was too difficult. Thus, students with high English levels learned the most in the bilingual classes.

5. Conclusion

Education a key determinant of social mobility (Lindley et al., 2012). However, because family socioeconomic status was one of the main reasons behind the gap in student achievement, the bilingual experimental program reproduced the status structure. In my analysis, preexisting English achievement was the primary barrier to bilingual education. Students with high English proficiencies could answer most of the

teachers' questions and expand their vocabularies through conversation with the teacher. By comparison, students with low English proficiencies did not understand teachers' instructions, nonetheless learn new material in a foreign language.

I also found that socioeconomic status determined the degree of parents' assistance, which differentiated students' English academic performances. These findings support those of the existing literature on socioeconomic status and parental direct behaviors (Bornstein et al., 2013). Although the bilingual teaching's effect has not been tested directly, teachers worried that bilingual teaching frustrates students and detracts from their learning experiences. Moreover, frustrated students give up not only on English, but also on the subjects taught in English.

These problems are not unique to Taiwan. Previous studies have shown that inappropriate teaching and learning styles lead to learning failure, frustration, and apathy in Hong Kong (Peacock, 2001; Reid, 1987). Since these problems existed in bilingual teaching, governments need to do adjustments, such as establishing clear teaching objectives and setting up workshops with differentiated instructions.

This study entailed interviewing nine bilingual teachers. These nine teachers taught at six elementary schools, representing half of the bilingual experimental schools in Taipei as of 2020. Although they do not represent all bilingual teachers' perspectives, the findings point to common problems in bilingual teaching. The Taiwan government has yet to conduct a review of student performance in bilingual programs; moreover, this study also does not examine bilingual programs' effectiveness. Future research could compare students in bilingual programs with students in normal classrooms, and examine the importance of socioeconomic status to explicate the effectiveness of bilingual teaching.

This study also has its limitations. The findings are based on nine participants, and they did not represent all bilingual teachers in Taipei. Also, this study entailed

interviews to collect data, and the potential effects were inferred by the participants without quantitative support.

English education is a global trend which the Taiwanese government aspires to follow. Bilingual teaching is a well-intentioned policy; however, more supporting measures are needed to improve its effectiveness. Only then will implementing a bilingual policy fulfill its intended purpose: to cultivate global talent and increase Taiwan's youth's international competitiveness.



References

- Acemoglu, D., Pischke, J.S.,(2001). Changes in the wage structure, family income, and children's education. *European Economic Review*. 45 (4–6), 890–904.
- Andersson, Boyer & Southwest Educational Development Laboratory. (1970). Retrieved from: <http://files.eric.ed.gov/fulltext/ED039527.pdf>.
- Awan, R.- un-N., Azher, M., Anwar, M. N., & Naz, A. (2010). An Investigation Of Foreign Language Classroom Anxiety And Its Relationship With Students Achievement. *Journal of College Teaching & Learning (TLC)*, 7(11).
- Blanden, J., & Gregg, P. (2004). Family Income and Educational Attainment: A Review of Approaches and Evidence for Britain. *Oxford Review of Economic Policy*, 20(2), 245-263
- Belinda Bustos Flores (2001) Bilingual Education Teachers' Beliefs and Their Relation to Self-Reported Practices, *Bilingual Research Journal*, 25:3, 275-299
- Baker, David P., et al. “Socioeconomic Status, School Quality, and National Economic Development: A Cross-National Analysis of the ‘Heyneman-Loxley Effect’ on Mathematics and Science Achievement.” *Comparative Education Review*, vol. 46, no. 3, 2002, pp. 291–312.
- Benson, C. (2004). Do We Expect Too Much of Bilingual Teachers? Bilingual Teaching in Developing Countries. *International Journal of Bilingual Education and Bilingualism*, 7(2-3), 204–221.
- Bornstein, M. H., & Bradley, R. H. (Eds.). (2003). *Socioeconomic status, parenting, and child development*. Lawrence Erlbaum Associates Publishers.
- Buchmann, C., & Hannum, E. (2001). Education and Stratification in Developing Countries: A Review of Theories and Research. *Annual Review of Sociology*, 27, 77-102.
- Cahyani, H., de Courcy, M., & Barnett, J. (2016). Teachers’ code-switching in bilingual classrooms: exploring pedagogical and sociocultural functions. *International Journal of Bilingual Education and Bilingualism*, 21(4), 465–479.
- Calvo A, Bialystok E. Independent effects of bilingualism and socioeconomic status on language ability and executive functioning. *Cognition*. 2014 Mar;130(3):278-88.
- Cheng, S-T & S.A. Kaplowitz. (2016). Family economic status, cultural capital and academic achievement: the case of Taiwan. *International Journal of Educational Development* ,49, 271-278.
- Chen, Kuei-Si (2001). Sociology of education. *Shta Book*.
- Chih-Lun Hung & Kevin Marjoribanks (2005) Parents, teachers and children’s school

- outcomes: a Taiwanese study, *Educational Studies*, 31:1, 3-13
- Coleman, J.S., Campbell, E.Q., Hobson, C.J., McPartland, F., Mood, A.M., Weinfeld, G.D., & York, R.L. (1966). *Equality of Educational Opportunity*. Washington, DC: U.S. Government Printing Office.
- Cummins, J. (1980a). The construct of language proficiency in bilingual education. In Alatis, J. E. (ed.), *Current issues in bilingual education: Georgetown University Round Table on Languages and Linguistics (GURT) 1980*, pp. 81–103. Washington, DC: Georgetown University Press.
- Filmer D, Pritchett L. (1999). The effect of household wealth on educational attainment: evidence from 35 countries. *Popul. Dev. Rev.* 25:85–120
- Genesee, F. (1983). An invited article: Bilingual education of majority-language children: The Immersion experiments in review. *Applied Psycholinguistics*, 4(01), 1.
- Han, W.-J., Huang, C.-C., & Garfinkel, I. (2003). The Importance of Family Structure and Family Income on Family's Educational Expenditure and Children's College Attendance. *Journal of Family Issues*, 24(6), 753–786.
- Heather Richards, Clare Conway, Annelies Roskvist & Sharon Harvey (2013) Foreign language teachers' language proficiency and their language teaching practice, *The Language Learning Journal*, 41:2, 231-246
- Kaohsiung Bilingual Feature Schools. [online]. Retrieved from: <http://khibilingschools.kh.edu.tw/> [Accessed August 15, 2021]
- Lindley, J., & Machin, S. (2012). *The Quest for More and More Education: Implications for Social Mobility*. *Fiscal Studies*, 33(2), 265–286
- Liu, J., Peng, P., & Luo, L. (2019). *The Relation Between Family Socioeconomic Status and Academic Achievement in China: A Meta-analysis*. *Educational Psychology Review*.
- MOE (Ministry of Education, Taiwan, Republic of China). (February 27, 2003b). 國民教育階段九年一貫課程總綱綱要。 [Nine-year compulsory education curriculum guidelines]. [online]. Retrieved from: <https://phy.ntnu.edu.tw/~wdchen/doc/class/000001.doc>.
- MOE (Ministry of Education, Taiwan, Republic of China). (December 17, 2018b). Implement in full scale bilingualization of Taiwan's educational system; cultivate bilingual talents to bring Taiwan to the world. [online]. Retrieved from: <https://english.moe.gov.tw/cp-13-17790-80201-1.html>.
- García, Ofelia (2009). Education, multilingualism and translanguaging in the 21st century. In: Ajit Mohanty, Minati Panda, Robert Phillipson and Tove Skutnabb-Kangas (eds). *Multilingual Education for Social Justice: Globalising the local*. New Delhi: Orient Blackswan, 128-145.

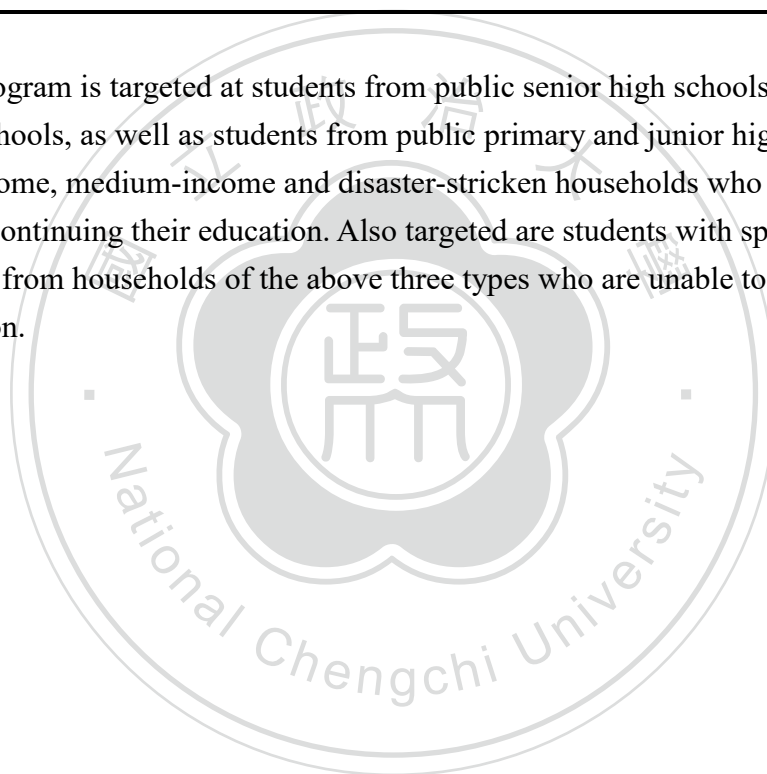
- Peacock, M. (2001). *Match or mismatch? Learning styles and teaching styles in EFL. International Journal of Applied Linguistics, 11(1), 1–20.*
- Phillips, M. (2011). Parenting, time use, and disparities in academic outcomes. In G. Duncan & R. Murnane (Eds.), *Whither opportunity? Rising income inequality and the uncertain life chances of low-income children* (pp. 207–228). New York, NY: Russell Sage Foundation & Spencer Foundation.
- Reardon, S.F. (2013). The Widening Income Achievement Gap. *Educational Leadership, 70(8), 10–16.*
- Reid, J.M. (1987). The learning style preferences of ESL students. *TESOL Quarterly 21.1: 87–111.*
- Sanders, W.L., Wright, S.P. & Horn, S.P. (1997). Teacher and Classroom Context Effects on Student Achievement: Implications for Teacher Evaluation. *Journal of Personnel Evaluation in Education 11, 57–67.*
- Siu, Y. M. (1988). Bilingual Education and Social Class: some speculative observations in the Hong Kong context. *Comparative Education, 24(2), 217–227.*
- Spring, J. (2008). Research on Globalization and Education. *Review of Educational Research, 78(2), 330–363.*
- Taipei City Government (2021) [online]. Retrieved from: https://dosw.gov.taipei/News_Content.aspx?n=96CA70B5FC3C3D56&sms=C04230CB75259A56&s=8E17591F678ED1B5 [Accessed August 17, 2021]
- Taiwan's Financial Supervisory Commission (2019) Retrieved from: <https://www.fsc.gov.tw/en/home.jsp?id=253&parentpath=0,4,212,252>
- Taiwan Young Students Education Survey (2018). [online]. Retrieved from: https://news.pchome.com.tw/magazine/report/li/Global_Family_Monthly/12950/153866880087808212005.htm
- Wu, C.-C. (2009). Higher education expansion and low-income students in Taiwan. *International Journal of Educational Development, 29(4), 399–405.*
- Yuko Goto Butler (2014) Parental factors and early English education as a foreign language: a case study in Mainland China, *Research Papers in Education, 29:4, 410–437*

Appendixes

Appendix 1. The School Education Special Savings Account Program

School	Percentage of students from socially or economically disadvantaged backgrounds
Sun	12%
Seed	62%
River	2%
Rainbow	22%
Wind	8%
Ocean	10%

The MOE program is targeted at students from public senior high schools and vocational schools, as well as students from public primary and junior high schools from low-income, medium-income and disaster-stricken households who are having difficulty in continuing their education. Also targeted are students with special requirements from households of the above three types who are unable to continue their education.



Appendix 2.

研究邀請函

您好，我是政治大學應用經濟與社會發展英語碩士學位學程研究生，目前在姜以琳教授指導下進行「臺北市公立雙語小學教師對雙語政策與CLIL教學觀點之研究」，誠徵目前在臺北市公立雙語小學擔任雙語老師的受訪者，將進行約一小時的深度訪談。以下為相關資訊：

研究生：蔡旻珊

指導教授：姜以琳教授

受訪時間：一小時

受訪地點：配合受訪者

受訪費：500

注意事項：訪談前須簽知情同意書，訪談會錄音，論文內容以匿名呈現。

若您有意願參與研究或想了解更多資訊，歡迎與我聯絡，我將會盡快與您討論，衷心期待您的參與。

聯絡方式：s89409@gmail.com

您的姓名: *

Short answer text

服務學校 *

文昌國小

東新國小

明道國小

永吉國小

懷生國小

銘傳國小

大佳國小

三民國小

潭美國小

螢橋國小

西門國小

長安國小

任教科目 *

Short answer text

聯絡方式 *

Short answer text

Appendix 3.

Interview Outline

No.	Interviewee background
1	What subject do you teach?
2	What grade do you teach?
3	What subjects have you previously taught? What positions have you previously held?
4	How long have you been a teacher?
5	How long have you been involved in bilingual teaching?
6	What is your educational level?
7	What is your major?

No.	Personal experience and opinions
1	Why did you become a bilingual teacher?
2	What do teachers need to prepare before bilingual teaching?
3	What's the difference between using English and using Chinese as a medium to teach subject content?
4	In your opinion, do students' English levels influence their motivation to learn?
4-1	When students have varying levels of motivation, what strategies do you use to motivate them?
5	Have you ever encountered any difficulties in bilingual teaching? What happened?
6	What strategies do you use when students cannot understand English instructions and subject content?
7	What assistance do you need most in bilingual teaching?
No.	Opinions on bilingual policy
1	According to "Developing Taiwan into a Bilingual Nation by 2030," based on the fact they established English as a second official language, the Taipei City Government has promoted bilingual experimental schools since 2017. What is your opinion on the "bilingual nation policy" and "bilingual experimental schools"?
2	In your opinion, what grade is most suitable for bilingual teaching? Why?
3	In your opinion, should bilingual teaching groups be based on students' English levels? Why?
	Other questions
☆	In addition to the questions above, is there anything that I did not ask, but which you wish to add?
☆	Some teachers have mentioned a bimodal distribution. What is your opinion on this "bimodal distribution"?

Appendix 4.

訪談大綱 (中文版本)

題號	受訪者背景
1	請問您現在擔任什麼科目的雙語教師?
2	請問您現在任教的年級?
3	請問您曾經教授過哪些科目及擔任何種職位?
4	請問您教學的年資?
5	請問您參與雙語教學的時間有多久?
6	請問您的最高學歷?
7	請問您畢業的系所?

題號	個人經驗與看法
1	是什麼樣的契機讓您決定成為一名小學雙語教師?/投入雙語教學?
2	在進行雙語教學前,您覺得教師應做哪些準備?
3	使用英語教學目標科目與使用中文教學有哪些差異?
4	您覺得不同英語程度的學生學習動機也會不同嗎?
4-1	若學習動機不同,您覺得應用哪些策略提升學生學習動機?
5	在雙語教學時,您曾遇到什麼樣的困難嗎?當時的情況是什麼?
6	當學生無法理解英語指示與學科內容時,您會使用哪些策略?
7	您覺得雙語教學中,您最需要的幫助是什麼?
題號	雙語政策題
1	符應行政院確立臺灣為「雙語國家」之政策,並研擬將英語定為第二官方語言,臺北市自 106 學年度起推動雙語實驗課程學校,請問您對「雙語國家之政策」與「雙語實驗課程學校」的看法是什麼?
2	您覺得最適合使用雙語教學的學生是幾年級?為什麼?
3	您覺得雙語教學是否要依照學生程度分組進行?為什麼?
☆	除了剛剛的問題,有沒有什麼我沒有問到,但是您覺得重要的事情呢?
☆	有別的老師提到英語科有雙峰現象,針對雙峰現象,您有什麼想法嗎?

Appendix 5. Topics and Vocabulary taught in Taipei Elementary Schools

A. First and second grade study topics and vocabulary reference table

Topics	Applied words	Word count
T-1 People	boy, girl, teacher, friend	4
T-2 Family	dad (father), mom (mother), brother, sister	4
T-3 Food & Drink	apple, cake, egg, milk, banana	5
T-4 School	ball, bag, book, box, class	5
T-5 Animals	bird, cat, cow, dog, fish, pig	6
T-6 Places & Locations	zoo, home, school	3
T-7 Numbers	one, two, three, four, five	5
T-15 Feelings & Emotions	good, happy	2
T-16 Clothing	hat	1
T-17 Place/Country Names	Taipei, Taiwan	2
T-19 Subjects	English	1
T-20 Pronouns	I, he, she it, my, you, your	7
T-21 WH-words	what, who	2
T-22 Be & Auxiliaries	be (am, are, is)	1
T-23 Articles & Determiners	a (an), this, that, the	4
T-24 Verbs	go, look	2
T-26 Other Nouns	name	1
T-27 Other Adverbs	no, not, yes	3
Words count		58

註：低年段學生 58 個應用字詞能臨摹抄寫即可，無書寫應用字詞。

B. Third and fourth grade study topic and vocabulary reference table

Topics	Applied words		Word count
	Writing (Word count)	Speaking (Word count)	
T-1 People	<u>boy</u> , <u>girl</u> , <u>teacher</u> , <u>friend</u> (4)	kid, student, doctor (3)	7
T-2 Family	<u>dad</u> , <u>father</u> , <u>mom</u> , <u>mother</u> , <u>brother</u> , <u>sister</u> (6)	grandpa, grandma (2)	8
T-3 Food & Drink	<u>apple</u> , <u>banana</u> , <u>cake</u> , <u>egg</u> , <u>milk</u> , <u>rice</u> , <u>tea</u> , <u>water</u> (8)	juice, hamburger, ice cream, orange, pizza, breakfast, lunch, dinner (8)	16
T-4 School	<u>bag</u> , <u>ball</u> , <u>book</u> , <u>box</u> , <u>class</u> , <u>pencil</u> , <u>desk</u> , <u>door</u> , <u>marker</u> , <u>pen</u> , <u>table</u> (11)	chair, eraser, ruler, window (4)	15
T-5 Animals	<u>bird</u> , <u>cat</u> , <u>cow</u> , <u>dog</u> , <u>fish</u> , <u>pig</u> , <u>bear</u> (7)	monkey, lion, rabbit, tiger (4)	11
T-6 Places & Locations	<u>home</u> , <u>school</u> , <u>zoo</u> , <u>park</u> (4)	bookstore, here, there (3)	7
T-7 Numbers	one, two, three, four, five, six, seven, eight, nine, ten (10)	eleven, twelve, many, much (4)	14
T-8 Colors	<u>blue</u> , <u>green</u> , <u>red</u> , <u>yellow</u> , <u>color</u> (5)	black, brown, white (3)	8
T-9 House	<u>cup</u> , <u>fan</u> , <u>key</u> (3)	(0)	3
T-10 Parts of the Body	<u>head</u> , <u>eye</u> , <u>nose</u> , <u>ear</u> , <u>hand</u> , <u>arm</u> , <u>leg</u> , <u>foot</u> , <u>face</u> (9)	mouth (1)	10
T-11 Descriptive Adjectives	<u>old</u> , <u>short</u> , <u>tall</u> (3)	big, long, small, thin (4)	7
T-12 Weather & Climate	<u>cold</u> , <u>cool</u> , <u>hot</u> , <u>warm</u> , <u>dry</u> , <u>wet</u> (6)	cloudy, rainy, sunny, weather, windy (5)	11
T-13 Time	(0)	evening, Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, morning, night, time, day,	18

		week, year, now, today, tomorrow, yesterday (18)		
T-14	Transportation	(0)	bus, bike, car (3)	3
T-15	Feelings& Emotions	<u>good</u> , <u>happy</u> (2)	bad, fine, great, nice, OK, sad (6)	8
T-16	Clothing	<u>hat</u> (1)	cap, jacket, shoes (3)	4
T-17	Place/Country Names	(0)	Taipei, Taiwan, Japan, UK, USA (5)	5
T-18	Sports and Hobbies	(0)	game, hiking (2)	2
T-19	Subjects	(0)	English, art, Chinese, math, music (5)	5
T-20	Pronouns	I, <u>you</u> , <u>he</u> , <u>she</u> , <u>it</u> , <u>my</u> , <u>your</u> , <u>we</u> , <u>they</u> (9)	(0)	9
T-21	WH-words	<u>what</u> , <u>how</u> , <u>who</u> , <u>where</u> (4)	which (1)	5
T-22	Be & Auxiliaries	<u>Be</u> (<u>am</u> , <u>are</u> , <u>is</u>), <u>do</u> (<u>does</u>), <u>can</u> (3)	(0)	3
T-23	Articles & Determiners	<u>a</u> (<u>an</u>), <u>this</u> , <u>that</u> , <u>the</u> (4)	these, those (2)	6
T-24	Verbs	<u>go</u> , <u>look</u> , <u>cry</u> , <u>dance</u> , <u>jump</u> , <u>like</u> , <u>read</u> , <u>sing</u> , <u>want</u> (9)	draw, sleep, swim, write, close, come, cook, open, play, run, see, listen, walk (13)	22
T-25	Prepositions	<u>at</u> , <u>in</u> , <u>on</u> , <u>under</u> (4)	(0)	4
T-26	Other Nouns	<u>name</u> , <u>yo-yo</u> , <u>kite</u> , (3)	o'clock (1)	4
T-27	Other Adverbs	<u>no</u> , <u>not</u> , <u>yes</u> (3)	(0)	3
T-28	Conjunctions		and, but, or, so (4)	4
	Words count	118	104	222

C. Fifth and sixth grade study topics and vocabulary reference table

Topics	Applied Words		Word count
	Writing (Word count)	Speaking (Word count)	
T-1 People	<u>boy</u> , <u>friend</u> , <u>girl</u> , <u>teacher</u> , <u>baby</u> , <u>doctor</u> , <u>kid</u> , <u>student</u> , <u>man</u> , <u>nurse</u> , <u>singer</u> , <u>cook</u> (12)	child, police officer, mailman, woman (4)	16
T-2 Family	<u>dad</u> , <u>father</u> , <u>mom</u> , <u>mother</u> , <u>brother</u> , <u>sister</u> , <u>grandpa</u> , <u>grandma</u> (8)	aunt, daughter, son, uncle (4)	12
T-3 Food & Drink	<u>apple</u> , <u>banana</u> , <u>cake</u> , <u>egg</u> , <u>milk</u> , <u>rice</u> , <u>tea</u> , <u>water</u> , <u>juice</u> , <u>hamburger</u> , <u>ice cream</u> , <u>orange</u> , <u>pizza</u> , <u>lunch</u> , <u>candy</u> , <u>pie</u> (16)	bread, breakfast, coffee, cookies, dinner, food, fruit, noodles, sandwich, soup (10)	26
T-4 School	<u>bag</u> , <u>ball</u> , <u>book</u> , <u>box</u> , <u>class</u> , <u>pencil</u> , <u>desk</u> , <u>door</u> , <u>marker</u> , <u>pen</u> , <u>table</u> , <u>chair</u> , <u>eraser</u> , <u>ruler</u> , <u>window</u> , <u>card</u> , <u>computer</u> (17)	classroom, seat, clock, page (4)	21
T-5 Animals	<u>bear</u> , <u>bird</u> , <u>cat</u> , <u>cow</u> , <u>dog</u> , <u>fish</u> , <u>pig</u> , <u>monkey</u> , <u>lion</u> , <u>rabbit</u> , <u>tiger</u> , <u>bee</u> , <u>duck</u> (13)	chicken, elephant (2)	15
T-6 Places & Locations	<u>home</u> , <u>school</u> , <u>zoo</u> , <u>park</u> , <u>bookstore</u> , <u>here</u> , <u>there</u> , <u>shop</u> , <u>supermarket</u> (9)	gym, hospital, library, police station, post office, restaurant (6)	15
T-7 Numbers	<u>one</u> , <u>two</u> , <u>three</u> , <u>four</u> , <u>five</u> , <u>six</u> , <u>seven</u> , <u>eight</u> , <u>nine</u> , <u>ten</u> , <u>eleven</u> , <u>twelve</u> , <u>many</u> , <u>much</u> , <u>some</u> , <u>thirteen</u> , <u>fourteen</u> , <u>fifteen</u> , <u>sixteen</u> , <u>seventeen</u> , <u>eighteen</u> , <u>nineteen</u> (22)	twenty, thirty, forty, fifty, sixty, seventy, eighty, ninety, hundred, (including 21~100) (9)	31
T-8 Colors	<u>blue</u> , <u>green</u> , <u>red</u> , <u>yellow</u> , <u>color</u> , <u>black</u> , <u>brown</u> , <u>white</u> , <u>pink</u> (9)	orange, gray (grey), purple (3)	12

T-9	House	<u>cup, fan, key, sofa, TV, bed, bathroom, bedroom, kitchen, living room</u> (10)	telephone, cellphone (2)	12
T-10	Parts of the Body	<u>head, eye, nose, ear, hand, arm, leg, foot, face, mouth, hair</u> , (11)	back, body, tooth (3)	14
T-11	Descriptive Adjectives	<u>big, long, old, short, small, tall, thin</u> (7)	busy, clean, cute, dirty, heavy, kind, sick, smart, strong, young (10)	17
T-12	Weather & Climate	<u>cold, cool, hot, warm, dry, wet, cloudy, rainy, sunny, windy, moon, sky, star, sun</u> (14)	weather (1)	15
T-13	Time	<u>time, day, week, year, now, today</u> (6)	evening, Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, morning, night, tomorrow, yesterday, spring, summer, fall, winter (16)	22
T-14	Transportation	<u>bus, bike, car, MRT, plane, ship, taxi, train</u> (8)	(0)	8
T-15	Feelings & Emotions	<u>good, happy, bad, fine, great, nice, OK, sad, mad</u> (9)	angry, excited, hungry, tired (4)	13
T-16	Clothing	<u>hat, cap, jacket, shoes, coat, glasses, pants, shorts, socks, T-shirt dress, skirt</u> (12)	jeans, sweater (2)	14
T-17	Place/Country Names	(0)	Taipei, Taiwan, Japan, UK, USA (5)	5
T-18	Sports and Hobbies	<u>game</u> (1)	hiking, baseball, basketball, jogging, sport,	8

		table tennis, camping (7)	
T-19	Subjects	<u>English</u> , <u>art</u> , <u>Chinese</u> , <u>math</u> , <u>music</u> (5)	computer, P.E., science (3)
T-20	Pronouns	I, <u>it</u> , <u>my</u> , <u>you</u> , <u>he</u> , <u>she</u> , <u>they</u> , <u>we</u> , <u>his</u> , <u>her</u> , <u>our</u> , <u>your</u> , <u>their</u> (13)	mine (1)
T-21	WH-words	<u>what</u> , <u>how</u> , <u>who</u> , <u>where</u> , <u>which</u> , <u>when</u> , <u>whose</u> (7)	(0)
T-22	Be & Auxiliaries	<u>be</u> (<u>am</u> , <u>are</u> , <u>is</u>), <u>do</u> (<u>does</u>), <u>can</u> , <u>have/has</u> , <u>may</u> (5)	(0)
T-23	Articles & Determiners	<u>A</u> (<u>an</u>), <u>this</u> , <u>that</u> , <u>the</u> , <u>these</u> , <u>those</u> (6)	(0)
T-24	Verbs	<u>go</u> , <u>look</u> , <u>cry</u> , <u>dance</u> , <u>jump</u> , <u>like</u> , <u>read</u> , <u>sing</u> , <u>want</u> , <u>draw</u> , <u>sleep</u> , <u>swim</u> , <u>write</u> , <u>close</u> , <u>come</u> , <u>cook</u> , <u>open</u> , <u>play</u> , <u>run</u> , <u>see</u> , <u>listen</u> , <u>walk</u> , <u>clean</u> , <u>drink</u> , <u>drive</u> , <u>eat</u> , <u>feel</u> , <u>fly</u> , <u>get</u> , <u>give</u> , <u>live</u> , <u>ride</u> , <u>say</u> , <u>sit</u> , <u>stand</u> , <u>speak</u> , <u>study</u> , <u>take</u> , <u>talk</u> , <u>wear</u> , <u>wash</u> , <u>watch</u> , <u>work</u> (43)	stop, hurry, turn, try, put, spell, share, thank (8)
T-25	Prepositions	<u>at</u> , <u>by</u> , <u>in</u> , <u>on</u> , <u>under</u> , <u>for</u> , <u>from</u> (7)	(0)
T-26	Other Nouns	<u>name</u> , <u>yo-yo</u> , <u>kite</u> , <u>o'clock</u> , <u>e-mail</u> , <u>tree</u> , <u>flower</u> (7)	(0)
T-27	Other Adverbs	<u>no</u> , <u>not</u> , <u>yes</u> (3)	(0)
T-28	Conjunctions	<u>and</u> , <u>but</u> , <u>or</u> , <u>so</u> (4)	(0)
T-28	Others	(0)	dollar, early, late, loud, money, quiet, very (7)
Words count		283	108
			391

註: clean 同時列於 T-11 及 T-24, computers 同時列於 T-4 及 T-19, cook
同時列於 T-1 及 T-24, orange 同時列於 T-3 及 T-8.