

Veronika Wanninger

**TEACHER PROFESSIONAL DEVELOPMENT
TOWARDS THE 2030 BILINGUAL NATION
POLICY IN TAIWAN**

Faculty of Education and Culture
Master's Thesis in Teacher Education
April 2021

Abstract

Veronika Wanninger: Teacher Professional Development towards the 2030 Bilingual Nation Policy in Taiwan
Master's Thesis in Teacher Education
Tampere University
Master's Degree Programme in Teacher Education
April 2021

The Taiwanese government has announced that Taiwan is to be developed into an English and Mandarin Chinese bilingual nation by 2030. In relation to it, *Blueprint for Developing Taiwan into a Bilingual Nation by 2030* was published and a nationwide bilingual education policy will be implemented. The purpose of this study is to investigate teachers' understanding of the bilingual policy, the different emphases of English teachers and Subject teachers and needs for a smooth implementation of Content and Language Integrated Learning (CLIL) from English teachers' and Subject teachers' perspectives. The empirical data was gathered through qualitative interviews with ten Taiwanese in-service secondary school teachers, five English teachers and five Subject teachers. The data was analyzed with inductive content analysis. The understandings of teachers were categorized into three main categories: the background of the policy, the execution plan and the actions taken by the government so far. The findings of the study indicate that Subject teachers are more aware of the base of the policy and the general execution plan while English teachers pay more attention to the expectations and impacts it has on teachers. Both types of teachers expressed knowledge about the actions taken by the government so far, with English teachers focusing more on Teacher Education and experimental schools while Subject teachers pay more attention to the materials designed for the bilingual policy. This research also revealed teachers' professional skills, adjusting the high expectations for academic outcomes, students' cooperation and careful planning as the needs for a smoother implementation.

Keywords: Bilingual Education, Teacher Professional Development, Cross Curricular Collaboration, Content and Language Integrated Learning (CLIL), Taiwan

The originality of this thesis has been checked using the Turnitin OriginalityCheck service.

CONTENTS

1	INTRODUCTION	5
2	BILINGUAL EDUCATION	8
2.1	Bilingual Education for Minority Groups	8
2.2	Bilingual Education as a National Policy	11
2.3	Adaptation of the Bilingual Policy in the Taiwanese Context.....	13
3	TEACHER PROFESSIONAL DEVELOPMENT	16
3.1	Six Principles for Professional Development.....	19
3.2	The Taiwanese Education System and Teacher Professional Development Policy	20
3.2.1	<i>Teacher Professional Development in CLIL</i>	23
3.2.2	<i>Teacher Professional Development Through Cross Curricular Collaboration</i>	27
4	DATA AND METHODS	34
4.1	Research Questions and Research Design	34
4.2	Participants	35
4.3	Data Gathering.....	37
4.4	Data Analysis	41
5	FINDINGS	43
5.1	Teachers' Understanding of the Implementation of the Bilingual Policy in Taiwan	43
5.2	English Teachers' and Subject Teachers' Perceptions about the Implementation of the Bilingual Policy in Taiwan	46
5.3	Problems in Implementation of CLIL in Taiwan Identified by the Teachers.....	49
6	CONCLUSION AND RECOMMENDATIONS	56
	REFERENCES	63
	APPENDICES	69
	Appendix 1: English Cover Letter	69
	Appendix 2: Mandarin Chinese Cover Letter	70
	Appendix 3: Interview Guide	71

LIST OF TABLES

TABLE 1. Background information of the participants	36
TABLE 2. Frequencies of the subcategories and main categories of teachers' understanding of the bilingual policy	43
TABLE 3. Frequencies of the subcategories and main categories of English teachers' and Subject teachers' understanding of the bilingual policy	46
TABLE 4. Frequencies of the subcategories and main categories of the problems of implementing CLIL into the Taiwanese education system identified by English teachers' and Subject teachers'	50
TABLE 5. Percentage of English Used in Content Subject and English Classrooms	54

LIST OF FIGURES

FIGURE 1. INSET Strategies Model (O'Sullivan, 2001, p.95)	19
FIGURE 2. The Language Triptych (Coyle et al., 2013, p.36)	26
FIGURE 3. The "provisional continuum of collegial relations" (Little, 1990, p.512)	29
FIGURE 4. Different types of collaboration (Hargreaves & Connor, 2018, p.5)	31

1 INTRODUCTION

The purpose of this study is to examine and report the understanding of secondary school teachers about the bilingual policy, how English teachers' and Subject teachers' perceptions of it differ and the needs for a smoother implementation of CLIL from teachers' perspectives. Previous studies have indicated that bilingual education can mainly be divided into two types: bilingual education for minority groups, such as the systems in Colombia and the USA, and bilingual education for the whole nation, such as Canada and Singapore (de Mejía, 2004; Cummins, 2009; Rakhlin, 2013; Mukan et al., 2017; Lee & Phua, 2020; National Development Council, 2018). Taiwan is set to implement a nationwide bilingual policy by 2030 (National Development Council, 2018). In relation to the policy, the government would ideally have cultivated 5,000 new elementary and secondary school English-Mandarin Chinese bilingual teachers and all current in-service English teachers and half of the in-service Subject teachers would have been equipped with bilingual skills by then (National Developmental Council, 2018; Department of Teacher and Art Education, 2018). In order to realize this plan, English education research centers and bilingual Teacher Education programs and courses have been designed and established (Department of Teacher and Art Education, 2018).

Even though the government has plans for the implementation process, to increase the chances for a smooth and successful implementation, it is necessary to examine the base of the current situation and investigate the needs of the frontline teachers and plan supporting measures based on them starting from the primary stages of implementation. In the field of education, the change the government has made for the bilingual policy at this stage include the language of instruction for pre-service teacher training, adding full English training programs to the traditional type that is mainly taught in Mandarin Chinese, and increasing the opportunities for current in-service teachers to obtain the skills needed for implementing the bilingual education policy through

related in-service training (Teacher Education Act, 2019; National Development Council, 2018; Department of Teacher and Art Education, 2018). These additions are beneficial for reaching the goal of becoming an English-Mandarin Chinese bilingual nation; however, what areas to train and how to train teachers so that the training they receive can satisfy the needs for a full nationwide implementation of the bilingual policy are the main issues to be investigated. The current plan for future teachers is to have 5,000 teachers with bilingual education skills obtained from their pre-service training by 2030 (Department of Teacher and Art Education, 2018). As for the plans for current in-service teachers, all English teachers and half of the content subject teachers would have received in-service bilingual teacher training by then (Department of Teacher and Art Education, 2018). Current in-service teachers are already education experts that have first-hand experiences in teaching; therefore, when designing plans for pre-service and in-service Teacher Education and Teacher Professional Development, needs based on those experiences can play the decisive role of whether the implementation of the bilingual policy will succeed or fail (Pérez Cañado, 2016). As a result, the government needs to put these requests into consideration before being able to develop sustainable training programs that are effective and efficient. It is especially important to address this gap as there are minimal indications of including teachers' thoughts in the planning process in *Blueprint for Developing Taiwan into a Bilingual Nation by 2030* (National Development Council, 2018).

Teacher Professional Development is discussed on a larger scale with different theories and empirical data in this study. These theories include general Teacher Professional Development theories, such as Six Stages of Teacher Professional Development (Little, 1993), and more specific focuses, including on Teacher Education for Content and Language Integrated Learning (CLIL), the specific teaching approach presented in the blueprint of implementation published by the National Development Council (2018) and Cross Curricular Collaboration in the Taiwanese context (Department of Teacher and Art Education, 2018). The empirical data for this research was gathered through one-on-one interviews with in-service secondary school English and Subject teachers in Taiwan to provide an understanding of the current situation from their perspectives and it was later analyzed through

inductive content analysis (Tesch, 1990; Elo & Kyngäs, 2008; Atkins & Wallace, 2012; Newby, 2014; Cohen et al., 2018). The findings of this study can act as a part of the “need assessment” (O’Sullivan, 2001, p.95) of the INSET strategies model so that the government can design Teacher Professional Development programs and credit courses that are helpful for the implementation of the bilingual policy based on the actual needs (O’Sullivan, 2001; Pérez Cañado, 2016).

2 BILINGUAL EDUCATION

Bilingual education can be defined as teaching and learning a language and content subjects through two languages so that learners can learn the target language in a natural environment, which can be beneficial in many ways (Cummins, 2009; Agudo, 2012). First of all, it supports transferring language skills in both languages to academic outcomes (Cummins, 2009). In other words, learning with two languages at the same time is positive for learning content subject matters as it develops the skills one needs to be outstanding learners of non-language matters (Cummins, 2009). People who have bilingual knowledge are more capable of learning other languages because they are trained to pay close attention to patterns and constructions of different languages (Cummins, 2009). Nowadays, most common types of bilingual education policies are either targeted at specific groups of people or implemented nationwide (de Mejía, 2004; Feng & Wang, 2007; Cummins, 2009; May, 2012; Rakhlin, 2013; Gu, 2014; Kuchah, 2016; Mukan et al., 2017; Smeds, 2019; Lee & Phua, 2020). Taiwan is planning to implement the latter type by 2030; therefore, many aspects need to be carefully studied and planned (National Development Council, 2018).

2.1 Bilingual Education for Minority Groups

In order to increase exposure to the target languages for certain people, either voluntarily or compelled, bilingual education in some countries is only for those who fit a certain criteria or are a part of a minor community (Feng & Wang, 2007; de Mejía, 2004; Rakhlin, 2013). Since languages can act as “ethnic or national identity” (May, 2012, p.135) and one of many “cultural markers” (May, 2012, p.137), some countries design bilingual education plans for certain groups of people so that they can become a part of the dominant group or the cultural identities that are attached to the languages of their own can be weakened or

even demolished. Consequently, bilingual education that aims at helping minorities obtain mainstream language skills needs to be planned carefully, especially for those who have a strong sense of the cultural association of languages (Cummins, 2009; Agudo, 2012; May, 2012).

The so called minorities or “minority groups” (Churchill, 1996, p.267) share certain characteristics. First of all, they can be those who share the same language and live in the same areas with a group of people who have better-developed culture and economical statuses. They can also be considered minorities because their “ethnicity of race, language or cultural heritage” (Churchill, 1996, p.267) is different from the majority group of people in that country or area. Minority groups can also be determined based on the location of where they reside, either their places of residence have a long history of being inhabited by minority groups or the people are considered newcomers from other cities or countries (Churchill, 1996). Finally, it is believed that youngsters of people from minority groups face difficulties at schools or other educational institutions caused by not being able to adapt to the dominant education system because of their unique backgrounds (Churchill, 1996). In most cases, minority groups do not only have their own sets of customs, they also have their own languages; however, sometimes other dominant languages are preferred and the languages of the minority groups are therefore even taken over by them (May, 2012). One classic example of such replacement occurred in previous parts of Soviet Union where mother languages of the minority groups in many countries were substituted with Russian (May, 2012).

In order to preserve diverse cultures or to teach the dominant languages to people of minority groups, some countries plan bilingual education for those minority group members (de Mejía, 2004; Rakhlin, 2013; Gu, 2014; Feng & Wang, 2007). For example, in Colombia, bilingual education is mainly for two groups of people: financially capable and more international families and indigenous people living in rural areas that need to learn, based on social belief, a relatively more valuable language, such as German, French or English (de Mejía, 2004). Aside from indigenous people, according to Churchill (1996), immigrants are also considered minority group members. The USA, for instance, offers immigrants bilingual education that combines their mother languages and English (Rakhlin, 2013).

A more detailed example of bilingual education for minority groups would be China where it is usually used to educate people who belong to minor ethnic groups for them to be able use Chinese and their dialects fluently (Feng & Wang, 2007; Gu, 2014). Based on different situations and students' reactions to the adaptation of bilingual policies, using Chinese as the major language and dialects as minor languages, dialects as the main languages and Chinese as the supporting language and an equal emphasis and implementation of both are the main types of bilingual education for minority groups implemented in China (Gu, 2014). However, they are facing two major problems: insufficient materials and bilingual teachers with the needed content knowledge (Gu, 2014). About the materials, the current case in China is that they have "national general teaching materials" (Gu, 2014, p.609) in Chinese but in order to teach them to minority groups, they need the translated versions of them. The difficulties of translating such materials into the languages of minority groups include the need for bilingual people with sufficient content-related knowledge and that certain concepts cannot directly be translated and understood by the minority group members as such concepts do not exist in their understanding. In order to solve the problem of lacking teachers with the required pedagogical and language skills, the Chinese government has designed multiple programs for different ethnic groups, including Han nationality and people of minority groups to be trained (Gu, 2014). As a means for integration, teachers without minority backgrounds are required to learn the traditions and customs of the corresponding minority groups before being qualified to teach them (Gu, 2014).

After planning and implementing bilingual education for minority group members, assessment methods that measure the learning outcomes act as indicators of how effectively they have obtained the intended language skills. Cummins (2009) explained that it is essential to examine the language skills of the dominant language of minority members from the aspects of their "(a) conversational fluency, (b) discrete language skills and (c) academic language proficiency" (Cummins, 2009, p.22). In other words, how fluently they are able to lead a daily conversation, how well they are capable of applying the rules of the language, such as how frequently they make grammatical mistakes, and whether they are able to master the high level academic vocabulary words (Cummins, 2009). These are to be examined as they indicate different areas of

linguistic developments (Cummins, 2009). Therefore, all three aspects of language development need to be put into careful consideration when designing bilingual education plans for minority groups (Cummins, 2009; Agudo, 2012; May, 2012).

2.2 Bilingual Education as a National Policy

While some countries only implement bilingual education for specific groups of people, others have two official languages and have a nationwide adaptation of the bilingual policy that affects every citizen.

One example of such national bilingual education policy is implemented in Canada. Since Canada was colonized by Britain and France, in 1969, both English and French became the official languages of the country (Mukan et al., 2017). In relation, there are English-French bilingual education programs and French immersion programs that teach students without French roots the language and the importance of accepting and respecting it as a part of the country's unique background (Mukan et al., 2017). These programs provide students with extra support with the French language and opportunities for them to receive firsthand experiences of using the language frequently (Mukan et al., 2017). Moreover, they increase the chances of exposing students to French traditions at other schools or countries that use French as their main language of communication and instructions (Mukan et al., 2017). Simultaneously, there are also programs to support English language skills for students who have a strong French background, such as students from Quebec as it is one of the areas that is impacted the most by the French culture (Cummins, 2009). Besides protecting the unique bilingual background, the Canadian government also tries to help preserve the languages and cultures of their immigrants and indigenous Canadians by offering them opportunities to make use of their languages outside of the bilingual education system (Cummins, 2009; Mukan et al., 2017).

Another country that implements a national bilingual education policy is Singapore. In 1959, Singapore obtained full power of self-ruling and that is when the then Prime Minister Lee Kuan Yew declared that Singapore is to become a country with a bilingual policy of English and the designated mother

language based on the background of each individual, including Chinese, Malay and Tamil (Lee & Phua, 2020). Before 1959, the separation between Chinese-speaking and English-speaking schools was strict and English was viewed as the high-class language, Chinese in the middle and Chinese dialects as the low-class language (Lee & Phua, 2020). Bilingual education first started to be practiced in 1959 when English-speaking and Chinese-speaking schools were combined and two languages were both used, one in the morning and one in the afternoon (Lee & Phua, 2020). The end of school and language segregation helped students obtain language skills and to learn to interact and respect people with different backgrounds (Lee & Phua, 2020).

Yet another example of a country with a nationwide bilingual policy that affects everyone in the nation is Finland. Because of its historical background with Sweden and to stress the importance of acceptance, Constitution of Finland states that the official languages in the country are Finnish and Swedish (Smeds, 2019). According to Official Statistics of Finland (2019), 87.3% of the Finnish population use Finnish as the main language of communication and only 5.2% use Swedish as the main language. However, it is by law that all official documents and information in the public domain have to be provided in both languages to emphasize inclusion (Smeds, 2019). Due to the same reason, in the areas where more Sámi population resides, such as in Enontekiö, Utsjoki and Sodankylä, Sámi and Finnish are languages that form the bilingual system (Smeds, 2019). Nowadays, with the vibrant immigration background, Finland has included a lot of foreign languages for students to choose from so that inclusion and embracing other languages and cultures can yet again be emphasized (Smeds, 2019).

The bilingual education system in Cameroon is a result of its colonial past (Kuchah, 2016). Cameroon was formally colonized by France and Britain; therefore, the country labels itself as bilingual, identifying French and English as its main languages of communication (Kuchah, 2016). However, the reality is that the areas in the county are monolingual because, depending on the location, only English or French is the main language of communication and schools also mainly use one of them, not both (Kuchah, 2016). Interestingly, however, in recent years, an increasing amount of parents, no matter whether using French or English as their main language, prefer their children to study at

schools where English is the medium of instruction because they are convinced that English is more valuable for future employment (Kuchah, 2016). Similarly, parents have expressed their belief that being fluent in both languages in Cameroon will increase the chance for people, especially females, to secure work (Kuchah, 2016).

2.3 Adaptation of the Bilingual Policy in the Taiwanese Context

The main reasons previously mentioned countries implemented bilingual education are their colonial backgrounds or the hope that minority group members can have the language skills to communicate with dominant groups; however, the reason behind the implementation in Taiwan has nothing to do with either. Instead, Taiwan is planning to implement bilingual education of Mandarin Chinese and English by 2030 because the government views English as the most international language used around the globe and it is therefore believed that mastering it will provide Taiwanese citizens with more international opportunities for brighter futures and make the human resources more competitive in the global market (National Development Council, 2018).

Blueprint for Developing Taiwan into a Bilingual Nation by 2030 indicates that the bilingual policy is a result of years or even decades of planning and in order to fully implement the national bilingual policy in Taiwan, the Taiwanese government has to develop plans for not only the field of education but also for multiple other areas (National Development Council, 2018). In 2002, the government started the different phases of implementing English-related policies in correspondence to the need for bilingual resources (National Development Council, 2018). The initial goal was to boost the tourism industry and it later on became the base for the bilingual education policy (National Development Council, 2018). Plans for using English skills to attract tourists to visit Taiwan were put into practice when “Action Plan for Creating an English-friendly Living Environment” (National Development Council, 2018, p.1) was implemented in Taiwan. The plan ended in 2007 and then a year later, the “Plan for Creating an International Living Environment” (National Development Council, 2018, p.1) was implemented. In 2010, after the implementation of the

previous plan ended, the government implemented “The Plan for Enhancing National English Proficiency” (National Development Council, 2018, p.1) which was the focus until 2012. The names of the plans suggest a hierarchical development from being English-friendly to making the environment international and finally to raising the English level of Taiwanese people as a whole, making the implementation of every plan a step closer to fully implementing the bilingual policy. After the phases of implementing English policies, the planning of making Mandarin Chinese and English the two official languages of Taiwan started in August, 2018, when the current vice president of Taiwan, William Lai Ching-te, declared the future of the nationwide implementation (National Development Council, 2018). Approximately one month later, in September, 2018, National Development Council was assigned to be the “coordinating agency in formulating a stage-by-stage schedule” (National Development Council, 2018, p.2) to realize the bilingual goal. In order to develop a realistic plan that suits the needs of Taiwan, National Development Council has listened to the voices of multiple trustworthy sources through “inter-ministerial coordination meetings” (National Development Council, 2018, p.3), discussions with “local governments” (National Development Council, 2018, p.3) and conferences with “foreign chambers of commerce and Taiwan’s five major domestic business and industrial associations” (National Development Council, 2018, p.3) and plans for a large number of aspects, such as plans for improving “English proficiency of hospitals and social welfare groups” (National Development Council, 2018, p.18) and building “bilingual production and marketing capabilities of agricultural and fishery sectors” (National Development Council, 2018, p.20) have been developed.

Plans for the field of education have undoubtedly also been developed, however, with minimal indications of including the opinions of first-line in-service teachers. The plan for bilingual education is structured based on four major goals: to make learning English “demand-driven” (National Development Council, 2018, p.4), to balance technical integration between big cities and rural areas, to focus equally on both languages and to increase the competitiveness of the next generation. What makes this particular plan stand out among all the other previously implemented English-related plans is that it emphasizes broadly equipping citizens with the ability to fluently use and understand English

whenever there is a need for it instead of merely aiming at developing skills for specific standards or occasions (National Development Council, 2018). It wishes to narrow the gap between students who live in major cities and those in areas that lack the learning resources through making sure that they have similar technical tools and skills (National Development Council, 2018). Additionally, the plan stresses that the current official language, Mandarin Chinese, and English will be equally valued and protected by the “Development Act of National Language” (National Development Council, 2018, p.5). Interestingly, before becoming the vice-present of Taiwan, Lai was the mayor of Tainan and during his time there, he initiated “the Office of English as the Second Official Language (OEASOL)” (Tainan City Government, 2017, para. 1) and formed a team specializing in having conversations with experts of different fields, such as health and business, to promote the importance of elevating English skills, especially through education. As a result, the adaptation experiences and results of the bilingual education in Tainan can be a reference for other cities and counties in Taiwan. The following are the education-related focuses responsible by the Ministry of Education (MoE) and other related departments. On the policy and regulation level, the plan urges the Ministry of Education to loosen up certain Acts to allow the creation of learning methods and to make the environment friendlier for learning English (National Development Council, 2018). The emphasis of the bilingual policy is the inclusion of “daily English use” (National Development Council, 2018, p.13) to normalize using English in daily teaching. In relation to it, secondary school English teachers are expected to teach English using full English and Subject teachers, even though not specified which subjects, to use CLIL (Content and Language Integrated Learning) as the main teaching approach (National Development Council, 2018). In order to fully implement specific teaching approaches and to use English as a language of instruction fluently as the blueprint states, high quality Teacher Education is inevitable.

3 TEACHER PROFESSIONAL DEVELOPMENT

Teacher Professional Development is crucial for the successful implementation of the bilingual policy and it has been studied on different scales by multiple researchers.

Professional development is an ongoing process that takes place anywhere and at any time, targeting at enhancing people's professionalism (Desimone, 2009; Evans, 2014; Philipsen et al., 2019). Evans (2014) views professionalism as a combination of elements related to behaviour, attitudes and intellectuality. In other words, professionalism has permanent impacts on the professional individual and it consists of the activities professionals do at work, their attitudes and their own understanding of how their knowledge is structured (Evans, 2014). Evans also (2014) stressed that even though it is widely believed to be beneficial to students' learning (Desimone, 2009; Lassonde & Israel, 2009; Hargreaves & Connor, 2018; Koellner & Jacobs, 2015), it should not be evaluated simply based on it because it is impacted by many other elements. Shulman (1987) is persuaded that most studies related to Teacher Professional Development are about how teachers manage classrooms, but how well they manage ideas in classrooms is not less important. Based on Shulman's understanding (1987), the basic knowledge base of teachers include knowledge of content in general and basic pedagogical skills, knowledge of curriculum and context, pedagogical subject-specific knowledge, detailed knowledge about learners and understanding of philosophy in education. In the context of the bilingual policy in Taiwan, pedagogical subject-specific knowledge is a combination of target language skills and subject-based knowledge, which, according to Shulman (1987), is the most essential aspect of teachers' knowledge base.

Different forms and levels of formality of Teacher Professional Development are also studied (Desimone, 2009; Evans, 2014; Philipson et al., 2019). Teacher Professional Development can occur formally and informally (Desimone, 2009; Evans, 2014; Philipson et al., 2019). Even though less recorded and uncertain of its degree of impact, informal professional developments of teachers occur frequently because even chatting with fellow teachers in a teachers' lounge room or listening to the most random anecdotes about interactions between fellow teachers and students can make an impact on teachers' professionalism (Little, 1990; Desimone, 2009). Some common examples of structured formal Teacher Professional Development methods include enrolling in developmental programs, joining meetings and conferences about education-related matters and learning recently developed teaching approaches in order to improve teachers' professional skills and the learning outcomes of students (Lassonde & Israel, 2009; Desimone, 2009). For the purpose of professional development, it is common for in-service teachers to participate in short-term training or workshops that last a few days or merely a few hours (Lassonde & Israel, 2009). However, even though teachers might obtain some information from the short training sessions, the duration makes the impacts of them not worthy of tracking and therefore show minimal scientific significance (Lassonde & Israel, 2009). On the other hand, if teachers are seeking solid developments in their own professional fields, research has backed up professional developmental programs for in-service educators as more effective mainly because teachers actually receive comments and suggestions about their performances their future developments can be based on (Lassonde & Israel, 2009; Evans, 2014).

Teacher Professional Development is usually context-based and difficult to universalize (Opfer & Pedder, 2011; Evans, 2014; Koellner & Jacobs, 2015); however, Koellner and Jacobs (2015) attempted to categorize different types based on their characteristics. Koellner and Jacobs (2015) developed a continuum that categorizes Teacher Professional Development models in the education field either more "highly adaptive" (Koellner & Jacobs, 2015, p.51) or more "highly specified" (Koellner & Jacobs, 2015, p.51). The ones that are considered more specified usually have a format of adaptation that requires teachers to closely follow as there are expected developmental results (Koellner

& Jacobs, 2015). For instance, teachers who are trained for the bilingual policy might need to follow a more specified model of Teacher Professional Development as it is aimed at fulfilling certain needs for cultivating teachers with certain sets of skills (Cammarata & Tedick, 2012). Consequently, models that are more specified usually contain a specific scale for measurement of the effectiveness of professional development, making it preferred by researchers and policymakers (Koellner & Jacobs, 2015). On the other hand, models that are more adaptive only serve as basic guidelines that can be modified to fit the local needs, hence providing teachers with more autonomy (Koellner & Jacobs, 2015). In relation to Teacher Professional Development models, Evans (2014) concluded that the focuses of them are either more on the concept or on the process, namely what it is about and how it works. In order to understand Teacher Professional Development in detail, the “cognitive process” (Evans, 2014, p.183) has to be studied through examining activities that last as short as one minute so that non-observable elements can be studied.

The In-service Education Training Model (INSET) (O’Sullivan, 2001, p.93) (presented in **FIGURE 1**) developed for in-service teachers is one of the well-developed models related to Teacher Professional Development. The model was originally designed for in-service teachers with minimal or no qualification in developing countries; however, since it falls into the category of “change theory” (O’Sullivan, 2001, p.97) and that participants of this study have minimum training in bilingual Teacher Education, it is highly relevant to this particular study. The elements of the “INSET strategies model” (O’Sullivan, 2001, p.95) include “need assessment, organization, determination of content, training process (workshops), follow-up and evaluation” (O’Sullivan, 2001, p.95) and they are presented in a circle of stages, indicating what is corresponding to what other researchers have also concluded from their studies: professional development is a continuous process (O’Sullivan, 2001; Desimone, 2009; Evans, 2014; Sprott, 2019). In order to design sustainable Teacher Professional Development programs, it is important to fully examine and understand the context-specific needs first; therefore, this research is designed to unveil the needs of current in-service English and Subject teachers for the future implementation of the bilingual policy in order to make related Teacher

Professional Development programs sustainable (O’Sullivan, 2001; Pérez Cañado, 2016).



FIGURE 1. INSET Strategies Model (O’Sullivan, 2001, p.95)

3.1 *Six Principles for Professional Development*

Despite the fact that professional development and educational reformations are both highly context-based and complicated concepts that involve many variations (O’Sullivan, 2001; Opfer & Pedder, 2011; Evans, 2014; Pérez Cañado, 2016), “Six Principles for Professional Development” (Little, 1993, p.137) can be used as the basic principles for evaluating the effectiveness of professional development. The first principle is that professional development has to be meaningful (Little, 1993). Professionals need to connect with people working in the same fields on “intellectual, social and emotional” (Little, 1993, p.138) levels in order to professionally improve. Evans (2014) shared similar concepts by stressing the roles of behavior, attitude and intellectuality in professional development. In order to maximize the outcome of professional development, teachers need to play active roles in the process and it is recommended to be done through collaborating with peers. Second, professional development relies heavily on contexts (Little, 1993; O’Sullivan, 2001; Opfer & Pedder, 2011; Evans, 2014; Pérez Cañado, 2016). This principle once again stresses the indispensable method for professional development: collaborating with colleagues. Some methods for collaboration include forming

collaborative research groups with educators at the same school or with experts working at university levels, arranging co-study sessions, conducting co-teaching lessons and committing to partnerships with fellow teachers for a long period of time with the aim of professionally developing together (Little, 1993; Lassonde & Israel, 2009; Lo, 2020). The third principle is related to the previously mentioned concept of collaboration because, according to Little (1993), it can act as a platform where people with different opinions might change their minds thanks to working closely with others for a long period of time. Forth, professional development is usually viewed on a larger scale (Little, 1993). While professionally developing, teachers need to view the developmental process from the schools' or even the whole education system's perspective, and in order to extend their vision, collaboration is yet again a recommended method (Little, 1993). The fifth principle is that, aside from training specific skills, through professional development, educators should learn to be prepared to ask questions (Little, 1993). Through asking questions, teachers can not only examine their own knowledge but also learn from their peers and, formally or informally, acquire professional skills (Little, 1990; Little, 1993). Finally, professional development lowers the influences caused by bureaucratization and finds a common ground for personal needs and institutional expectations (Little, 1993; Cammarata & Tedick, 2012).

3.2 The Taiwanese Education System and Teacher Professional Development Policy

The basic education system in Taiwan consists of six years of elementary education, three years of junior secondary education and three years of senior secondary education (Ministry of Education, 2020). The first six years have been compulsory since 1968 (Ministry of Education, 2020). Decades later, in 2019, Taiwan has officially implemented 12-year Basic Education which has extended basic education for another three years, but compulsory education still lasts nine years (Ministry of Education, 2020). Now that the government has decided to implement the bilingual policy, both Pre-service and In-service Teacher Education for it should be examined and planned.

Based on the current system in Taiwan, The Preservice Teacher Education Section (PTES) and the Teacher Professional Development Section (TPDS) of Department of Teacher and Art Education, an organization under the Ministry of Education, are the two official departments managing and arranging Teacher Education related matters (Ministry of Education, 2019). Some of the main duties of the former section include ensuring the training of outstanding teachers with international views through supervising training programs and developing related models, curriculum and other aids (Ministry of Education, 2019). As the name suggests, the latter section focuses more on in-service teachers, offering them support and assistance (Ministry of Education, 2019).

The qualification process for teachers in Taiwan is quite specific and complicated to ensure high quality. Teacher Education in Taiwan is mainly provided by education-related universities, such as normal universities and universities of education, Teacher Education Centers and other teacher training related departments or programs of non-education specific universities (Ministry of Education, 2020). In order to become a teacher in basic education in Taiwan, people need to at least hold a bachelor's degree, receive certified Pre-service Teacher Education and obtain evidence of it, pass the qualification examination and complete full-time practical education training for the duration of six months (Teacher Education Act 2019, Article 11). Pre-service Teacher Education consists of taking "general courses, professional education courses, and area of specialization courses" (Teacher Education Act 2019, Article 3) at approved Teacher Education institutions or departments. After the pre-service training, the university where they were trained at will issue a "Pre-service Teacher Education Completion Certificate" with which they are eligible to take the qualification examination (Teacher Education Act 2019, Article 8). After passing the exam, one applies for a six-month full time practical education training that trains future teachers in real-life teaching situations at schools (Teacher Education Act 2019, Article 10; Ministry of Education, 2020). After undergoing pre-service training, obtaining a certificate to prove the passing of the qualification exam and undergoing a six-month practical education training, a Teacher's Certificate with which teachers can apply for vacancies matching their qualified areas as education professionals is issued (Teacher Education Act 2019, Article 15).

The Implementation Plan for Cultivating Full English Teachers states that some goals from 2019 to 2022 include that English teachers teach English lessons in full English and Subject teachers have the ability to deliver full English classes (Department of Teacher and Art Education, 2018). For Pre-service Teacher Education, the plan is to establish full English Teacher Education related programs and departments and more full English master's degrees related to teaching and to transform traditional departments related to teaching English (Department of Teacher and Art Education, 2018). The main change resulted from this plan is the percentage of using English in Teacher Education. For instance, it is regulated that the language of instruction of Teaching Materials and Pedagogy (教材教法) and/ or Practical Training Courses (教學實習課程) of Pre-service Teacher Education at related universities and the main language of communication should be English, not Mandarin Chinese (Department of Teacher and Art Education, 2018). Another rule is that all Teacher Education related universities need to offer a minimum of ten full English credits (Department of Teacher and Art Education, 2018). The Teacher's Certificate teachers receive after completing the English pre-service training, passing the qualification examination and finishing the six-month practical training will state that they are bilingual teachers (Department of Teacher and Art Education, 2018). Therefore, to ensure sufficient language ability to teach and use English in classrooms, before being accepted into the pre-service bilingual training programs, candidates need to proof that their English levels are at least equivalent to B2 in CEFR (Common European Framework of Reference for Languages: Learning, Teaching, Assessment) or pass the listening and reading tests of the High-Intermediate Level of General English Proficiency Test (GEPT) (Department of Teacher and Art Education, 2018).

When implementing a new policy into any education system, professional training programs for in-service teachers are equally important as pre-service training. Since most Taiwanese in-service teachers have not experienced bilingual education in the past, they require training to equip them with the knowledge they need to implement it. Therefore, Department of Teacher and Art Education has planned Enrichment Credit Classes for teaching in English

(英語授課增能學分班) for English teachers and Subject teachers separately and other related programs at Teacher Education universities in The Implementation Plan for Cultivating Full English Teachers (Department of Teacher and Art Education, 2018). Teachers who completed either are eligible to being identified as bilingual teachers and the title is added to their Teacher's Certificate in addition to their original qualified subjects (Department of Teacher and Art Education, 2018). Aside from plans to certify bilingual teachers, the government also has plans for establishing six full English Teaching Centers and for increasing the number of teachers who visit English-speaking countries as overseas trainees from 74 teachers in 2017 to 300 in the near future (Department of Teacher and Art Education, 2018).

3.2.1 Teacher Professional Development in CLIL

The measures taken to cultivate Taiwan into an English-Mandarin Chinese nation include implementing Content and Language Integrated Learning (CLIL) as the teaching method in content knowledge classrooms, making the understanding and discussing of it essential (National Development Council, 2018).

CLIL is an educational approach that equally focuses on the teaching and learning of a foreign language and content subjects (Coyle et al., 2013; Kewara & Prabjandee, 2018; Lo, 2020). Instead of learning the target foreign language and subject-specific knowledge separately, CLIL combines these two areas by using the target language as the main language of instruction in content knowledge classrooms, such as using French to teach Geography in Colombia (Coyle et al., 2013; Kewara & Prabjandee, 2018; Lo, 2020). Besides teaching content knowledge in the target language, teachers also support students' language acquisition by explaining certain language-related knowledge when needed (Coyle et al, 2013). Through this combination, conversations in that target language will occur more frequently and naturally, increasing learners' exposure to the language, making the target language more meaningful and easier to acquire (Pérez Cañado, 2018). Research in many European countries, such as Germany, Spain and Finland, and in Asia, including in Thailand, Japan

and Hong Kong have indicated positive outcomes of implementing CLIL (Sylvén, 2013; Kewara & Prabjandee, 2018; Pérez Cañado, 2018; Lo, 2020).

The main reasons for the adaptation of CLIL can be divided into two: “reactive reasons” (Coyle et al., 2013, p.6) and “proactive reasons” (Coyle et al., 2013, p.7). Reactive reasons, as the name suggests, is used to react to the special needs of a country or region, such as to establish a national common language, to teach language skills to immigrants, to nurture minority groups or endangered languages or to react to a nation’s colonial past (Cammarata & Tedick, 2012; Coyle et al., 2013). Schools in countries or areas with those focuses teach in a language that is not considered the main language learners use in their daily lives as a mechanism to complement their needs (Coyle et al., 2013). Adapting CLIL for proactive reasons is mainly to improve citizens’ language proficiency skills for the benefits of the target languages (Banegas, 2012; Coyle et al., 2013). For instance, CLIL is promoted in European countries because governments, experts in languages and families act as the main proactive parties that stimulate language learning through CLIL (Coyle et al., 2013). The reason for Taiwan to implement CLIL in content subject classrooms can also be categorized as proactive (Coyle et al., 2013).

Aside from the previously mentioned language-related benefits of CLIL, it also arouses “cognitive flexibility” (Coyle et al., 2013, p.10) that helps students and teachers think more organized and clearer and simulates higher learning levels. CLIL serves as the correspondence to a way to successfully acquire language skills: through real-life experiences (Coyle et al., 2013; National Development Council, 2018; Pérez Cañado, 2018). Coyle and colleagues (2013) pointed out the different roles language classes and subject classes take on: language classes should teach the basics of a language, such as general vocabulary words and grammatical structures, while subject classrooms focus on training content-based skills in that language and provide opportunities to use the language skills they acquired and apply them in real-life situations. Ideally, CLIL teachers have to be masters in both content knowledge and target language and their role is to help students obtain content knowledge and to boost their language proficiency levels through encouraging them to frequently use the target language (Lo, 2020). In order to have the skills to do so, teachers

need information and specific help with Teacher Professional Development and ideally, it is based on teachers' needs.

Previous studies have studied the needs of CLIL teachers for Teacher Education (Cammarata & Tedick, 2012; Banegas, 2012; Sylvén, 2013; Pérez Cañado, 2016; Pérez Cañado, 2018). Pérez Cañado (2016) conducted survey study on 241 in-service teachers in Europe about their needs for implementing CLIL into their teaching and the results show that they need the least help with language and intercultural skills and the most assistance with CLIL-related methodologies and continuous Teacher Professional Development. The result could be affected by the fact that since most participants are language specialists, language is not their major concern (Pérez Cañado, 2016). Other previous studies, however, have indicated that since most CLIL classes are taught by Subject teachers, language skills of the target language are the major factors of confusion and concern (Cammarata & Tedick, 2012; Banegas, 2012; Sylvén, 2013; Pérez Cañado, 2018; Pons Seguí, 2019). Pons Seguí (2019) compared the results of seven studies about the needs for implementing CLIL conducted in Europe, Asia and South America from 2005 to 2016 and regardless of contexts and experiences, teachers indicated needs for training regarding language proficiency and CLIL specific skills. These results pinpoint the importance of language skill training to be incorporated in CLIL teacher training (Cammarata & Tedick, 2012; Banegas, 2012; Sylvén, 2013; Pérez Cañado, 2018; Pons Seguí, 2019).

Language skills for CLIL teachers go beyond the commonly known listening, speaking, reading and writing skills; instead, there are other language-related skills CLIL teachers also have to master (Cammarata & Tedick, 2012; Banegas, 2012; Sylvén, 2013; Pérez Cañado, 2016; Pérez Cañado, 2018). Despite most CLIL classes are taught in the target language, different scales of CLIL implementation determines how much of the target language should be used in classrooms. For instance, “extensive instruction through the vehicular language” (Coyle et al., 2013, p.15) requires a nearly full target language usage, paying close attention to the delivery of “content-relevant language” (Coyle et al., 2013, p.15) and, on the other hand, “partial instruction” (Coyle et al., 2013, p.15) uses the target language during as low as less ten percent of class time. No matter which scale of CLIL is implemented, teachers need to be fluent in both

languages and master the skills of switching between them systematically or “translanguaging” (Coyle et al., 2013, p.16) to help build students’ language and content knowledge skills. Coyle and colleagues (2013) further investigated the language aspect of CLIL and organized their findings in the “Language Triptych” (p.36) (presented in **FIGURE 2**). The Language Triptych consists of “language *of* learning, language *for* learning and language *through* learning” (Coyle et al., 2013, p.36). To learn subject knowledge, students require the basic language for it and those language skills are known as the language *of* learning (Coyle et al., 2013). Traditional language learning methods stress the importance of accuracy rather than fluency, but for subject learning, language skills sufficient for surviving in settings where these languages are used, known as language *for* learning, are more important, hence some studies pointed out that CLIL works the most efficiently for teachers and students who are outstanding academically and language-wise (Banegas, 2012; Coyle et al., 2013). As for language *through* learning, learners need be able to use those acquired language skills to conduct high-level sense-making (Coyle et al., 2013). All the language aspects should be a part of the CLIL training in order for teachers to be fully equipped with the knowledge they need.

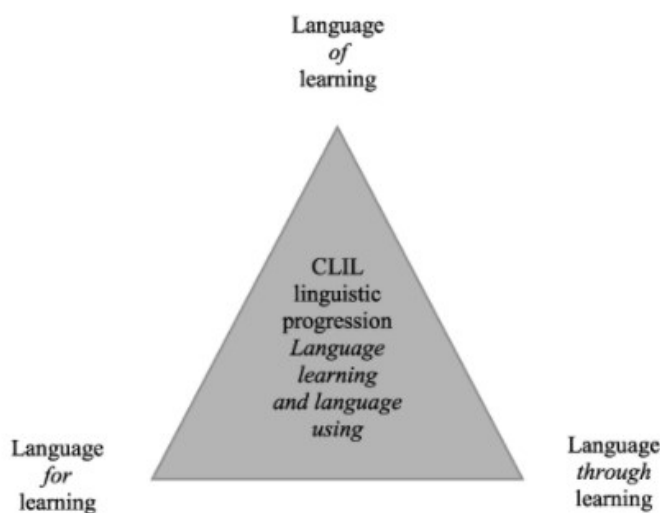


FIGURE 2. The Language Triptych (Coyle et al., 2013, p.36)

Aside from training for language skills, other needs such as time management skills, pre-designed materials and skills to design them are also identified by CLIL teachers (Cammarata & Tedick, 2012; Lo, 2020). One urgent need for time management training is caused by teachers not having sufficient time for preparing and delivering both content knowledge and language skills, especially

because the requirements for the coverage of content knowledge is already filling up the whole class time (Cammarata & Tedick, 2012). CLIL teachers therefore struggle to squeeze in the teaching of language-related knowledge, making time management skills for balancing the teaching of both areas crucial (Cammarata & Tedick, 2012). CLIL teachers are also struggling due to insufficient materials designed for CLIL (Banegas, 2012). Without the sufficient materials designed for CLIL, teachers are left without a guide of the knowledge to be followed in the classroom, leaving them with the burden to design their own materials even without the required knowledge (Banegas, 2012). How to design and apply materials in classroom contexts, specific methodologies and theories and incorporation of technology are needs that are relatively less expressed by teachers (Cammarata & Tedick, 2012; Pérez Cañado, 2018).

3.2.2 Teacher Professional Development Through Cross Curricular Collaboration

Concluding from the previous chapter, cultivating bilingual teachers who are experts in content knowledge is not an easy task and teachers have also expressed feelings of loneliness in the process; therefore, Cross Curricular Collaboration could bring out better results (Cammarata & Tedick, 2012; Banegas, 2012). Little (1990), Lassonde and Israel (2009), Davison (2006), Hargreaves and Connor (2018) and Lo (2020) have developed different forms and theories of Teacher Professional Development that are of high referencing value for teachers adapting to the bilingual education plan in Taiwan.

Little (1990) examined collaboration from the perspective of the relationships between fellow teachers. It is believed that collaboration is a result of teachers interacting with each other and any form of collaboration can be beneficial in terms of the contribution of “knowledge, skill, judgment, or commitment” (Little, 1990, p.509) and they will “enhance the collective capacity of groups or institutions” (Little, 1990, p.509). Previous studies also indicated that teachers collaborating with each other can boost students’ academic performances, help novice and experienced teachers deal with stress and stimulate creativity among them (Little, 1990). In the article, Little (1990) proposed a “provisional continuum of collegial relations” (Little, 1990, p.512)

(presented in **FIGURE 3**) which illustrates forms of teacher collaborations based on different depths and to what extent they interfere with each other's work. From the most independent to the heaviest reliance on common decision-making among the teachers, the types are: "Storytelling and scanning, sharing, aid and assistance and joint work" (Little, 1990, p.512). According to the definition by Little (1990), Storytelling is the most common and casual form of collaboration that can take place anywhere and anytime even in the shortest period of time. Teachers grasp any opportunity they have to share incidents they encountered and questions or worries they might have with fellow teachers in order to find "specific ideas, solutions, or reassurances" (Little, 1990, p.513). Aid and Assistance is that teachers respect each other's professionalism and therefore only share their opinions and help other teachers when they are asked to do so (Little, 1990). Teachers are cautious about this as they do not want to make themselves seem superior to their peers and when they express their opinion on other teachers' teaching-related matters, they are usually prepared to start deep discussions or even debates (Little, 1990). Sharing is mainly about opening up through sharing teaching-related elements for public feedbacks (Little, 1990). The major concerns of Little (1990) about this type of collaboration is the competitive nature of human beings it might bring out. In other words, being openly discussed by peers might make teachers feel uncomfortable and give them the pressure to overly push themselves to develop ideas to substitute the ones they already shared with others (Little, 1990). Joint work is the type of collaboration that is based on the highest level of reliance on the teachers involved (Little, 1990). The level of dependence is so high that other teachers are considered key factors that determine whether their work will be a success or a failure because it requires contributions from all members involved (Little, 1990).

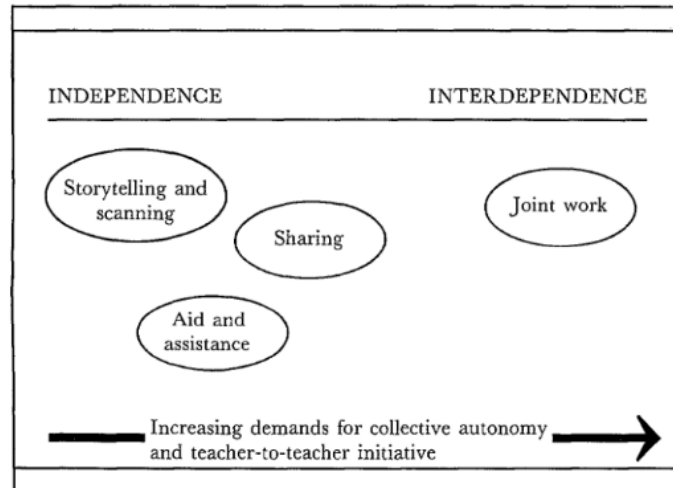


FIGURE 3. The “provisional continuum of collegial relations” (Little, 1990, p.512)

Almost two decades later, Lassonde and Israel (2009) published a book about collaboration from the point of view of “collaborative teacher research” (Lassonde & Israel, 2009, p.4) which, according to the research, can also be seen as the most efficient form of Teacher Professional Development. Collaborative teacher research stresses the importance of creating communities for teachers to learn and develop together through discussing and working on matters related to schoolwork and the field of education in general. In the book, Lassonde and Israel (2009) included an example of teacher collaboration between two seventh grade teachers. They described that their professional relationships have developed from occasionally sharing ideas and frustrations with peers they trust to professionally working together to study their professional field as a group (Lassonde & Israel, 2009). The change of their relationship is similar to moving from the level of “storytelling and scanning” (Little, 1990, p.512) to “joint work” (Little, 1990, p.512) and shifting from “Informal Collaboration” (Hargreaves & Connor, 2018, p.5) to “Collaborative Professionalism” (Hargreaves & Connor, 2018, p.5). These concepts all point at the fact that collaborating does not necessarily need to be planned by authorities; instead, teachers themselves can play an active role in them (Little, 1990; Lassonde & Israel, 2009; Hargreaves & Connor, 2018; Lo, 2020). Lassonde and Israel (2009) suggested that there are two main types of collaborative study groups for teachers: school-based groups and school-university groups. School-based groups, as the name suggests, are formed

between colleagues working closely together, usually teaching at the same school or students that are the same grades or even professionals working in the same geographical areas (Lassonde & Israel, 2009). Either way, this type of groups are usually more focused on matters on local scales (Lassonde & Israel, 2009). School-university groups, on the other hand, usually consist of professors or experts at a university and school educators working on research for professional development (Lassonde & Israel, 2009). Since the personnel involved are from different backgrounds, the research scales are usually broader and wider and they can also examine topics from different angles (Lassonde & Israel, 2009).

Even though previous studies associated with teacher collaboration mentioned so far have been mainly about the professional relationships between teachers, it has also been studied with different emphases. One example is Davison's study (2006) on the different stages of collaboration based on teachers' willingness to work with others. Davison (2006) studied English teachers' attitudes towards collaborating with Subject teachers and Subject teachers' attitudes towards collaborating with English teachers at a school in Taiwan that uses English as the main language of instruction. Based on the findings, he proposed "five stages of increasing effectiveness in teacher collaboration" (Davison, 2006, p.466). The stages, from the least willing to cooperate to effectively collaborating with others, include "passive resistance, compliance, accommodation, convergence and some co-option" (Davison, 2006, p.466) which are measured by "attitude, effort, achievements and expectations of support" (Davison, 2006, p.466). Davison pointed out that even though the teachers studied are teaching at a well-equipped school with a large variety of hardware available for them to freely use and collaboration is strongly encouraged and supported by the staff at the school, teachers expressed different levels of willingness to work together (Davison, 2006). As a result, it is safe to conclude that from the findings of this study, the environment and available resources are not the only factors that influence teachers' willingness for collaboration.

Almost twenty years after Little's article (1990) was published, Hargreaves and Connor (2018) published their research about collaboration. Similar to what Little (1990) pointed out, Hargreaves and Connor (2018) also learned that

collaborations between teachers better students' learning outcomes and make teachers feel less alone. Hargreaves and Connor (2018) presented four types of collaboration that are determined by how much teachers trust each other and how precise the collaboration is (presented in **FIGURE 4**). The type of collaboration that requires teachers to have “high trust, high precision” (Hargreaves & Connor, 2018, p.5) is named as “Collaborative Professionalism” (Hargreaves & Connor, 2018, p.5). Of all types of collaboration introduced by Hargreaves and Connor (2018), this is the type that makes teachers work the closest together and support each other the fullest, similar to a close community. Low level of precision but high level of trusting each other is identified as “Informal Collaboration” (Hargreaves & Connor, 2018, p.5). Just like the name suggests, Informal Collaboration is relatively casual, similar to the informality of “storytelling and scanning” introduced by Little (1990). This type of collaboration happens frequently between teachers as it can make them feel supported and motivated but to what extent it improves their daily work remains unknown because it is difficult to measure (Little, 1990; Hargreaves & Connor, 2018). It is safe to say that “Contrived Collegiality” (Hargreaves & Connor, 2018, p.5) is the least effective form of collaboration as is it usually forced by higher authorities. Teachers do not usually voluntarily get involved in this kind of collaboration because even though they are formally collaborating with others, they can be quite suspicious of those they need to closely work with (Hargreaves & Connor, 2018). The unhealthiest form of collaboration between teachers is “No collaboration” (Hargreaves & Connor, 2018, p.5) because teachers do not feel a sense of security and are afraid of or even hostile towards their peers. In this kind of environment, even though teachers have to work together, they act like enemies (Hargreaves and Connor, 2018).

		Trust	
		Low	High
Precision	High	Contrived Collegiality	Collaborative Professionalism
	Low	No Collaboration	Informal Collaboration

FIGURE 4. Different types of collaboration (Hargreaves & Connor, 2018, p.5)

The most recently published study about teacher collaboration has retrieved four main methods of collaboration between language and content knowledge teachers (Lo, 2020). These methods include “theme-based collaboration, generic academic skills, genre-based collaboration and project-based learning” (Lo, 2020, p.39). When teachers possessing different fields of expertise select a theme and mutually work on it in their own teaching, they are practicing theme-based collaboration (Lo, 2020). Another way of collaborating is the mutual focus on developing students’ “generic academic skills” (Lo, 2020, p.38), such as training their abilities to read charts or use transitional terms cross curriculums. To practice “genre-based collaboration” (Lo, 2020, p.39), teachers involved use their own professional knowledge to identify and support the common features of what is taught in their separate fields and come up with methods to make them beneficial for delivering the highlights of those genres (Lo, 2020). Finally, collaborations can be based on “project-based learning” (Lo, 2020, p.39). With this type of learning, content knowledge teachers are the ones who equip students with the subject-specific knowledge they require and language teachers use their professional skills to help them produce the content they are asked of (Lo, 2020). Through conducting research on Subject teachers and English teachers, Lo (2020) unveiled some essential factors that influence the effectiveness of Cross Curricular Collaboration: the different structures of language and content knowledge curriculums and the significance of the roles each teacher plays in the collaboration (Lo, 2020). Firstly, it is important to understand that, at least in the context of Lo’s study (2020), the curriculum and schedule for content subject is clearer structured, which makes Subject teachers more focused on the speed of teaching so that all aspects of the content can be covered in time (Lo, 2020). On the opposite end, English teachers have a lot more space for personal interpretation on how to deliver the content because English is comparatively less structured in the curriculum (Lo, 2020). It is particularly important to pay attention to the fact that curriculum design varies from nation to nation or even from municipality to municipality; therefore, it is a conclusion that may significantly differ based on contexts. Another influencing factor is the significance of the roles teachers are convinced they play in the collaboration mainly because the level of it can highly affect how committed and hard-working they are (Lo, 2020). Thirdly, power relationships

could have an intense impact on Cross Curricular Collaboration (Atkins & Wallace, 2012; Lo, 2020). Collaboration comes in different forms and degrees; therefore, for instance, whether English teachers regard collaborating with Subject teachers as a gesture of assisting them or as working with them as a team member that share the same level of importance and impact will bring out different results (Lo, 2020). In addition, time management and the division of work are also the key influences of Cross Curricular Collaboration (Lo, 2020). Teachers involved in Cross Curricular Collaboration need to take teamwork seriously and remember that they are not working on their own (Lo, 2020). Especially since teachers already have heavy workloads and long teaching hours, if one puts all burdens of collaboration on their own shoulders instead of working on them with others, it might cause too much stress and eventually fail (Lo, 2020). The final factor of influence pointed out is “central policy and coordination” (Lo, 2020, p.89). Many participants in Lo’s study (2020) confessed that they barely initiated Cross Curricular Collaboration; instead, they have been waiting to be told by authorities before doing so because they are afraid of being refused by their peers. Since most teachers lack the motivation to voluntarily take part in any form of collaboration, this concept was a mutual finding in multiple studies (Little, 1990; Lassonde and Israel, 2009; Hargreaves & Connor, 2018).

4 DATA AND METHODS

4.1 Research Questions and Research Design

In order to gain a clear and in-depth understanding of the base for the bilingual policy from teachers' perspectives, the following research questions were constructed:

1. How do in-service secondary school English teachers and Subject teachers in Taiwan understand the implementation of the new bilingual policy?
2. How do English teachers and Subject teachers differ in their perceptions about the implementation of the bilingual policy?
3. From English teachers' and Subject teachers' perspectives, what is currently lacking to smoothly implement CLIL into the Taiwanese secondary school education system?

Qualitative interview study was used to gather the empirical data for throwing light on the starting point of implementing the bilingual policy in Taiwan (National Development Council, 2018; Cohen et al., 2018). The interviews were conducted with in-service English teachers and Subject teachers to learn about the issues studied from their perspectives (Freebody, 2003; Cohen et al., 2018). Qualitative research methods were chosen as they allow participants to share their own interpretations of the situations studied and share some elements that can otherwise not be retrieved or are limited in quantitative methods (Freebody, 2003; Cohen et al., 2018). Aiming at studying the pre-implementation stage of the bilingual policy in Taiwan from teachers' perspectives of an education level that was less studied in the past, secondary school English teachers and Subject teachers became the target participants. After the field and the interest area of research were located, the next step was to formulate the research questions (Cohen et al., 2018). The questions were designed so that they can be answered through opinions, knowledge and experiences presented in interviews with teachers that fit the previously set criteria (Cohen et al., 2018).

While designing the research questions, ethical issues, such as obtaining consent, recruiting participants and handling sensitive questions, were put into careful considerations (Oliver, 2010; Hammersley & Traianou, 2012; Tuckman & Harper, 2012; Cohen et al., 2018). After the interviews, the researcher analyzed the data through content analysis (Green et al., 2006; Flick, 2007; Elo & Kyngäs, 2008; Oliver, 2010; Moretti et al., 2011; Atkins & Wallace, 2012; Hammersley & Traianou, 2012; Cohen et al., 2018). The first research question is studied through an overview of teachers' thoughts and experiences and the second and third questions are investigated through comparing the needs English teachers and Subject teachers expressed in order to uncover how they differ (Tuckman & Harper, 2012; Cohen et al., 2018). The feature that separates the two groups of participants in order for them to be compared for the sake of this research is their different fields of expertise (Tuckman & Harper, 2012).

4.2 Participants

In order to collect data for the comparing the thoughts of English teachers and Subject teachers, five in-service secondary school English teachers and five Subject teachers were interviewed (Tuckman & Harper, 2012). The participating Subject teachers include Living Technology (生科), Guidance Activities (輔導活動), Health Education (健康), Biology (生物) and Civics Education (公民) teachers and one of them is currently being trained to become a bilingual teacher. Of the ten participants, one holds a PhD degree, four teachers have master's degrees and five of them hold bachelor's degrees as their highest degree. All of them received Teacher Education in Taiwan and even for those who studied at the English Department, Mandarin Chinese was used as the main language of instruction for the courses provided by Teacher Education Centers. Only one Subject teacher received a one-semester-long teaching-related training in English from when studying for a master's degree abroad and the rest of them never received teaching-related training in English. On the other hand, all English teachers expressed to have teaching-related training in English, whether in the form of a course or the whole degree. The duration of such training for English teachers lasted one semester to two years. The average duration of Pre-service Teacher Education, including pre-service

practical training if applicable, for those participating Subject teachers is two point eight years and English teachers studied four years on average before they started teaching. The length of Pre-service Teacher Education could be affected by the change of regulation about mandatory pre-service practical training over the past years. In November 1995, the Teacher Act started to require pre-service training to include one full year of paid pre-service practical education training which usually lasted from July to June the following year (Ministry of Education, 1995). Starting from August 2003, instead of one year, according to the Enforcement Rules of Teacher Education Act that was executed in 2003, the now unpaid practical education training only lasts six months and requires pre-service teachers to pay what is equivalent of the fee for four credits at universities. In other words, if teachers went through the training process before 1995, they were not required to undergo pre-service practical training. Hence, their training time is shorter than those who were trained later on. The Subject teachers who participated have an average teaching experience of 13.3 years and English teachers have been teaching for an average of 9.2 years. As for the gender of the participants, one is male and the rest of them are females. All of them are currently teaching at secondary schools in Taipei, Taiwan. The details of participants are presented in **TABLE 1**.

TABLE 1. Background information of the participants

	Subject	Highest degree	Teaching experiences	Current teaching level
Et1	English	PhD	Over 20 years	8 th and 9 th grade
Et2	English	Master's	21 years	9 th grade
Et3	English	Bachelor's	1.5 years	7 th and 8 th grade
Et4	English	Bachelor's	1.5 years	10 th grade
Et5	English	Master's	3 years	7 th and 8 th grade
St1	Guidance Activities	Bachelor's	over 20 years	7 th grade
St2	Living Technology	Master's	5 years	8 th grade
St3	Health Education	Bachelor's (currently being trained to be a bilingual teacher)	1.5 years	7 th grade
St4	Biology	Bachelor's	0.5 years	7 th grade
St5	Civic rights	Master's	26 years	8 th and 9 th grade

4.3 Data Gathering

In order to learn how in-service teachers interpret the current situation of implementing CLIL into the secondary school settings in Taiwan, the empirical data for this research was gathered through one-on-one interviews with five Subject teachers and five English teachers (Cohen et al., 2018). After deciding the area of research interest and designing the interview guide, researchers ought to decide the sampling of the participants, namely since not everyone who fits the criteria of participants can be interviewed for this research, the researcher needed to choose the smaller group people of people that are able to provide an overview of the bigger group of people that fit the criteria (Auerbach & Silverstein, 2003; Cohen et al., 2018). For this particular research, the researcher performed “typical-case sampling” (Cohen et al., 2018, p.307) and asked a small group of people to present an understanding of the general thoughts of secondary school English teachers and Subject teachers. The researcher started the recruitment process of participants early so that if some of them eventually decide to drop out, there will be time to find other participants (Cohen et al., 2018). Once the interview guide was ready for being used for data collection, the researcher conducted a pilot interview with a former colleague working as an educator and that became the base on which the interview questions were adjusted (Schreier, 2012; Elo et al., 2014). Some participants were recruited through the help of the pilot interviewee and the researcher also contacted potential participants met through education-related events or previous work relationships (cover letter presented in Appendix 1 and Appendix 2). Despite the fact that working on a project as an “insider” (Atkins & Wallace, 2012, p.48) can be more convenient and easier as the researcher and participants already know each other, participants might be more willing to open up to the researcher, it can also be challenging. Some concerns include relationship borderlines, classification and benefit conflicts and some might also doubt the trustworthiness of the report as it is conducted from the insider’s perspectives (Atkins & Wallace, 2012). Aiming at avoiding the possible bias and lack of objectivity, only those who have not worked in the same institutions or on the same projects as the researcher for at least two years were chosen as participants. Voluntary participation was emphasized to each participant;

therefore, of the fifteen teachers who were contacted, ten ended up participating. The researcher set appointments with those who are willing to be interviewed and those who refused were kindly thanked and no reasons were forced to be given. All participants in this research are in-service teachers, currently teaching at secondary schools in Taipei City, Taiwan. To show respect to participants, all of them were informed that the interviews will be conducted online before they were able to accept or deny the invitation because it gives people who do not feel secure enough to share their thoughts through online platforms a chance not to participate without the pressure to (Oliver, 2010; Tuckman & Harper, 2012; Cohen et al., 2018). During the arrangement process, the researcher also made sure to ask teachers whether they would be comfortable to be recorded during the interviews as the audio recordings are important for the analysis process (Oliver, 2010; Hammersley & Traianou, 2012; Tuckman & Harper, 2012; Cohen et al., 2018). All of them were very understanding of why recording is necessary and they all gave oral consents to be recorded only on tape or in video formats (Oliver, 2010; Tuckman & Harper, 2012; Cohen et al., 2018). Before the interviews, each participant was sent a reminder and a link with instructions to join the interviews. Some concerns participants might have about identity protection is that when answering interview questions, unlike answering survey questions, researchers are fully aware of their identities and the small school contexts also brought the difficulty of protecting participants' personal information to another level (Atkins & Wallace, 2012; Cohen et al., 2018). In relation to these concerns, it was clearly pointed out that interviews are for research purposes and participants' identities are completely protected with name codes and only the necessary information about them will appear in the final report (Oliver, 2010; Atkins & Wallace, 2012; Cohen et al., 2018). When conducting interviews, "power relationships" (Atkins & Wallace, 2012, p.87) caused by the overpowering impression of the hosting researchers can make the participants feel passive (Atkins & Wallis, 2012). In order to prevent this from happening, giving participants appropriate space to make certain decisions in the research can be helpful (Atkins & Wallis, 2012). As a result, participants were given the most power to decide the time, the location they would like to be at and the device they are going to use when the interviews are conducted and even though most interviews were conducted through Zoom, some teachers

expressed their preference for Line and therefore Line was chosen over Zoom for their interviews. Even though the impact of these elements might not be as influential as other more significant decisions, participants might feel more equal and comfortable and therefore more willing to open up about their opinions and experiences (Oliver, 2010; Hammersley & Traianou, 2012; Tuckman & Harper, 2012; Cohen et al., 2018). Because most teachers expressed lack of confidence in their English skills, eight interviews were conducted in Mandarin Chinese, which is both the researcher's and the participants' native language, and two of them were conducted in full English because the interviewees were able to understand and use English fluently. During the interviews, participants were asked about their backgrounds, their current teaching situations, their understanding of the new bilingual policy, professional development, Content and Language Integrated Learning (CLIL) and thoughts about and experiences with Cross-Curricular Collaboration and their sense of well-being was given the first priority (interview guide presented as Appendix 3). All interviews were started with chitchats and short talks that acted as ice breakers and warming up sessions to ensure a cheerful and comfortable atmosphere for further conversations that felt like sharing personal thoughts with a friend, not like being put on a trial (Atkins & Wallace, 2012; Cohen et al., 2018). The researcher treated participants as equals and made sure to preserve their humanity by allowing them to freely express themselves in their own pace without any limitations or restrictions about the content of their answers and time (Oliver, 2010; Hammersley & Traianou, 2012). They were also encouraged to answer each question according to their own understandings and to express their opinions based on personal experiences and interpretations to provide an insight of the current situation (Packer, 2011; Atkins & Wallis, 2016). In addition, participants were constantly reminded that if they feel the mildest sense of discomfort, the interviews can be terminated without any conditions or consequences (Oliver, 2010; Hammersley & Traianou, 2012). For the sake of this research, the researcher asked certain questions about the bilingual policy that could potentially be connected to one's political view, which can be quite sensitive to some (Hammersley & Traianou, 2012). Therefore, the researcher attempted to make participants feel more comfortable by stressing that they do not necessarily need to tell whether they are against it or for it, but merely share

their understanding of it. Most participants were more willing to open up about this question afterwards, presumably because the researcher acted in a sensitive and respectful manner and expressed understanding of their possible doubt to answer the question (Hammersley & Traianou, 2012). The interviews lasted forty-five minutes to approximately one hour and forty minutes. Considering the reliability, trustworthiness and validity, the participants of this research are all adults with solid teaching experiences, pedagogical training and qualifications for teaching at secondary schools in Taiwan (Atkins & Wallis, 2012). They have no conflicts of benefits with the researcher or the research itself; therefore, it is safe to conclude that their responses to the interview questions are valid, trustworthy and hold a certain degree of reliability (Atkins & Wallis, 2012). With the cameras of the interviewer and interviewees on, the outcomes of online interviews are close to those resulting from face-to-face interviews (Cohen et al., 2018). However, the issue with technology is that sometimes, there can be some inevitable technical issues that are not necessarily able to be fixed (Cohen et al., 2018). Some technical issues that occurred during the interviews include short-term loss of audio connections, occasional loud echoes and poor internet connections (Cohen et al., 2018). Most of these problems were able to be solved soon with only one interview having to be rescheduled due to the loss of audio from the interviewee's end. The interview was rescheduled to the same time the following day and the previously emerged difficulties automatically disappeared. Another problem that had to be dealt with was the time differences. At the time of gathering the data, the researcher was in Finland and participants were physically in Taiwan, making the six-hour time difference an issue to be put into consideration when arranging the time for interviews. To match the schedule of teachers, interviews were conducted on weekends or after school hours, and due to the time differences, they were conducted in the afternoon or at night, Taiwan time, and there were no major related problems detected. At the end of the data gathering process, the researcher transcribed the interviews and translated the data manually into English for conducting content analysis. The translated data was proofread and the recordings were re-listened to multiple times to ensure the high quality, accuracy and reliability. After the process was completed, the transcript in size 12 Times New Roman font and 1.5 line space ended up to be

63 pages long. In order to directly find the answers to the research questions from the gathered data, the researcher only focused on the oral answers of the participants and other elements, such as body language and pauses, were not analyzed.

4.4 Data Analysis

The qualitative data gathered for this particular research was analysed through qualitative content analysis because it reveals the meanings behind the answers (Tesch, 1990; Newby, 2014). Qualitative analysis can be regarded as “the process of making sense of narrative data” (Tesch, 1990, p.4) which, unlike analyzing quantitative data that follows certain formulas, can be quite abstract. As a result, interpretations of qualitative research results rely heavily on the interpretation of the researcher, the “principal research instrument” (Cohen et al., 2018, p.643), the context, the environment, involved personnel and the method being used to analyze the information gathered (Tesch, 1990). Content analysis was chosen as the analytical tool for the research mainly because it views words as straightforward and clear means of communication that directly express people’s opinions (Green et al., 2006). During interviews, participants express themselves through daily-life conversations and words are some of the main resources of information gathered through those meaningful talks. Therefore, content analysis was used to identify those patterns in the answers so that these units of analysis can be coded into different categories, calculated and presented in tables (Green et al., 2006; Flick, 2007). For this particular research, the units of analysis of this research are sentences and phrases that frame similar meanings, for instance, “...have added a lot of related courses at Teacher Education Centers” and “...recruited quite a few teachers and are currently training them” share the same code because they indicate the same theme (Green et al., 2006; Flick, 2007; Moretti et al., 2011). The coding process was completed by the researcher manually by laying out all the units of analysis and categorizing them into several categories and sub-categories (Green et al., 2006; Flick, 2007; Moretti et al., 2011). The coding process for each research question was conducted six times by the researcher. The first three times were to identify the main categories by moving around the common themes and the

sub-categories were identified two times, and finally, in the last round of analysis, the results were finalized. Currently, most countries that have implemented bilingual education as a national policy do it as a result of their unique colonial or ethnic backgrounds, such as the cases of Canada or Singapore (Lee & Phua, 2020; Mukan et al, 2017). Taiwan is a rare case; therefore, inductive methods were used for the research questions to analyze the data gathered for this particular research for an understanding of the current situation (Elo & Kyngäs, 2008; Atkins & Wallace, 2012; Cohen et al., 2018). The coding and categorizing processes were completed for answering all three research questions but they were interpreted differently. For the first research question, the understanding of teachers were viewed as a whole and since the thoughts of English teachers and Subject teachers need to be studied and compared, quotes from them were viewed separately to reveal how they differ (Tuckman & Harper, 2012; Cohen et al., 2018). Finally, for the third research question, the quotes were first analyzed on a wider scale and then English teachers' and Subject teachers' views were studied separately and compared (Tuckman & Harper, 2012).

5 FINDINGS

5.1 Teachers' Understanding of the Implementation of the Bilingual Policy in Taiwan

To find answers to the first research question, the researcher conducted content analysis inductively through categorizing and coding quotes of similar meanings and identified three main categories and several sub-categories (shown in **TABLE 2**).

TABLE 2. Frequencies of the subcategories and main categories of teachers' understanding of the bilingual policy

Teachers' knowledge about...	Number of quotations
	Total (N = 10) f(%)
<i>the background of the policy</i>	16 (35.6)
the base	2 (4.45)
the purpose	14 (31.15)
<i>the execution plan</i>	24 (53.3)
in the education field in general	4 (8.8)
expectations and impacts on teachers	20 (44.5)
<i>the actions taken by the government so far</i>	5 (11.1)
Materials	2 (4.44)
Teacher Education	2 (4.44)
experimental schools	1 (2.22)
The numbers of quotations	45

As it is shown in **TABLE 2**, three main categories related to Taiwanese secondary school teachers' understanding of the bilingual policy include the background of the policy, the execution plan and the actions taken by the government so far. About the background of the policy ($f = 16$), some teachers pointed out that bilingual education is not an entirely new policy in Taiwan. One teacher was particularly concerned that the government is about to implement the policy merely for copying what other countries have done and expect the same or even better outcomes. In other words, teachers urge policymakers to

put the context into consideration before fully implementing the bilingual policy. Some examples of such worries are presented below.

This policy was first introduced by the current vice-president William Lai Ching-te (賴清德). He was already promoting this in Tainan when he was the mayor there. He has been going to Singapore to learn about their way of integrating the bilingual policy into their education system. (St5)

If we are looking to be like Singapore, our cultural backgrounds are very different, so I think it will be misleading if the government implements this bilingual policy just because another country is doing it. (Et2)

The most quotes related to the background of the policy are about the purpose of implementing the bilingual policy ($f=14$). The following statements are examples of such indications.

I know that the policy will expect subject teachers to teach in English to make students feel comfortable to use English in their daily lives so that English can become an official language in Taiwan. (Et5)

I think the government is using this policy to push the society to face using English. I believe the government is aware that it is impossible to reach this goal but through this policy, more people will be willing to promote using English. (St4)

In the interviews, teachers shared their understanding of the execution plan related to the field of education in general ($f = 4$) and the expectations and impacts directly on teachers ($f = 20$). About the general plan, teachers indicated specific details about the implementation, such as the time, geographical areas of where this policy will be implemented first and the affected subjects. Some quotes about the details of implementation are presented below.

Starting from the next school year, at least in Taipei City, art-related subjects, including living technology, would have to be taught in English. The most concerning part of this policy is that teachers are notified that they should teach in English, but they were not given information on how to achieve this goal. (St2)

...the bilingual policy is only promoted at school. Therefore, how to make learning English related to students' daily lives needs to be discussed. (St5)

It is worth mentioning that all teachers interviewed stressed the role English plays in the bilingual education system. Both English and Subject teachers believe that Subject Teachers are the targeted teachers that the policy will have an impact on mainly because they do not possess the required language ability

that is the main focus of the bilingual policy. In other words, because English teachers have the required language skills, many teachers believe that the policy has not much or even nothing to do with them. The mutual agreement amongst teachers is that the bilingual policy will make English the main language of instruction; however, there are some disagreements on the amount of English expected to be used. Some teachers understand that after the implementation of the bilingual policy, English should be the only language used in classrooms while others mentioned the percentage, such as 1/8 of class time. A few teachers even talked about specific types of English integration methods. The quotes below show the different understandings about how much English teachers will be expected to use when teaching.

There will be two major ways to integrate English: Incorporated English (融入式) (100% full English) and English Immersion (沉浸式) (1% ~ 25%). (St1)

I know that the government is asking teachers to use English in 1/8 of the whole teaching time. For instance, for classes that last 45 minutes, teachers are only required to use English for about five minutes per period. (St5)

I think the policy wants subject teachers to teach in English. (Et1)

The third category, actions the government has taken to ensure a smoother implementation of the bilingual policy includes adding related Teacher Education courses ($f = 2$), designing teaching materials ($f = 2$) and establishing experimental schools ($f = 1$). There are indications about pre and in-service Teacher Education targeted at the bilingual policy. Teachers are convinced that the government has a clear plan for the implementation and is working hard on designing courses to cultivate sufficient teachers with the required fields of expertise. In the following quotes, teachers described their understanding of the actions the government has taken so far related to Teacher Education.

But when I was studying at the university, I had never heard about bilingual teacher training, and I believe that the government has seen this gap, so they have added a lot of related courses at Teacher Education Centers for teachers who did not receive bilingual training when they were trained to become teachers. (Et2)

They recruited quite a few teachers and are currently training them, so we should have enough teachers by 2030. (Et4)

As for the materials needed for the implementation of the bilingual policy, it is believed that the government and major textbook publishers are studying and designing suitable context-based materials that will integrate local matters. Another action that has been taken is that there are experimental schools established in every district in Taipei City. In those schools, some amount of class time is dedicated to teaching in English and that the policy and implementation methods can be adjusted based on them before the nationwide implementation. The following example suggests related concepts.

Nowadays, Taipei City government is designing the bilingual teaching materials and the main publishing companies for textbooks, such as 康軒 (Kang Hsuan Educational Publishing Group) and 翰林 (Hanlin Publishing Co.) are also working on it. (St5)

5.2 English Teachers' and Subject Teachers' Perceptions about the Implementation of the Bilingual Policy in Taiwan

The second research question concerns the differences in English teachers' and Subject teachers' perceptions of the implementation of the bilingual policy in Taiwan. In order to answer the question, the transcribed interviews were coded, categorized and calculated (presented in **TABLE 3**).

TABLE 3. Frequencies of the subcategories and main categories of English teachers' and Subject teachers' understanding of the bilingual policy

Teachers' knowledge about...	Number of quotations	
	English teachers (N = 5) f(%)	Subject teachers (N = 5) f(%)
<i>the background of the policy</i>	7 (33.3)	9 (37.5)
the base	0 (0)	2 (8.3)
the purpose	7 (33.3)	7 (29.2)
<i>the execution plan</i>	11 (52.4)	13 (54.2)
in the education field in general	0 (0)	4 (16.7)
expectations and impacts on teachers	11 (52.4)	9 (37.5)
<i>the actions taken by the government so far</i>	3 (14.3)	2 (8.3)
Materials	0 (0)	2 (8.3)
Teacher Education	2 (9.5)	0 (0)
experimental schools	1 (4.8)	0 (0)
The numbers of quotations	21	24

The frequency of each category discussed by English teachers and Subject teachers are quite similar, making the execution plan the most frequently mentioned, the background of the policy the second most talked about and the actions taken by the government so far the least discussed category of all. Even though the orders of the frequency of the categories are the same, different types of teachers indicate different focuses. Subject teachers slightly focused more ($f = 2$) on the base of the policy while English teachers did not mention it at all ($f = 0$). Subject teachers pointed out the details of the base of the implementation, such as that the bilingual policy was first introduced to Taiwan in Tainan, while English teachers did not particularly focus on such information about the base of the implementation. Subject teachers and English teachers paid attention to the purpose of the policy quite equally with Subject teachers more concerned that the government will simply copy the bilingual policy from other nations. As for the execution plans, Subject teachers were more focused on the execution details ($f = 4$) as they pointed out the specific time, geographical areas and subjects that will be affected by the bilingual policy. The following statements are related to such details.

Starting from the next school year, at least in Taipei City, art-related subjects, ...would have to be taught in English. (St2)

...the bilingual policy is only promoted at school. (St5)

English teachers, on the other hand, were more concerned about the expectations and impacts on teachers, including the main language of instruction, the specific expectations of teachers and the type of teachers that will be affected by the policy. Some solid examples are presented below.

I believe that the government wants all non-language subjects to be taught in English. For example, use English to teach Arts and Home Economics. (Et2)

English teachers are expected to design content knowledge curriculum for the whole semester. (Et5)

Even though Subject teachers also paid attention to the language of instruction, they were focused on the details of how much and how the target language is expected to be delivered. Such details were a lot less mentioned by English teachers. Some quotes of Subject teachers are displayed below.

I know that the government is asking teachers to use English in 1/8 of the whole teaching time. For instance, for classes that last 45 minutes, teachers are only required to use English for about five minutes per period. (St5)

There are two main types of English lessons expected in classrooms: Incorporated English (融入式) (100% full English) and English Immersion (沉浸式) (1% ~ 25%). (St1)

Both types of teachers reported knowledge about the actions the government has taken for the bilingual policy so far with slightly different focuses. English teachers focused more on Teacher Education ($f = 2$) and experimental schools ($f = 1$) while Subject teachers paid more attention to the teaching materials, such as textbooks ($f = 2$). Even with slight differences in perceptions, teachers seem to be quite confident as they were able to provide solid examples of the actions the government is taking without showing concerns. These quotes represent related perceptions and depict the different focuses of English teachers and Subject teachers.

They (Taipei City government and publishers) adjust international textbooks to fit the needs for the bilingual policy of Taiwan, such as adding some local elements to them. (St5)

As I understand it, every district in Taipei City has one elementary school and one secondary school that are experimenting with bilingual education. One third to two third of the courses in those schools are taught in English. (Et4)

It is worth discussing that the answers to this research question indicate a gap between the understanding of teachers and the information in *Blueprint for Developing Taiwan into a Bilingual Nation by 2030* (National Development Council, 2018). In fact, in opposition to the indicated worries of teachers about simply duplicating the bilingual policy from other nations without considering the Taiwanese context, there is a great deal of emphasis on the local contexts not only on the national level but also that local governments ought to design related policies “to match the particularities of their local culture and industries” (National Development Council, 2018, p.8) in the blueprint. Related to the execution plan, Subject teachers shared their understanding on its impact on the general level in the education field and on the expectations and impacts it has directly on teachers, such as the language of instruction and the percentage of its expected use in classrooms. English teachers, however, only

mentioned its influences on teachers. There are no indications of which subjects will be first affected by the bilingual policy in the blueprint which is slightly different from what teachers understand. About specific teaching approaches, the blueprint only depicted a promotion of CLIL in content subject classrooms at secondary schools and that English teachers should implement “TEIE (Teaching English in English)” (National Development Council, 2018, p.13) to promote using English daily. In other words, the blueprint only included the different teaching methods to be used by teachers for the implementation of the bilingual policy, not the specific subjects that will be affected. Besides, impressions about the bilingual policy, such as it is “only promoted at school,” can be indicators that teachers do not feel or witness the outcome or promotion of the bilingual policy in everyday settings outside of schools. Most comments on the execution plan indicated that Subject teachers are the main target of the bilingual policy; therefore, this could be some of the reasons why Subject teachers indicated more understandings of the details of general and targeted plans of execution. Similarly, there are no significant differences in the percentages of quotes from English teachers and Subject teachers related to the actions taken by the government; however, the focuses are yet again slightly different. English teachers pay more attention to the practical preparation aspect of the implementation plan, including Teacher Education and experimental schools. On the other hand, Subject teachers emphasize the development of materials that promote the bilingual policy more. Despite slightly differing in the emphases presented in the sub-categories identified, the percentages of quotes categorized under the main categories are quite similar between both types of teachers.

5.3 Problems in Implementation of CLIL in Taiwan Identified by the Teachers

The responses to the research question concerning the needs for a smooth implementation of CLIL in the Taiwanese education system are coded, categorized and presented in **TABLE 4**.

TABLE 4. Frequencies of the subcategories and main categories of the problems of implementing CLIL into the Taiwanese education system identified by English teachers' and Subject teachers'

The problem of implementing CLIL in Taiwan identified include...	Number of quotations		
	English teachers (N = 5) f(%)	Subject teachers (N = 5) f(%)	Total (N = 10) f(%)
<i>Teachers' professional skills and training needs</i>	10 (40)	18 (54.5)	28 (48.3)
language using and teaching skills	5 (20)	11 (33.3)	16 (27.6)
content knowledge	1 (4)	2 (6.1)	3 (5.2)
time management skills	0 (0)	3 (9)	3 (5.2)
CLIL-specific teaching approaches	4 (16)	2 (6.1)	6 (10.3)
<i>High expectations of academic performances</i>	3 (12)	6 (18.2)	9 (15.5)
heavy teacher workload	0 (0)	6 (18.2)	6 (10.3)
little chances for real life English usage	3 (12)	0 (0)	3 (5.2)
<i>Students' noncooperation</i>	6 (24)	7 (21.2)	13 (22.4)
lack of language skills	5 (20)	5 (15.2)	10 (17.2)
unwillingness	1 (4)	2 (6)	3 (5.2)
<i>Careless planning</i>	6 (24)	2 (6.1)	8 (13.8)
lack of time	4 (16)	0 (0)	5 (8.6)
insufficient context consideration	2 (8)	2 (6.1)	3 (5.2)
The numbers of quotations	25	33	58

For a smoother implementation of CLIL as a teaching method for the bilingual policy, both English teachers ($f = 10$) and Subject teachers ($f = 18$) suggested the lacking of related Teacher Education, making it the most required area for support. English teachers believe that language skills are lacking the most for a smooth implementation ($f = 5$). Subject teachers seem to have more concerns about the acquisition of English skills enough for them to deliver content knowledge to students in English and simultaneously teach the language ($f = 11$). They expressed that they lack English conversation skills and many of them stated that they lack the skills for teaching content-related knowledge in English and they also do not master English enough to teach it. Aside from English skills, Subject teachers also mentioned a shortage of time management skills ($f = 3$) to balance the teaching of content knowledge and language skills for CLIL as they are not trained for it. English teachers did not mention the requirement for time management skills ($f = 0$). However, they expressed more needs for training CLIL-specific teaching approaches ($f = 4$) than Subject

teachers ($f = 2$). Interestingly, Subject teachers feel they lack training for content knowledge if the teaching method and language of instruction is to be changed ($f = 2$) while English teachers seem to be less concerned with this issue ($f = 1$). Below are some of the examples expressed by teachers about their needs for implementing CLIL into their teaching more smoothly.

There is a need for three kinds of training. One kind is English conversation; how to deliver daily conversations in English. Another kind of training is knowledge-related. ... there is a need for knowledge-related English and how to explain specific skills in English. I also need knowledge for teaching English. (St2)

How to balance the time spent on teaching English and content language is one issue and, especially for subject teachers, the knowledge to use and teach English might also be what is lacking. (St3)

The government has to design some sort of courses or programs for those non-English teachers to at least develop their English abilities to a certain level. It is not something that can be taken care of during a short period of time. (Et3)

The most significant difference between the focuses of English teachers and Subject teachers is related to the high expectations of academic performances that make implementing CLIL difficult. Subject teachers stress that the high expectations of academic performances lead to heavy workloads of teachers ($f = 6$) and English teachers emphasize the lack of chances for using English in real-life settings due to it ($f = 3$). The researcher identified the following quotes to be related to such issues.

To implement CLIL, teachers need an environment for professional development but the problem is time. Secondary school teachers need to take students' academic performance into account because they are facing exams that will make an impact on their futures. As a result, teachers spend most of their time and energy on taking care of students' learning outcomes and daily life at school. Therefore, teachers do not really have the time and efforts for further developing themselves. (St5)

Schools should arrange more opportunities for students to use English. ...students can interact with foreigners. This will raise students' interests in English and show them the practical aspect of English. Aside from English speech contests and singing contests, real-life interactions with foreigners are helpful for students really use the language in daily life. But this is very hard now because students' academic outcomes are very important and teachers really need to focus on that. (Et1)

It is worth highlighting that Subject teachers ($f = 5$) and English teachers ($f = 5$) share similar concerns about the levels of students' English skills. In order to make CLIL successful and efficient in any education setting, language skills on both teachers' and students' ends are essential; however, from personal experiences, teachers have learned that students' English levels might cause CLIL to fail in the Taiwanese education system. Below are some of the worries expressed by teachers.

Some students do not even know all 26 letters; others might not have a broad vocabulary base. Also, it might be difficult for them learn in English as they might not have enough knowledge in English. (St1).

This kind of teaching approach is not for everyone; only those who are very interested in English or have outstanding English proficiency are able to learn well and there are not many of them. ... If English and content subjects are integrated, most students will not be able to learn content knowledge anymore because they do not understand English well enough. (Et1)

Aside from lacking English skills, Subject teachers ($f = 2$) also discussed how students are not willing to adjust themselves for the changes caused by the bilingual policy. English teachers have expressed less worried about this issue ($f = 1$).

...it is common for Taiwanese to hide themselves and let others do the work because they are less willing to leave their comfort zones. Students are less motivated to fight and work hard for change. (St5)

The most remarkable difference in the focuses of English teachers and Subject teachers is that quite a few English teachers ($f = 6$) emphasized that implementing CLIL lacks careful planning while Subject teachers mentioned related issues a lot less ($f = 2$). The main related themes include the time and contexts that need to be put into careful consideration. English teachers expressed that the insufficiency for implementing CLIL is time. In other words, CLIL is to be implemented in a rush. Most of them expressed that it takes a long time to train CLIL teachers; therefore, the currently planned timeframe that expects CLIL to be implemented by 2030 is too short, as stated in the quotes below.

It takes a long time to train teachers who have sufficient knowledge for both. ...I really do not think nine years is enough for implementing CLIL. (Et1)

I believe it can take up to ten years, longer than medical school, to train a teacher with content knowledge and English skills. Therefore, 2030 is too soon for fully implementing CLIL. (Et4)

Some teachers, especially English teachers, mentioned the importance of careful planning based on the context of implementing CLIL because language base and other elements may also determine whether CLIL suits the Taiwanese context.

...the problem with the Taiwanese education system is that people tend to mimic others. They do not always consider the background, culture, time and other factors behind the different teaching approaches or educational reforms of other countries before implementing what they saw into the Taiwanese education system. CLIL might not be suitable for the Taiwanese education system for many reasons. (Et4)

CLIL is easier implemented in European countries. First, students there have probably been growing up in bilingual environments. Second, their mother tongue and English are more likely to be from the same or similar language families. (St5)

As implied in the answers to the third research question, English teachers and Subject teachers suggested different needs for implementing CLIL smoothly. Current in-service Subject teachers are expected to have more content knowledge than English language skills as they were not trained to teach in English at the time they were trained to become teachers. Therefore, it is interesting, even surprising, that English teachers also implied the need for English skills. According to *Blueprint for Developing Taiwan into a Bilingual Nation by 2030*, instead of CLIL, secondary school English teachers should be able to use the teaching approach “TEIE (Teaching English in English)” (National Development Council, 2018, p.13) to teach; however, some English teachers do not feel confident enough to do so. This could be caused by the fact that English teachers are not used to teaching in full English. During the interviews, teachers were asked to estimate the percentage of English used in their classrooms. **TABLE 5** presents that even though English teachers significantly use more English in classrooms compared to Subject teachers, there is still a large gap between the full English classes that the government is

aiming at, which corresponds to the need for English teachers to also be trained for the bilingual policy (Department of Teacher and Art Education, 2018). This concept is clashing with the statements some teachers' made, claiming that the bilingual policy "has nothing to do with English teachers."

TABLE 5. Percentage of English Used in Content Subject and English Classrooms

Teachers	St1	St2	St3	St4	St5
Percentage of English used in classrooms	10%	0%	<1%	up to 70%	<1%
Teachers	Et1	Et2	Et3	Et4	Et5
Percentage of English used in classrooms	70%	40% ~ 50%	<20%	50%	30%

In addition, English teachers brought up needs for CLIL-specific teaching approaches as the second most needed support and Subject teachers expressed the need for training about time management skills in classrooms as an urgent need. Some of them shared that they feel confused about how to balance class time spent on teaching content knowledge and English language. Previous research has concluded that Taiwanese teachers have some of the highest burnout rates in Asia, which is already remarkably higher than those in most parts of the world (Chang, 2009). As a result of this high burnout rate and that *Blueprint for Developing Taiwan into a Bilingual Nation by 2030* has assigned Subject teachers to implement CLIL, they have expressed that the current workload is too heavy for them to simultaneously prepare themselves for it (National Development Council, 2018). Whereas English teachers, experts in language teaching, pay more attention to the lack of opportunities for students to actually practice the language skills real-life situations at schools as the focus is still on academic performances. Moreover, a significant number of English teachers have indicated that the full implementation of CLIL in content subject classrooms requires more time. This could be the result of the long training English teachers went through when being trained to become English teachers and now that content knowledge teachers, teachers who were not specifically trained to master English or use the language to teach, need to teach in English, English teachers are aware of the hard work and level of

difficulty to achieve that goal. In other words, English teachers indicated a stronger belief that in order to smoothly implement CLIL, more careful and thorough planning is required.

6 CONCLUSION AND RECOMMENDATIONS

This qualitative research aims at examining Taiwanese secondary school Subject teachers' and English teachers' understanding of the bilingual policy, how the perceptions of the two types of teachers differ and, from both types of teachers' perspectives, the needs for a smoother implementation of CLIL into the Taiwanese education system as a part of the bilingual policy through inductive content analysis.

The first two research questions uncovered teachers' understanding of the bilingual policy and how the perceptions of English teachers and Subject teachers differ. Teachers' understandings are categorized as, in the order of the frequency, the execution plan, the background of the policy and the actions taken by the government so far. The data gathered for this particular research revealed subtle differences in the areas of emphasis between English teachers and Subject teachers. Subject teachers are more aware of the base of the policy while English teachers did not mention related matters. Both types of teachers provided knowledge on the purpose of the implementation of the bilingual policy but Subject teachers are more worried that the Taiwanese context would not be considered when the implementation of the bilingual policy was designed. About the execution plan, Subject teachers are able to share knowledge about the details of implementation, such as the time and impacted subjects. English teachers, on the other hand, focus more on the expectations and impacts it has directly on teachers. About the background of the policy, both English teachers and Subject teachers talked about the reasons for implementation but Subject teachers indicated more understanding of the base of the background of the bilingual policy. Some of the actions taken by the government so far include designing related materials, Teacher Education and

experimental schools. Subject teachers have more knowledge about the former and English teachers are more focused on the latter two.

Studying the needs for smoothly implementing CLIL is crucial for the bilingual policy as it is one of the designated teaching methods stated in *Blueprint for Developing Taiwan into a Bilingual Nation by 2030* (National Development Council, 2018). Interestingly, the most commonly discussed needs expressed by the participants of this research are related to teachers' professional skills and they are similar to some of the findings in previous studies (Sylvén, 2013; Pérez Cañado, 2018; Pons Seguí, 2019). The needs related to the professional skills are English language using and teaching skills, content knowledge, CLIL-specific skills and skills for time management. Their needs are almost identical to the needs expressed by teachers in other contexts, suggesting that they are quite universal and impacts contexts of CLIL implementation has on them are little (Cammarata & Tedick, 2012; Sylvén, 2013; Pérez Cañado, 2018; Pons Seguí, 2019; Lo, 2020). Aside from needing support with professional skills, students' cooperation, adjusting the current high expectations of academic performances and careful planning are also required for implementing CLIL smoothly. These elements, however, are less mentioned in previous related studies (Cammarata & Tedick, 2012; Sylvén, 2013; Pérez Cañado, 2018; Pons Seguí, 2019; Lo, 2020).

When designing the research, trustworthiness, reliability and validity of the data and analysis and ethics of the data gathering process were also put into careful consideration to ensure valuable and ethical information and results. For studies to be considered high quality, methods and outcomes have to stand the test of certain principles (Auerbach & Silverstein, 2003; Schreier, 2012; Riffe et al., 2014). Unlike quantitative methods that follow clear scientific rules, making sure that the scale used to analyze qualitative data is reliable is allowing science to be involved in the studies (Riffe et al., 2014). To better the level of trustworthiness, Elo and colleagues (2014) have come up with a list of different questions researchers need to ask themselves at different stages of their research process. Therefore, throughout the whole process of conducting this research, the researcher has been self-examining with these questions (Elo et al, 2014). The list of questions were the most helpful when it reminded the researcher of the importance of conducting a pilot interview based on which the

interview guide was slightly adjusted before starting the official process of data collection (Elo et al., 2014). To ensure that results are trustworthy, researchers of qualitative research are expected to identify the categories of the research data at the beginning of the analysis process and prove that it was completed with sufficient scientific support and interpreted carefully and meaningfully (Schreier, 2012; Riffe et al., 2014). It is also believed to be crucial to check the results twice and if both times indicate similar or preferably the same results, the scales are proven to be reliable (Auerbach & Silverstein, 2003). For this particular study, the researcher studied a great number of previous studies and theories with care then coded, categorized and calculated the units of analysis and to test the reliability of the results, the researcher repeated the coding process for each research question six times. In the first three times, the goal was to identify the main categories and then, the sub-categories were identified twice. Finally, the sixth time was to confirm that the findings were accurate. The complexity of the concepts analyzed is one of the decisive factors that determines the reliability of studies (Riffe et al., 2014). This study focuses on participants' understanding of the bilingual policy and the needs they believe will ensure a smoother implementation of it. In other words, participants based their answers on their personal thoughts and on real life settings that lead to concepts of low complexity that are easy to capture and understand (Riffe et al., 2014). The following is one example of such clear quote: "...the knowledge to use and teach English is also lacking (St3)." This quote, for instance, was placed under teachers' need for language using and teaching skills as it indicates such needs. Such low complexities of the concepts identified from the interviews increased the reliability of the results (Riffe et al., 2014). In order to be considered valid, instruments and interpretations of studies have to be logical or match the reality (Riffe et al., 2014; Cohen et al., 2018). Similarly, a scale is only valid if it is actually able to test what it is designed to test (Auerbach & Silverstein, 2003). From the planning of the research to the data collection process and, finally, the analytical and reporting stages of the research, the researcher attempted to stay as unbiased as possible, even though, as Maxwell (1992) described, it is impossible to conduct research without the slightest impacts of one's own personal experiences and viewpoints. To upgrade the level of validity of this study, it is supported by four of the five

types of validity identified and developed by Maxwell (1992). “Descriptive validity” (Maxwell, 1992, p.285) is used to ensure that the data and results are correct and that nothing is forgotten. In this study, it is ensured through the fact that all interviews were recorded and during the transcribing process, the recordings were listened to multiple times for accuracy and quality check. “Interpretive validity” (Maxwell, 1992, p.288) focuses on what the languages used by the participants actually mean. Based on this concept, when interviewing participants, the researcher asked questions to confirm what is understood matched the information that participants attempted to deliver to make the data valid (Maxwell, 1992). Similarly, the data was carefully analyzed with special attention paid to the participants’ meanings (Maxwell, 1992). The study of previous related work acted as a means to support “construct validity” (Riffe et al., 2014, p.127), also known as “theoretical validity” (Maxwell, 1992, p.285), of the study. The research questions were answered through inductive content analysis because of its unique setting and background; however, it is coherent with previous studies and discusses some of the previous findings. Even though the study discusses the bilingual policy and related Teacher Education in the Taiwanese context, is it a part of more extensive education studies. Maxwell (1992) is concerned about the existence of the agreement between members of certain communities, whether the terms used serve common meanings in such communities and whether they are used appropriately in the report. In this study, the researcher managed to include some of the common terms concerning the studied areas, such as bilingual education, Teacher Professional Development, pre-service and in-service training, Cross Curricular Collaboration and CLIL. These are all common and well-known terms that play essential roles in the community of related studies, add validity to the research (Maxwell, 1992). “Generalizability” (Maxwell, 1992, p.293) can be divided into “internal generalizability” (Maxwell, 1992, p.293) and “external generalizability” (Maxwell, 1992, p.293). This study relies heavily on the context; therefore, like most qualitative studies, the results of this study are more likely to be generalized within settings similar to that of this particular study (Maxwell, 1992; Little, 1993; O’Sullivan, 2001; Opfer & Pedder, 2011; Evans, 2014; Pérez Cañado, 2016). Maxwell (1992) listed “evaluative validity” (Maxwell, 1992, p.295) as one of the five types of validity. It requires using a

specified framework to study but since it is more commonly considered in non-qualitative studies, this form of validity was not particularly put into consideration for this research. Additionally, the words used to describe the findings in this research are carefully selected in consideration of its indication of validity (Cober & Adams, 2020). Qualitative research, especially in Education, depends highly on the context; therefore, when describing the findings, researchers should be aware of the important role wordings play (Cober & Adams, 2020). In relation, when reporting the results of this research, the researcher made sure to use words such as “indicative” (Cober & Adams, 2020, p.75) and “suggest” (Cober & Adams, 2020) to indicate that their validity for this particular research that might either be effective or not in other contexts.

Some of the limitations of this study include the scale, the research methods and the time. This research focused on the data gathered through interviews with ten secondary school teachers, five English teachers and five Subject teachers, in Taiwan; therefore, it is clear that the scale and research methods are limited. Consequently, the data and results only act as representations of the thoughts of teachers who meet the criteria of participants of this study and they should not be regarded as standardized answers to the research questions. The researcher therefore recommends a larger scale research with more participants from a wider variety of school levels and geographical areas to provide a broader view of the studied issues and areas. The data gathering methods of this research were restricted due to the outbreak of the COVID-19 pandemic, making class observations impossible for the time being, and the time restriction also limited the amount of data collected. As a result of the restriction, the data gathered are not sufficient for conducting full deductive testing of the “need assessment” (O’Sullivan, 2001, p.96) of INSET strategies model; however, they can be used as the initial part of the model to help Taiwan develop the most suitable Teacher Professional Development programs and courses to train pre-service and in-service teachers based on their needs (O’Sullivan, 2001). In order to further develop this study, there is a need to expand the methods by adding classroom observations for researchers to be able to study related issues from different angles to provide a more wholesome understanding. This study was conducted at the pre-implementation stage when most actions for implementation are still under development;

therefore, it would be interesting to re-visit this study in a few years. Conducting the same interviews among the same group of teachers or even different groups of teachers would provide researchers and policymakers with valuable data for further developments. Moreover, how Cross Curricular Collaboration can assist teachers in Taiwan to obtain CLIL skills also requires to be investigated (O'Sullivan, 2001; Opfer & Pedder, 2011; Evans, 2014; Pérez Cañado, 2016). The data gathered for this research indicates that it is broadly understood that English is to become the target language in the Taiwanese education system and that, despite being emphasized more by Subject teachers, both types of teachers are in need of more support with it. Even though most teachers understand that the bilingual policy will have a greater impact on Subject teachers, which corresponds with the information presented in *Blueprint for Developing Taiwan into a Bilingual Nation by 2030* as CLIL is targeted in content subject classrooms, more teachers with bilingual knowledge are in urgent need (National Development Council, 2018) In other words, to make the bilingual policy effective, in-service Subject teachers should be encouraged to obtain English using and teaching skills, English teachers should learn content subject knowledge and both types of teachers are in need of bilingual education training (Coyle et al., 2013; Pérez Cañado, 2018). This is believed to be most efficiently completed through Cross Curricular Collaboration as teachers will be able to learn with and from each other; however, how effective it is in the Taiwanese context requires further investigation (Little, 1990; Cammarata & Tedick, 2012; Banegas, 2012; Lassonde & Israel, 2009; Hargreaves and Connor, 2018; Davison, 2006).

All in all, the findings of this research hope to be beneficial and valuable for a smooth implementation of the nationwide bilingual policy that is set to be implemented in Taiwan by 2030. Previous studies and the findings of this research have indicated that Teacher Education is a must if the government is seeking to fully and effectively implement the bilingual policy into the Taiwanese education system or, even broader, into the Taiwanese society. From the government's perspective, designing clear and realistic plans based on related theories and findings of studies that fit the Taiwanese context and Teacher Education programs and courses with the needs of the frontline educators put into careful considerations are essential for realizing the goal of cultivating

Taiwan into a bilingual nation. From teachers' perspective, active participation in Teacher Professional Development towards the 2030 bilingual nation policy will increase the chances of making the policy effective and help Taiwan become increasingly international. With the support from all actors in Taiwan, the chances for the bilingual policy to be successful will certainly increase and Taiwanese people will become active actors with high levels of English proficiency in the global village in the foreseeable future.

REFERENCES

- Agudo, J. (2012). *Teaching and Learning English through Bilingual Education*. Cambridge Scholars Publisher.
- Atkins, L., & Wallace, S. (2012). *Qualitative Research in Education*. Sage.
- Auerbach, C., & Silverstein, L. (2003). *Qualitative Data An Introduction to Coding and Analysis*. New York University Press.
- Banegas, D. L. (2012). CLIL teacher development: Challenges and experiences. *Latin American Journal of Content and Language Integrated Learning*, 5(1), 46–56. <https://doi.org/10.5294/lacilil.2012.5.1.4>
- Cammarata, L., & Tedick, D. J. (2012). Balancing Content and Language in Instruction: The Experience of Immersion Teachers. *The Modern Language Journal* (Boulder, Colo.), 96(2), 251–269. <https://doi.org/10.1111/j.1540-4781.2012.01330.x>
- Chang, M. L. (2009). An Appraisal Perspective of Teacher Burnout: Examining the Emotional Work of Teachers. *Educational Psychology Review*, 21(3), 193–218. <https://doi.org/10.1007/s10648-009-9106-y>
- Churchill, S. (1996). The decline of the nation-state and the education of national minorities. *International Review of Education*, 42(4), 265–290. <https://doi.org/10.1007/BF00601092>
- Cober, W., & Adams, B. (2020). When interviewing: how many is enough? *International Journal of Assessment Tools in Education*, 7(1), 73–79. <https://doi.org/10.21449/ijate.693217>
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (Eighth edition.). Routledge, Taylor & Francis Group.
- Coyle, D., Hood, P., & Marsh, D. (2013). *CLIL: Content and language integrated learning*. Cambridge: Cambridge University Press.
- Cummins, J. (2009). Fundamental Psycholinguistic and Sociological Principles Underlying Educational Success for Linguistic Minority Students. In *Social*

- Justice through Multilingual Education (pp. 19–35). UK: Multilingual Matters. Print.
- Davison, C. (2006). Collaboration between ESL and content teachers: How do we know when we are doing it right? *International Journal of Bilingual Education and Bilingualism*, 9(4), 454 – 475.
- de Mejía, Anne-Marie (2004) Bilingual Education in Colombia: Towards an Integrated Perspective, *International Journal of Bilingual Education and Bilingualism*, 7:5, 381-397, DOI: 10.1080/13670050408667821
- Department of Teacher and Art Education. (2018). 全英語教學師資培育實施計畫 [The Implementation Plan for Cultivating Full English Teachers]. Taiwan: Department of Teacher and Art Education 師資培育與藝術教育司.
- Desimone, Laura M. (2009). Improving Impact Studies of Teachers' Professional Development: Toward Better Conceptualizations and Measures. *Educational Researcher*, 38(3), 181–199.
<https://doi.org/10.3102/0013189X08331140>
- Elo, S. & Kyngäs, H. (2008) The Qualitative Content Analysis Process. *Journal of Advanced Nursing* 62(1), 107–115. Retrieved from
- Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K., & Kyngäs, H. (2014). Qualitative Content Analysis: A Focus on Trustworthiness. *SAGE Open*, 4(1), 215824401452263–.
<https://doi.org/10.1177/2158244014522633>
- Evans, L. (2014). Leadership for professional development and learning: enhancing our understanding of how teachers develop. *Cambridge Journal of Education*, 44(2), 179–198.
<https://doi.org/10.1080/0305764X.2013.860083>
- Feng, Z. & Wang, J. (2007). Integrated English - A Bilingual Teaching Model in Southern China. In *Bilingual education in China: Practices, policies, and concepts* (pp. 147-165). Clevedon: Multilingual Matters.
- Flick, U (2007) *Designing Qualitative Research*. London: Sage Publications.
Retrieved from
- Freebody, P. (2003). *Qualitative research in education : interaction and practice* . Sage.

- Green, J., Camilli, G., Elmore, P., Skukauskaiti, A., & Grace, E. (2006). Handbook of complementary methods in education research. Lawrence Erlbaum Associates.
- Gu, M. (2014). On General Issues of Bilingual Education for Minority Ethnic Groups. *Frontiers of Education in China*, 9(4), 603–611.
<https://doi.org/10.3868/s110-003-014-0047-x>
- Hammersley, M., & Traianou, A. (2012). *Ethics in qualitative research : controversies and contexts* . SAGE Publications.
- Hargreaves, A., & O'Connor, M. T. (2018). *Leading Collaborative Professionalism*. Victoria, Australia: Centre for Strategic Education.
- Kewara, P. & Denchai P. (2018). CLIL Teacher Professional Development for Content Teachers in Thailand. *Iranian Journal of Language Teaching Research* 6(1) 93–108.
- Koellner, K., & Jacobs, J. (2015). Distinguishing Models of Professional Development: The Case of an Adaptive Model's Impact on Teachers' Knowledge, Instruction, and Student Achievement. *Journal of Teacher Education*, 66(1), 51–67. <https://doi.org/10.1177/0022487114549599>
- Kuchah, K. (2016). English-medium instruction in an English-French bilingual setting: issues of quality and equity in Cameroon. *Comparative Education*, 52(3), 311–327. <https://doi.org/10.1080/03050068.2016.1185257>
- Lassonde, C., & Israel, S. (2009). *Teacher Collaboration for Professional Learning: Facilitating Study, Research, and Inquiry Communities*. Jossey-Bass.
- Lee, C., & Phua, C. (2020). Singapore bilingual education: One policy, many interpretations. *Journal of Asian Pacific Communication*, 30(1-2), 90–114. <https://doi.org/10.1075/japc.00046.lee>
- Little, J. W. (1990). The Persistence of Privacy: Autonomy and Initiative in Teachers' Professional Relations. *Teachers College Record*, 91(4), 509–536.
- Little, J. W. (1993). Teachers Professional Development in a Climate of Educational Reform. *Educational Evaluation and Policy Analysis*, 15(2), 129-151. doi: 10.2307/1164418
- Lo, Y. Y. (2020). *Professional Development of CLIL Teachers*. Springer Singapore Pte. Limited.

- Maxwell, J. (1992). Understanding and validity in qualitative research. *Harvard Educational Review*, 62(3), 279–300.
<https://doi.org/10.17763/haer.62.3.8323320856251826>
- May, S. (2012). *Language and minority rights ethnicity, nationalism and the politics of language* (2nd ed.). Routledge.
- Ministry of Education. (1995) 民國 84 年高級中等以下學校及幼稚園教師資格檢定及教育實習辦法第 13 及第 29 條 [Teacher Education Act 1995, Article 13 & 29]
<https://edu.law.moe.gov.tw/LawContent.aspx?id=FL009444>
- Ministry of Education. (2003) 民國 92 年師資培育法細則 [Enforcement Rules of Teacher Education Act]
<https://law.moj.gov.tw/LawClass/LawOldVer.aspx?pcode=H0050007&lnndate=20030811&lser=001>
- Ministry of Education. Department of Teacher and Art Education. (2019, April 1). Retrieved March 11, 2021, from <https://english.moe.gov.tw/cp-4-18909-7dd9a-1.html>
- Ministry of Education. Implementation Scheme for 12-year Basic Education. (2020, June 23). Retrieved March 11, 2021, from <https://english.moe.gov.tw/cp-48-23066-05c85-1.html>
- Moretti, F., van Vliet, L., Bensing, J., Deledda, G., Mazzi, M., Rimondini, M., Zimmermann, C., & Fletcher, I. (2011). A standardized approach to qualitative content analysis of focus group discussions from different countries. *Patient Education and Counseling*, 82(3), 420–428.
<https://doi.org/10.1016/j.pec.2011.01.005>
- Mukan, N., Shyika, J., & Shyika, O. (2017). The Development of Bilingual Education in Canada. *Novitnâ Osvîta*, 4(8), 35–40.
<https://doi.org/10.20535/2410-8286.100924>
- National Development Council. *Blueprint for Developing Taiwan into a Bilingual Nation by 2030* (2018). Taipei City. Retrieved from https://bilingual.ndc.gov.tw/sites/bl3/files/news_event_docs/blueprint_for_developing_taiwan_into_a_bilingual_nation_by_2030.pdf
- Newby, P. (2014). *Research Methods for Education* (Second edition.). Routledge, Taylor and Francis.

- O'Sullivan, M. (2001). The inset strategies model: an effective inset model for unqualified and underqualified primary teachers in Namibia. *International Journal of Educational Development*, 21(2), 93–117.
[https://doi.org/10.1016/S0738-0593\(00\)00026-2](https://doi.org/10.1016/S0738-0593(00)00026-2)
- Oliver, P. (2010). *Understanding the research process*. SAGE.
- Opfer, V. D. & Pedder, D. (2011). Conceptualizing Teacher Professional Learning. *Review of Educational Research*, 81(3), 376–407.
<https://doi.org/10.3102/0034654311413609>
- Packer, M. (2011). *The science of qualitative research*. Cambridge University Press.
- Pérez Cañado, M. L. (2016). Teacher training needs for bilingual education: in-service teacher perceptions. *International Journal of Bilingual Education and Bilingualism*, 19(3), 266–295.
<https://doi.org/10.1080/13670050.2014.980778>
- Pérez Cañado, M. L. (2018). Innovations and Challenges in CLIL Teacher Training. *Theory Into Practice*, 57(3), 1–10. doi: 10.1080/00405841.2018.1492238
- Philipsen, B., Tondeur, J., Pareja Roblin, N., Vanslambrouck, S., & Zhu, C. (2019). Improving teacher professional development for online and blended learning: a systematic meta-aggregative review. *Educational Technology Research and Development*, 67(5), 1145–1174.
<https://doi.org/10.1007/s11423-019-09645-8>
- Pons Seguí, L. (2019). Qualitative meta-analysis on the training needs reported by in-service CLIL teachers. *Revista Española de Lingüística Aplicada*, 32(1), 277–303. <https://doi.org/10.1075/resla.17020.pon>
- Rakhlín, N. (2013). Bilingual Language Development and Academic Achievement Among Language Minority Students. In *U.S. immigration and education: cultural and policy issues across the lifespan* (pp. 249–274). essay, Springer Publishing Company.
- Riffe, D., Lacy, S., & Fico, F. (2014). *Analyzing media messages: using quantitative content analysis in research* (3rd ed.). Routledge.
- Schreier, M. (2012). *Qualitative content analysis in practice*. SAGE.

- Shulman, L. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1–22.
<https://doi.org/10.17763/haer.57.1.j463w79r56455411>
- Sinkovics, R. R., Penz, E. & Ghauri, P. N. (2008). Enhancing the Trustworthiness of Qualitative Research in International Business. *Management International Review*, 48(6), 689–713.
<https://doi.org/10.1007/s11575-008-0103-z>
- Smeds, J. (2019). Finland. In *Multilingualism in European language education* (pp. 194–209). essay, *Multilingual Matters*.
- Sprott, R. A. (2019). Factors that foster and deter advanced teachers' professional development. *Teaching and Teacher Education*, 77, 321-331.
 doi:10.1016/j.tate.2018.11.001
- Sylvén, L. (2013). CLIL in Sweden - why does it not work? A metaperspective on CLIL across contexts in Europe. *International Journal of Bilingual Education and Bilingualism*, 16(3), 301–320.
<https://doi.org/10.1080/13670050.2013.777387>
- Tainan City Government. (2017, June 27). Challenges and Opportunities Preparing Tainan City to Adopt English as the Second Official Language. Tainan City Government.
https://www.tainan.gov.tw/en/News_Content.aspx?n=13205&s=1395468.
- Teacher Education Act 2019.
<https://law.moj.gov.tw/ENG/LawClass/LawAll.aspx?pcode=H0050001>
- Tesch, R. (1990). *Qualitative Research*. Taylor & Francis Group.
- Tuckman, B., & Harper, B. (2012). *Conducting educational research* (6th ed.). Rowman & Littlefield Publishers, Inc. Victoria, Australia: Centre for Strategic Education.

APPENDICES

Appendix 1: English Cover Letter

Dear Teacher,

Thank you for reading this invitation. I am a master's degree student at Tampere University conducting interviews as a part of a research study to learn about secondary school teachers' thoughts about the implementation of the bilingual national policy that is set to be fully implemented in Taiwan in 2030. Your first-hand information related to the topic studied and professional view are not only valuable for this particular research but also for the planning of the implementation of the bilingual policy; therefore, I would like to invite you to share your thoughts about the policy as a secondary school teacher. The interview will be conducted online and it will last around 40 minutes. Participation is fully voluntary and you will be able to freely drop out at any time without any particular reasons. The responses that reveal personal information will be kept confidential and the data collected will be stored safely with personal identities fully protected with name codes. The researcher will be the only person who has access to all the gathered information and only the necessary information will be revealed in the final report. If you are willing to participate, please provide your contact information so that the researcher can get in touch with you. Your participation is highly appreciated. Thank you again for your time!

Best regards,

Veronika Wanninger

Appendix 2: Mandarin Chinese Cover Letter

敬愛的_____老師，您好！

感謝您願意閱讀這封邀請信。我是芬蘭坦佩雷大學（**Tampere University**）的碩士學位研究生，目前正在對 2030 年臺灣雙語國家政策進行研究，想要了解您作為專業教育人員對這項政策及相關配套的理解和想法。您的一手經驗及教育專業有助於這項研究及整體的雙語政策的執行，因此想邀請老師以中等學校教師的角度分享您的相關經驗與看法。本次的訪談將在線上進行，歷時約 40 分鐘，是否參與訪談完全尊重個人意願，不論任何原因，您可以隨時自由退出。為了顧及個人隱私，訪談過程中一切涉及個人隱私的內容及參與者的真實身分將被保密，所有的受訪者名字最終將以代碼及編號呈現，蒐集到的資料也將被安全地被保存。除研究人員之外，沒有別人能夠取得您所提供的資料，報告中也只僅會顯示必要的資訊，以不涉及個人隱私為主。如果您願意參與這次的研究，請提供您的聯絡方式，研究人員將與您聯繫。非常感謝您的參與！再次感謝您的願意花寶貴的時間！祝 教安！

研究生 Veronika Wanninger 敬上

Appendix 3: Interview Guide

Interview questions for English and Subject Teachers

1. Background

- What is the highest degree you currently hold and what was your major?
- How many years of Teacher Education did you complete before you started teaching at school?
- In what language was your Teacher Education program taught?
- How long have you been teaching?
- What subject(s) and levels are you currently teaching?
- Did you ever have teaching-related training in English?

2. Sufficient knowledge for Cross-Curricular Teaching

- What percentage of your class would you say is taught in English?
- Have you ever taught full English classes? (If yes, why did you teach it/ them in full English?)

(for English teachers)

- Are you confident to teach English in full English? What are the obstacles?
- Do you think you have sufficient knowledge to teach non-language related subjects in full English? How so?

(for Subject teachers)

- Are you confident to teach Subject in full English? What are the obstacles?
- Do you think you have sufficient knowledge to use English to teach subject-specific knowledge and the language at the same time? How so?

3. The new bilingual education policy

- What do you know about the bilingual education policy that it set to be fully executed in Taiwan by 2030?
- How do you think it will affect you professionally?

4. CLIL

- Have you heard of CLIL? Please explain it in your own words?
- What do you think are the benefits of CLIL?
- What might make it difficult to implement it into the Taiwanese education system?
- What do you think can be done to assure a smoother implementation of CLIL in secondary school education?
- What, in your professional opinion, makes a qualified CLIL teacher?

Professional Development

- What motivates you to take actions for professional developments?
- What kinds of voluntary professional developmental actions are you taking to adapt to the implementation of CLIL?
- What kinds of arranged CLIL training are you taking part in so far?
- How have they helped you professionally develop?
- What aspects of professional developmental training do you believe you need further assistance with to fully implement CLIL in your teaching?

Cross Curricular Collaboration

- Have you experienced collaboration with English/ Subject teachers? What was the situation?
- How was the planning and execution of teaching divided?
- Was there any assistance provided by the school/ administration, such as cutting down some of their teaching workload, financial support and other types of assistances?
- What was the most impressive aspect of the collaboration?
- What could have changed or improved?
- Are you willing to commit to another Cross-Curricular Collaboration? Why or why not?
- Based on your experiences and professional view, is it realistic for English teachers and Subject teachers to regularly

collaborate? What can be done to motivate such collaboration?

Conclusion

- As an experienced teacher, how can current in-service teachers who did not learn under the new bilingual policy gain the knowledge they require to teach in CLIL classrooms
- What would you like to add?