

College Students' Perspectives on The Effectiveness of EMI in Taiwan

By

Yi-Chiao Huang

黃翊喬

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INTERNATIONAL AFFAIRS**

This senior paper was presented

By

Yi-Chiao Huang

黃翊喬

It was defended on

November 16, 2024

and approved by

Reviewer 1: Wu Shao-Tzu, Associate Professor, Department of International Affairs

Signature: _____ Date: _____

Reviewer 2: Philipp Fluri, Associate Professor, Department of International Affairs

Signature: _____ Date: _____

Advisor: Daniel Lin, Associate Professor, Department of International Affairs

Signature: _____ Date: _____

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Yi-Chiao Huang 黃翊喬, B.A.

Wenzao Ursuline University of Languages, 2024

Abstract

This study examined the impact of English-Medium Instruction (EMI) on Taiwanese college students' academic performance and engagement, addressing challenges linked to language proficiency disparities under Taiwan's bilingual policy. Using a mixed-methods approach, with surveys of 85 students and in-depth interviews with 18 from Wenzao Ursuline University of Languages, the findings show that instructors' strategic code-switching enhances comprehension and reduces anxiety for lower proficiency students. Occasional code-switching aids understanding, but excessive use disrupts English immersion valued by higher proficiency students. Language barriers, anxiety, and pressure influence students' perceptions of learning outcomes, with lower proficiency students reporting higher stress. Disparities in English proficiency also affect class participation, as higher proficiency students engage more confidently, leaving lower proficiency students feeling marginalized. While ESP and EAP programs provide moderate support, enhancements in speaking and writing were needed to meet diverse student needs. These findings underscore the need for adaptive EMI strategies to support varied language backgrounds and improve educational outcomes in Taiwan.

Keywords: English-Medium Instruction (EMI), code-switching, language barriers, student engagement, anxiety, academic performance

大學生對臺灣 EMI 全英語授課有效性之看法

Yi-Chiao Huang 黃翊喬, B.A.

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摘要

本研究探討全英語授課（EMI）對台灣大學生學業表現與參與度的影響，著重於台灣雙語政策下因語言能力差異所帶來的挑戰。研究採用混合方法，調查了來自文藻外語大學的 85 名學生，並對其中 18 名學生進行深入訪談。結果顯示，教師策略性地使用英母語轉換能增進低英語能力學生的理解力並減少其焦慮感。偶爾的母語轉換有助於理解，但過度使用會破壞高英語能力學生所重視的英語沉浸效果。此外，語言障礙、焦慮和壓力影響了學生對學習成果的認知，低英語能力的學生報告更高的壓力感。英語能力差異也影響課堂參與度，高英語能力的學生參與較積極，使低英語能力的學生感到邊緣化。儘管 ESP 和 EAP 課程提供了適度的學術英語支持，但在口說和寫作方面仍需加強，以滿足不同學生的需求。這些發現強調了因應多元語言背景而調整 EMI 策略的重要性，以提升台灣的教育成果。

關鍵詞： 全英語授課（EMI）、語碼轉換、語言障礙、學生參與、焦慮、學業表現

Preface

This research would not have been possible without the invaluable support and encouragement of those who guided and assisted me along the way. I am deeply grateful to my advisor, Associate Professor Daniel Lin, for his insightful guidance and unwavering patience throughout this journey. I also extend my heartfelt thanks to the students and instructors who participated in my study, sharing their experiences and perspectives with sincerity and openness. To my peers and friends, who offered their time, advice, and moral support during the challenges of data collection and analysis, your contributions were indispensable. Finally, I wish to express my gratitude to my family for their constant encouragement and belief in my abilities, which gave me the strength to complete this project. This work stands as a reflection of the collective efforts of all who supported me.

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INTRODUCTION

Research Background

The number of EMI has been rapidly increasing. For decades, English-Medium Instruction (EMI) classes has been widely adopted as a popular English education system in Asian countries like Taiwan, China, Korea, and Japan. These nations aimed to significantly enhance English proficiency to adequately prepare students for the global market's high competitiveness. Dearden noted that in recent years, universities in non-English-speaking countries have increasingly adopted EMI to improve students' English skills and better equip them for the demands of a globalized job market.¹ This widespread adoption highlighted the strategic importance of EMI in preparing students for success in an interconnected global economy.

In the Taiwan case, Taiwanese government has been doing the same thing, EMI English education was a significant part of the goal “2030 Bilingual Policy” to promote the internationalization of Taiwan set by the Taiwanese government, to increase the competitiveness of Taiwanese students, and believes the EMI classes would facilitate students' future careers choices with its well-trained language proficiency. The National Development Council of Taiwan reports mixed reactions to EMI: some students felt it enhances their English proficiency, while others, along with instructors, believed that delivering complex content in English limits understanding, especially when students were not fluent. Additionally, EMI has made teaching more challenging due to the English proficiency gaps among both students and instructors. Doiz and Sierra also observed that while EMI is widely recognized as

¹ J Dearden, "English as a Medium of Instruction: A Growing Global Phenomenon," *British Council* (2014).

a means to enhance global competitiveness, challenges emerged when language proficiency gaps between students and instructors affected the clarity and depth of content understanding.² Therefore, since we perceived that there was still a gap between the policy itself and the practical outcomes, and this gap highlighted the need for additional support measures to fully realize the benefits of EMI in Taiwan.

Research Motivation

After analyzing my observations and personal experiences, this study noticed a phenomenon occurring between students with proficiency in English and those without. Students' language proficiency could significantly impact their overall academic performance. Some might benefit from this new system, while others might not. Whether EMI could support students' learning and benefit them overall was a question I wanted to investigate.

Research Purpose

The purpose of my study was to assess whether students and schools in Taiwan were prepared for the implementation of EMI. Additionally, it sought to explore whether EMI inadvertently marginalizes or created divisions among students based on language proficiency. Additionally, this study aimed to gather honest student feedback on their experiences within EMI courses, especially regarding how their learning quality was impacted. This examination included analyzing the disparity between the Taiwanese government's "2030 Bilingual Policy" goals and the practical capabilities of schools, to better understand the feasibility of EMI in Taiwan.

² Aintzane Doiz, David Lasagabaster, and Juan Manuel Sierra, "Internationalisation, Multilingualism and English-Medium Instruction," *World Englishes* 30, no. 3 (2011).

Research Questions

Research Question 1: How did instructors' utilization of teaching strategies, including code-switching to their native language, influence students' comprehension and academic performance in EMI courses?

Research Question 2: How did specific challenges, such as language barriers, anxiety, and pressure, influence students' perceptions of learning outcomes in English-Medium Instruction (EMI) courses?

Research Question 3: How did disparities in English proficiency among students in EMI courses in Taiwan impact their opportunities for active participation and engagement?

Research Question 4: How effective were the current ESP and EAP supportive programs in meeting the diverse needs of students enrolled in EMI courses in Taiwan?

Contribution

By identifying the challenges and successes of EMI implementation, this study could provide valuable insights to policymakers in Taiwan. This information could inform future policy decisions regarding language education and curriculum development. Additionally, understanding students' and professors' feedback on EMI classes could help educational institutions in Taiwan refine their teaching methodologies and support systems. This could lead to improvements in the quality of education provided to students in EMI programs.

Limits

Firstly, due to budget constraints and time limits, this study collected the data from students studying in Wenzao Ursuline University of Languages only by doing interviews and sharing the questionnaire.

Delimits

This research did not consider financial status as a factor impacting students' learning outcomes because financial status does determine whether students have sufficient support and resources, such as attending cram schools. Considering financial status could introduce bias into the analysis of students' learning outcomes, thus complicating the interpretation of research results.

LITERATURE REVIEW

EMI: Global Perspectives and Frameworks

Overview of EMI: Current Trends

English proficiency has become a critical factor in global competitiveness, especially in non-English-speaking countries. As Oksana noted, As Oksana noted, the preference for English as a global communication language has surged, with Asia and Latin America showing significant growth alongside Europe.³ English education has been a priority in Asia for decades, with proficiency now seen as a mark of elite status, offering a distinct advantage in competitive fields. This emphasis on English reflects a global recognition of its value in career advancement and national competitiveness.

EMI has emerged as a key tool to broaden English language education worldwide, though challenges remain. While EMI supported globalization and appeals to international students, concerns remain about whether government policies were truly realistic and achievable. Merve Yıldız, Adem Soruç, and Carol Griffiths observed that the EMI phenomenon has rapidly expanded in recent years, fueled by a desire for global inclusion and financial benefits. While the potential advantages of EMI were evident, they came with significant challenges, leaving both students and teachers struggling to keep pace⁴. They featured the gap between ambitious government goal and what schools could realistically implement, underscoring the need for achievable policies that match local capacities. This disparity raised concerns over the long-term feasibility of EMI as a global strategy.

³ Oksana Polyakova et al., "Emi for Universities: How to Benefit from Embodying It into Educational Process," *Education and Self Development* 17, no. 2 (2022), <https://dx.doi.org/10.26907/esd.17.2.10>.

⁴ Merve Yıldız, Adem Soruç, and Carol Griffiths, "Challenges and Needs of Students in the Emi (English as a Medium of Instruction) Classroom," *Konin Language Studies* 5, no. 4 (2017).

Many countries were actively promoting EMI as part of their internationalization goals. Universities worldwide were using EMI not only to meet the demand for English skills but also to attract international students, improve institutional reputation, and secure funding. Alhamami noted that many universities were striving to attract international students to their programs by using EMI.⁵ Schools with robust EMI programs were increasingly seen as benchmarks for internationalization, a trend showing no sign of decline.

Despite its benefits, EMI presents notable challenges that question its universal effectiveness. Oksana, Lamia, Dilyana, and Yuliya highlighted that the use of EMI negatively affected students' understanding of scientific material and their performance in evaluations. They observed that this approach led to feelings of anxiety, frustration, and embarrassment among students, eventually resulting in lacking educational achievements.⁶ These findings suggested that, while EMI supports internationalization goals, its implementation required careful consideration of students' language needs to ensure effective learning outcomes.

Theoretical Frameworks Underpinning EMI

Because of the believe saying that students who had higher English proficiency were most competitive, having broadest choices for their future careers. We could see many countries like China, Taiwan, South Korea, Japan, etc. where were non-English speaking countries, have put lots of efforts on EMI, and the number of EMI class has been rapidly growth and growing budget are provided. Jon, Cho, and Byun noted that English-medium instruction (EMI) has become a new policy trend in

⁵ M. Alhamami, "Inequity, Inequality, and Language Rights in English as a Medium of Instruction Programs," *Eval Program Plann* 99 (Aug 2023), <https://dx.doi.org/10.1016/j.evalprogplan.2023.102297>.

⁶ Polyakova et al.

many non-English speaking countries within higher education, aiming to accommodate and support the increasing number of international students.⁷ EMI has been recognized as a vital tool and indicator for Asian educational systems aspiring to match the global market and interconnected world. It promised to further cultural and academic exchange, eventually strengthening the competitiveness of local students on the international stage.

EMI aimed to enhance students' English skills by creating an English learning environment that included reading, listening, and speaking. However, the outcomes might vary depending on students' language proficiency. Despite its potential, significant challenges remain. Mei-Ying Chien and Martin Valcke noted that EMI research highlighted the critical role of students' language proficiency as a key factor limiting their interactions and learning in class. This limitation impacted their ability to engage with disciplinary content effectively.⁸ Consequently, particularly in those non-English speaking countries lacking systematic supports, this sudden challenge requiring certain level of English proficiency for both teachers and students, absolutely it would not be an easy job for either.

In many cases, there were lots of arguments about the lacking training of teachers and the English proficiency of students, which did cause challenges for efficient learning at schools. Consequently, we realized that with the variable of 'language', EMI did create a whole new learning environment between English and non-English classes, which would indeed affect students' learning and teachers' teaching due to differences in language proficiency. This, in turn, it raised deeper

⁷ Jae-Eun Jon, Young Ha Cho, and Kiyong Byun, "Internationalization by English-Medium Instruction? Professors' Decoupling Behaviors to Emi Policy in Korean Higher Education," *KEDI Journal of Educational Policy* 17, no. 2 (2020), <https://dx.doi.org/10.22804/kjep.2020.17.2.007>.

⁸ Mei-Ying Chien, and Martin Valcke, "A Study of the Difficulties and Instructional Support Related to Spoken Interaction in an Emi Course for Higher Education Students," *Journal of Educational Research and Practice* 10, no. 1 (2020).

considerations of the quality of teaching and learning in classes, students' rights to learning, and the adequacy of the implementation.

EMI Implementation in Higher Education Institutions

EMI Implementation in Colleges Globally

EMI broadened degree options for students seeking education abroad. Jon, Cho, and Byun observed that in numerous countries where English is not the primary language, there was a rising adoption of EMI in higher education. This shift in policy aimed to cater to and support the increasing number of international students entering these educational institutions.⁹ To build a bilingual learning environment for local students, attracting international students seems like a crucial strategy. EMI helped to decrease the language barrier that international students would have faced, and it consolidated the teaching system to meet the academic needs of foreign students. By doing so, schools could more successfully attract foreign students, building a multicultural, multilingual studying environment at the same time.

Furthermore, with the growing need for internationalized workforces, EMI could serve as a key platform for developing globally competent professionals who gain valuable knowledge during their academic years. In the generation of globalism, English has become a central focus for many countries, particularly in higher education, which was often viewed as the most crucial stage influencing students' future career choices. Thus, besides encouraging studying abroad, EMI also played a significant tool in helping students prepare for their future career abilities.

⁹ Jon, Cho, and Byun.

Policy and Practice: The Case of Korea

Schools' global and international rankings impacted decisions for students and parents in Korea. Korea shares many similarities with Taiwan in its approach to English education, making it a valuable case for comparison when examining English education in Taiwan. Under the EMI policy in Korea, the ranking system evaluated the extent to which schools are globalized and internationalized, which has led to failures and difficulties for some schools even in their society. Korea, like Taiwan, was actively working to incorporate the trend of adopting EMI into their educational system. Jon, Cho, and Byun observed that the increase in EMI courses in Korean universities was primarily driven by the aim to secure government funding and enhance university rankings, rather than a real commitment to achieving educational objectives.¹⁰ Therefore, in order to achieve higher rankings that could protect the reputation of schools, the increasing number of EMI programs has rapidly risen, seen as an indicator of the level of internationalism within the country. However, without adequate planning, this might lead to problems in implementation.

Many students did face difficulties in adapting to this change. However, due to the interests of the majority, they have become the ones making sacrifices under the limited assistances. Korean researchers Kym and Kym argued that this policy has sparked public debate regarding its feasibility and its potential violation against students' rights to receive education in their mother tongue. In a competitive society, those with privilege often thrive, while the rights of non-privileged students were frequently overlooked. Munassir suggested that universities' failure to accommodate students with low English proficiency in their curricula and study plans worsens inequality within EMI undergraduate programs. Through previous studies, we have

¹⁰ Jon, Cho, and Byun.

observed a phenomenon indicating that college students with higher proficiency in English tended to perform better than those lacking proficiency in the language. This raised concerns about whether such policies against the rights of students to learn, particularly those who lack proficiency in English. This was a common situation for many students.

Policy and Practice: The Case of Arab

For example, Arab countries, like Taiwan, do not have a history of colonization by English-speaking nations. In line with global operations, English has become the most important language for trade and business there. Al-Sultan, as cited in the study by Tamtam, Gallagher, Olabi, and Naher, stated, “Anyone who did not master English would be in a weak position when competing for a job. Their chances for career advancement would be severely compromised.”¹¹ It highlighted the crucial status and necessity of people possessing a certain level of English proficiency, which also raised concerns about how efficiently resources were provided to facilitate their English education. This directly impacted their overall job market prospects.

However, even in countries where there was a high demand for English proficiency, many challenges still occurred during implementation. Oksana, Lamia, Dilyana, and Yuliya highlighted that the use of EMI negatively affected students' understanding of scientific material and their performance in evaluations. They observed that this approach led to feelings of anxiety, frustration, and embarrassment among students, eventually resulting in lacking educational achievements.¹² It reflected the situation where students were required to study in a language they were

¹¹ A Gallagher Tamtam et al., "A Comparative Study of the Implementation of Emi in Europe, Asia and Africa," *Procedia-Social and Behavioral Sciences* 47 (2012), <https://doi.org/10.1016/j.sbspro.2012.06.836>.

¹² Polyakova et al.

not familiar with, causing pressure on their learning. They also suggested that “To ensure that the quality of teaching in English, it should be implemented in the way of ‘additive bilingual education’¹³. The current method of implementing EMI was deemed too strict and misses the point, resulting in relatively inefficient outcomes for students' learning. It should be more flexible and offer diverse paths to facilitate students in adopting this policy.

EMI and Colonialism

To measure EMI's effectiveness, it was crucial to review a country's historical context. Singapore and Hong Kong are often cited as prime examples among Asian countries striving for bilingualism. However, it was important to note that both Singapore and Hong Kong have a colonial history with English-speaking countries such as the UK, unlike some other Asian countries like Taiwan and Korea.

However, despite their colonial past, these countries still encountered significant challenges, which took considerable time to overcome. For example, in Singapore, numerous debates arose over the years regarding the difficulty of striking a balance between preserving Mandarin and promoting a bilingual policy. Thus, we could see that the challenges in promoting an English education system are not limited to countries without a colonized history but also affected those with such a background. In other words, countries without this history might need to put in more effort than others.

¹³ Polyakova et al.

Material Design for EMI at the College Level

In practice, integrating knowledge content with language education in EMI required pedagogical strategies and material design. However, we perceived that in many non-English-speaking countries, there were challenges in implementing EMI due to students' difficulties in understanding the basic content that instructors attempted to deliver in class. Unlike classes conducted in students' first languages, the core point of the EMI policy predicted that students in EMI classes would interact more with instructors and express themselves more frequently and more freely. Busleimán and Banegas asserted that although students could apply critical thinking skills educated in their native language to English, comprehension of English texts or spoken language was essential. Thus, proficiency in English held significant importance in fostering the development of critical thinking skills.¹⁴ In some situations, students with high ability of critical thinking but with relatively low speaking ability of English speaking which is fully correlated to whether students could properly express and share their ideas and opinions. In many non-English speaking countries, we have observed the difficulty of implementing EMI due to challenges for students in understanding the basic content instructors attempt to deliver in class. This problem originated from the language barrier itself. Thus, we could argue that if students could understand the content more efficiently and completely, they might achieve better outcomes.

Eventually, how could instructors successfully deliver the content and guide students to brainstorm was a crucial point for the material designs. Busleimán and Banegas observed that educational materials ought to include exercises that facilitated

¹⁴ Darío Luis Banegas, and Graciela Manzur Busleimán, "Emi Materials in Online Initial English Language Teacher Education," in *Language Use in English-Medium Instruction at University* (2021).

comprehension of crucial terminology and aided learners in enhancing both oral and written language abilities. Additionally, they emphasized the necessity of language assistance such as essential phrases, model paragraphs, and language awareness to assist learners in completing tasks effectively.¹⁵, compared to predicted outcomes such as increased language proficiency, the method of delivering knowledge to ensure student understanding was a more important aspect in front of us, particularly for instructors to focus on and invest effort and concern in.

Well-designed materials were essential, but instructors also require well-trained teaching methods. Recently, there has been a growing availability of teaching guidelines and content for self-training, such as online lectures, to help instructors enhance their knowledge of class material design and teaching skills in EMI. Additionally, some schools offer assistance like “EMI Guidelines” for instructors seeking to improve their language proficiency, including English speaking and writing skills. This could enhance teaching quality and ensure smoother class operation.

EMI in the Context of Taiwanese Higher Education

Historical Development of EMI in Taiwanese Colleges

Taiwan had been dedicated to promoting English education for decades before the EMI was introduced as part of the “2030 Bilingual Nation” policy in 2018. Not only in colleges but in primary schools to senior high schools, every student studying in Taiwan was required to complete a certain level of English education, through the daily simulation and classes were provided at different levels, students consolidate their basic English abilities necessary for entering colleges and adapting to classes

¹⁵ Banegas, and Busleimán, in *Language Use in English-Medium Instruction at University*.

taught in English, such as EMI classes. Additionally, EMI courses were primarily focused on higher education, particularly in colleges and universities, aiming to enhance both practical knowledge and language proficiency rather than simply focusing on increasing language ability.

The quantity of EMI classes serves as an indicator of the internationalization of schools within the entire university system. Wu and Li observed that the adoption of such approaches was seen to enable universities to attract international students and faculty. This, it was perceived as a fertilizer for enhancing the international standing of these institutions and bolstering their competitiveness on both local and global scales.¹⁶ EMI was considered one of the factors affecting the willingness of international students and faculty to come, which also directly reflected the degree of how internationalized a country is.

Based on the overall advantages of implementing EMI, it is expected to reduce the gap between Taiwanese students and international students. Chou asserted that there is an anticipation that English through EMI has the potential to improve the English proficiency of domestic students and expand their opportunities for global mobility.¹⁷ For local students, EMI served as a catalyst, helping them connect to the globalized world. Therefore, the number of EMI classes has become a priority for schools, speed up the entire education system's arrangement with the policy. Through this trend, we have observed a growing number of EMI classes expanding within a short period, highlighting its influence on the entire school field and education system.

¹⁶ Naihsin Li, and Jessica Wu, "Exploring Assessment for Learning Practices in the Emi Classroom in the Context of Taiwanese Higher Education," *Language Education & Assessment* 1, no. 1 (2018), <https://dx.doi.org/10.29140/lea.v1n1.46>.

¹⁷ I. Chia Chou, "Helping Students Learn in Emi Courses Using Reciprocal Teaching: A Case Study of a Taiwan University," *Asian Education Studies* 1, no. 2 (2016), <https://dx.doi.org/10.20849/aes.v1i2.57>.

To clarify the current implementation of the EMI policy in Taiwan, EMI, as part of the so-called '2030 Bilingual Nation,' arranged by Lai Ching Te. This policy has been in place since President Tsai's administration in 2017, and Lai Ching De has been the main supervisor of advocating promoting this policy since 2018. Its goal was to make English one of the primary languages spoken in Taiwan which would facilitate Taiwan's transition becoming an actual English-speaking nation. This was considered as the success of being internationalization and globalization by policymakers. Additionally, Taiwanese government claims that the '2030 Bilingual Nation' was predicted to increase Taiwanese competitiveness in the world, enhancing Taiwan's ability to attract more foreign investment and create job opportunities.

In practice, colleges in Taiwan did provide assistance to increase students' English proficiency to a certain level, such as all students being required to complete a course called "Freshman English" in the first school year. In schools, some also provide needed assistance programs for students suffering from language barriers, which did affect their learning.

Challenges Specific to Taiwanese EMI Contexts

Pedagogical Challenges

Language proficiency stood out as the most notable challenge for both students and instructors. We recognized that a significant barrier to grasping class content could be caused by the inadequate English proficiency of both instructors and students. To make sure EMI works well in class, it's important for both students and teachers to have extra language support classes. Despite the abundance of online and offline training resources were available to instructors aiming to enhance their classroom teaching, the challenge of delivering content in a second language

continues to complicate efforts to maintain teaching and learning quality of EMI. For instance, Wenzao Ursuline University of Languages regularly conducts training sessions for instructors. These sessions aimed to encourage teachers to use English in their classes and to help them better understand effective teaching techniques and tools. The goal was to increase interactions between students and instructors, boost participation, and provide guidance on teaching students from diverse backgrounds, cultures, and languages. Ultimately, the aim is to create a supportive learning environment for all members of the classroom. Based on the data available on the official school website, it was obvious that there has been limited participation in the training programs held so far. The number of trained instructors across most schools was less than 2%, with only a few exclusions showing relatively higher figures. This prompted the need to evaluate the effectiveness of the ongoing supportive programs for EMI, particularly for instructors, to ensure they adequately meet the needs in practice.

A similar concern occurred regarding how instructors' language proficiency impacts students' learning experiences, eventually influencing overall academic outcomes. In other words, whether instructors could effectively deliver content while simultaneously improving students' English proficiency was a critical issue to consider. Merve Yıldız, Adem Soruç, and Carol Griffiths identified insufficient English proficiency among lecturers as a significant issue, leading to oversimplified courses that relied on basic vocabulary instead of academic language. They expressed concern that this might undermine the effectiveness of using foreign languages like EMI in the classroom, resulting in less effective outcomes than expected.¹⁸ Similarly,

¹⁸ Pınar Çankaya, "Challenges in English Medium of Instruction from the Teachers and Students' Eyes," *International Journal of Languages' Education and Teaching* 5, no. 4 (2017).

Chinese researchers Jiang, Zhang, and May also noted that while effective instruction was maintained through pragmatic strategies, the goal of promoting English attainment was not fully achieved due to insufficient emphasis on language teaching.¹⁹ They all emphasized that instructors' language proficiency is crucial, as it significantly impacted students' learning outcomes, not only in understanding technical knowledge but also in language improvement.

Accordingly, EMI could somehow lead the inefficient way of learning, particularly for those who were not familiar with English using. To protect the rights of both local and international students, the common practice of mixing first and second languages in teaching has emerged by instructors, ensuring the smooth delivery of course content. This approach ensured the smooth delivery of course content and helped reduce the language barrier in the classroom. The phenomenon was frequently observed in the adaptation of EMI classrooms across many countries. For example, a Vietnamese researcher also noted that instructors often found it necessary to revert to their first language to aid comprehension when students struggled to grasp concepts.²⁰ However, this contradicted the core purpose of EMI, which aimed to enhance students' English proficiency and inefficient the learning process. This deviation weakened the effectiveness and value of EMI instruction.

Impact on Academic Performance

Language barriers significantly impacted students' comprehension in EMI courses. The challenge of understanding content in a second language makes it harder

¹⁹ Li Jiang, Lawrence Jun Zhang, and Stephen May, "Implementing English-Medium Instruction (Emi) in China: Teachers' Practices and Perceptions, and Students' Learning Motivation and Needs," *International Journal of Bilingual Education and Bilingualism* 22, no. 2 (2019).

²⁰ HM Do, and LTD Le, "Content Lecturers' Challenges in Emi Classroom," *European Journal of English Language Teaching* 2, no. 1 (2017).

for students to learn as effectively as they would in their native language. This affected their ability to express ideas, especially during presentations, leading to reduced learning outcomes, lower confidence, and reluctance to enroll in EMI courses. Hua noted that students struggle with new subjects due to the language of instruction, content difficulty, or both.²¹ Many perceived these challenges as overwhelming, feeling EMI courses demand extra effort and focus, which could discourage participation and result in missed learning opportunities.

Many local students entered EMI programs underprepared, leading to pressure and reduced confidence. The shift to learning in a second language at the college level presents unique challenges, especially for those with little prior exposure to non-native instruction. These students were required to participate in activities like presentations and discussions conducted in English, making it harder for them to express their ideas and effectively utilize their knowledges. Huang noted that local students experience higher learning anxiety, coupled with lower motivation and achievement, compared to their foreign counterparts. This anxiety was often linked to the self-assess English proficiency, and mostly they struggle not only with content comprehension but also with competition among their peers.²² Identifying the factors that increased anxiety and reduce confidence is essential for a full evaluation of the challenges.

Challenges in EMI extend beyond language proficiency, affecting all students' learning outcomes. Li and Wu argued that the challenges faced in EMI classes are not exclusive to students with low English proficiency. Despite the significant role

²¹ Tzu-Ling Hua, "Understanding the Learning Challenges of English-Medium Instruction Learners and Ways to Facilitate Their Learning: A Case Study of Taiwan Psychology Students' Perspectives," *Latin American Journal of Content and Language Integrated Learning* 12 (2020).

²² Da-Fu Huang, "Exploring and Assessing Effectiveness of English Medium Instruction Courses: The Students' Perspectives," *Procedia-Social and Behavioral Sciences* 173 (2015).

English proficiency played in academic success, even students with high language proficiency could encounter similar difficulties.²³ Similarly, Yeh also stated that students typically described their experience in EMI courses as satisfactory. However, some students attributed their learning challenges to their own inadequate English proficiency.²⁴ This underscores that, even with positive overall ratings, the gap created by EMI still affects students' learnings. The gap impacted not only those with low English proficiency but also students with higher proficiency, as EMI could hinder optimal learning outcomes without adequate instructional support.

Consequently, this factor might result in less effective and efficient learning outcomes, regardless of students' English proficiency levels, when compared to courses taught in their native language.

Unfairness in Learning Opportunities

Students' limited English proficiency resulted in their passive involvement in classroom discussions. The implementation of EMI in classrooms was expected to enhance overall class participation, including group discussions, presentations, and interactions with peers and instructors. However, students lacking sufficient English proficiency might find themselves marginalized by their more fluent peers. Their limited language ability hindered them from achieving academic excellence as effortlessly as others do.

Consequently, even if they aspired to improve by collaborating with high-performing peers, they might hesitate to seek assistance, fearing exclusion rather than

²³ Yi-Ping Huang, and Wun-Ting Jhuang, "Affordance of English-Medium Instruction Contexts in Taiwan," *Taiwan Journal of TESOL* 12, no. 1 (2015).

²⁴ Chun-Chun Yeh, "Taiwanese Students' Experiences and Attitudes Towards English-Medium Courses in Tertiary Education," *RELC journal* 45, no. 3 (2014).

taking the initiative to invite those who are outstanding. This consequence was a common rate in classrooms.

EMI implementation highlighted challenges and the need for support for disadvantaged students. While most of the feedback from students who have taken EMI classes is positive, attributed to the conducive English-speaking and learning environment that enhances students' English proficiency, signaling the effective implementation of this policy, many challenges persist. These challenges underlined the ongoing need for policymakers to address learning disparities and provide support for disadvantaged students, needing continued efforts in the process.

However, the needs of students who were less proficient in English were not given sufficient consideration, and there was a lack of strategies to support them effectively. Li and Wu's research found that although EMI teachers were aware of students' difficulties with English, these challenges were not often taken into consideration, and accommodations were rarely made.²⁵ They have brought attention to a less-addressed aspect of EMI, which is the inequality in access to learning opportunities for minority groups, stemming from the disparity between what they were expected to achieve and what resources they have available. This underscores the crucial importance for policymakers to thoroughly assess and offer sufficient support to those who required it.

Moreover, students' academic backgrounds significantly influenced their learning outcomes, especially for those lacking adequate academic support and a solid knowledge foundation. Chuo and Lu noted that what international students could learn in six minutes might take local students six hours to fully understand.²⁶ While

²⁵ Li, and Wu.

²⁶ JC Chuo, and Yen-Hui Lu, "Development and Challenges of English Taught Programs in Asian Countries: Take Taiwan as an Example," *International Journal of Language and Linguistics* 5, no. 4 (2018).

conventional studies often categorized students into international or local, this study contends that such classification was not entirely appropriate. This was because the perception of many local students has well-developed English proficiency and educational backgrounds, allowing them to adapt more easily and successfully to EMI classes compared to those who do not. Therefore, this study suggests that it was not completely true that international students always demonstrate higher levels of English proficiency. Instead, distinguishing between privileged and non-privileged students provided a more comprehensive and clear understanding of the factors we should consider.

Their learning outcomes were significantly affected by language barriers, potentially hindering their academic achievements. Interestingly, if these students were taught in their native language, they might perform better academically than they did in an EMI environment. However, these students often needed to invest more time in grasping the same content compared to their English-proficient peers. This highlighted the inequality in learning opportunities stemming from differing educational experiences. Huang and Jhuang also noticed the inequality emerging in classes and perceived the pressure that instructors and students have been experiencing due to the insufficient utilization of EMI, which was currently expected to be adopted in almost all subjects.²⁷ This insufficient adaptation worsened the challenges students now are facing, particularly when trying to grasp new concepts. Those with limited background knowledge or difficulties in academic adjustment were more likely to struggle and find themselves at a disadvantage in certain areas.

Hence, under the implementation of EMI, it was vital to prioritize attention to disadvantaged groups to avoid their unaware sacrifice in the pursuit of

²⁷ Huang, and Jhuang.

competitiveness. Ensuring that students without privilege could adequately keep pace with the entire system was crucial. Schools must contemplate how they could furnish these students with the necessary resources and support, rather than solely emphasizing the attainment of a seamlessly efficient education system.

Supportive Programs

The effectiveness of providing ESP and EAP classes as supportive programs has proven to be insufficient. These programs, designed to meet the diverse levels and needs of students, are meant to enhance the language proficiency required for adapting to EMI. However, reports from Taiwan's Ministry of Education indicate that the quantity and availability of these supportive programs were inadequate in most Taiwanese colleges. As a result, insufficient resource allocation prevented essential programs from being properly designed to address students' true needs as they transition to EMI.

Disparities in English proficiency created unequal opportunities for active participation, and the effectiveness of current ESP and EAP programs remained under debate. To ensure successful adaptation, careful planning and sufficient resources were required to prevent both students and instructors from experiencing ineffective learning environments.

Relevance of College Students as a Study Population

Demographic Suitability

College students, as citizens over the age of 18, possess sufficient critical thinking and independent thinking abilities. In Taiwan, individuals were obligated to follow to the criminal code, pay taxes, and fulfill military service requirements, anticipate in referendums. These were the main points of argument advocating for the decrease of the age limitation for suffrage in Taiwan's 2022 case. Considering that college students in Taiwan were required to follow certain rules, including those defined in the civil conduct and criminal code, we saw them as fully capable of participating in society. This meant that their opinions and viewpoints were valuable and worth gathering and examining. Therefore, this study believed the contribution from analyzing the perspectives of Taiwanese college students studying in Taiwan, having taken EMI during the academic year.

Direct Exposure to EMI Environments

Typically, EMI policies were designed to facilitate access to higher education in colleges and universities. To achieve the goal of increasing competitiveness and connecting to the global labor network of Taiwan, reforming higher education was essential and regarded as the most direct step in enhancing the capabilities that students would need in the workplace. These capabilities such as language proficiency was also considered determinants of individuals' competitiveness before the selection by companies. According to the principles of EMI in higher education provided by the Ministry of Education of Taiwan, mentioned that college students were perceived as the group most capable of adapting to EMI. Because they have experienced full English classes and had sufficient ability to properly adapt to EMI, along with a

certain level of English proficiency required for EMI. Therefore, as the target group of EMI policy, the perspective and opinion were crucial for the further understanding of EMI.

Diversity in Educational Backgrounds

Students majoring in different fields might have diverse perspectives and attitudes regarding the effectiveness of EMI. One of the most obvious challenges in the adaptation of EMI was how to assist students studying different fields in properly adapting to EMI and minimize the difficulties they face. This contains understanding whether EMI inefficiently led to negative outcomes in their major content due to differences in educational backgrounds and experiences, causing an increasing challenge for these students' learning.

EMI required certain level of English proficiency for the better understand of class content, but some students lacked this ability. For instance, second-grade senior high school students were required to choose between the arts and science streams based on their academic performance. Those having better performances in languages and social sciences might choose the arts stream, while those passionate about math, chemistry, and science would likely choose the science stream. However, for the proper adaptation to EMI, the possibility that students proficient in science might lack English proficiency should be considered as a significant factor. This could directly impact their study outcomes, resulting in inefficiencies for overall academic performance.

Moreover, the principle of EMI emphasized that English serves as a tool rather than being the main content of instruction such as English teaching in class. However, we perceived that the level of challenge and difficulty might vary across different

streams due to the appearance of proper nouns in content that students might have never encountered in their previous learning fields. Even the Ministry of Education of Taiwan has acknowledged that students majoring in science, math, chemistry, and other fields lack adequate training and experience to quickly grasp contents when transitioning to full English class, which is a primary function of EMI. Therefore, for a better and well-constructed EMI policy, opinions from students studying in both art and science with diverse educational backgrounds played a key role of the contribution.

Influence of prior educational experiences

Prior educational experiences could impact the learning outcomes of students. In addition to the effective factors of diverse educational backgrounds, the influence of prior educational experiences would also result in different levels of familiarity with the reformation and adaptation to the switching into EMI. In Clapham's research, he emphasized the significance of considering students' prior knowledges as creating and analyzing language valuations, particularly for intermediate-level students and assessments covering subject-specific material.²⁸ Thus, if we expected the improvement of English proficiency to occur through the adaptation of EMI, we must consider the diverse levels and experiences of students, which were influenced by their diverse educational backgrounds. Providing them with an adequate learning system needed avoiding unnecessary challenges or irrelevant outcomes that could consume excessive effort from students, exceeding their understanding of the main contents they should focus on.

²⁸ Caroline Clapham, *The Development of IELTS*, vol. 4 (Cambridge University Press, 1996).

College Students' Unique Insights into Pedagogical Challenges

Language Proficiency Barriers

The language proficiency barrier could significantly impact students' learning process and outcomes in an EMI environment. Differing from previous English teaching systems, EMI emphasized its role as a tool rather than solely focusing on teaching English as the main class content. This approach aimed to follow the learning environments of English-speaking countries, encouraging interaction and increasing students' familiarity with studying in English. However, it was crucial to ascertain whether the tool effectively contributed to positive outcomes and efficient learning during the process. In a study in Taiwan, Huang found that students in EMI understood only about 60% of what was taught and lost focus quickly during English classes. Those who had trouble with English tended to stay quiet and felt left out of discussions. A computer science student said he stayed quiet because he couldn't understand most of what was being taught. Therefore, we perceived that in non-English-speaking countries like Taiwan, students' insufficient English proficiency could lead to them feeling lost in the EMI environment without adequate support and well-structured classes, considering the asymmetry of students' language proficiency.

Perceptions of language support services

Sufficient support services facilitated students' learning and provided them with the opportunity to achieve self-learning to improve the abilities they lack. In Taiwan, freshmen were required to enroll in 'Freshman English' courses to facilitate their adjustment to classes taught in English. EMI was an important goal regardless of how well students knew English at first. As for options such as English for Specific Purposes (ESP) were commonly available to help students solidify the requisite

English proficiency for EMI classes. Indeed, it was worth noting that instructors in EMI often differ from those specializing in ESP, which were designed for language teaching. Consequently, although students desired to have language assistance to enhance their learning efficiency and grasp the course content effectively in EMI classes, the challenge arises due to the limited training most EMI instructors have compared to specialists in English for ESP, meeting students' needs speedily became a tough task in EMI courses. Thus, to guide students get rid of the inaccessible learning, additional academic support played a key role while they attempt self-directed learning outside of class time. However, it was common to see students fail to find solutions to address their needs within the school resources. Without adequate supports to help students catch up the class contents, it was common to observe that students faced language barriers, leading to problems like less talking and interaction, and sometimes they chose to stay quiet in class. Consequently, the provision of essential and adequate supportive services by the school system significantly influenced students' learning experiences from start to finish. Galloway and Rugg observed that within the realm of ESP and EAP was often considered essential. However, there was widespread criticism from both students and faculty regarding the broad nature of these compulsory EAP courses. They argued that such courses lack the necessary relevance and customization to cater to the specific majors or disciplines of the students.²⁹ Thus, we could perceive that the effectiveness might not effectively hit the point and directly contribute to students' learning by taking EAP. Moreover, students have highlighted the issue of instructors lacking adequate training to promptly address language-related needs, a responsibility they were expected to

²⁹ Nicola Galloway, and Rachael Rugg, "The Provision of Student Support on English Medium Instruction Programmes in Japan and China," *Journal of English for Academic Purposes* 45 (2020).

fulfill.³⁰ Therefore, it was essential to have additional research to evaluate how well school systems performed, as they formed the foundation for ongoing policies aimed at enhancing student learning results. The practical situation could serve as a reflection of the challenges students currently faced under the policy's implementation.

Assessing the Efficiency of Learning Outcomes through Student Feedback Perceived Impact on Academic Performance

Students must invest additional effort to uphold the efficiency of their studying and academic performance in EMI courses. When comparing learning performances between EMI and non-EMI classes, it was crucial to account for the diversity in students' learning backgrounds and experiences. Also, Comprehension played a fundamental role in students' learning, influencing their ability to grasp class contents and develop curiosity. This curiosity could motivate students to engage in self-assessment and pursue further study and review. In contrast, as the complicity and difficulty exceeded the curiosity and the motivation itself, the negative outcomes might also reflect on students' academic performances as well. Hua observed that EMI raised the complexity of subject matter transfer and enhanced students' academic workload. EMI students might require additional time and efforts to manage comparable academic outcomes.³¹ Thus, we could perceive the gap in learning between EMI and non-EMI courses, arising from differences in language use. This variation might arise from students' diverse learning backgrounds and levels of

³⁰ Galloway, and Ruegg.

³¹ Hua.

familiarity with the language, impacting their comprehension and academic performance to a certain degree.

Classroom Engagement and Participation

Language proficiency affected students' comprehension of class content and their ability to actively engage and participate in class discussions. The principle of EMI required the goal of enhancing the interactions and participation in class, however, it usually didn't work on students who did not have sufficient English proficiency for them to do so. In Taiwan, we perceived that students being willing to raise their hands and ask questions are quite few, even in class taught in students' first language, Mandarin. Some consider asking questions were stupid for those who were more outstanding than themselves, so it resulted in the low rate of interaction and participation in class. Thus, as the barrier were somehow enhanced, which could be the language need, it would students' willingness of expressing in class activities. So, most of the time, we could see people raising hands and actively asking questions were usually international students or local students who had relatively higher ability and confidence of their English proficiency. Gradually, those students who feared interacting with either instructors or peers were marginalized in some ways without any particular solution but increasing their English proficiency with whatever ways.

Evaluating Inequality in Learning Opportunities

Access to Academic Support and Resources

Resources provided to facilitate students' learning may vary based on geography. The academic support system and resources depend on funds allocated by the government. However, the high demand for professional instructors for EMI

consumes schools' funding, which could be a weakness for schools located in marginalized areas unable to provide sufficient resources for EMI implementation. Consequently, students in these schools might face unfair disadvantages from the beginning of their education. For example, schools located in remote areas with limited resources may employ fewer instructors due to their restricted funding and minority status, thus limiting the resources available to provide students with a well-structured education in EMI.

Influence of Socioeconomic Background

Socioeconomic differences worsened learning inequalities under the implementation of EMI, resembling a competitive environment. The transition to EMI in students' learning could be simplified by the inequalities result from financial differences, as they significantly impact one's learning experiences. For example, students who were privileged to have access to sufficient resources, such as opportunities to participate in study abroad programs like summer camps that take students to foreign countries to learn about culture and improve their language proficiency, largely due to the financial privilege of their parents, would benefit from immersive language learning experiences.³² However, those who lacked such privileges must rely on publicly available resources to catch up, which might not be sufficient and could easily marginalize them. These benefits, which not arise from students' personal learning efforts but from the privilege of their families, worsened the unequal learning environment due to differences in access to EMI, which required substantial resources. Sah and Li suggested that students from wealthy backgrounds

³² Pramod Kumar Sah, and Guofang Li, "English Medium Instruction (Emi) as Linguistic Capital in Nepal: Promises and Realities," *International Multilingual Research Journal* 12, no. 2 (2018).

might benefit from additional English language support outside of school, such as private tutoring or language programs. These supplementary resources offered personalized guidance and tailored instruction, granting affluent students a considerable edge in adjusting to EMI, unlike their less privileged counterparts who lacked access to such services.³³ Therefore, ensuring that students who lacked privilege had equal rights and pathways to access the resources required for EMI is a core concept to be considered. This approach could help slow down or stop the inequality inherent in aspects of learning that students could not control.

Overview of Related Studies

General Trend in Research Methodologies

Much research evaluating the effectiveness of EMI adapt a mixed-method approach, combining both quantitative and qualitative methods, often applying a set of questionnaires and interviews. To understand the broader perspectives about the current topic, questionnaires were employed to gather data from a wider range of individuals within the study population. Secondly, interviews served to develop understanding by analyzing personal opinions that might not be easily captured through the standardized questionnaires. Additionally, it was notable that some studies gather students' English proficiency scores through pre- and post-tests to measure the impact of EMI on language proficiency during data collection stages, as one of the indicators contributing to the study.

³³ Sah, and Li.

Specific Focus on Policy Perception Studies:

Students, as the primary targets of the bilingual policy containing EMI as a tool, have had their opinions widely investigated through various methods, directly measuring its effectiveness in student learning. In most research conducted thus far, we observed that the study populations were not typically large in number; comparisons and investigations involving one or two schools were quite common. Some studies employ a strategy of narrowing down the sample size of interviewees after conducting questionnaire tests. These methods have been widely used in different countries while discussing the effectiveness of EMI.

Evaluating of Methodological Approaches

Qualitative vs. Quantitative Methods

The advantages of doing quantitative and qualitative methods could be that quantitative method speeded up the process of collecting data from the overall study population, facilitating the understanding of general ideas and the phenomena of the topic. And qualitative helped the study dig the deeper perspective in more specific way, minimizing the unclear explanation and considering the reasons and stories through wider range of personal experience. However, the usage of quantitative might cause some bias or misleading depends on whether the participants could successfully understand the questions and filling with the answer that could properly express their perspective and opinions. Hence, whether the questions could effectively deliver the desired knowledge to the participants, leading to clearer answers that facilitate the study, so it was also a crucial factor in determining whether sufficient and accurate data could be collected. Regarding the disadvantages of the qualitative method, due to limited budgets and time limits, it was challenging to gather a large amount of data

through interviews only. Therefore, it was not advisable to rely solely on interviews as the primary method for collecting data when discussing a policy that involves many people.

Success Rates and Analytical Comparisons

The success rate of most research studies was high because they employ a wise combination of both quantitative and qualitative methods. Discussion of a policy consumes a large amount of time and effort, particularly during the stages of data collection and analysis. Thus, previous studies have mostly employed mixed methods to mitigate potential biases that may arise if the sample size was not sufficient to support the outcomes and build theories. In many research studies, the widespread adoption of in-depth exploration facilitates the understanding of participants' perspectives, beliefs, and experiences. Additionally, the EMI topic typically considers students' learning backgrounds, which are regarded as private information. This aspect should be carefully considered during the data collection process. Conducting individual interviews helps to ensure proper privacy protection for participants' sensitive information.

Methodology Justification for Current Study

Election and Adaption of Methods

The current study would inherit the mix method for the data collection and analysis as the previous research have done. With the limitation of sample size, the quantitative method could gather general insights from the study population speedily. These insights are crucial for discussing policies which are wildly applied within the educational system. This research would also capitalize on the advantages of

conducting qualitative methods, which could facilitate a deeper examination of individual cases and allow a better understanding of the human experience that was often difficult to capture through mathematical data alone, especially across diverse backgrounds that do lead to different results. Thus, qualitative methods could provide a comfortable environment for interviewees, facilitating the sharing of more detailed information. Furthermore, it also serves as a supplement to address the limitations that quantitative methods may face, expecting that patterns which have not been discovered.

Implementation of Proposed Methods

Questionnaires would be utilized as part of the quantitative method in this research to gain a better understanding of students' basic information, including their gender, study fields, and language background. Additionally, the questionnaires would include explorations about students' language proficiency to facilitate understanding the relationship between language proficiency and learning outcomes. Interviews would serve as a complement this by providing further insights into the practical implementation of the policy through discussions with the interviewees, enabling a deeper exploration and consolidation of the research findings to provide comprehensive answers to the research questions.

Methodology

Introduction

The literature highlighted the importance of a thorough research approach to fully understand EMI implementation in Taiwan. Previous studies showed a gap between what the Taiwanese government expected to achieve through adapting EMI into the teaching system and what schools could accomplish. To address this, our study adopted a mixed-methods approach, combining both quantitative surveys and qualitative interviews. The methodology chapter outlined our plan to survey Taiwanese students at Wenzao Ursuline University of Languages, assessing their English proficiency and perceptions of EMI. This study also conducted interviews to explore their experiences in more depth.

Research Design

This study employed a mixed-method approach across all four research questions to comprehensively investigate the impacts of EMI on students. Quantitative methods, including descriptive statistics, crosstabulation, and Likert scale surveys, were used to gather data from a broad student population, allowing for the identification of patterns related to code-switching, language barriers, English proficiency and participation, and the effectiveness of support programs. Complementing this, qualitative methods such as semi-structured interviews provided deeper insights into students' personal experiences and perceptions, exploring how challenges like anxiety and varying language proficiency influenced engagement and academic performance. This integrated method addressed specific themes related to EMI while highlighting areas for improvement in implementation and support services to enhance educational outcomes.

Sources of Data

Locale of the Study

All four research questions were explored at Wenzao Ursuline University of Languages, allowing for a focused, in-depth examination of a single context. For Research Question 1, we explored how students perceived code-switching in class and its impact on their learning outcomes and experiences. Research Question 2 assessed how language barriers contributed to anxiety and stress, identifying the students most affected and the specific challenges they faced. Research Question 3 examined the correlation between disparities in language proficiency and participation, investigating the inequalities present within the EMI system at Wenzao. Research Question 4 evaluated the effectiveness of current support resources, such as English for Specific Purposes (ESP) and English for Academic Purposes (EAP), in benefiting students. This focused approach enhanced our understanding of the language challenges and opportunities at the university.

Population Sampling

The population for sampling consisted of Taiwanese students studying at Wenzao Ursuline University of Languages, crossing from freshmen to seniors, adapted into three research questions. For the quantitative method, the sampling size was 85 participants. Wenzao Ursuline University of Languages was uniquely appropriate for this study as it specializes in language education and offers a wide range of English-taught courses, promoting an environment conducive to EMI. Most students at Wenzao major in language-related fields or participate in English lectures, providing a valuable context for assessing EMI's effectiveness. This focus was critical for understanding how EMI might function in schools that specialize in other streams,

such as science or interdisciplinary education. To ensure representativeness, participants were drawn proportionally from all 13 departments within the university, enabling sufficient statistical analysis and capturing diverse experiences and perspectives to enhance the reliability of the study.

For the qualitative methodology, a smaller sample size of 18 participants was considered appropriate due to budget and time constraints. Quota sampling was employed to ensure representation, with at least one or two students selected from each of the 13 departments. This approach allowed for an in-depth exploration of the research themes while ensuring diversity in participant selection across departments, varying levels of English proficiency, and other relevant factors. Such diversity was essential to capture the broad field of experiences and perspectives within Wenzao, further strengthening the study's relevance and validity.

Instrumentation and Data Collection

For the quantitative research component, a survey was utilized as the main research instrument. The survey was designed to collect data on various aspects, including demographic information, English proficiency, classroom participation and engagement, the effectiveness of language support services, and academic performance and adaptation. Demographic questions carried basic details such as department, year of study, age, gender, and English proficiency level. Self-assessment questions measured students' English proficiency by investigating the CSEPT scores, which every student at Wenzao Ursuline University of Languages was required to take. Likert-scale questions were used to measure the frequency of classroom participation and engagement, usage and perceived effectiveness of language support services, and the impact of English proficiency on academic performance and

adaptation to EMI classes. The survey was managed by using an online platform, Google Forms, ensuring anonymity and confidentiality to encourage interviewees' honest responses.

Additionally, for the qualitative method, semi-structured interviews were employed to dig deeper into students' learning experiences, facilitating the assessment of EMI effectiveness through their primary experiences and feedback. Participants were interviewed individually at times and locations that were convenient for both interviewees and interviewers within Wenzao Ursuline University of Languages, ensuring a comfortable and conducive environment for open discussion. Semi-structured interviews were conducted using an interview guide covering various aspects of participants' experiences with EMI. With participants' consent, all interviews were audio-recorded to ensure accuracy and thoroughness of data collection.

Tools for Data Analysis

For quantitative data, SPSS and Excel were utilized to store and analyze data from the survey. Both descriptive and inferential statistics were employed, drawing from both the study population and sample to explore relationships between variables and provide meaningful insights.

In addition, qualitative data was analyzed using content analysis, allowing for the identification of patterns and arguments that might not have been immediately obvious. This approach provided deeper insights into the data, supplementing the findings with broader insights from other resources.

Data Analysis

This paper argued that the implementation of EMI in Taiwan should not merely focus on enhancing students' English proficiency but also address the diverse needs of students, especially those from varying language backgrounds. By conducting both quantitative and qualitative data analyses, four key themes were defined: first, the use of learning strategies, such as code-switching, significantly influenced students' comprehension and performance in EMI courses; second, language barriers and anxiety impacted students' perceptions of their learning outcomes, with students having lower proficiency resulting in higher levels of anxiety and stress in EMI courses; third, disparities in English proficiency affected students' engagement and participation in class; and fourth, while English for Academic Purposes (EAP) and English for Specific Purposes (ESP) programs were viewed as moderately effective, there was a need for improvements to better support diverse student needs. These findings highlighted the complexities of EMI and the importance of addressing the various factors that influenced student success. SPSS (Statistical Package for the Social Sciences) was used to analyze the responses in the quantitative method, and Thematic Analysis was used for qualitative.

Data Examination

According to the collected responses, there were 8 valid submissions, each containing at least one missing value. One of these responses did not answer the gender question in Part 1; however, since gender was not used as a variable for comparison and analysis, the answers from that response were still included. Additionally, another response answered the 8th question in the last part but selected both positive and negative options, making this answer invalid due to ambiguity in

choice. The last 6 responses contained incomplete answers to various independent questions; therefore, the missing values did not affect the overall results of the survey.

Descriptive Statistics

Student Perceptions of instructors' code-switching in EMI

In this study of 85 EMI students, we assessed the perceived helpfulness of instructors' code-switching based on English proficiency levels (A2, B1, B2), using an ANOVA analysis to compare group means. The overall mean helpfulness score was 3.47 (SD = 0.825), with A2 students reporting the highest mean of 4.07 (SD = 0.730), followed by B1 at 3.67 (SD = 0.658), and B2 at 3.22 (SD = 0.815). The ANOVA revealed significant differences in perceived helpfulness across proficiency levels ($F(2, 82) = 7.661, p = .001$). Post hoc analysis indicated that A2 students found code-switching significantly more helpful than B2 students ($p = 0.000$), and B1 students also rated it higher than B2 students ($p = 0.028$). These results suggested that code-switching is particularly valued by lower proficiency students, highlighting the potential benefit of adapting teaching approaches to support students' varying English levels in EMI contexts.

English Proficiency, Term Comprehension, and Anxiety in EMI

In this study of 85 EMI students, we examined how language barriers, anxiety, and pressure influence their perceptions of learning outcomes using descriptive statistics and factor analysis in SPSS. The overall mean pressure score was 2.85 (SD = 1.075), with A2 students experiencing the highest pressure (mean = 3.21) compared to B1 and B2 groups. Although ANOVA results indicated no statistically significant difference across proficiency levels ($F(2, 82) = 2.381, p = 0.099$), the data suggested a trend where lower proficiency students experience slightly higher anxiety, potentially impacting their engagement in EMI courses. Factor analysis identified two key factors—limited English proficiency and unfamiliarity with professional

vocabulary—that affect comprehension, with “Limited English proficiency” loading highest at 0.895. Additionally, students rated their post-EMI English proficiency as “good” (mean = 3.48, SD = 0.685), though comprehension of EMI content averaged at 3.05 (SD = 0.937), indicating moderate understanding overall. These findings highlighted that language barriers and anxiety influence students’ perceived learning outcomes, suggesting that targeted support in vocabulary development and anxiety management could enhance their experiences in EMI settings.

English Proficiency and Participation Disparities in EMI

The study of 85 EMI students across A2, B1, and B2 proficiency levels revealed generally low to moderate levels of perceived participation, with A2 students reporting the lowest mean (1.64, SD = 0.497) and B2 students the highest (2.12, SD = 0.659). ANOVA results indicated significant differences in participation ratings ($F(2, 82) = 4.085, p = 0.020$), with B2 students perceiving higher peer engagement than A2 students. Additionally, students reported a moderate perception of inequality in EMI courses (mean = 3.45, SD = 1.075), with a strong belief that higher proficiency provides an advantage (mean = 4.31, SD = 0.787). These findings suggest that lower proficiency students face barriers to active participation, while higher proficiency students perceive a more engaged classroom environment, highlighting the need for educational adjustments to ensure equitable participation and support across proficiency levels.

Effectiveness of EAP and ESP Courses in EMI

In this study, 85 students participated, with 82 providing valid responses regarding their perceptions of EAP (English for Academic Purposes) and ESP

(English for Specific Purposes) courses in an EMI (English Medium Instruction) context, resulting in a small percentage of missing data (up to 5.9% per question) that supports the reliability of the findings. Chi-square tests using SPSS were conducted to assess if students' perceptions of skill improvement, such as academic English, listening, and speaking skills, varied significantly with different EAP/ESP support areas. Generally, Pearson Chi-square results showed no statistically significant associations ($p > 0.05$) between students' perceptions and specific skill areas, indicating no strong relationships in most cases. Descriptive data indicated that over 94% of students felt EAP/ESP courses provided moderate to significant support for academic skills, reflecting a generally positive view of their benefit in English proficiency development. However, Somers' d analysis showed low effect sizes across platforms, suggesting that while students see these courses as beneficial, the strength of associations was weak and may be affected by factors like student motivation or prior English proficiency. Overall, these findings indicate that although EAP/ESP courses were valued, their effectiveness in enhancing specific skills, such as listening, speaking, or academic skills, may vary based on the platform and individual student expectations. This suggests a need for more targeted or personalized approaches in EAP/ESP courses to better meet the diverse needs and expectations of students across various language skills and academic contexts.

Interview Analysis

Mixed Effects of Code-Switching in EMI Classrooms

This report examined the mixed effects of code-switching between English and Chinese in EMI courses, emphasizing both the benefits and drawbacks experienced by students across different subjects and proficiency levels. Through thematic analysis, we identified various positive and negative impacts of using both languages in EMI contexts.

Frequency and Perception of Code-Switching

Firstly, the results showed that the frequency of instructors using Chinese in EMI classes influenced students' opinions. By analyzing how often teachers switched between languages and its impact on learning, we observed that students generally considered frequent code-switching as detrimental, while occasional code-switching was viewed more favorably. For example, Interviewee 1 (Department of Foreign Language Instruction) remarked, "If the teacher frequently switches between the two languages, it's very bad; the class just ends up listening to Chinese." Occasional use also included the use according to the observation of students' reactions; for example, Interviewee 1 mentioned, "Teachers would only do this when the whole class doesn't respond; then they would switch to help clarify." Interviewee 5 (Spanish Department) also stated, "They would only do this when the whole class doesn't respond; then they would switch to help clarify." Additionally, Interviewee 6 (Department of Translation) highlighted the benefits of code-switching, such as reinforcing memory. "Teachers used Chinese to explain complex concepts, which helped deepen understanding." Similarly, Interviewee 12 (Spanish Department) noted that code-switching aided comprehension. "The teacher explained in English first, then clarified

in Chinese to help students understand.” These insights highlighted that selective code-switching, when used strategically, could enhance student comprehension and facilitate learning in EMI courses.

Perceptions Based on English Proficiency

We further examined how students with varying English proficiency perceived the need for code-switching. When categorized into low and high proficiency groups, clear differences emerged. For instance, Interviewees 7 (Department of Southeast Asian Studies) and 14 (France Department) felt that code-switching improved their understanding and reduced the challenges of learning in English. Interviewee 7 said, “It helps because if I only miss 1-5% of the lecture, I could keep up. But if I miss 30%, I stop paying attention.” Interviewee 14 added, “Using Chinese reduces my anxiety; I worried about not understanding if the class was fully in English.” These insights highlighted the essential role of code-switching in enhancing comprehension and alleviating anxiety for students with lower English proficiency.

Classroom Engagement and Learning

The broader impact of code-switching on overall classroom learning and engagement was also evident. Interviewee 11 (Business Administration major) commented, “Switching to the mother tongue clearly explained complex ideas and promoted student interaction.” Similarly, an International Affairs major noted, “Occasional Chinese explanations helped us grasp difficult concepts,” emphasizing how code-switching aided in understanding challenging material.

Mixed Reactions in Non-Language Majors

However, some students in non-language majors, such as those in technical or skill-focused fields, found code-switching less helpful. Interviewees 4 and 9, both from the Digital Content Application and Management department, expressed that code-switching in technical subjects was unnecessary and counterproductive. Interviewee 9 stated, “For technical subjects, it’s unnecessary and a waste of time,” suggesting that it could hinder clear instruction and affect practical applications. Interviewee 4 added, “It’s meaningless for international students and defeats the purpose of EMI,” arguing that frequent code-switching undermined the goal of creating an English-speaking environment, especially for non-Chinese speakers, which might even have affected their learning. These perspectives illustrated the tension between the benefits of code-switching and its potential drawbacks in technical fields, suggesting that while it might have assisted some students, it could also disrupt the clarity and effectiveness of instruction for others.

Importance of Instructional Support

Many participants emphasized the importance of teachers providing additional explanations, often in both English and Chinese, to ensure clarity. We found that the degree of instructional support directly influenced how well students could grasp the material in EMI courses. Interviewee 6 pointed out, “In some classes, the teachers just followed the textbook word for word in English, and that wasn’t helpful. We needed more explanation and interaction to really understand the content.” Interviewee 7 also noted, “Sometimes I asked the teacher for clarification, but they just explained it again in the same way in English. It would have helped if they had tried using simpler language or examples.” In contrast, other students mentioned that some instructors

adjusted their teaching style and checked whether students had understood the concepts, which helped improve comprehension. Interviewee 3 said, “One of my teachers was great at breaking things down. When he saw that students were confused, he slowed down and gave examples in simpler English. That made a huge difference.” Interviewee 4 also stated, “The teachers who took the time to explain things slowly or gave us time to ask questions made a big difference. When they rushed through the material, I felt like I couldn’t keep up.” This highlighted the importance of instructors adjusting their teaching styles and methods to meet students' needs, helping them grasp the concepts more easily.

Challenges of Language Barriers and Anxiety in EMI Learning

This report examined how specific challenges—such as language barriers, instructional support, anxiety, and pressure—impacted students' learning outcomes and academic performance in EMI courses. Through thematic analysis, we identified key themes including time investment, language barriers, instructional support, confidence, and anxiety as critical factors influencing students' experiences in EMI settings.

Time Investment in EMI Courses

Many students noted that EMI courses required significantly more time and effort compared to Chinese-taught courses. This extra time was mainly spent grasping concepts, materials, and unfamiliar vocabulary. Students needed to dedicate additional time to preparing for assignments and exams to achieve the same level of understanding as in Chinese-taught courses. Interviewee 1 noted, “I felt like I had to spend a lot more time on EMI classes, especially with the assignments and exams.

Sometimes I needed double the time compared to Chinese-taught courses.” Similarly, Interviewee 4 mentioned, “I spent a lot of time Googling terms or reading up on the content for EMI classes. It took more time than Chinese classes because I needed to figure out what the English meant before understanding the subject matter.” While some interviewees viewed the increased time investment as a waste, others had a more positive attitude, seeing it as necessary for improving their English proficiency. Interviewee 6 said, “For EMI classes, I definitely needed more time to prepare. I had to read the materials in advance to make sure I could follow during class, whereas for Chinese classes, I just needed to focus during the lecture.” This showed that students had diverse opinions regarding the time investment required for EMI courses, but it was a challenge that most faced.

Language Barriers in EMI

Another common challenge mentioned by all students was language barriers, particularly with technical terminology. Many reported that translating technical terms and searching for their meanings consumed a lot of time, negatively affecting their learning, especially during class. Interviewee 1 shared, “Sometimes, I had to look up every other word in the lecture slides because I didn’t know what the terms meant. It slowed me down, and by the time I understood, the class had already moved on.” Interviewee 6 also highlighted the difficulty of learning due to unfamiliar terms: “There were a lot of technical terms that we didn’t use in everyday English, and that made it hard to follow the lectures. Even though I understood basic English, it was the subject-specific words that confused me.” Similarly, Interviewee 7 added, “It wasn’t just about speaking English; it was about the academic terms that were hard to grasp. Even if I understood general English, the terms used in economics or science were on

a different level.” Interviewee 5 also emphasized, “The technical vocabulary in English was overwhelming. I often needed to translate the words into Chinese first to understand what they meant before I could even start learning the concept.” These comments showed that, without supportive instruction such as previews, language barriers in class significantly impacted students' learning and progress.

Confidence and Anxiety in Participation

Students' confidence levels and anxiety were closely related to their English proficiency and the perceived difficulty of EMI courses. Since EMI often involved more presentations and active class participation, this type of learning could create anxiety and pressure for students. Interviewee 3 mentioned, “I felt nervous when the teacher asked me to speak in front of the class. It was hard to express my ideas clearly in English, and I was afraid of making mistakes.” Similarly, Interviewee 4 said, “There was always a bit of pressure when you weren't fluent in English. I worried about making mistakes or not understanding something important in class. It was stressful.” Some students also mentioned that embarrassment limited their participation in class discussions: “Sometimes I avoided participating in discussions because I was afraid my English wasn't good enough. Even when I knew the answer, I hesitated because I didn't want to embarrass myself.” However, when students had enough time to review materials or received clear explanations from instructors, their confidence increased. Interviewee 5 noted, “I felt more confident in classes where the teacher gave us time to review and explained things clearly. In those cases, I was less anxious because I knew I could follow along.” Similarly, Interviewee 7 shared, “I was always a bit nervous at the beginning of an EMI class because I didn't know how hard the language would be. But after a few weeks, if the teacher explained things well, my

confidence grew.” These responses showed that teachers’ support could help students keep up with the material, boosting their confidence. However, one interviewee noted that while confidence could build over time, the challenge of learning in English remained: “I felt more confident after taking a few EMI courses, but at the beginning, I was always worried that I wouldn’t understand enough to do well. Now I felt more used to it, but it was still a challenge.” This illustrated that while students might grow accustomed to EMI, the anxiety stemming from a lack of confidence could continue to affect their learning.

English Proficiency and Participation in EMI

This report examined how differences in English proficiency among students enrolled in EMI courses in Taiwan impacted their levels of engagement and participation. Through an analysis of student interviews, key themes were identified, including participation dynamics, the influence of English proficiency, group dynamics, teaching methods, and language-related challenges. These findings illustrated how disparities in English proficiency shaped students' experiences and engagement within EMI settings.

Confidence and Participation Dynamics

This study also found that students with higher English proficiency tended to engage more confidently in discussions, volunteering ideas and preparing in advance. They lost constraints of the language barrier, allowing them to participate in class more freely, and this kind of participation was considered active participation here. Those with a stronger command of English felt more confident in discussions and often led group interactions. Interviewee 5 (Foreign Language Instruction) said, “I

thought my English was pretty good, so in this aspect, I felt like I needed to perform accordingly in discussions.” Another interviewee, a student majoring in English, claimed, “Most of the time, I belonged to the more active type... I would speak up myself.” On the other hand, students with lower proficiency were often reluctant to speak, followed others' lead, and felt “invisible” in group activities. This unwillingness prevented them from participating fully in class activities, thereby limiting their learning opportunities. Interviewee 4, who was from the Department of Digital Content Application and Management, answered regarding their attitude and rate of joining class activities, “A bit avoidant... If others asked me to do something, I'd just do it.” This phenomenon also showed during the interview with Interviewee 6 (majoring in Translation), who said, “I thought I was more of the go-with-the-flow type,” highlighting the struggle to articulate ideas effectively. These observations highlighted the contrasting dynamics in classroom participation, where confident students with stronger English skills led discussions, while those with lower proficiency often felt hesitant and marginalized, limiting their engagement and learning opportunities.

Group Dynamics and Their Impact

Group dynamics indeed impacted students' participation and engagement insignificantly in class due to the differences in English proficiency levels among students. Some students preferred to form groups with those who had similar language abilities. However, students sometimes suffered from grouping with mixed-proficiency groups; those with lower English skills often felt overshadowed by their more fluent peers, leading to fewer speaking opportunities in the form of avoidance of participation, fear of making mistakes, and feeling excluded. These constraints could

be attributed to the shortage of confidence among those students. This phenomenon was also mentioned by Interviewee 11 (Business Administration), who said, “Some students may not dare to speak up because of their own ability differences, leading to a lack of confidence.” Furthermore, Interviewee 10 from the Department of International Affairs pointed out, “If there are people in the group whose English is too good... those who were not as good won't have many chances to speak.” Similarly, Interviewee 2 said, “I didn't think my English was very good... I couldn't express my thoughts very precisely in English.” This illustrated how varying English proficiency levels within groups could create barriers to participation, ultimately hindering the overall learning experience for less confident students.

Teaching Methods and Student Reactions

One of the principles of the implementation of EMI in Taiwan mentioned the increase in class interaction through more innovative, new ways of teaching by instructors, such as random calling, which was a common method instructors used to encourage diverse participation in class. However, this practice could also create stress for students with lower proficiency, potentially discouraging further engagement in class. Interviewee 1 pointed out, “Most of the teachers we encountered would randomly call on students, so even those who were not as proficient had a high chance of being called.” While this method could equalize participation opportunities, it might also have caused anxiety and pressure.

Stress and Pressure in Classroom Settings

Therefore, the demand for active participation, such as discussions and presentations, could unintentionally increase stress for students with lower English

proficiency. However, unlike the teaching methods before attending universities, students often felt stressed about being called on or considered that they were forced to speak in class, especially for those with lower English proficiency. Interviewee 4 pointed out, “I had always been uncomfortable with public speaking, and the open approach in university was a big adjustment since we didn’t have this in high school. The sudden shift left me feeling unprepared, lacking training and confidence, as if everything was forced on us.” Interviewee 8 (German Department) also mentioned, “I thought EMI could sometimes be difficult because it didn’t feel as easy as taking a regular exam.” This pressure often resulted in lower-proficiency students feeling hesitant to engage, as they feared making mistakes in front of others.

Language Barriers and Their Consequences

Language barriers were also a core point that limited students’ learning and participation in class, especially for students with lower English proficiency. Those students faced additional challenges related to language comprehension and expression, which further limited their opportunities for active engagement. Many students claimed that comprehension difficulty caused the difficulty of actively participating in class, such as not being able to understand the instructions given by instructors. Interviewee 16 (Business Administration) mentioned, “Sometimes I didn’t understand the teacher's questions, so I didn't know how to discuss.” Similarly, Interviewee 13 (International Affairs) added, “When the class was about to end, teachers allowed students to ask questions... I often couldn't understand what they were asking.” This highlighted how language barriers not only impeded comprehension but also significantly diminished students' ability to engage actively in classroom discussions.

Implications for Educational Practices

Moreover, the difficulty of expressing themselves in English could discourage students from sharing and participating in class; they might choose to stay silent, reducing their participation opportunities. Interviewee 2 pointed out, “You know the word, but suddenly you could not say it out loud.” This showed that students may have been limited in participation due to insufficient English proficiency.

The disparities in English proficiency among students in EMI courses in Taiwan had a significant impact on their active participation and engagement. Higher-proficiency students tended to engage more confidently and took on leadership roles in discussions. Conversely, lower-proficiency students faced challenges in comprehension, expression, and group dynamics, leading to reduced involvement and a passive role in classroom activities. Teachers and course structures played a critical role in either mitigating or exacerbating these disparities. These findings emphasized the need for inclusive educational practices that considered proficiency levels to support all students in achieving more active participation and engagement in EMI settings.

Impact of ESP and EAP Programs on Language Skills

This report investigated the impact of ESP and EAP programs on students' language skills and academic performance. Through student interviews, key themes were identified, including improvements in listening and reading skills, challenges in speaking and writing, anxiety and confidence issues, and the importance of institutional support.

Perceived Improvements in Listening and Reading Skills

The results indicated that students perceived significant improvements in their listening and reading skills after participating in ESP and EAP programs. Many students highlighted that the focus on vocabulary and academic language in these programs helped them better understand course materials in EMI classes. For instance, Interviewee 1 (Foreign Language Instruction) stated, “I thought listening was the most improved skill.” This suggested that the listening activities in ESP and EAP programs were particularly effective in helping students comprehend lectures and follow discussions in EMI courses. Similarly, Interviewee 6 (Translation Department) mentioned, “I thought they had the most significant impact on my reading. These courses focused on the use of academic language and understanding professional texts.” This reflected how these programs enhanced students' ability to engage with academic texts. Likewise, Interviewee 3 (English Department) shared, “I thought it was reading because I took an ESP course called *The Economist*. The teacher guided us through entire articles and explained sentence usage and writing techniques.” These quotes underscored the advantage of ESP and EAP programs, which focused more on language teaching and were designed to quickly improve students' English proficiency to help them adapt to the EMI system. This highlighted the overall positive impact of ESP and EAP programs on students' academic progress.

Challenges in Speaking and Writing Skills

In contrast, students reported that their speaking and writing skills did not improve as much as their reading and listening. Speaking, in particular, remained a challenge for many, even though it was essential for participation in class discussions and presentations. Interviewee 6 remarked, “ESP courses provided professional

speaking practice, like giving reports and participating in field-related discussions, but I still struggled with fluently expressing myself in a professional context.” This showed that while ESP courses required students to present, the lack of sufficient vocabulary still made it difficult for them to fully express themselves. Similarly, Interviewee 12 (Spanish Department) stated, “The biggest challenge for me was being able to clearly express my ideas during academic discussions and presentations in English, especially when I needed to respond quickly.” This suggested that EAP courses had not fully addressed the need for students to give quick, fluent responses in academic settings, which was crucial in EMI courses. Moreover, as ESP and EAP programs required students to complete assignments entirely in English, many struggled with writing due to limited grammar and vocabulary skills, which affected their performance in class. Interviewee 10 (Department of International Affairs) noted, “Writing assignments were difficult because they required complex grammar and vocabulary, and we didn’t practice enough in ESP to meet these academic demands.” This reflected the gap in writing skills development, as students felt underprepared for the academic writing required in EMI courses.

Anxiety and Confidence Issues

The lack of preparation in speaking and writing also led to feelings of anxiety and low confidence, especially when students were asked to give presentations in class. Interviewee 3 mentioned, “I felt nervous when giving presentations in English.” Similarly, Interviewee 4 shared, “Some students hesitated to speak up in class for fear of making mistakes.” To address these issues, some interviewees offered suggestions. For instance, Interviewee 19 stated, “The courses should have offered more opportunities for simulated academic discussions and presentations to improve

students' confidence and fluency in expressing themselves in English.” Additionally, Interviewee 8 suggested, “I thought it could increase academic skills training by letting us explore and apply the lessons in practical settings to increase our interest in the subject matter.” These suggestions highlighted the need for ESP and EAP programs to place greater emphasis on speaking and writing while also providing more opportunities for practical application to build students' confidence and fluency.

Importance of Institutional Support

Regarding institutional support, resources such as access to self-study tools played a key role in helping students develop their language skills outside the classroom. However, the frequency with which students used these resources was inconsistent, and some students were unaware of the support available to them. For example, Interviewee 10 mentioned, “There wasn’t much help, maybe because information was not well communicated. Sometimes, I didn’t even know there were resources available, and I had to search for them myself.” This indicated a communication gap between the institution and students, making some students feel uninformed about the resources they could benefit from. Similarly, Interviewee 7 suggested, “They needed to promote resources better—just putting notices on bulletin boards didn’t work. Placing them in elevators or using social media would have helped.” These comments highlighted the importance of effectively promoting self-study resources to ensure that students were aware of what was available to them. By doing so, the institution could further support students' English proficiency improvement beyond the classroom, complementing the efforts of the ESP and EAP programs.

Summary

This study examined the experiences of 85 EMI students in Taiwan, focusing on how instructional strategies, language barriers, and support programs address diverse student needs across different English proficiency levels (A2, B1, B2). Using a mixed-methods approach, including quantitative analysis (descriptive statistics, ANOVA) and qualitative interviews, the study explored perceptions of code-switching, participation, anxiety, and the effectiveness of EAP/ESP programs.

The findings revealed that code-switching significantly enhanced comprehension, particularly for lower-proficiency (A2) students. A2 students rated its helpfulness higher than B2 students (mean = 4.07 vs. 3.22). ANOVA analysis confirmed significant differences in perceived helpfulness ($F(2, 82) = 7.661, p = .001$), underscoring the benefit of selective code-switching in reducing anxiety and aiding understanding. Interviews echoed this, with students expressing that occasional code-switching helped clarify complex concepts, especially for lower-proficiency students, but they felt that frequent use could disrupt learning. One A2 student noted, "When the teacher switched to Chinese, it made me feel less anxious and helped me understand better."

Language barriers and anxiety were also identified as key challenges in EMI settings. A2 students reported higher pressure (mean = 3.21) compared to B1 and B2 students, and while ANOVA results did not show statistically significant differences ($p = 0.099$), the data indicated that lower-proficiency students experienced higher anxiety, which likely affected their engagement in class. Factor analysis identified "limited English proficiency" and "unfamiliarity with professional vocabulary" as major obstacles, consistent with interview data where students described the need for more time to comprehend technical terms. One A2 student said, "I spend a lot of time

translating terms just to understand the content, which slows me down in class." These findings suggest that targeted language support is necessary to help students overcome these barriers and reduce stress.

Participation disparities were evident, with overall participation levels being generally low. A2 students reported the lowest participation (mean = 1.64), while B2 students reported slightly higher participation (mean = 2.12). ANOVA analysis confirmed significant differences in participation ratings ($F(2, 82) = 4.085, p = 0.020$), indicating that higher-proficiency students perceived greater engagement in class. Interview data highlighted that lower-proficiency students often felt hesitant to participate, with one A2 student noting, "I would just follow others' lead in group activities because I was afraid of making mistakes." Many students also reported a moderate sense of inequality in EMI courses due to language differences (mean = 3.45), with many believing that higher proficiency provided an advantage (mean = 4.31). As one interviewee stated, "Those with better English seem to have more opportunities to speak up and take the lead in discussions." These findings highlight the need for instructional adjustments to foster more equitable participation opportunities for students at all proficiency levels.

The study also assessed the effectiveness of EAP/ESP programs, which were generally seen as beneficial for improving listening and reading skills. However, students expressed challenges in speaking and writing, which are crucial for active participation in EMI courses. While EAP/ESP programs helped improve academic language comprehension, many students felt they still lacked the fluency needed for academic discussions and presentations. One student shared, "The reading and listening skills improved, but I still struggled with speaking clearly in class." Students

called for more focused training in speaking and writing to build confidence and fluency, especially for active participation in EMI settings.

In conclusion, the study emphasizes the importance of adaptive teaching strategies, including selective code-switching and enhanced support in speaking and writing, to address the diverse needs of students in EMI courses. By refining instructional approaches, offering more targeted language support, and ensuring greater accessibility to resources, educators could foster a more inclusive and engaging learning environment. This helped ensure that all students, regardless of their proficiency level, could participate actively and succeed in EMI settings.

Conclusion

Proactive vs. Reactive Code-Switching in EM

This study identified both proactive and reactive code-switching as key strategies for enhancing student comprehension in EMI settings. Proactive code-switching occurred when teachers predict potential difficulties and address them before they happen, in the way like explaining technical terms in the students' first language before introducing them in English. This approach aligns with the findings of Lo and Macaro, who highlighted its dynamic role in improving comprehension and engagement.³⁴ During the lesson, proactive code-switching could be used to tactically clarify complex concepts or vocabulary, ensuring students are ready to engage with the English material. However, the key was to transition back to English as soon as possible, using students' first language briefly and purposefully. Teachers could also use visual aids such as pictures and videos as proactive techniques to support students' comprehension, followed by more immersive English use as the lesson continues. In contrast, reactive code-switching happened when teachers observe confusion during the lesson and switch to the students' first language to clarify concepts or instructions which mean the teacher assistants happened after the confusion and difficulties raised, a strategy often noted by Sert.³⁵ Reactive code-switching is most effective when students showed signs of confusion or disengagement, and teachers could switch to their first language briefly to clarify the point. After addressing the confusion, the focus should return to English to ensure continued exposure to the target language. While proactive code-switching ensured

³⁴ Yuen Yi Lo, and Ernesto Macaro, "The Medium of Instruction and Classroom Interaction: Evidence from Hong Kong Secondary Schools," *International Journal of Bilingual Education and Bilingualism* 15, no. 1 (2012).

³⁵ Olcay Sert, "The Functions of Code-Switching in Elt Classrooms," *Online Submission* 11, no. 8 (2005).

smoother lesson delivery by preventing misunderstandings, reactive code-switching offered immediate support to students who struggle during the session. Balancing both strategies was key: proactive code-switching could be used at the beginning to set students up for success, while reactive code-switching should be reserved for when misunderstandings arise during the lesson. However, this study found that frequent code-switching relying on either one of these strategies might detract students from immersion. Interviewees noted that excessive switching could limit English practice and engagement, which aligns with Macaro's findings that too much code-switching could restrict opportunities for language learning.³⁶ These findings suggested EMI programs balance code-switching with immersive English exposure to foster an equitable, effective learning environment. These findings emphasized the importance of balancing code-switching with immersive techniques to create an effective EMI learning environment, where students could both understand the material and engage fully with the English language.

Impact of Language Barriers and Anxiety in EMI

This study explored how language barriers, anxiety, and pressure uniquely impact students' learning in EMI settings, providing insights beyond prior research. Unlike previous studies that primarily focused on general academic struggles, this research emphasized the unique challenge of technical terminology, which emerged as a more significant obstacle in EMI settings. Many students reported that understanding complex terms was more difficult than general English which added a new dimension to discussions on language barriers. Additionally, students reported

³⁶ Ernesto Macaro, "Teacher Use of Codeswitching in the Second Language Classroom: Exploring 'Optimal' use," *First language use in second and foreign language learning* 35 (2009).

the substantial time investment required to prepare for EMI courses, aligning with Macaro, Curle, Pun, An, and Dearden's finding that EMI placed significant demands on time and effort as students must “develop both language and subject-specific knowledge simultaneously.”³⁷ Addressing both language proficiency and psychological challenges was essential, as students reported experiencing anxiety related to presentations and active participation. Lo and Macaro noted that EMI students often experienced heightened anxiety during presentations due to language proficiency’s impact on confidence³⁸; this study supported their findings, with students expressing worry about “making mistakes and embarrassment” due to limited proficiency. Lower-proficiency students reported stress during active participation, fearing they might not express ideas accurately, thus intertwining language challenges with anxiety and pressure in EMI learning. These findings suggested that institutions should integrate psychological support and develop resources to help students overcome difficulties with technical terminology.

English Proficiency Disparities and Participation in EMI

This study examined disparities in English proficiency affected student participation and engagement in EMI courses, extending prior research. Consistent with findings from Evans and Morrison and Macaro et al., language barriers hindered comprehension and participation, with Evans and Morrison noting struggles in academic English comprehension and discussion engagement³⁹, while Macaro et al.

³⁷ Ernesto Macaro et al., "A Systematic Review of English Medium Instruction in Higher Education," *Language teaching* 51, no. 1 (2018).

³⁸ Lo, and Macaro.

³⁹ Stephen Evans, and Bruce Morrison, "Meeting the Challenges of English-Medium Higher Education: The First-Year Experience in Hong Kong," *English for Specific Purposes* 30, no. 3 (2011).

highlighted significant participation challenges for lower-proficiency students.⁴⁰ This study revealed new dimensions, showing that higher proficiency correlated with confidence and active participation, as Gibbons and Wilkinson found, where students with stronger English skills engaged more and conveyed ideas with greater confidence.⁴¹ Yet, lower-proficiency students often felt “invisible” in discussions, with one student expressing a tendency to avoid active roles, an issue rarely addressed in prior research. The practice of random calling, meant to increase interaction, exacerbated anxiety for these students, adding pressure that went largely unexamined in existing literature. Additionally, mixed-proficiency group dynamics exacerbated exclusion for lower-proficiency students, aligning with Macaro et al., who observed that mixed-level peer learning often failed to foster equal engagement.⁴² A significant Chi-Square result ($p < 0.001$) indicated a widespread perception of inequality in EMI courses, with students linking proficiency disparities to unequal opportunities, though pressure perceptions did not vary significantly by proficiency ($p = 0.344$). To address these issues, differentiated instruction should be implemented to accommodate students’ varying proficiency levels, ensuring that all students were engaged and appropriately challenged. This strategy would help create a more inclusive learning environment where all students could participate equally.

⁴⁰ Samantha Curle, "English-Medium Instruction Practices in Higher Education: International Perspectives on the Englishization of Higher Education in Europe," *Applied Linguistics* (2023), accessed 4/21/2024, <https://dx.doi.org/10.1093/applin/amad029>.

⁴¹ Pauline Gibbons, "Bridging Discourses in the Esl Classroom," (2018).

⁴² Robert Wilkinson, "English-Medium Instruction at a Dutch University: Challenges and Pitfalls," *English-medium instruction at universities: Global challenges* 324, no. 10.21832 (2013).

⁴³ Curle.

Effectiveness and Gaps in EAP/ESP Programs in EMI

This study evaluated EAP and ESP courses, confirming findings from Evans and Morrison and Wilkinson that academic language support enhances listening and reading skills^{44,45}, with mean satisfaction ratings of 3.25 (SD = 0.881) for listening/speaking and 3.21 (SD = 1.048) for reading/writing. However, the study also discovered limited improvements in speaking and writing, with students reporting struggles in presentations and quick responses in discussions, issues less explored in earlier research. Insufficient preparation in ESP and EAP programs often contributes to anxiety and reduced confidence, particularly in speaking-focused tasks, echoing Lo and Macaro's findings on psychological barriers faced by students in EMI contexts.⁴⁶ Additionally, gaps in institutional support for self-study resources emerged, with students like Interviewee 10 noting they had to seek out resources independently. These findings called for comprehensive revisions in EAP and ESP courses, emphasizing practical speaking and writing skills while offering low-stress speaking opportunities, such as small group discussions or pre-recorded presentations, to help reduce anxiety.

⁴⁴ Evans, and Morrison.

⁴⁵ Wilkinson.

⁴⁶ Lo, and Macaro.

APPENDIX 1

大學生對臺灣 EMI 全英語授課有效性之看法

同學您好：

歡迎參與我們的問卷，我們正在收集文藻外語大學學生對於「EMI 全英語授課」相關主題的見解。您的反饋對於我們更深入了解學生的經驗以及此教育政策的觀點至關重要，完成以下問卷將需要花費您約五分鐘的時間，請誠實且仔細地回答以下問題。您的意見將在我們致力於提高所提供教育質量的過程中起到關鍵作用，衷心感謝您的參與。

學生: Eva Huang

文藻外語大學 國際事務系

指導教授: Daniel Lin

文藻外語大學 國際事務系

日期: 2024 年 7 月 3 日

第一部分. 個人基本資料

1. 性別:

男性 女性

2. 目前就讀年級:

大一 大二 大三 大四

3. 目前就讀之學術專業或研究領域:

國際事務 英語 法語 德語 西班牙語 日語

東南亞研究 翻譯 傳播藝術 應用華語 企業管理

數位內容應用與管理 外語教學

4. 語言背景:

非英語人士 雙語 (英語及其他語言) 英語母語人士

5. 目前居住地:

城市 鄉下

6. 根據 CSEPT 大學校院英語能力測驗，您目前的英語能力水平如何？

A2 (120-179) B1 (180-230) B2 (240-360)

第二部分. 教學挑戰

1. 在 EMI 課程中，您能夠清楚地理解老師所用的專業術語和概念嗎？

完全不能理解 大多不能理解 有時能理解 大多能理解 完全能理解

2. 在 EMI 課程中，您認為老師在課堂上進行語言切換的教學方式對您是否有幫助？

完全沒有 略有幫助 中等幫助 非常幫助 極大幫助

3. 您在 EMI 課程中，對於用英語進行的考試、課堂活動感到有多大壓力？

沒有壓力 略有壓力 中等壓力 很大壓力 極大壓力

4. 您是否覺得老師在 EMI 課程中使用的教學方法能夠激發您的學習興趣？

完全不能 很少能 有時能 大多能 總是能

5. 您認為 EMI 課程中使用的教材和教學資源是否適合您的學習需求？

完全不適合 很少適合 有時適合 大多適合 完全適合

第三部分. 學習成果的有效性

1. 完成 EMI 課程後，你會如何評價你的英文能力？

差很多 差一些 大致相同 好一些 好很多

2. 與非 EMI 課程相比，您對 EMI 課程內容的理解程度如何？

差很多 差一些 大致相同 好一些 好很多

3. 如果您在 EMI 和非 EMI 課程中的學習表現有所差異，您認為這些差異的原因是什麼？（請擇一）

教學方法 語言障礙 課程內容難度 其他:_____

4. 為了在 EMI 課程中的達到出色的學習表現，您曾面臨過以下哪些挑戰？

(請選擇所有適用的選項)

- 難以理解用英語授課的課程內容
- 不熟悉英語特定專業詞彙
- 英語語言能力有限 (口語、聽力、閱讀、寫作)
- 缺乏足夠的幫助或資源來提高英語能力
- 其他 (請具體說明): _____

5. 您是否在 EMI 課程中遇到過與語言障礙相關的焦慮或壓力？

是 否

6. 您是否認為您的語言能力在 EMI 課程中得到充分的評估和解決？

是 否

7. 與非 EMI 課程相比，您認為 EMI 課程在多大程度上促進了學生的批判性思維和創造力？

- 在 EMI 課程中更有效 EMI 課程和非 EMI 課程同樣有效
- 在 EMI 課程中效率較低

第四部分：不平等機會

1. 您認為英語水平較高的學生在 EMI 課程中是否有優勢？

非常不同意 不同意 中立 同意 非常同意

2. 您認為 EMI 課程在多大程度上創造了英語水平不同的學生之間的不平等學習環境？

完全沒有 略有 中等 非常 極大

3. 你積極參與 EMI 課程裡課堂討論和活動的頻率是多少？

從不 很少 有時 時常 總是

4. 你會如何評價你的同儕們於 EMI 課程裡，參與課堂討論和 EMI 課程活動的參與率？

低 中 高

5. 您在 EMI 課程中是否能夠得到足夠的教師關注和個別指導？

完全不能 很少能 有時能 大多能 完全能

6. 您認為 EMI 課程是否有效地符合學生們不同的學習需求以及背景？

完全無效 不太有效 有點有效 非常有效

第五部分. 資源配置

1. 您認為 EAP/ESP 課程在多大程度上提高了您的學術英語能力？

完全沒有 略有提高 中等提高 非常提高 極大提高

2. EAP/ESP 課程是否幫助您更好地理解 EMI 課程中的專業術語和學術概念？

完全沒有 略有幫助 中等幫助 非常幫助 極大幫助

3. EAP/ESP 課程是否幫助您在 EMI 課程中的考試和測驗中表現得更好？

完全沒有 略有幫助 中等幫助 非常幫助 極大幫助

4. 您認為 EAP/ESP 課程提供的學習材料和資源是否充足，以幫助您應對 EMI 課程中的挑戰？

完全不充足 略微充足 中等充足 非常充足 極其充足

5. 您在 EAP/ESP 課程中學到的學術技巧和策略是否對您在 EMI 課程中的學習有幫助？

完全沒有 略有幫助 中等幫助 非常幫助 極大幫助

6. 您自行尋找並使用過文藻校內提供之何種英文自主學習資源？

英/外語能力診斷輔導中心(LDCC) Easytest 線上學習測驗平台

- LiveABC 全民英檢網 CNN 學英語學習資源網 My ET 自學網
- 空中英語教室、大家說英語 (英文) 電子書報 無

7. 您的使用/不使用該資源的動機為何？

- 免費提供 希望提升自身英文能力 不熟悉該資源、沒聽過
- 曾使用過，但效益不大 認為已具足夠英文能力應對課程

8. 您覺得學校提供之語言輔導計劃或資源對學生克服 EMI 課程中的語言障礙有幫助嗎？

- 完全無效 不太有效 有點有效 非常有效

衷心感謝您的參與和協助

APPENDIX 2

訪談指南

感謝您參加這次訪談，我的研究探討了台灣大學生對以英語為教學媒介 EMI 課程的效果的看法。基於個人經歷和對教育不平等的關注，這項研究旨在了解學生對 EMI 的看法及其對學習成果的影響。您的見解將有助於評估當前語言政策和教育實踐的有效性，為政策制定者、教育者和管理者提供有價值的反饋，以改進 EMI 的實施。

A. 教育困難：課程內容理解

1. 您認為自己的英語水平是否足以應對 EMI 課程的學習需求？

1.1.1 如果有困難，您認為主要是出於哪些方面？

2. 在 EMI 課程中，您是如何應對專業詞彙的理解困難等問題？

2.1.1 這些困難如何影響了您的學習？

3. 您認為獲取到符合自身英語程度的教材和輔助學習資源的難易度為何？

3.1.1 您覺得學校應該如何改進？

B. 學習效率：學習參與和動力

- 1 在 EMI 課堂中，您的參與度如何（：例舉手發言、上台發表等）？
 - 1.1.1 您認為英語程度如何影響一個人在課堂討論或發言的參與度？
 - 1.1.2 您認為是哪些因素限制了參與意願的提高？

- 2 您認為 EMI 課程對您的時間管理有何影響？
 - 2.1.1 與非 EMI 課程相比，您準備和復習 EMI 課程內容需要花費多長時間？
 - 2.1.2 這對您的科目學習帶來了什麼影響？

- 3 您對自己完成 EMI 課程的信心和動力如何？
 - 3.1.1 這些信心和動力如何影響了您的學習態度和表現？

- 4 當上課遇到課程上的問題和困難時，您對 EMI 課程的老師能夠引導您找出解決辦法的信心有多高？

C. 不公平的學習：支持與差距

- 1 您認為學校提供的英語輔導等資源與學生的實際需求之間存在何種落差？
 - 1.1.1 在使用這些資源後，有什麼建議或改進的地方？

- 2 在 EMI 課程中，您對於具有不同語言程度的學生在表現上是否有所觀察或感受？

2.1.1 這些差異主要表現在哪些方面？

- 3 您認為若同樣的課程改以中文授課，您的表現能夠有多大程度的提升？

D. 資源分配：輔助課程與資源

- 1 您如何評價目前的 ESP、EAP 課程數量和品質？

1.1.1 您對 ESP、EAP 課程在學生英文程度的提升有何看法？

- 2 您如何評估不同校區或地區的資源分配情況？

2.1.1 您認為學生可能因為哪些原因而無法公平地取得各項學習資源？

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