English and Paiwan Inclusive Bilingual Instruction in an Indigenous Elementary School

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1. Introduction

Taiwanese local languages, such as Indigenous languages, have been regarded as national languages that should be included in education (Development of National Languages Act, 1999). Additionally, English is essential for enhancing Taiwanese students' international competitiveness and is supported by Taiwan's bilingual policy (National Development Council, 2021). Balancing English learning under the bilingual policy and Indigenous language revival, as per the Development of National Languages Act, becomes an essential but challenging mission for stakeholders in Indigenous schools and communities. We need successful experiences to gain practical wisdom and solutions for this challenge. This study aims to explore a successful elementary school that includes both English and Paiwan learning in harmony, providing ideas and practical strategies for other elementary schools facing similar challenges.

Taiwan is a small island located on the rim of the Pacific Ocean, and its economy relies mainly on international trade (Office of the Accountant and Accountant, Executive Yuan, 2024). Moreover, Taiwan's information technology industry has played an essential role in global industries. For example, Taiwan Semiconductor Manufacturing Company (TSMC) is the top semiconductor producer in the world and is expanding its factories in the USA, Japan, and Germany. TSMC needs many employees who can speak English or a foreign local language to work in these international factories. English plays an essential role in increasing Taiwanese international working opportunities. Taiwan's Ministry of Education has been promoting Taiwan Mandarin and English learning from K-12 and English-medium instruction (EMI) in higher education (National Development Council & Ministry of Education, 2022). Preliminary results have been reported (Chen, 2021; Lin, 2022; Tsou, 2021).

However, enhancing the quality of education for everyone is an essential mission of the Sustainable Development Goals (SDGs) for every country (United Nations, 2015). Indigenous students have faced the challenges of bilingual learning and

Indigenous language learning since they need to learn English, the Indigenous language, and Taiwan Mandarin under the policies of the bilingual policy, the National Language Act, and the 12-year national curriculum (Ministry of Education, 2014). Overcoming these challenges is vital for increasing Indigenous students' academic achievements and proclaiming social justice for these disadvantaged groups (Rawls, 1999). Unfortunately, there are few studies on how to improve Indigenous language and English learning for Indigenous students. Exploring English and Indigenous language inclusive bilingual instruction is critical to addressing this research gap and providing practical experiences for other Indigenous schools.

The research goals include investigating the challenges of English and Indigenous language learning in Indigenous elementary schools and exploring the successful experiences from the case of an Indigenous elementary school.

2. Literature Review

(1) Difficulties of English Teaching in Indigenous Schools

Non-indigenous students typically perform better in English learning than Indigenous students (Chang, 2023). Several factors contribute to Indigenous students' poor academic performance in English. A significant factor is the lack of family support. Many Indigenous families may not have the resources or background to support their children's English learning effectively (Tan, 2002). Additionally, low learning motivation among Indigenous students is a critical issue. This lack of motivation can stem from the perception that English is less relevant to their daily lives and future aspirations (Chang & Chang, 2017). Furthermore, educational resources and teaching methods tailored to Indigenous students' cultural contexts are often lacking, resulting in disengagement and poor academic outcomes.

Innovative approaches are necessary to address these challenges and improve English learning outcomes for students. Incorporating culturally relevant materials and teaching methods that resonate with Indigenous students' experiences can enhance engagement and motivation. Programs involving the community and emphasizing the practical benefits of learning English, such as increased job opportunities, can also help boost motivation and performance. These approaches align with the Sustainable Development Goals (SDGs) to ensure inclusive and equitable quality education for all (United Nations, 2015). By addressing the specific needs of Indigenous students, educators can create a more supportive and effective learning environment.

(2)　Struggling with Indigenous Language Learning

Indigenous or mother tongue competency is vital to the national 12-year curriculum (Ministry of Education, 2014). However, Indigenous language learning faces numerous challenges. One significant challenge is cultural assimilation, where Indigenous families adopt the majority group cultures, making students feel out of place with their cultural roots (Tan, 2002). This shift negatively impacts their motivation and ability to learn their mother tongue, weakening their sense of cultural identity.

The lack of an environment conducive to using Indigenous languages also places many of these languages in an endangered state (Ma, 2023). Schools and communities often do not provide sufficient opportunities for students to practice and develop proficiency in their Indigenous languages. This situation is exacerbated by the academic demands on Indigenous students, who must learn their Indigenous language, English, and Taiwanese Mandarin. The burden of trilingual learning can hinder their academic performance and language proficiency.

Reviving and sustaining Indigenous languages is crucial for preserving cultural heritage and identity. Strategies to support Indigenous language learning include creating immersive language environments, involving community elders and language experts in education, and integrating Indigenous languages into various subjects and activities. Educators can help students develop a strong cultural identity and linguistic proficiency by fostering a supportive environment for Indigenous language learning.

(3)　Challenges of Bilingual Instruction

Balancing academic and cultural literacy development is essential (Hsien & Hsien, 2019). Government and Indigenous school leaders aim to integrate English and Indigenous language learning to enhance students' academic and cultural competencies. However, implementing bilingual instruction poses significant challenges. Educators must navigate the complexities of teaching two languages simultaneously, each with unique difficulties. English learning, for instance, often requires substantial resources, skilled teachers, and culturally relevant curricula (Chang, 2023). On the other hand, Indigenous language learning requires overcoming the challenges of cultural assimilation and the lack of a supportive language environment (Tan, 2002).

These dual-language instruction challenges are daunting but essential to address. Overcoming these challenges can provide Indigenous students with better opportunities

in the international job market, contribute to the revival of endangered Indigenous languages, and promote social justice and fairness (Rawls, 1999). Effective bilingual education programs can draw on successful models from other contexts, such as incorporating culturally relevant materials, engaging community involvement, and providing professional development for teachers.

Educators and policymakers must collaborate to develop and implement strategies supporting English and Indigenous language learning. This collaboration can include creating bilingual curricula that reflect Indigenous cultural contexts, offering professional development for teachers in bilingual education methods, and engaging families and communities in the educational process. By addressing these challenges thoughtfully and systematically, bilingual instruction can become a powerful tool for enhancing educational equity and preserving cultural heritage.

In conclusion, integrating English and Indigenous language learning presents significant challenges but is crucial for enhancing educational equity and preserving cultural heritage. Educators and policymakers can develop effective bilingual education programs that benefit Indigenous students and communities by drawing on successful models and adapting them to local contexts.

3. Research Method

To provide valuable insights for other Indigenous schools, we conducted a preliminary case study on an Indigenous elementary school that has successfully balanced English and Indigenous language instruction. The aim was to uncover practical strategies and practices that can be applied in similar educational contexts.

We selected critical stakeholders from the case school for in-depth interviews, including the principal, director, English teacher, Paiwan language teacher, and homeroom teacher. These participants were chosen due to their direct involvement in the bilingual education program and unique perspectives on its implementation and outcomes.

Data were collected through interview shorthand, ensuring the interviewees' consent was obtained. The interviews were structured to gain comprehensive insights into the school's bilingual education strategies. The interviews were conducted as follows:

The principal (IAP) was interviewed 6 times, each session lasting 60 minutes. Example coding: (IAP, 20240412). Director (IAD) was interviewed 2 times, each session lasting 40 minutes. Example coding: (IAD, 20240508). English Teacher (IET) was interviewed 2 times, each session lasting 40 minutes. Example coding: (IET, 20240408). Paiwan Language Teacher (IPT) was interviewed 2 times, each session lasting 40 minutes. Example coding: (IPT, 20240416). Homeroom Teacher (IHT) was interviewed 2 times, each session lasting 40 minutes. Example coding: (IHT, 20240503).

The authors reviewed the interview data multiple times to ensure a thorough understanding. Thematic analysis was used to extract relevant argumentative themes. This method involved coding the data into categories that reflected the core issues and insights discussed by the interviewees. To ensure the validity and reliability of the findings, we employed triangulation by interviewing multiple stakeholders, we were able to cross-verify information and gain a comprehensive view of bilingual education practices.

4. Research Results

(1) Students' High Learning Motivation in Case School

Students in this Indigenous elementary school exhibit high enthusiasm for their English classes. The principal noted, "Students tell me that they like English class" (IAP, 20240412). Additionally, this enthusiasm translates into proactive behavior: "I can see that students are expecting to have their English class and go earlier to the classroom usually" (IAP, 20240419). English is perceived as a joyful and engaging subject by the students.

Similarly, students demonstrate high motivation to learn the Paiwan language. The director mentioned, "Students have high motivation in Paiwan language learning" (IAD, 20240508). A Paiwan teacher recounted a lower-grade student's reflection: "If we do not speak the Paiwan language, how can we answer our offspring who wonders why we do not speak Paiwan?" (IPT, 20240416). This illustrates the students' intrinsic motivation and the cultural significance they associate with native language learning.

(2) Teacher's Positive Mindset and Flexible Pedagogy

The positive and growth mindset of the teachers plays a crucial role in their

effective teaching strategies. The English teacher exemplifies this mindset: "She has a positive and growth mindset to deal with teaching and various school stuff" (IAP, 20240327). Her teaching philosophy is to "bring joyful experiences for students during their English learning" (IET, 20240408), and her innovative methods including teaching English songs, performing English plays with local culture, arranging international exchanges with Singapore students, and using table games. She also offers extra activities like "English time" during breaks on Tuesdays (IAP, 20240511).

Similarly, the Paiwan teacher is committed to language and cultural revival. His philosophy, "I want to deliver the Paiwan language to the new generation because it is the root of our culture" (IPT, 20240607), underscores his dedication. His pedagogy includes integrating Paiwan language into daily routines like morning greetings, lunch appreciation, and dismissal songs, making it a natural part of students' lives. The principal noted, "The results are obvious. Students use Paiwan to express their lunch appreciation, and it has become everyday usage" (IAP, 20240531). The teacher also decorates the campus with Paiwan terms for environmental learning (IPT, 20240607) and encourages students to tell Paiwanese history and stories in their mother tongue. Forming an Indigenous singing and dancing group has further excited students about using Paiwan language and culture joyfully (IAP, 20240531).

(3)　Effective Use of Technology and Resources

Making effective use of technology and resources can significantly enhance teaching quality. For instance, the English professional classroom at the case school is equipped with multimedia learning materials, which the students find highly engaging. "Students enjoy English learning in the professional classroom" (IET, 20240516). iPads allow students to explore English learning through various multimedia resources, making the experience more interactive and enjoyable. "Students use iPad to access multimedia English learning materials, such as Kahoot, Pagamo, Nearpod, and ChatterKid" (IET, 20240525). Additionally, the English teacher actively utilizes various learning resources, such as scheduling the English Bus from the County Government and arranging language exchanges with overseas students. These activities are well-received by the students, who appreciate the diverse learning (IAP, 20240517).

Similarly, the Paiwan teacher incorporates technology and related resources into his classes. He introduces Paiwan learning through the Pagamo online learning platform, which students find enjoyable and engaging. "Students enjoy Paiwan learning in Pagamo through iPad" (IPT, 20240416). Some students even extend their learning at

home, proudly sharing their progress and achievements in the platform's learning levels (IAP, 20240608). The "Indigenous language e-learning" online resource (https://web.klokah.tw/) further enhances students' motivation by providing abundant multimedia materials for Paiwan learning. The Paiwan teacher frequently utilizes these free resources to enrich his teaching.

(4) Inclusive Bilingual Learning: Paiwan and English

Both Paiwan and English hold significant importance for this school. Balancing the instruction of both languages in a school simultaneously is challenging, but the school has achieved commendable results in inclusive bilingual instruction. The English teacher demonstrates a strong awareness and positive attitude towards bilingual culture, often integrating Indigenous language elements into her English lessons. For instance, "She performs an English opera based on the Paiwan cultural story, Bali's Red Eye" (IAP, 20240524). This activity excites students and enhances their learning experience by blending Paiwan culture with English instruction. The English teacher has also created several English-Paiwan inclusive YouTube videos, allowing students to learn both languages anytime and anywhere (IAP, 20240531).

The Paiwan teacher also incorporates English elements into his Paiwan lessons. For example, he designed a cultural final performance at the end of the semester where students performed a song incorporating both English and Paiwan (IAP, 20240524). He integrates English pronunciation into his Paiwan language lessons, believing that "comparing English pronunciation and Paiwan pronunciation can enhance students' knowledge and skills in both" (IAP, 20240607). As a result, "both English and Paiwan are welcome in school. Teachers and students use both languages when appropriate" (IAP, 20240607). The homeroom teacher observed that "students use both Paiwan and English in class sometimes, without feeling any discomfort" (IHT, 20240503).

(5) Positive School Culture and Supports

The case school exhibits a positive culture that actively supports teachers and students in achieving their educational goals. The principal's growth mindset and willingness to innovate have led to significant advancements in the school's educational practices, particularly in inclusive bilingual instruction of Paiwan and English. To create better English learning conditions, the principal built an English professional classroom and included Paiwan language and culture into our extracurricular activities and campus decorations, enriching students' Paiwan learning experience significantly.

"I have applied for many Indigenous experimental programs with substantial budgets and resources to support teachers in implementing innovative teaching activities" (IAP, 20240517). Additionally, to improve English proficiency, "We have an English class starting from grade one in this experimental Indigenous school" (IAP, 20240412). The school also enhances environmental Indigenous language learning by "decorating the campus with Indigenous-related language displays" (IAP, 20240419). A positive and friendly school culture has been firmly established: "The school partner relationship in a teacher tribe (a small teacher support group) holds regular meetings to share the latest ideas and solve problems together" (IAP, 20240510). This supportive atmosphere fosters partnerships among school members, encourages the recognition and inclusion of bilingual culture, and promotes sustainable bilingual inclusive development.

5. Discussion

(1)　Students' High Learning Motivation Powered by Teacher's Enthusiasm

Teachers' enthusiasm and dedication to English and Paiwan language instruction significantly inspire students' learning motivation. The principal emphasized, "Teachers are highly enthusiastic and committed to English and Paiwan language instruction that inspires students' learning motivation" (IAP, 20240531). Teachers employ flexible pedagogies that cater to students' interests and cultural contexts. For English classes, methods include integrating English learning into songs, international exchange activities, positive feedback, and focusing on the joy of learning English. These strategies significantly boost students' motivation and engagement. The Paiwan language teacher uses an ethnically sentimental approach, incorporating Paiwan history, culture, and stories into the curriculum. Multimedia learning materials, such as indigenous hero movies, enhance students' recognition of their heritage. Additionally, situation-based learning tasks, like performing a Paiwan hero story play during Indigenous Day and participation in Indigenous language and culture competitions, showcase students' learning outcomes. These methods make learning enjoyable and instill cultural pride and identity.

(2)　Teachers' Positive Mindset and Flexible Pedagogy

The English and Paiwan teachers at the school have a positive educational philosophy. The English teacher views English learning as a joyful journey, while the Paiwan teacher sees the revival of Paiwan language and culture as a mission through the new generation. These philosophies reinforce their positive mindsets in handling

teaching and school responsibilities. They employ various strategies to create joyful and meaningful learning experiences. Recognizing the challenges of both English and Paiwan for Indigenous students, they use diverse pedagogical approaches to help students overcome obstacles. The English teacher attends a master teaching program to enhance her pedagogical knowledge and skills, while the Paiwan teacher attends workshops on the latest Indigenous teaching methods almost weekly. Equipped with new ideas and skills, both teachers implement effective strategies, such as learning by song, performance, season festival, and overseas interaction to enhance learning.

(3)　Effective of Technology and Resources

Renowned for its advanced technology industry, Taiwan strongly emphasizes technology-supported learning, particularly for remote schools. In this Indigenous school, every student can access an iPad, facilitating their learning through various digital platforms. The government supports this initiative by creating numerous online learning resources like CoolEnglish and Indigenous language e-learning platforms. These resources provide valuable tools for both teachers and students. English and Paiwan teachers regularly attend professional development activities, including master programs and workshops, keeping them updated with the latest technological advancements and teaching methodologies. This ongoing professional development enables them to integrate technology into their teaching practices effectively. Additional funding for creating specialized classrooms, such as the English professional classroom, and for organizing activities like the English Bus Learning and Indigenous cross-school exchange programs, significantly expands students' learning opportunities and enhances their enjoyment of learning. Integrating technology enriches the learning experience and helps bridge educational gaps, providing students with a broader range of learning tools and resources.

(4)　Inclusive Bilingual Instruction Approach

This Indigenous experimental elementary school's principal believes that Paiwan and English are essential for students' career development. He actively encourages using both languages in school and at home, promoting a supportive culture for bilingualism. This administrative support allows school members to use Paiwan and English freely. The principal also aims to enhance cross-cultural understanding among teachers and students, supporting inclusive bilingual instruction. He often converses in both languages with teachers, students, and parents, extending bilingual learning into the family and community (IAP, 20240531). The school embraces innovative bilingual

instruction and supports related initiatives. "When teachers apply for budget or resources to enhance Paiwan, English, or bilingual instruction, I am committed to fulfilling their needs if possible" (IAP, 20240608). This inclusive atmosphere fosters a culture where all members celebrate and utilize Paiwan and English.

(5) Positive School Organizational Culture and Support

Support from the school is a crucial element in shaping students' learning outcomes. The principal's optimal attitude and passion for creating a supportive school culture have led to a thriving environment where Paiwan learning, English instruction, cultural activities, enriched learning equipment, and diverse learning materials and activities all prosper. The principal's educational philosophy is that "sound support from the school with opportunities and resources can significantly enhance students' learning results" (IAP, 20240531). Despite the demands of his position, the principal works tirelessly, often late into the night, driven by the desire to see the positive changes he has implemented. His efforts have led to profound developments in Paiwan language and culture, English competency, academic achievements, and life skills among school members

6. Implication and Conclusion

(1) Implications

The enthusiasm for learning English and Paiwan at this Indigenous school highlights deep student engagement. Their proactive behavior and intrinsic motivation, noted by principal and teachers, indicate a positive and engaging learning environment. This attitude enhances linguistic skills and instills cultural pride and identity.

Teachers' positive mindsets and flexible pedagogies are crucial. The English teacher's philosophy of joyful learning and the Paiwan teacher's dedication to cultural revival showcase their commitment to meaningful education. Innovative methods, like songs, plays, and international exchanges, make learning exciting and relevant, enriching students' overall educational experience. The effective use of technology and resources, such as multimedia materials, iPads, and online platforms like Pagamo, makes learning interactive and engaging. These tools provide dynamic learning opportunities, allowing students to explore and enjoy both languages in various ways.

The inclusive bilingual instruction approach integrates Paiwan culture into English

lessons and vice versa. Activities like performing cultural stories in English and creating bilingual YouTube videos help students appreciate both languages. This fosters cross-cultural understanding and prepares students for future academic and career opportunities. A positive school culture and strong support systems underpin the educational programs' success. The principal's growth mindset and commitment to innovation have led to significant advancements. Supportive initiatives, like the teacher tribe and regular meetings for idea-sharing, create a collaborative atmosphere that encourages continuous improvement.

Overall, the school demonstrates a successful bilingual education model, combining high student motivation, positive teaching mindsets, effective technology use, inclusive instruction, and supportive culture to create a thriving learning environment.

(2) Conclusion

The case study of the Indigenous elementary school showcases the success of inclusive bilingual instruction, with high student motivation for learning both English and Paiwan. This approach enhances linguistic skills and cultural pride. Teachers' innovative and engaging methods make learning enjoyable and meaningful. Effective use of technology, like multimedia materials and online platforms, enriches the educational experience and prepares students for modern demands. The integration of cultural elements into language education fosters a holistic learning environment, promoting linguistic abilities and cross-cultural understanding. A supportive school culture, driven by the principal's growth mindset and commitment to innovation, ensures continuous improvement and a strong sense of community among educators.

In conclusion, this model of inclusive bilingual instruction offers valuable insights for other schools. By maintaining high student motivation, employing flexible teaching methods, utilizing technology effectively, and fostering a supportive school culture, this approach values cultural heritage while preparing students for the globalized world.

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