

*Implementation of EMI in Taiwan's Higher Education:
Exploring Students' Perspective on the Challenges and Their Needs*

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Abstract

Taiwan's recent bilingual education policy has driven universities to promote English-medium instruction (EMI) courses. While research has explored teacher perspectives on EMI implementation, student experiences remain understudied. This quantitative study addresses this gap by investigating the perceptions and self-reported experiences of 1,137 Taiwanese Mandarin-speaking university students enrolled in EMI courses, whose first language is Taiwanese Mandarin only. This research sheds light on student preferences, challenges, and learning needs in EMI courses. By highlighting these aspects, the study aims to inform instructors on how to effectively plan and deliver EMI instruction while providing appropriate learning resources aligned with students' varying English abilities.

Keywords: English-Medium Instruction (EMI), Students' Perception and Experience, Quantitative Study

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Introduction

In line with global trends in politics and economics (National Development Council, 2018; Hsu, 2021), Taiwan has developed its bilingual education policy, known as the Bilingual Policy 2030. The primary objectives of this policy are to “raise the nation’s international perspective” (National Development Council, 2018, p. 2), “spur national economic prosperity” (National Development Council, 2018, p. 6), and “enhance young people’s English communication skills” (National Development Council, 2018, p. 1). To support these goals, Taiwan’s Ministry of Education (MOE) launched the Program on Bilingual Education for Students in College (BEST Program) in 2021, establishing two specific targets for higher education students (Ministry of Education, 2020):

I. Goals of BEST Program

- a. 50% of undergraduate students acquire an English proficiency equivalent to CEFR B2 before entering their sophomore year
- b. 50% of credits earning from EMI classes for second-year and first-year graduate students

To achieve this goal, higher education institutions in Taiwan, supported by the BEST Program, have introduced English as a Medium of Instruction (EMI) courses. These courses aim to immerse students in an English-speaking environment, facilitate the acquisition of technical vocabulary, and foster disciplinary literacy. Since the implementation of EMI courses in 2021, limited research has explored students’ learning preferences, challenges, and needs under this new language policy. To address this gap, we conducted a quantitative study to evaluate students’ perceived challenges, learning strategies, and preferred support or resources for EMI courses.

This paper is structured as follows: first, it reviews the existing literature on EMI in Taiwan, identifies research gaps, and highlights the significance of the present study. It then outlines the quantitative study conducted with students at National Taiwan University and examines the findings, with a focus on variations in students’ English proficiency levels. Finally, the paper concludes by summarizing the key insights and offering recommendations for instructors to design and adapt EMI courses to better meet students’ needs.

Literature Review

Recent studies on bilingual education in Taiwan can be categorized into three areas: course development and pedagogical skills (e.g., Chen et al., 2020; Lin, 2016), challenges and arrangements from teachers’ perspectives (e.g., Graham et al., 2021; Graham & Yeh, 2023), and concerns regarding language policy (e.g., Chen & Lin, 2021; Hsu, 2021; Ngangbam, 2022; Ferrer & Lin, 2021; Huang, 2021; Chou & Ching, 2012; Tsou, 2021; Wang, 2021; National Development Council, 2018, 2021).

While these studies shed light on teachers’ and scholars’ perspectives, they often neglect students’ actual experiences with the policy. This oversight creates a critical gap, as understanding students’ challenges is essential for educators to refine EMI course design and for policymakers to make the language policy more practical for classroom implementation. Addressing this gap forms the core motivation for our study. In the following subsection, we present our research objectives and questions, highlighting the significance of our work.

Research Objectives, Questions & Its Significance

This research has two primary objectives: to identify the challenges students face in EMI courses and to determine the types of learning support they prefer from instructors. To achieve these goals, we formulated the following research questions:

II. Research Questions

- a. What are students' expectations when enrolling in EMI courses?
- b. What are students' preferences regarding course activities?
- c. What are students' actual experiences in EMI courses?

These questions address students' perspectives at different stages of their engagement with EMI courses: before enrollment, during the courses, and after completion. The first question examines whether students enroll in EMI courses primarily for content learning or to improve English proficiency. The second explores activities instructors could apply to enhance learning experiences. The third investigates challenges faced during the courses and the types of support students find most beneficial.

While teachers and institutions are key to implementing the Bilingual Policy 2030, students play an equally critical role in the success of EMI classrooms. This study examines students' expectations, preferences, and challenges, offering both practical and theoretical contributions. The findings aim to support the development of more inclusive, student-centered bilingual education policies and equip educators with evidence-based strategies to adapt their teaching practices, ultimately enhancing learning outcomes. Finally, this research contributes to global discussions on bilingual education by offering comparative insights for regions pursuing similar policies and bridging the gap between institutional objectives and classroom realities.

Current Study

This section presents a quantitative study that investigates the challenges students encounter in EMI courses and the types of support they prefer. The study is structured as follows: the first subsection outlines the research design and method, the second details the procedures, and the third presents the results.

Design & Method

To address the research questions, this study organizes its survey questions into four main categories: students' backgrounds, expectations for EMI courses, preferences for course activities, and actual experiences in EMI courses, represented as (1), (2), (3), and (4), respectively. Categories (2), (3), and (4) align directly with the research questions outlined earlier, with specific questions tailored to each category.

(1) Student's backgrounds:

- a. Which degree am I in?
- b. Which college am I from?
- c. Which year of study am I in?
- d. What is my English proficiency level on the CEFR scale?
- e. What is/are my native language(s)?

(2) The expectations of taking EMI courses:

- a. What was my expectation of this course before I signed up? (single-select)
- b. How confident am I in using English to take this course? (single-select)

(3) The preference for activities in courses:

- a. Irrespective of the language of the course, to me, what is the most interesting activity? (single-select)
- b. In this course, the most interesting activity for me is? (single-select)

(4) The actual experiences in EMI courses:

- a. What am I most worried about using English in this course? (multi-select)
- b. Among all the EMI courses (not English language learning courses) I took, what methods can assist me in comprehending the course material most effectively? (single-select)
- c. Considering this course is mediated in English, I would appreciate it if my instructor could provide me with the following learning support or resources. (multi-select)

Note that this study specifically focuses on the perspectives of Taiwanese students whose mother tongue is exclusively Taiwanese Mandarin. To ensure the validity of the data, question (1-e) serves as a control measure.

Procedure

The data for this questionnaire study was collected via Google Forms, requiring all participants to complete the survey in full. A total of 1,373 students participated, incentivized by a lottery offering multiple rewards. Of these, 1,175 identified Taiwanese Mandarin as their sole native language, while the remaining 198 were either bilingual in Taiwanese Mandarin and English or non-native speakers of Taiwanese Mandarin.

Results

This section presents the results of the collected data. As our research focuses on university students whose native language is exclusively Taiwanese Mandarin, we analyze and report the findings from the 1,175 participants in this category. For clarity, the results are presented according to the categories outlined earlier. We begin with the findings from category (1).

Results of Category (1)—Student’s Backgrounds.

The first question (1-a) asked students about their level of study. Among the 1,175 Taiwanese Mandarin-speaking students, 886 were undergraduates, 251 were graduate students, and 38 were PhD candidates. The proportions for each group are illustrated in Figure 1.

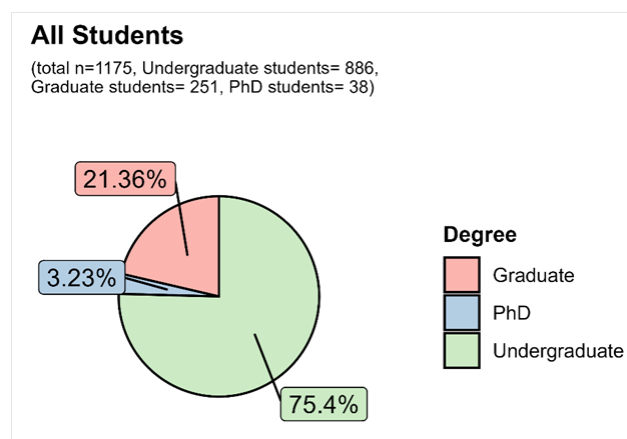


Figure 1: The Results of (1-a), “Which degree am I in?”

Figure 1 shows that the majority of participants in this study are undergraduates. Note that course designs for undergraduates and graduates in Taiwan often differ significantly: undergraduate courses are typically lecture-based, while graduate courses are more likely seminar- or colloquium-based. To ensure accurate representation of students' opinions and needs, the data from this study are analyzed separately by degree level.

The data from PhD students, due to their negligible proportion compared to undergraduates and graduates, are excluded from specific analysis to avoid bias. We begin by examining the undergraduate participants, starting with their colleges, as shown in Figure 2.

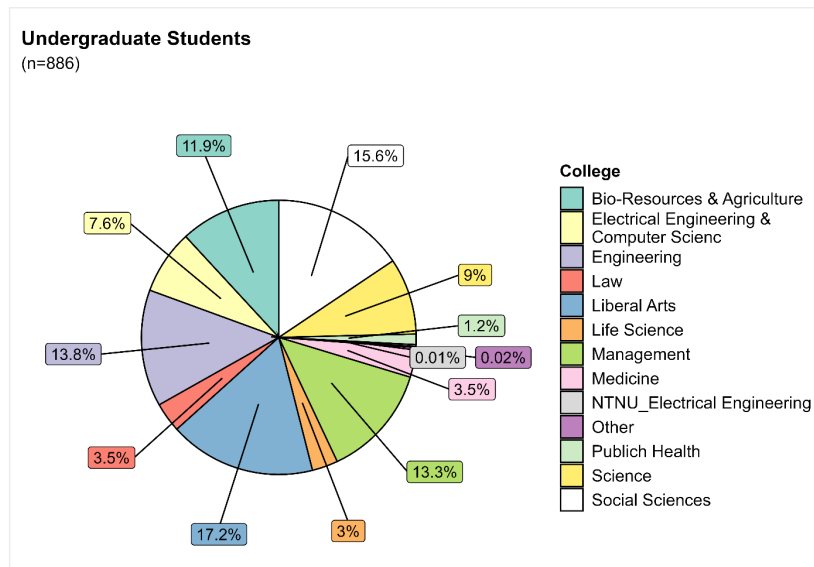


Figure 2: Undergraduate Students' Result of (1-b), "Which college am I in?"

Figure 2 reveals that undergraduate students represent a diverse range of colleges. However, the majority of participants are concentrated in five colleges: Liberal Arts, Engineering, Bio-Resources & Agriculture, Management, and Social Sciences.

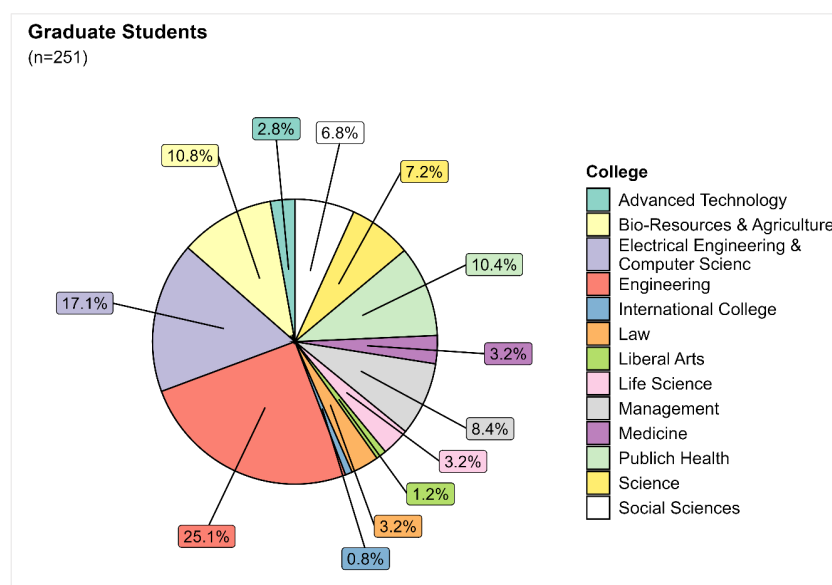


Figure 3: Graduate Students' Result of (1-b), "Which college am I in?"

Figure 3 shows that graduate students come from various colleges. Unlike undergraduates, the majority of graduate participants are from the College of Engineering, comprising over one-quarter of the sample. Other significant groups include students from the College of Electrical Engineering & Computer Science (17.1%), College of Bio-Resources & Agriculture (10.8%), College of Advanced Technology (10.4%), and College of Social Sciences (8.4%).

Next, students were asked about their year of study. Figures 4 and 5 present the results for undergraduates and graduates, respectively. Among undergraduate participants, 28.5% are freshmen, 34.4% sophomores, 18% juniors, and 18.9% seniors or higher. The distribution of undergraduates across years of study is relatively balanced.

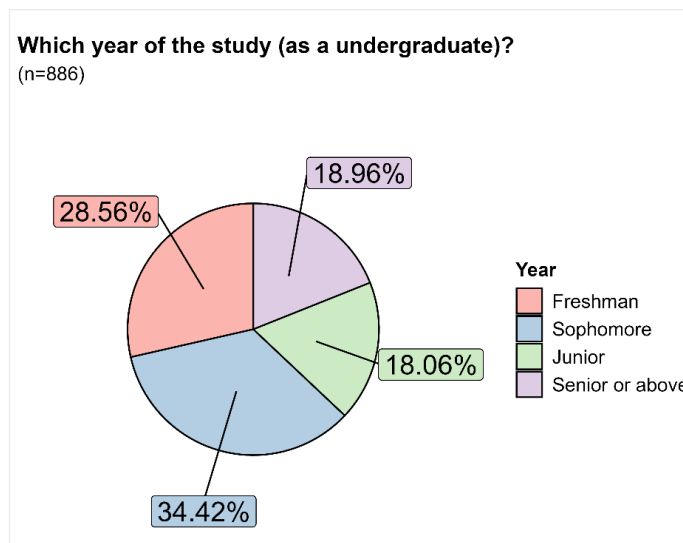


Figure 4: Undergraduate Students' Result of (1-c), "Which year of the study am I in?"

In contrast to undergraduates, the data collected from graduate students in their third or fourth year of study is minimal. This is expected, as graduate programs typically require 18 months to two years of full-time study. As shown in Figure 5, the majority of graduate participants are first-year students (71.3%), while second-year students comprise 25.5%, accounting for over a quarter of the graduate sample.

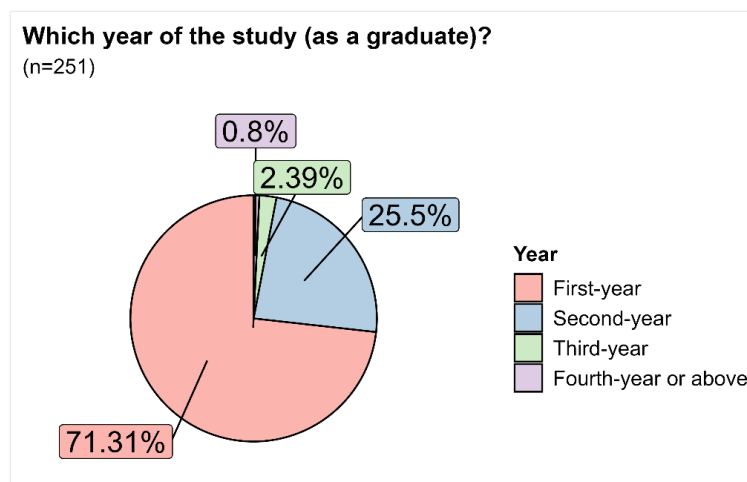


Figure 5: Graduate Students' Result of (1-c), "Which year of the study am I in?"

The final question in category (1) assessed students' English proficiency using the Common European Framework of Reference for Languages (CEFR) scale. Figure 6 presents the results for undergraduate and graduate students.

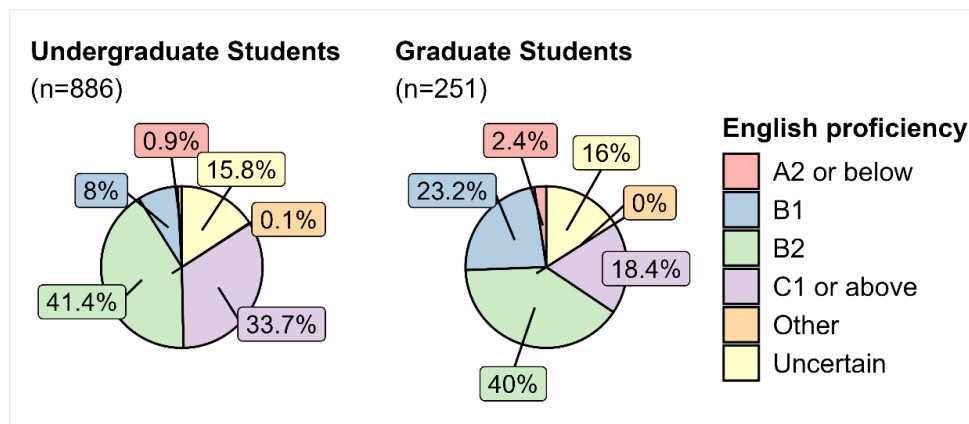


Figure 6: Undergraduate and Graduate Students' Result of (1-d), "What is my English proficiency level?"

Figure 6 shows that 33.7% of undergraduate students are at the C1 level or higher, while 41.4% are at the B2 level. This indicates that most undergraduates at National Taiwan University possess upper-intermediate to advanced English proficiency. In comparison, graduate students' English proficiency is slightly lower. Only 18.4% of graduate students are at the C1 level or higher, while 23.2% are at the B1 level. This suggests that graduate students generally have intermediate to upper-intermediate proficiency.

Results of Category (2)—Expectation of Taking EMI Courses.

Next, we examine students' expectations for taking EMI courses, the second category of this study. The first question in this category explores students' expectations prior to enrolling in the courses, with the results shown in Figure 7.

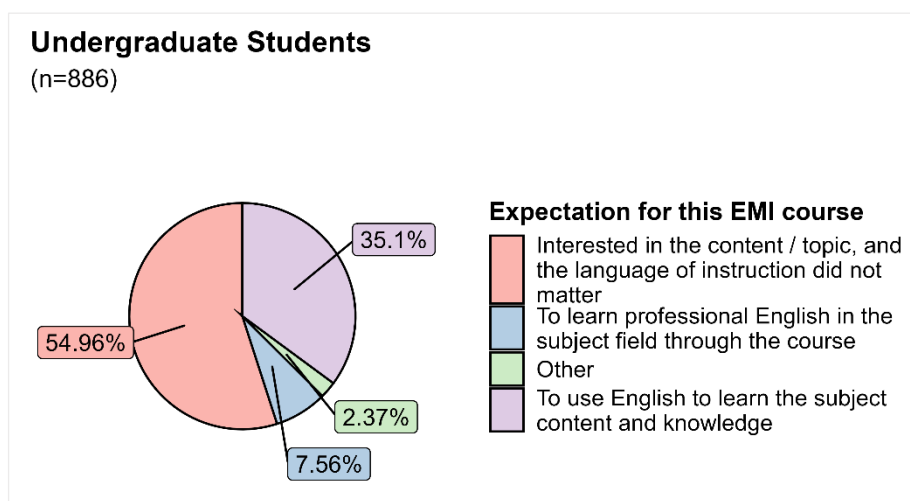


Figure 7: Undergraduate Students' Result of (2-a), "What was my expectation of this course before I signed up?"

Figure 7 shows that over half of undergraduate students prioritize the content or topic of the EMI course, with the language of instruction being largely irrelevant to them. In contrast,

35.1% of undergraduates express a desire to use English as a medium for learning subject content and knowledge. Only 7.5% aim to develop professional English skills specific to their field of study, while 2.4% mention other reasons.

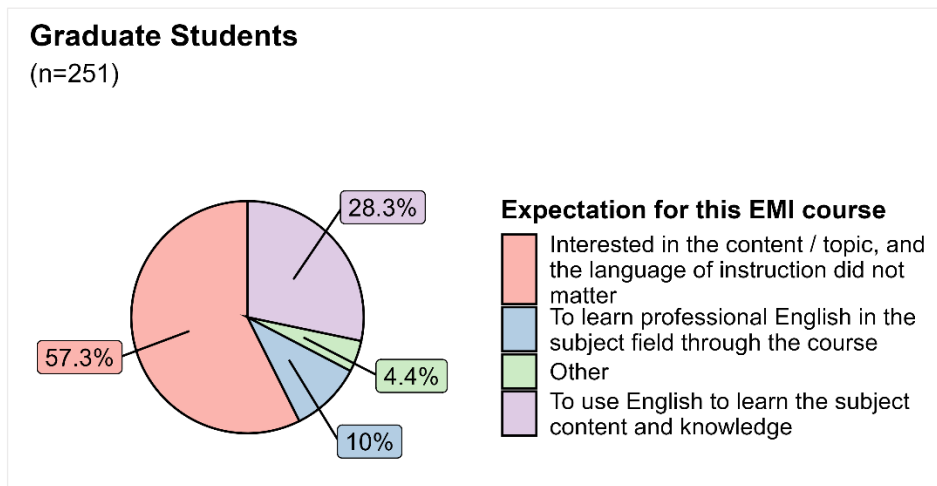


Figure 8: Graduate Students' Result of (2-a),
“What was my expectation of this course before I signed up?”

The results for graduate students in question (2-a) are similar to those of undergraduates. As shown in Figure 8, 57% of graduate students take EMI courses primarily out of interest in the content or topic, while 28.3% aim to use English to learn subject content and knowledge. Only 10% expect to acquire professional English specific to their field.

The final question in (2-b) explores students' confidence in using English to take EMI courses. The results are presented in Figure 9.

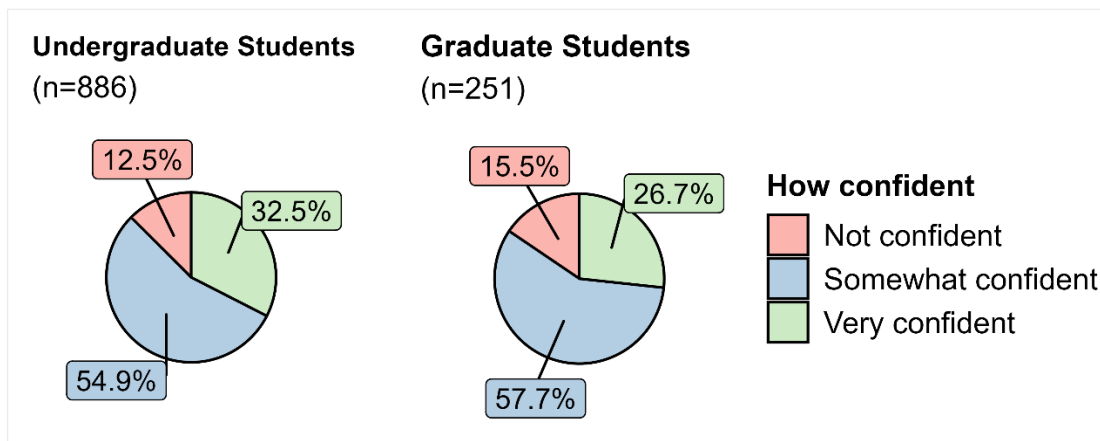


Figure 9: Undergraduate and Graduate students' Result of (2-b),
“How confident am I in using English to take this course?”

The results indicate that more than half of undergraduate and graduate students are somewhat confident in using English for EMI courses (54.9% and 57.7%, respectively). While 32.5% of undergraduates are very confident, the percentage is lower among graduates, with only 26.7% reporting high confidence. However, a notable portion of students lack confidence entirely, with 12.5% of undergraduates and 15.5% of graduates indicating no confidence at all.

Results of Category (3)—Preference for Activities in Courses.

Beyond exploring students' expectations for EMI courses, we also examined their preferences for course activities. The first question in this category (3-a) asks about the most interesting activities, regardless of the course language. Figure 10 presents the results for undergraduate students, revealing clear preferences. The top three activities are group discussions (30.7%), applying course content to real-life scenarios (27.4%), and midterm/final projects, essays, or displays (17.5%).

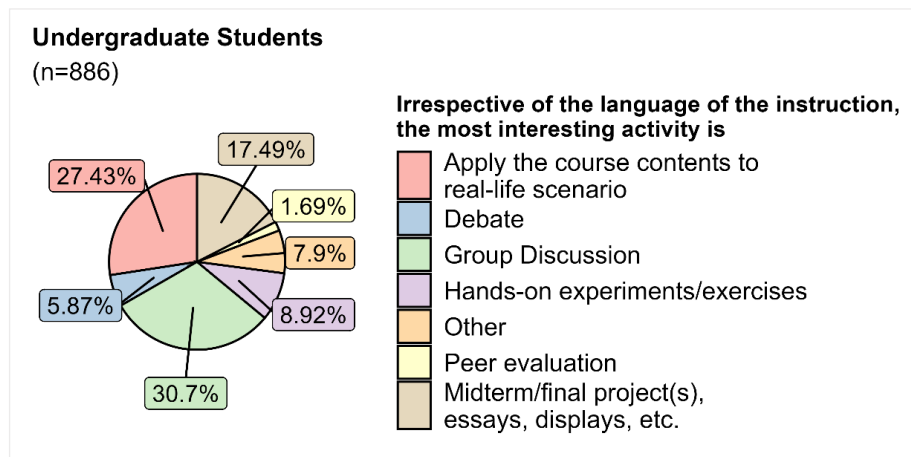


Figure 10: Undergraduate Students' Result of (3-a),
“Irrespective of the language of the course, to me,
what is the most interesting activity?”

Similarly, graduate students identified group discussions (26.3%), midterm/final projects, essays, or displays (25.9%), and applying course content to real-life scenarios (23.5%) as the most interesting activities, as shown in Figure 11. These results highlight that debate and peer evaluation are the least preferred activities among both undergraduate and graduate students.

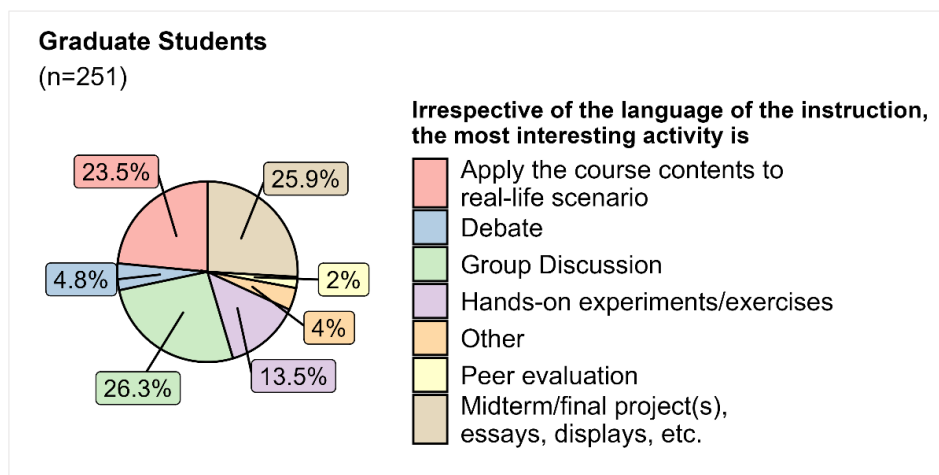


Figure 11: Graduate Students' Result of (3-a),
“Irrespective of the language of the course, to me,
what is the most interesting activity?”

We also examined whether students' activity preferences change when courses are delivered in English. Comparing Figure 10 (undergraduates' preferences regardless of the language of

instruction) with Figure 12 (preferences in EMI courses), no notable differences in activity preferences were observed for undergraduate students.

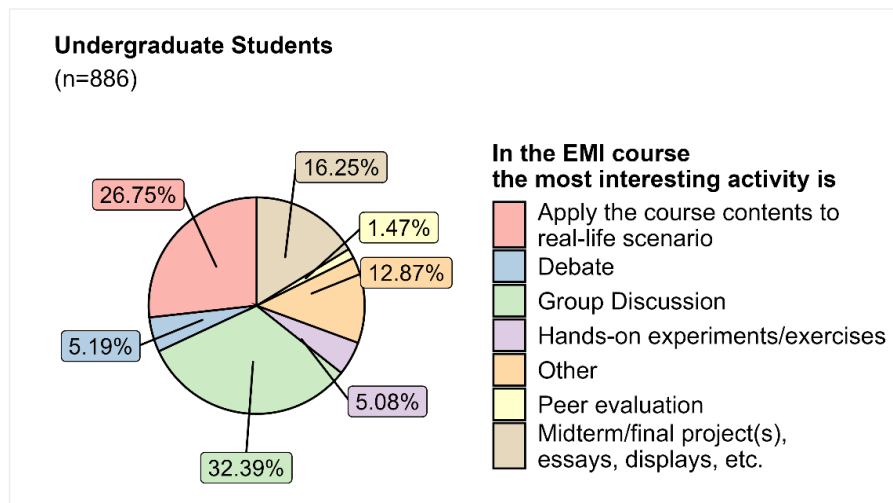


Figure 12: Undergraduate Students' Result of (3-b),
"In this course, the most interesting activity for me is?"

Similarly, we investigated the most interesting activities for graduate students and whether their preferences differ in EMI courses. The results are presented in Figure 13.

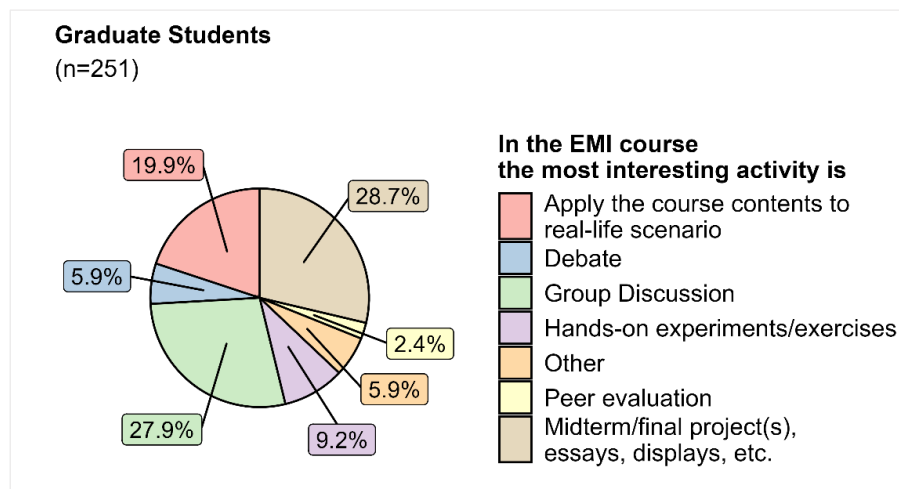


Figure 13: Graduate Students' Result of (3-b),
"In this course, the most interesting activity for me is?"

Figure 13 shows that for graduate students, group discussions remain the most favored activity. However, midterm projects, essays, and displays emerge as the second most preferred activity, differing from undergraduate preferences. This may reflect graduate students' need for tangible achievements, given their advanced theoretical knowledge.

When we compare the graduate results of (3-a) and (3-b), we find no significant differences. This indicates that the language of instruction does not influence students' activity preferences.

Results of Category (4)—Actual Experiences in EMI Courses.

Finally, we examine students' actual experiences in EMI courses. The first question in this category (4-a) addresses concerns about using English in EMI courses. As a multi-select question, the results for undergraduate students are presented in Figure 14.

Only 22% of students express concerns about reading course materials and assigned papers in English. However, understanding course content delivered in English (42%) and asking questions or participating in discussions in English (38%) are notable areas of concern. Conversely, giving presentations in English (22.5%), taking exams in English (15%), and completing assignments in English (15%) seem to pose fewer challenges for students.

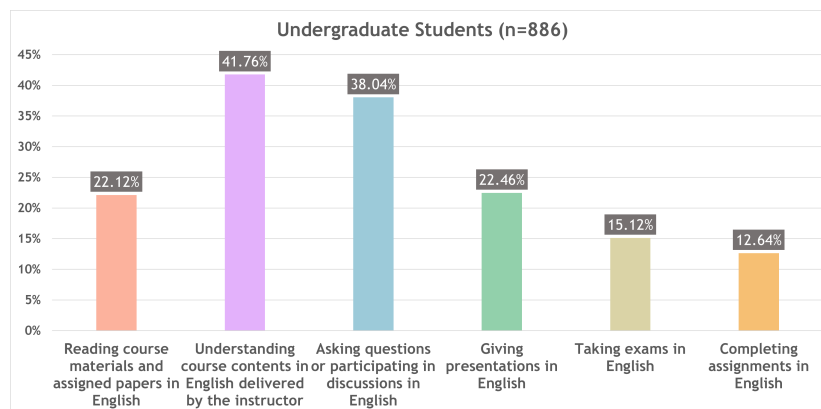


Figure 14: Undergraduate Students' Result of (4-a),
“What am I most worried about using English in this course?”

In contrast to undergraduate results, Figure 15 reveals that graduate students report lower levels of concern regarding reading course materials and assigned papers in English (11.2%), taking exams in English (6.4%), and completing assignments in English (10.8%). However, like undergraduates, graduate students express significant concerns about understanding course content delivered in English (40.6%) and asking questions or participating in discussions in English (41.4%). Notably, concerns about giving presentations in English are higher among graduate students (30.3%) compared to undergraduates. This may be attributed to the seminar- or colloquium-based nature of graduate courses, often requiring students to present in class.

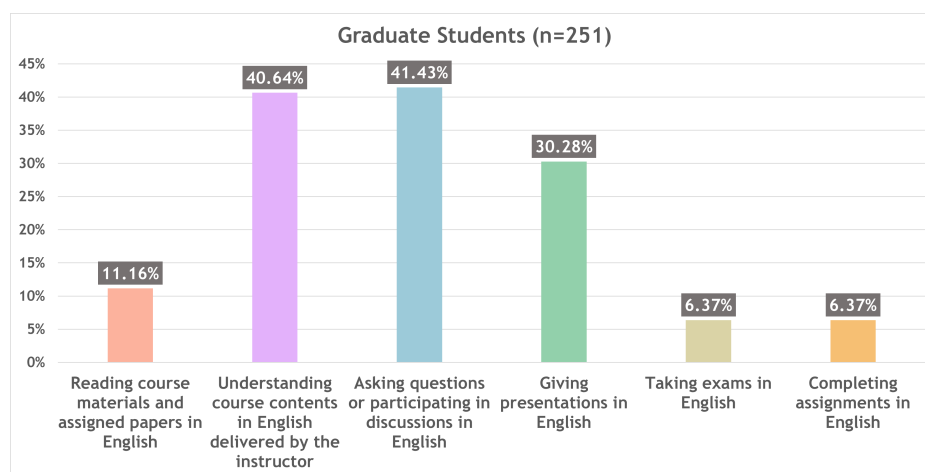


Figure 15: Graduate Students' Result of (4-a),
“What am I most worried about using English in this course?”

To better understand how students effectively comprehend course material in EMI courses, we analyzed undergraduate responses, as shown in Figure 16. The most effective method identified is using supplementary materials, accounting for 38.5% of responses. Taking notes is the second most effective method, favored by 25.6% of students. Interacting in pairs or small groups (16%) and asking questions (14.3%) also contribute to better comprehension. Conversely, discussing course content with TAs was deemed least helpful, with only 4% of students selecting this option.

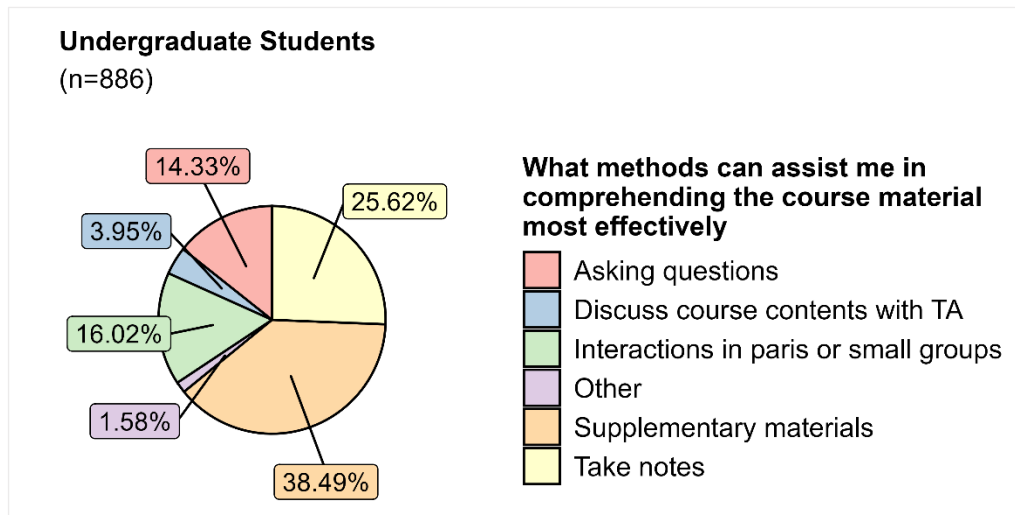


Figure 16: Undergraduate Students' Result of (4-b),
"Among all the EMI courses I took, what methods can assist me in comprehending the course materials most effectively?"

For graduate students, the most effective method for understanding course content mirrors undergraduate results, as shown in Figure 17. Supplementary materials remain the most preferred method, comprising 37.4% of responses. Other effective strategies include taking notes (21.5%), interacting in pairs or small groups (20.3%), and asking questions (16.3%). Similar to undergraduates, discussing course content with TAs is deemed least effective, with only 3.2% of graduate students selecting this option.

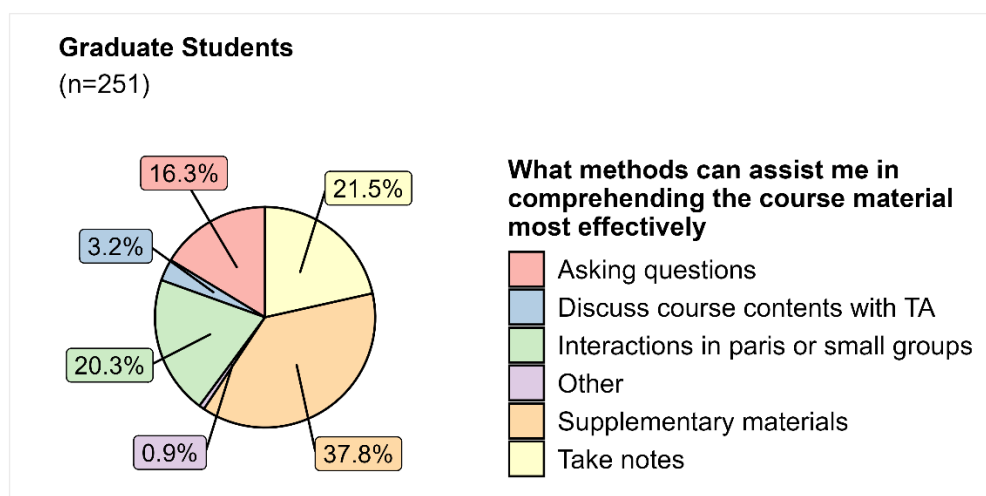


Figure 17: Graduate Students' Result of (4-b),
"Among all the EMI courses I took, what methods can assist me in comprehending the course materials most effectively?"

The final question in the questionnaire explores the types of learning support or resources students would like from their instructors. Figures 18 and 19 present the results for undergraduate and graduate students, respectively. This question allowed multiple selections.

As shown in Figure 18, nearly half of undergraduate students prefer a glossary of course terminology (44.9%) and supplementary materials for preview or review (34.7%). Furthermore, 32.6% value instructors providing relevant prior knowledge. In contrast, only 22.2% of students consider tutorials or counseling with EMI teaching assistants helpful.

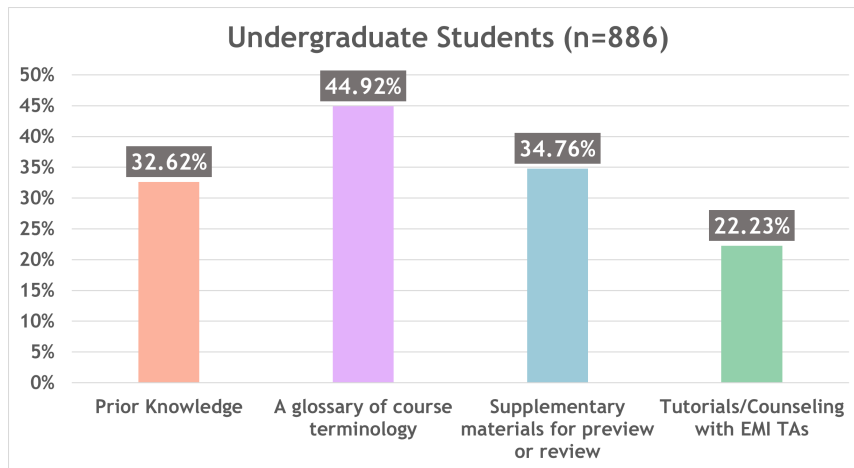


Figure 18: Undergraduate Students' Result of (4-c),
“Considering this course is mediated in English, I would appreciate it if my instructor could provide me with the following learning support or resources.”

When we examine the results for graduate students, as shown in Figure 19, nearly half (49%) identify supplementary materials as a key resource for their learning. In contrast, only 20.7% find tutorials or counseling with EMI teaching assistants helpful. Compared to undergraduates, a higher proportion of graduate students (42.6%) value the provision of prior knowledge, while fewer (29.5%) prioritize a glossary of course terminology. This difference is unsurprising, as graduate courses typically require a stronger foundation of background knowledge, and graduate students are generally more familiar with field-specific terminology from their undergraduate studies.

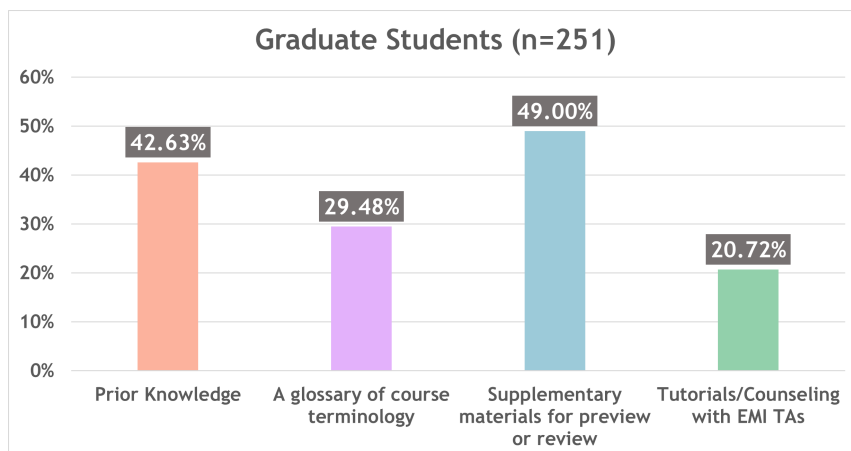


Figure 19: Graduate Students' Result of (4-c),
“Considering this course is mediated in English, I would appreciate it if my instructor could provide me with the following learning support or resources.”

Summary of Results

The key results of this questionnaire study are summarized below.

1. Most undergraduates have upper-intermediate to advanced proficiency, while most graduate students are at an intermediate level.
2. The primary motivation for both undergraduates and graduates is interest in course content or topics, regardless of the language of instruction.
3. Over half of both undergraduate and graduate students are somewhat confident in using English for EMI courses.
4. Undergraduates favor group discussions and applying course content to real-life scenarios, while graduates prefer midterm/final projects, essays, displays, and group discussions.
5. Both undergraduates and graduates are most concerned about understanding course content delivered in English and engaging in discussions or asking questions. In addition, nearly one-third of graduate students also worry about giving presentations in English.
6. Both undergraduates and graduates find the following most effective:
 - Supplementary materials
 - Taking notes
 - Asking questions
7. Undergraduates value a glossary of course terminology and supplementary materials, while graduates prioritize supplementary materials and prior knowledge.

Data Analyses & Discussions

Given that English proficiency plays a critical role in students' ability to succeed in EMI courses, we conducted a further analysis to examine whether challenges and needs differ based on proficiency levels. In this section, the results are grouped according to students' English proficiency as defined by the CEFR. Data from students who were uncertain about their proficiency level were excluded, resulting in a total of 983 valid responses. Among these, 16 students were at A2 level or below, 131 at B1 level, 486 at B2 level, and 350 at C1 level or above.

Data Analyses

The first issue we address is students' confidence in using English in EMI courses. We hypothesize that students with intermediate or lower English proficiency are less confident in EMI courses compared to those with upper-intermediate or advanced proficiency. To examine this assumption, we present the data in Figure 20.

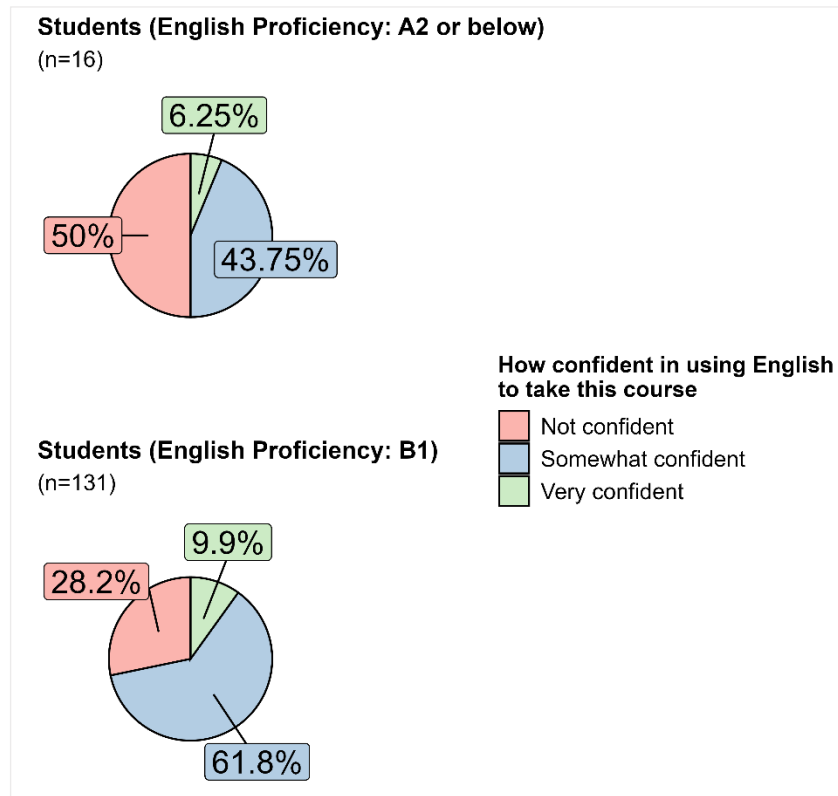


Figure 20: Pre-intermediate and Intermediate Students' Confidence in Using English to Take EMI Courses

Based on the results shown in Figure 20, approximately half of the students whose English proficiency is A2 or below are not confident at all in using English for EMI courses, while the other half are somewhat confident. The data suggest that confidence significantly increases as English proficiency improves. For students at the intermediate level (i.e., B1), nearly 62% are somewhat confident. However, around 30% of B1-level students still report lacking confidence. To enhance students' confidence in taking EMI courses, higher education institutions should consider offering training courses or EMI preparation programs to help students improve their English proficiency before enrolling in EMI courses.

Another key issue is understanding students' performance in EMI courses. To address this, question (5) in the questionnaire investigates the strategies students use to comprehend course content. We are particularly interested in whether these strategies differ between students with lower and higher English proficiency. Figure 21 presents the results of question (5), categorized by English proficiency level.

- (5) Among all the EMI courses (not English language learning courses) I took, what methods can assist me in comprehending the course materials most effectively?

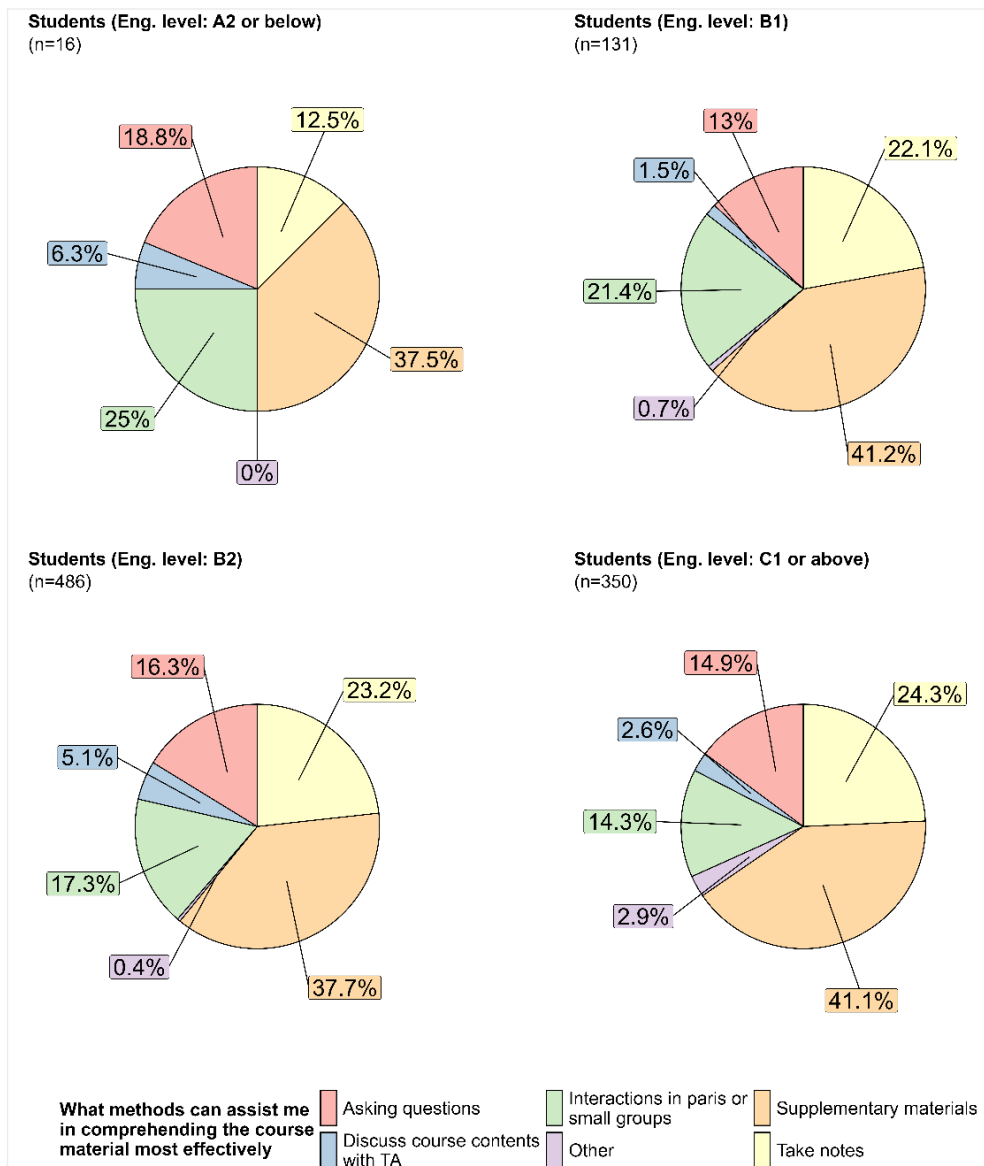


Figure 21: The Result of (5) Grouped by English Proficiency

As shown in Figure 21, the most effective method for all students, regardless of English proficiency level, is using supplementary materials. For pre-intermediate students, approximately one-fourth found pair or group interactions particularly helpful, while only about 13% considered note-taking effective. This contrasts with the results for intermediate and advanced students. It is possible that pre-intermediate students lack the proficiency needed to simultaneously listen to EMI course content and take notes, making peer discussions a more significant learning strategy for them.

In addition to examining students' strategies for coping with EMI course content, we aim to identify additional learning supports or resources that instructors could provide. This is addressed by question (6) in the study, with the results presented in Figure 22.

- (6) Considering this course is mediated in English, I would appreciate it if my instructor could provide me with the following learning supports or resources (Select all that apply).

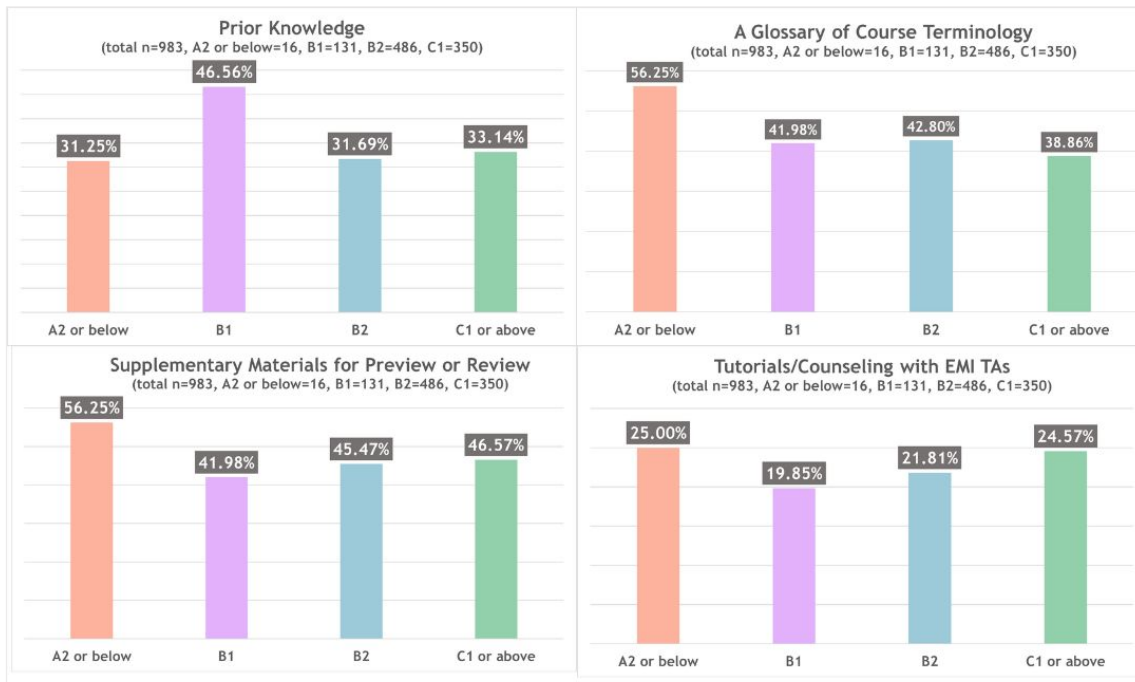


Figure 22: The Result of (6) Grouped by English Proficiency

We begin by addressing the need for prior knowledge. Approximately 30% of pre-intermediate, upper-intermediate, and advanced students reported requiring prior knowledge, with intermediate students showing an even higher need—an unexpected result.

Next, regarding the provision of a glossary of terminology, nearly 60% of pre-intermediate students found it necessary, while the need declined to around 35% among more advanced students.

Providing supplementary materials emerged as another key resource. Across all proficiency levels, at least 40% of students appreciated supplementary materials, with pre-intermediate students expressing a particularly high demand, exceeding 50%.

The final option considered was providing tutorials or counseling with EMI teaching assistants (EMI TAs). This form of support was the least favored, with only around 20% of students across all proficiency levels expressing a need for it. This finding prompts further questions about the low perceived usefulness of EMI TA support.

Two possible reasons were identified. First, in some departments, TAs are assigned limited roles, such as taking attendance or grading basic assignments, which may render them ineffective in addressing students' academic needs. Second, current TAs may lack adequate training, particularly in instructional English, as tutorials and counseling sessions are conducted in English. For instance, leading discussions in English requires specialized skills. Therefore, similar to instructors, TAs must undergo targeted training to effectively support students in EMI contexts.

Lastly, we aim to understand students' concerns about using English in EMI courses, which is addressed by question (7) in the study. This question is particularly significant, as it allows us to consider how instructors might help alleviate students' anxiety about using English in

these courses. The results of question (7), categorized by students' English proficiency, are presented in Figure 23.

(7) What am I most worried about using English in this course (Select all that apply).



Figure 23: The Result of (7) Grouped by English Proficiency

Based on the results in Figure 23, it is evident that reading course materials and assigned papers in English, as well as taking exams in English, are not significant concerns for students, regardless of their English proficiency level. These findings are unsurprising, as students are likely to have anticipated and prepared for these common requirements when opting to enroll in EMI courses.

Next, we examine the results concerning students' ability to understand course content delivered in English by instructors. It is important to clarify that this focus is on the delivery of content in English, not the content itself. Over half of pre-intermediate and intermediate students expressed concerns about this issue, with the figure only slightly declining to around 45% for upper-intermediate students—a level we still consider significant. This finding shows the critical role of instructors' instructional English proficiency and pedagogical skills in EMI teaching. On one hand, better instructional English is believed to enhance students' comprehension of course content. Thus, we recommend that institutions offer training in instructional English, such as formulaic expressions, to support instructors. On the other hand,

even instructors with advanced English skills may struggle to deliver content effectively when transitioning from teaching in their native language to teaching in English. This challenge suggests the need for improved pedagogical approaches. As Prabjandee and Nilpirom (2022, p. 424) argue, “Transforming monolingual disciplinary classes into EMI is not simply about changing the language of instruction; instead, it requires teachers to re-evaluate their existing pedagogy and change it to a learner-centered approach.” Consequently, institutions should also prioritize workshops on teaching enhancements to help instructors adapt their methodologies to the EMI context.

Next, we examine the results related to asking questions or participating in discussions in English. Surprisingly, over 50% of students with intermediate English proficiency express concerns about this—a proportion even higher than that of students with pre-intermediate proficiency (37.5%). Notably, upper-intermediate (42.1%) and advanced-level students (29%) also report similar concerns. These findings suggest that institutions should design EMI preparation programs, focusing on enhancing students’ oral communication skills.

Furthermore, when it comes to giving presentations in English, as many as 43% of pre-intermediate students express concerns about this task—a significantly higher proportion compared to intermediate or more advanced students. This outcome likely reflects the fact that presentations can be prepared and practiced in advance, whereas asking questions or participating in discussions often requires spontaneous responses. Therefore, it is crucial for students to recognize the importance of improving their English-speaking proficiency before enrolling in EMI courses.

Lastly, we note that most students are not concerned about completing assignments in English, although around 30% of pre-intermediate students express concerns. Based on this finding, we recommend that instructors offer additional support to pre-intermediate students when assigning tasks.

Discussions

In this section, we further analyze the collected data by students' English proficiency levels to identify the specific needs at each level. First, we found that as students progress from lower-intermediate to upper-intermediate English proficiency, their confidence in using English in EMI courses significantly increases. This indicates the need for adequate training to improve students’ English proficiency, providing a solid foundation for successful participation in EMI courses.

In addition, we observed that supplementary materials are the most effective method for aiding course comprehension across all proficiency levels. However, for students with a proficiency level of B1 or below, pair or small group interactions also play a particularly important role.

We furthermore explored whether instructors should offer differentiated support based on students' English proficiency levels. The results show no significant differences: students across all levels value the provision of a glossary of course terminology and supplementary materials.

Finally, we analyzed students' primary concerns about EMI courses in relation to their proficiency levels. Students at the C1 level or above expressed minimal concern about

understanding course content delivered in English. In contrast, those at the B2 level or below reported significantly greater challenges with comprehension. For intermediate and upper-intermediate students, participating in questions or discussions in English emerged as a major concern. These findings highlight the importance of enhancing both listening and speaking skills for students across different proficiency levels.

Conclusion

This paper explores students' perspectives on the challenges and needs of EMI courses, drawing on data from 1,137 Taiwanese Mandarin-speaking university students. The findings reveal students' expectations, preferred activities, and actual experiences. For most students, the primary focus of EMI courses is the course content, with the language of instruction being a secondary concern. Regardless of the language used, students favor group discussions and activities that apply course content to real-life scenarios.

However, students express concerns about understanding course content delivered in English and participating in discussions conducted in English, underscoring the importance of developing listening and speaking skills in EMI contexts. Supplementary materials and glossaries of terminology are identified as valuable resources to help address these challenges.

These quantitative findings offer valuable insights into student perspectives on EMI in Taiwan's higher education. With the EMI policy now in its third year, we recommend that future research reevaluate students' needs to determine whether adjustments are required to enhance the EMI learning environment.

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