The Implementation of Bilingual Education in Taiwan: A Case Study of Two Junior High Schools with a Bilingual Curriculum in Taipei City Using the FERTILE Model

Po Tsai

Faculty of Education, University of Cambridge, Cambridge CB2 8PQ, UK; sallypotsai@gmail.com

Abstract: The development of bilingual education has rapidly grown in the past few decades, with varying implementations reflecting each country’s political, social and cultural contexts. In response, the Taiwanese government launched the Bilingual 2030 policy in Taiwan to improve international competitiveness and communication. Employing the FERTILE model as the theoretical framework, this case study focuses on (1) comprehending the role of the administrative team in implementing bilingual education within schools and (2) exploring the function of bilingual teacher professional learning communities. The results indicate that the involvement of school administrative teams, along with the support from BPLCs, are essential for implementing bilingual education in schools. More importantly, this research highlights the importance of administrative teams in providing a supportive environment. Also, the support from administrative teams is significant for enhancing the function of BPLCs, which play a key role in improving teachers’ instructional strategies. The findings of this study can generate both theoretical and practical contributions to bilingual education in Taiwan. First, the findings provide schools and policy makers in Taiwan with valuable insights for fostering bilingual teacher professional learning communities. Second, the findings from the two case studies, which utilised the FERTILE model to implement bilingual education, can serve as references for its nationwide promotion.

Keywords: bilingual education; bilingual teacher professional learning community; FERTILE model; school administration

1. Introduction

Since the early 1990s, the development of bilingual education across the globe has rapidly grown [1], becoming a significant focus for educational stakeholders and governments as an important aspect of 21st century education. The formulation of language policy is often a deeply political process, influenced by a society’s historical legacies as well as its present economic or geopolitical contexts [2]. This observation applies to Taiwan as well. The Taiwanese government launched the Bilingual 2030 policy in Taiwan with the aim of enhancing the competitiveness and economic advantages of Taiwan [3]. By transforming into a bilingual nation, Taiwan seeks to improve its students’ abilities in English, and consequently, increase its international competitiveness in the short term.

The literature on bilingual education has highlighted various models, including immersion, content language integrated learning (CLIL), and English as a medium of instruction (EMI), among others. On the other hand, Lin [4] developed the FERTILE bilingual model, tailored for the Taiwanese context, which is grounded in the comprehensive input [5] and interaction hypothesis [6,7]. The main difference between the aforementioned models and the FERTILE model is that while the other models emphasise classroom practices, the FERTILE model is a whole-school approach.

The FERTILE model highlights three important components: international intelligibility, student comprehensibility, and content engagement [4]. This model emphasises that teachers have the ability to instruct students effectively and students are capable of...
comprehending the materials presented to them, further stressing the following principles: (1) the promotion of bilingual education requiring flexibility; (2) bilingualism promotion needing to be based on the establishment of the environment; (3) the effect of role modelling in the school; (4) giving sufficient time to promote bilingual education; (5) the principles of instructional strategies for class teaching; (6) the care for students on learning needs analysis and differentiated instruction during bilingual teaching; and (7) bilingual education requiring engaging stakeholders [8]. The first four points represent principles and guiding philosophies for schools when promoting bilingual education, while the fifth and sixth points relate to strategies and techniques used in bilingual classrooms. The final point aims to inspire all stakeholders to participate in the implementation of bilingual education [4].

Given that the FERTILE model is grounded in the Taiwanese context, this paper will employ this model as the analysis framework to explore the role of bilingual professional learning communities (BPLCs) and school administrative teams in the implementation of bilingual education in schools, with a focus that excludes teachers’ teaching practices. The focus on BPLCs and school administrative teams is essential, because BPLCs and administrative support were identified as important determinants in the implementation of bilingual education. DuFour [9] stated that PLCs require teachers to collaborate on matters related to learning and share common visions, beliefs, or values to learn and grow together, which significantly impact student learning outcomes [10]. Lin [11] also highlighted the importance of BPLCs in implementing bilingual education in schools. In addition, Carrasquillo and Rodriguez [12] stressed the important role that management teams play in the success of bilingual education programmes.

Additionally, BPLCs are a main strategy within the FERTILE model for enhancing teaching practices. Since Taiwan is still in the early promotional stage of bilingual education, most bilingual teachers are in-service teachers. BPLCs play an important role in supporting these teachers to further develop their abilities. The support from school administrative teams is also important for enhancing BPLCs, thereby facilitating the implementation of bilingual education in schools. BPLCs need to work closely with school administrative teams, because the success of bilingual education depends not only on enhancing classroom teaching practices but also on establishing a bilingual environment [13]. Also, school administrative teams need to provide resources to BPLCs to facilitate the promotion of bilingual education. Given the essential roles these two factors play, understanding the influence of school administrative teams and the function of BPLCs is important for implementing bilingual education within schools.

Within this paper, bilingual education is defined as the use of two languages in the teaching and learning process [14,15]. In the context of Taiwan, bilingual education is not the same as all-English teaching, as teachers utilise both Mandarin and English to deliver subject content. Among the studies on bilingual education in Taiwan, some of these studies have focused on the national 2030 bilingual education policy, e.g., in [16,17], while other research has discussed the challenges associated with implementing bilingual education, e.g., in [18,19]. Despite the available research, there remains a gap concerning the involvement of school administrative teams and the function of BPLCs in the implementation of bilingual education in junior high schools. This study aims to address this gap by exploring how school administrative teams and BPLCs contribute to the implementation of bilingual education. The findings could provide insights for schools and policy makers to better understand and support administrative practices and BPLCs. Additionally, this research could identify the needs and gaps in these aspects within schools, thereby enhancing the implementation of bilingual education in Taiwan.

Based on the previous discussion, the research questions are the following:
1. What roles do school administrative teams play in the implementation of bilingual education within schools?
2. How do BPLCs function in the implementation of bilingual education within schools?
2. Methods

This study acknowledges the significance of understanding real-world cases and the contextual insights they can offer [20]. Therefore, the multi-case study approach was employed to investigate the role of school administrative teams and the function of BPLCs in facilitating bilingual education. This approach allows for the exploration of differences and similarities across cases, facilitating the development of a deep understanding of complex educational phenomena within their real-life context [21]. It provides valuable insights into the strategies and challenges associated with implementing bilingual education. Data collection was conducted through semi-structured interviews and documentary analysis from the middle to the end of 2021.

A purposeful and convenient sampling strategy was employed to recruit participants in this study [22]. Two average-sized state schools in Taipei, each with around 1000 students, participated in this research. Both schools implement bilingual experimental curricula. Schools in Taipei were selected because the city has the longest history of implementing bilingual education in Taiwan, providing valuable insights into the role of school administrative teams and the function of BPLCs in enhancing bilingual education.

To provide diverse perspectives, this study included participants from a range of roles within two schools in the interviews, encompassing staff members from the administrative teams and teachers. Eight participants from School A and five from School B were selected to take part in the interviews. Before conducting the interviews, participants signed an informed consent form. Each interview session lasted between 45 and 60 min, was recorded for accuracy, and was later transcribed. Table 1 shows the diversity of the participants interviewed from each school.

Table 1. Interview participants.

<table>
<thead>
<tr>
<th>School</th>
<th>Code</th>
<th>Participant Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>School A</td>
<td>AH</td>
<td>Head Teacher</td>
</tr>
<tr>
<td></td>
<td>AD</td>
<td>Director of Educational Affairs Division</td>
</tr>
<tr>
<td></td>
<td>AS</td>
<td>Section Chief of Curriculum Development</td>
</tr>
<tr>
<td></td>
<td>AFD</td>
<td>Former Director of Educational Affairs Division</td>
</tr>
<tr>
<td></td>
<td>AFS</td>
<td>Former Chief of Curriculum</td>
</tr>
<tr>
<td></td>
<td>AHE</td>
<td>Health Education Teacher</td>
</tr>
<tr>
<td></td>
<td>AP</td>
<td>Performing Arts Teacher</td>
</tr>
<tr>
<td></td>
<td>ASL</td>
<td>Scout Leader</td>
</tr>
<tr>
<td>School B</td>
<td>BH</td>
<td>Head Teacher</td>
</tr>
<tr>
<td></td>
<td>BD</td>
<td>Director of Educational Affairs Division</td>
</tr>
<tr>
<td></td>
<td>BS</td>
<td>Section Chief of Curriculum</td>
</tr>
<tr>
<td></td>
<td>BM</td>
<td>Music Teacher</td>
</tr>
<tr>
<td></td>
<td>BV</td>
<td>Visual Arts Teacher</td>
</tr>
</tbody>
</table>

With permission from School A and School B, the collected documents contain various materials related to bilingual education. These include weekly bilingual newspapers, records of meetings associated with BPLCs, worksheets, and more. Table 2 presents the collected documents from each school.

Table 2. Overview of school documents.

<table>
<thead>
<tr>
<th>School</th>
<th>Code</th>
<th>Document Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>School A</td>
<td>Document A01</td>
<td>Weekly Bilingual Newspaper Issue No. 108</td>
</tr>
<tr>
<td></td>
<td>Document A02</td>
<td>1st BPLC Meeting Record</td>
</tr>
<tr>
<td></td>
<td>Document A03</td>
<td>2nd BPLC Meeting Record</td>
</tr>
<tr>
<td></td>
<td>Document A04</td>
<td>School Anniversary Celebration Record</td>
</tr>
<tr>
<td></td>
<td>Document A05</td>
<td>3rd BPLC Meeting Record</td>
</tr>
<tr>
<td></td>
<td>Document A06</td>
<td>4th BPLC Meeting Record</td>
</tr>
<tr>
<td>School B</td>
<td>Document B01</td>
<td>BPLC Meeting Record</td>
</tr>
<tr>
<td></td>
<td>Document B02</td>
<td>Bilingual Worksheet for A Visual Art Course</td>
</tr>
</tbody>
</table>
Data collected from the interviews and school documents were analysed using deductive analysis. This study mainly applied the FERTLE model as a thematic framework for the coding process, while remaining open to new insights during data analysis. Throughout the process, experts in the bilingual education field were consulted for further guidance. To analyse the data, the NVivo qualitative analysis software was used to code the information, identify main themes, and extract assumptions from the interview data and school documents.

3. Findings

In this section, the FERTILE model is used as a theoretical framework to analyse the collected data. This section is divided into two parts: the role of school administrative teams and the function of BPLCs. This analysis aims to investigate how these two factors influenced the schools’ implementation of bilingual education.

3.1. The Role of School Administrative Teams in the Implementation of Bilingual Education

3.1.1. Providing Flexibility and Sufficient Time

Each school in Taiwan has its unique context, implying that a one-size-fits-all approach for implementing bilingual education is not feasible. The FERTILE model emphasises the importance of allowing schools the flexibility to tailor their implementation of bilingual education to best fit their circumstances [4]. In this context, school administrative teams need to allow teachers to have freedom to adapt their teaching strategies for bilingual education. For instance, teachers should have the flexibility to apply different teaching approaches in their classrooms, and they should not be required to adhere to a mandated proportion of English usage. This flexible policy helps prevent any potential negative impacts on student learning that could arise from transitioning to bilingual education.

“I believe that the best thing school administrative teams can do is to offer teachers freedom, flexibility, and support. . . .When there is strong cohesion and a positive atmosphere within the school community, it positively influences the students as well.” (Interview AHE)

“The school has been very supportive of me. They don’t comment on using too much Mandarin, because I feel that as long as the children are learning during class, that is what truly matters.” (Interview BM)

The FERTILE model also highlights that the implementation of bilingual education needs to be gradual and take time [4]. It points out the importance of a school administrative team continuously communicating with teachers and encouraging them to engage in bilingual education.

“Many schools are hesitant to make too many changes at once, as most teachers are not accustomed to significant shifts. . . .Gradual adjustments will allow teachers to slowly accept and adapt to the changes.” (Interview AFD)

“Making teachers feel that implementing bilingual education in schools is meaningful and valuable involves spending a lot of time communicating with each teacher individually.” (Interview BH)

School administrative teams should prioritise providing teachers with adequate time to prepare their lessons and improve their English ability [8]. Rather than solely focusing on Key Performance Indicators (KPIs), school administrative teams should encourage teachers to progress at a manageable pace. As noted in Document A06, a physical education teacher expressed concerns about the challenges of implementing bilingual education in their subject. They felt that their current abilities were not sufficient for bilingual teaching and hoped that the school would provide more time and resources for their professional development.
Additionally, it is essential for administrative teams to consistently assist teachers when support is required. This includes granting teachers enough time for rest and allocating common periods for collaborative lesson preparation.

“Usually, I show concern for them and listen to their feedback. For instance, teachers often tell me that the workload is too heavy. . . . If the course load is too much, I tell them that I’ll adjust for the next academic year to ease their burden. I listen to their concerns and if what they propose seems feasible, I generally try to meet their needs. It’s crucial to support these teachers because they are incredibly important.” (Interview BD)

“How to schedule lessons is crucial because my previous schedule was too packed, and it left me feeling exhausted. . . . I realised that with such a heavy workload and complexity, I couldn’t teach three classes in a row. I needed to have breaks in between, like teaching two classes and having a break after. So, my scheduling needs to be a bit more flexible.” (Interview BV)

The discussion above shows the necessity of flexibility and sufficient time in implementing bilingual education in schools. Schools need to allow their teachers the freedom to apply different teaching strategies and determine the proportion of English used in the classroom. Interviews with teachers indicated the significance of gradual implementation and continuous communication between school administrative teams and teachers to foster a supportive environment. It is significant to provide teachers with enough time to prepare their lessons, enhance their English skills, and rest. Allocating a common period for collaborative lesson preparation is also essential. The implementation of bilingual education can positively impact educational practice, but its successful implementation needs time and gradual integration into schools.

3.1.2. Establishing a Bilingual Environment and Applying Role Modelling in Schools

Establishing a bilingual environment is important for language learning; therefore, schools should create and maintain such an environment to support the development of language ability among students. This includes both a “live” interactive bilingual environment and the necessary “hardware” environment to support it [4].

For the establishment of a “hardware” environment, schools can enhance students’ exposure to English by the use of bilingual environmental prints, classroom journals, timetables, and other resources. These materials can be offered either entirely in English or bilingually. This approach not only promotes bilingual learning within the classroom but also integrates it into daily life. For example, as illustrated in Document A01, a bilingual weekly newspaper is distributed to each class every week in School A. Also, Document B02 shows a teacher in School B presenting a worksheet bilingually.

“During a bilingual event, students were given 20 puzzles in English. Those who correctly solved all the puzzles could visit the Educational Affairs Division to receive a stamp from a teacher.” (Document A04)

“Efforts are made to present all forms bilingually, such as classroom journals, timetables, or attendance sheets . . . . Further steps may include bilingualising forms required for transferring schools and other various documents.” (Interview BS)

To facilitate role modelling in the school, it is significant to create a “live” interactive bilingual environment that enhances communication in both languages. In this case, head teachers, school administrative teams, and teachers play an important role in engaging students naturally in a bilingual environment. Especially, head teachers and school administrative teams should serve as a role model by actively participating in the bilingual environment [13]. For instance, schools can use English to conduct daily broadcasts, morning assemblies, and so on.
“I feel the head teacher has already made an effort. For instance, a speech was delivered in English during the school anniversary celebration.” (Interview AS)

“In school broadcasts or morning assemblies, common phrases are delivered in both languages. For example, daily announcements, including reminders about cleaning time, are made bilingually.” (Interview BS)

The establishment of a bilingual environment is essential for enhancing language learning in schools, requiring both interactive elements and the appropriate infrastructure to support it. The practices of these two schools align with the principles of the FERTILE model, which highlight establishing both “hardware” and “live” bilingual environments. To further support this environment, role modelling by school head teachers, administrative teams, and teachers is essential. They engage students by participating in bilingual activities, such as conducting daily broadcasts and assemblies in both languages.

3.1.3. Engaging Stakeholders

School administrative teams are important in the implementation of bilingual education through effective stakeholder engagement. To engage stakeholders, school administrative teams need to build consensus within schools, identify teachers who are willing to engage, provide necessary resources and additional motivation, as well as reduce any conflicts or anxiety these teachers might experience. This effort is related to the final principle of the FERTILE model, which emphasises the significance of engaging stakeholders in bilingual education initiatives.

“Sometimes, some teachers feel uneasy, thinking that the head teacher only values certain aspects. Everyone needs to feel cared for, and when they don’t feel acknowledged, feelings of dissatisfaction can arise. I often tell teachers, it’s okay if you don’t want to participate, but please don’t obstruct the process.” (Interview AH)

“We do our best to support teachers. If teachers need certain teaching materials, we will purchase them without hesitation, provided we have sufficient funds.” (Interview AS)

“At that time, we would approach teachers who seemed interested to see if they were willing to participate. Most of our teachers were willing, although a few refused. . . . So, I didn’t force those who refused me. I decided to put the refusals aside for now and begin with those who were willing to participate.” (Interview BH)

“The Educational Affairs Division has various projects. I usually compensate them [bilingual teachers] with lecturer hourly fees, amounting to about a thousand per session. Typically, as the semester nears its end, I review the remaining hourly pay budget, and start distributing it among the bilingual teachers.” (Interview BD)

For BPLCs, it is essential that school administrative teams are involved to understand their needs and provide the necessary support. As previously mentioned, the collaboration between BPLCs and school administrative teams is significant for the successful implementation of bilingual education. Hord and Sommers [23] also indicated the importance of practical support external to professional learning communities (PLCs). According to Document A05, administrative teams at School A distributed a survey before the monthly meeting to gather information on the necessary resources, the status of bilingual teaching, and other related matters. Through the survey, administrative teams gain a better understanding of BPLCs’ needs at School A, which helps in supporting bilingual teaching. Moreover, the Director of Educational Affairs Division in School B provides their bilingual lesson plan design as a resource for other teachers to reference, as noted in Document B01.

Occasional disagreements or communication issues among teachers may arise within BPLCs. In these instances, it is important for school administrative teams to monitor the situation and intervene when necessary. Their role is to establish trust and create a
positive working environment, which is essential in motivating teachers to continue with bilingual education.

“ Teachers may have different opinions during the BPLCs meeting. If opinions diverge, school administrative teams need to intervene, starting from the needs of the students’ learning. This approach can facilitate finding common ground among the teachers.” (Interview AFD)

“When I collaborate with another teacher, I sometimes feel hesitant to speak up due to my inexperience. In such instances, I ask the director to speak on my behalf. Once the director has spoken, it seems everyone pays attention, and following their intervention, coordinating work with my colleague becomes much smoother.” (Interview BV)

The successful implementation of bilingual education relies on effective collaboration and stakeholder engagement, which corresponds with the final principle of the FERTILE model. School administrative teams are essential in involving stakeholders by building consensus and identifying and motivating willing teachers, among other tasks. Although the interviews and documents revealed challenges such as teacher hesitancy and resource limitations, school administrative teams remain a cornerstone, ensuring the smooth implementation of bilingual education in schools.

3.2. The Function of BPLCs in the Implementation of Bilingual Education

BPLCs are the main teaching strategy in the FERTILE model, playing a significant role in promoting bilingual education. For bilingual teachers, BPLCs provide not only professional support but also emotional support [11]. For schools, BPLCs facilitate the professional development of teachers and enhance student learning.

BPLCs provide a platform where members can examine and adjust their teaching methods. Teachers engage in discussions, share experiences, and provide feedback on each other’s instructional design. Prior to each meeting, bilingual teachers prepare and share their lesson presentations, worksheets, and other instructional documents. This allows all attending teachers to review these materials in advance.

“The location for the Scout leaders’ meeting was the Integrative Activities Office. Before the meetings, teachers opened their lesson presentations and worksheets on their laptops.” (Document A02)

“Before the collaborative preparation meeting began, health education teachers arrived early at the meeting location to download their teaching presentations and worksheets from the cloud onto a computer connected to a projector.” (Document A03)

After that, teachers explain the whole process of the lesson, the teaching methods employed, and the expected student responses. This explanation facilitates an understanding among colleagues, who then offer feedback that might further refine these strategies. As the Health Education teacher in School A indicated in the interview, “The three of us offered some different ideas for subject teaching, discovering that it can also be done in different ways”.

“I participated in a collaborative preparation session and found that they first discussed whether there were any issues with last week’s classes, what they would do next week, and the conditions of specific classes. Thus, they were continuously making rolling adjustments and accumulating valuable learning experiences.” (Interview AFD)

Additionally, BPLCs may maintain their own social media groups. These platforms enable school administrative teams and teachers to interact, sharing resources, websites, and the latest updates on bilingual education and teaching.
“There was even a time when everyone was sharing websites related to teaching resources, all related to bilingual education. Some teachers would share which ones they used, like how they used Padlet, and how they implemented it. We all thought that was quite good and everyone could try to learn from it. I’ve noticed that younger teachers are very adept at this, so as soon as they share something, some of the other teachers feel encouraged to try it out.” (Interview BD)

Most importantly, BPLCs offer teachers emotional support and facilitate a supportive environment where teachers collaborate to refine and enhance these bilingual instructional strategies for classroom teaching.

“Teachers often look forward to participating in BPLCs, because working alone can be stressful. Therefore, forming a team to prepare together puts them more at ease. In fact, professional communities have already established teachers’ confidence. The team-oriented community comes first, followed by the development of plans.” (Interview AFD)

BPLCs offer both professional and emotional support to bilingual teachers, contributing to their professional development and their improvement in student learning, as highlighted in the FERTILE model. These communities create a collaborative environment that fosters the adjustment and improvement in teaching strategies, encourages resource sharing, and supports a team-oriented community that reduces teacher stress and builds confidence.

4. Discussion and Conclusions

Taiwan has recently implemented its own bilingual education policy aimed at using its advantages as a Mandarin-speaking nation to improve the English communication capabilities of its young people [24]. This study aims to understand the implementation of bilingual education in Taiwan, with a focus on the involvement of school administrative teams and the role of BPLCs by applying the FERTILE model.

The first research question is to understand the role of school administrative teams in implementing bilingual education. Ancess [25] mentioned that improving student learning requires responsive and supportive administration, time, and regulatory flexibility. The findings of this study show the necessity for school administrative teams to provide bilingual teachers with the flexibility to choose their own teaching strategies to use in their classrooms. Additionally, schools should not mandate a specific proportion of English usage for teachers. Previous studies have highlighted the importance of flexibility in teaching strategies and the use of two languages [26,27]. This aligns with the first principle, flexibility, of the FERTILE model.

This research also indicates the significance of offering teachers with sufficient time to prepare their lessons, improve their English abilities, and address other relevant professional needs. Previous research has identified sufficient time as an important element for the professional growth of teachers [28]. This corresponds to the fourth principle, time, of the FERTILE model.

Establishing a bilingual environment is important for promoting bilingual education [29]. The environment both inside and outside the classroom should support the use of two languages [30], consistent with the second principle, environment, of the FERTILE model. School administrative teams can improve the implementation of bilingual education by providing environmental prints, documents, and other materials in both languages. Research conducted in Taiwan has emphasised the effectiveness of bilingual environmental prints in schools and highlighted the crucial role of school administrative staff in cultivating an environment rich with meaningful literacy input [31].

Furthermore, it is important to establish not only the “hardware” but also the “live” aspects of a bilingual environment in schools. To create an interactive bilingual environment, head teachers, school administrative teams, and teachers should actively participate in enhancing this environment and serve as role models. This approach is in line with
the third principle, role modelling, of the FERTILE model. This includes using English for daily announcements and other activities, helping students naturally adapt to the bilingual environment. If head teachers and school administrative teams consistently use both languages in daily interactions, it will encourage others to follow suit. In such an environment, authentic and meaningful interactions are more likely to occur. Lin [13] also emphasised the importance of role modelling and its impact on the implementation of bilingual education and enhancing student learning.

Bilingual education requires the involvement of all school staff. This study highlights the significant role of school administrative teams in engaging stakeholders. Pedrosa and Moreno [32] and Camilleri and Europarat [33] also argued that all stakeholders in bilingual education should collaborate as a team. The findings of this study point out the efforts that school administrative teams can undertake, such as building consensus within schools, offering necessary resources, and additional motivation, among other initiatives.

The second research question is to comprehend the function of BPLCs in the implementation of bilingual education within schools. This study indicated that BPLCs offer a supportive environment for teachers to discuss and adjust their instructional strategies for class teaching, allowing them to identify and address challenges while enhancing their teaching approaches. Moreover, BPLCs act as a collaborative space where administrative teams and teachers can collaborate to further bilingual education. Teachers in these communities also have opportunities to share resources and information related to bilingual teaching. This is in line with the fifth principle, instructional strategies, of the FERTILE model. Reyes [34] noted that BPLCs establish a culture of inquiry and a continuous learning environment, supporting dual language teachers’ efforts to improve the academic achievement of English language learners. Sanna [35] also indicated that BPLCs are a safe place for teachers to share common struggles, reflect on pedagogy, and flexibly use their language resources.

The findings of this study show the importance of the significant role of school administrative teams and the support provided by BPLCs. These insights have practical implications for schools and policy makers in Taiwan and around the world. School administrative teams are responsible for ensuring that BPLCs are well supported with adequate resources, enabling teachers to collaboratively share strategies and address challenges. In addition, school administrative teams and teachers should collaborate to create a bilingual environment, and serve as role models, setting a positive example for students. Policy makers should implement policies that allow schools the flexibility to adapt bilingual education to their unique needs and contexts, as well as ensure consistent funding and resources are available for implementing bilingual education and supporting teacher training.

While the findings of the study provide valuable insights, it is important to acknowledge its limitations. Since this research was based on only two cases, the generalisability of the findings may be limited. Therefore, it is suggested that further studies include other cases from different regions in Taiwan. This expansion would provide more comprehensive insights into the implementation of bilingual education in Taiwan, using the FERTILE model as a framework. Moreover, due to the limitation of the word limit, this study primarily focused on the role of school administrative teams and the function of BPLCs, excluding teacher teaching. Future studies could expand the scope to cover teaching practice. This would provide a more complete understanding of the factors contributing to the implementation of bilingual education. While numerous studies on bilingual education have been conducted internationally, research in Taiwan on this topic has been relatively sparse. This gap presents a valuable opportunity for researchers in Taiwan to explore further, thereby improving our understanding of bilingual education and contributing to the global body of knowledge on this topic. Currently, while investigating bilingual education in schools, most research only focuses on what happens in the classroom but ignores the bilingual environment building outside the classroom. Previous models such as immersion, CLIL, and EMI have focused mainly on classroom practice. However, the implementation of bilingual education involves the whole school, not only the classroom. Therefore, the
FERTILE model offers valuable insights for educators, practitioners, and policy makers engaged in bilingual education, both in Taiwan and internationally. Future research could apply the FERTILE model in either a Taiwanese or international context.

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**References**


17. Wang, Y.-P.; Lin, T.-B. The implementation of bilingual education: Reflections on Taiwan’s bilingual national policy with the experience of Singapore and Canada. *Second. Educ.* 2021, 72, 18–31. [CrossRef]


31. Yeh, C.-Y.; Teng, C.-W. The Effectiveness of Bilingual Environmental Print in an Elementary School: A Case Study. Taiwan J. TESOL 2010, 7, 45–75. [CrossRef]

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