

ENGLISH-MEDIUM INSTRUCTION (EMI) IN A CONTENT COURSE: A CASE STUDY OF STUDENTS' PERCEPTIONS, BELIEFS, STRATEGIES, AND INFLUENTIAL FACTORS

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ABSTRACT

This empirical research aimed to investigate students' perceptions, beliefs, strategies, and influential factors, such as gender roles, English proficiency levels, and English listening skills in an English-Medium Instruction (EMI) content course offered by an Applied English Department in southern Taiwan. A questionnaire was distributed to 46 students on a volunteer basis, 43 of whom completed the survey. The results showed that participants strongly suggested that the course would be better to be taught through a bilingual approach; however, they reported that their English proficiency and content knowledge improved tremendously through EMI instruction. For the gender-related issue, the results indicated that gender did not significantly impact English improvement and disciplinary learning, except for improving listening skills. Male students seem to have higher satisfaction with improving listening skills than female students. To further investigate whether the student's English proficiency (CEFR C1-C2, B2, B1, & A2) and English listening ability (excellent, good, fair, poor) for EMI were factors in the EMI approach, one-way ANOVA was conducted. An analysis of variance showed that English proficiency was not substantial, but English listening ability plays an extremely vital role in the study. This article concludes with some pedagogical implications for English practitioners as well as administrators who wish to launch EMI courses, particularly in Taiwanese EFL classrooms.

Keywords: English-medium instruction, content course, gender roles, English proficiency, English listening skills.

INTRODUCTION

Due to the accelerated growth of globalization and internationalization, having a command of English skills has become a must-have requirement for so-called "global citizens." To do this, the policy to make Taiwan a bilingual nation by 2030 was announced in early December 2018 to enhance Taiwan's competitiveness by improving citizens' English proficiency rather than their ability to pass language examinations. The new policy is in line with the 108 curricula of the Ministry of Education 12-year Curriculum for Basic Education in Taiwan. The development and implementation of the 108 curricula are intended to foster critical competencies in future generations and to increase Taiwan's economic competitiveness. One particular feature of the 108 curricula is to integrate English learning and teaching into subject learning in order to foster learners' content knowledge and English skills at the same time. The bilingual policy and 108 curricula have stirred up some debates and criticisms among educators and advocators. The supporters believe that both plans would enhance Taiwan attractiveness in the globalized world, while opponents question the current English environment as well as people's English proficiency, and criticize both policies for being too challenging for most

local citizens and school learners, not to mention that many people on the island are afraid of speaking English.

Despite the debate about top-down national English language policy, equipping students with adequate English proficiency is vital for higher education worldwide, and Taiwan is no exception. To achieve this ambitious goal, many universities have begun to launch schoolwide English-medium instruction (EMI) policies in a belief that this will make schools more internationalized, promote their prestigious status, and increase the number of student enrollments, especially attracting more international students in the current universal market, to enhance students' employability (Chien & Valcke, 2020; Yeh, 2014; Yeung, 2020).

Additionally, in response to transforming Taiwan into a bilingual nation by 2030, the researched university plans to "advance deployment" to change the university into an English-speaking university before 2028. It intends to gradually improve the English proficiency of all of the faculty members, staff, and students to build a bilingual campus and achieve the ultimate goal of all academic subjects being taught in English. The school is striving to become the first EMI university on the island, yet many have expressed doubts about the challenging objectives. Although some studies have been conducted regarding the students' experience and attitudes towards EMI courses in tertiary education in Taiwan (Chang, 2010; Huang, 2009; Yang, 2016; Yeh, 2014), none have been done in the current research site. Hence, this study aimed to serve as a pilot study to investigate the efficiency of the EMI approach for the preliminary stage of a larger EMI project.

LITERATURE REVIEW

What is EMI? The answer to this question is sometimes vague, especially in the EFL context. Some define it as instruction using 100% English; some suggest that the moderate use of the learners' first language also meets the requirement of EMI. Phuong and Nguyen (2019) stated that EMI is an innovative approach for instructors to adopt English as a medium to conduct academic subjects for their students. Marcaro (2018) defined EMI as "the use of English language to teach academic subjects other than English itself in countries or jurisdictions where the first language of the majority of the population is not English" (p. 19). In a similar vein, Dundon (2019) defined EMI as "the use of English as an instructional language in a location where neither the students nor the general population in the environment in which the school is located use English as a first language (L1)" (p. 46). According to this definition, the use of English in Taiwan would qualify as EMI. In this study, EMI refers to an approach that English is adopted as an instructional language by instructors to deliver content knowledge to their students.

Considerable research on EMI has been conducted universally; some has focused on instructors' perspectives (Arévalo, 2017; Gundsambuu, 2019); other studies have looked at translation in the EMI program (Eser & Dikilitaş, 2017), and more research has been on students' perspectives.

Yeh (2014) conducted a large-scale study to investigate Taiwan tertiary level students' experiences of and attitudes towards EMI courses which involved 476 students at six universities. The results showed that students were satisfied with and had positive attitudes toward the EMI courses. The majority of the participants in the study reported that their English proficiency or linguistics skills improved after taking the EMI courses, yet whether the EMI courses helped the learners gain content knowledge remains unclear. Madrid and Julius (2020)

inspected the profile of Spanish university students in bilingual degree programs that adopted EMI for the teaching degree in primary school education. The findings informed that the students were satisfied with the EMI degree program, particularly with improving their language skills, such as listening, reading, and vocabulary.

Chien and Valcke (2020) examined the difficulties and instructional support related to spoken interaction in an EMI course at a Belgian university. The researched university requires students' English at Level B2 to enroll in the EMI courses. The findings demonstrated that lack of contextual knowledge prohibited students from speaking up in the class and impeded their understanding of the disciplinary content. The results also indicated that learners felt constrained in their spoken interaction due to insufficient academic language in the second language. However, the study suggested helping students to build up their confidence as an urgent need when conducting EMI courses.

Research concerning gender issues for EMI courses has also been reported. Maramag-Manalastas and Batang (2018) compared the effectiveness of English-only instruction and multilingual medium instruction on students' achievement and confidence in English at an Isabela State University. The results revealed that male students from English-only and multilingual classes had higher achievement scores than female students. Yet, the confidence of the two types of classes was significantly different. Students in the multilingual class had higher scores on confidence, for they were able to express themselves better in that class than the students in the English-only class. Köksal and Tercan (2019) investigated students' perceptions of EMI and IP courses and speculated about any significant differences between female and male students in these two types of classes. The findings show that both male and female students held similar perceptions of EMI and IP courses. Ahmadi (2017) conducted a study which intended to find out how male students perceived their native language as being under threat in an EFL context, and the role of English in the EMI context. The results indicated that students acknowledged the usefulness of English; yet, EMI was not welcomed by most male students.

Given that teachers have practiced EMI in diverse educational contexts globally in recent decades, it is interesting to see how this policy is implemented in an EFL context of the researched site. Therefore, three research questions are explored in this study: 1. What skills and disciplinary learning have students improved after using the EMI approach? (Are gender roles, students' English proficiency levels, and English listening skills the factors influenced by the EMI approach?); 2.) What are the students' perceptions of and beliefs about EMI as an effective approach to personal learning? (Are gender roles, students' English proficiency levels, and English listening skills the factors of influence?); and 3.) What are the various learning strategies students use in an EMI content course? (Are gender roles, students' English proficiency levels, and English listening skills the factors of influence?)

METHODOLOGY

This research is a case study which pays particular attention to the implemented EMI approach made available to English majors. The studied course was offered for two semesters (36 weeks). The survey was distributed in the 10th week of the second semester to evaluate the overall outcome of the EMI instruction.

Participants

This study was conducted during the fall 2020 and spring 2021 semesters. It involved junior students taking an Introduction to Linguistics course from an Applied English Department in a private university in southern Taiwan. Of the 46 students, 43 were involved in this study. The classroom instruction was for 3 hours per week for a period of 18 weeks each semester. The treatment for the current study lasted for 2 semesters which were made up of a total of 36 weeks.

Instruments

In order to investigate the English major Taiwanese university students' perceptions, attitudes, and strategies related to English-medium instruction, a questionnaire was designed for the purpose of this study. The student questionnaire consisted of three sections: section one provided for the demographic information; section two had 25 items based on a 5-point summated Likert-type response, ranging in scale from 5 (*strongly agree*) to 1 (*strongly disagree*), and the items were subdivided into three specific categories: influence of EMI on English improvement and disciplinary learning (11 items) which adopted partial survey questions from Yeh (2014) with modification to suit the purpose of the current research, reactions and beliefs (7 items), learning strategies (7 items), and the last section was an open-ended question available for students to express any concerns they may have regarding the EMI course. The questionnaire showed an internal consistency coefficient of .909 (Cronbach's alpha, $n = 25$).

Procedure

The 46 recruited students were enrolled in the Introduction to Linguistics course during the fall 2020 and spring 2021 semesters. The course met 3 hours per week for a total of 36 weeks. To experiment and gain deeper insights into students' perceptions, beliefs, and strategies related to the instructional languages for this current course, English-only instruction was used in the fall 2020 semester. In the second semester, spring 2021, both English and Mandarin were adopted purposely as the instruction languages.

RESULTS AND DISCUSSION

Three research questions explored in the study are: 1. What skills and disciplinary learning have students improved after using the EMI approach? (Are gender roles, students' English proficiency levels, and English listening skills the factors influenced by the EMI approach?); 2. What are the students' perceptions of and beliefs about EMI as an effective approach to personal learning? (Are gender roles, students' English proficiency levels, and English listening skills the factors of influence?); and 3. What are the various learning strategies students use in the EMI content course? (Are gender roles, students' English proficiency levels, and English listening skills the factors of influence?). An anonymous online questionnaire was sent to the students to respond; 43 out of 46 participants completed the survey successfully. All the participants were clearly briefed on the purpose and procedure of the study. They were also informed of their rights to withdraw from the study at any time, and the consent forms were collected. Descriptive statistics are summarized and reported in the following sections.

Respondents and course profile

Table 1. Respondents and Course Profile

Feature	Profile
Gender	72% female; 28% male
English proficiency (CEFR)	2% C1-C2; 48.8% B2; 37.2% B1; 9.3% A2;
English listening ability	11.6% excellent; 39.5% fair; 48.8% good; 0% poor

As shown in Table 1, two-thirds of respondents were female students, and one-third were males. This is a normal phenomenon in most Taiwanese universities where not many male students choose to study languages as their majors. To find out participants' English proficiency levels, a Cambridge mock test was administered. The results indicate that the majority of students' English levels were between CEFR B1 (37.2%) and B2 (48.8%). It is suggested that for students to participate in EMI courses, the basic English proficiency requirement is B2 (Lawrence, *et al*, 2017). Strictly speaking, nearly half of the students in this study were not eligible for the EMI course. The result of the English listening ability in this study is a self-rated item; 39.5% of the participants thought their English listening ability was fair, and 48.8% thought theirs were good.

Language skills and disciplinary learning

To answer the first research question, 1. What skills and disciplinary learning have students improved after using the EMI approach? (Are gender roles, students' English proficiency levels, and English listening skills the factors influenced by the EMI approach?), Table 2 presents in descending order of mean scores the students' English improvement.

Table 2. English Improvement

Skills	Mean	SD
My overall English proficiency is enhanced.	3.56	.765
My listening ability is enhanced.	3.51	.883
My motivation to learn English is enhanced.	3.51	.856
My reading ability is enhanced.	3.42	.823
My writing ability is enhanced.	3.21	.773
My speaking ability is enhanced.	3.14	1.037

Students highly acknowledged that their overall English proficiency had enhanced through EMI instruction with the mean score of 3.56 ($SD = .765$) and that they had improved their listening ability as the second ($M = 3.51$, $SD = .883$). The improvement of reading ability is also reported ($M = 3.51$, $SD = .883$).

The open-ended question asked in the last section of the survey allowed students to write down any comments concerning EMI in the content course. Many stated that EMI had improved their language skills. Below are examples of direct quotes from the students.

The EMI course has improved my listening and comprehension skills. (S19)

I think it helps me a lot and increases my language ability. Even if we are not living in a foreign country, we can also experience the fun of talking with people in different languages in a foreign country. (S7)

Generally speaking, students were satisfied with the use of EMI in the content course. This finding is in line with the research of Köksal and Tercan (2019), Madrid and Julius (2020), Yeh (2014), and Yeung (2020). All have reported that students' language skills improved after engaging in the EMI course. Table 3 presents the findings regarding whether EMI had helped to enhance learners' disciplinary learning.

Table 3. Disciplinary Learning

Content learning	Mean	SD
My content knowledge is enhanced.	3.63	.846
Generally, I can understand most EMI courses.	3.30	.989
I have no difficulty orally expressing my content knowledge.	2.98	.886

Students in this study agreed that EMI had advanced their content knowledge ($M = 3.63$, $SD = .846$), the majority of them understood the EMI content ($M = 3.30$, $SD = .989$), and they had no difficulty expressing their content knowledge orally ($M = 2.98$, $SD = .886$). The findings of this study support those of Yeh (2014). In her research, students reported that EMI helped them improve their professional knowledge ($M = 3.48$, $SD = .95$).

To examine whether gender was one of the influential factors in English improvement and disciplinary learning, an independent-samples t test was computed. The results indicate that gender does not significantly impact English improvement and disciplinary learning, except for improving listening skills [$t = -1.931$, $df = 41$, $p = .060$]. Male students ($M = 3.92$, $SD = .793$) seem to have higher satisfaction for enhancing listening skills than do female students ($M = 3.35$, $SD = .877$).

To further investigate whether the students' English proficiency (CEFR C1-C2, B2, B1 & A2) and English listening ability (excellent, good, fair, poor) for EMI were factors for English improvement and disciplinary learning, one-way ANOVA was calculated. An analysis of variance showed that English proficiency was not significant, $p > .005$. Yet, the results of the students' English listening ability for EMI were highly significant. Participants reported that English listening ability greatly influences both English language skill improvement and disciplinary learning. Table 4 presents the results of statistical consequences.

Table 4 One-way ANOVA Analysis for the Variable of English Listening Ability on English Improvement and Disciplinary Learning

Items		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
1. My writing ability is enhanced.	Between groups	5.979	2	2.990	6.249	.004
	Within groups	19.137	40	.478		
	total	25.116	42			
2. My reading ability is enhanced.	Between groups	9.181	2	4.591	9.522	.000
	Within groups	19.284	40	.482		
	total	28.465	42			
3. My speaking ability is enhanced.	Between groups	14.842	2	7.421	9.790	.000
	Within groups	30.320	40	.758		
	total	45.163	42			
4. My listening ability is enhanced.	Between groups	15.894	2	7.947	18.865	.000
	Within groups	16.850	40	.421		
	total	32.744	42			
5. My motivation to learn English is enhanced.	Between groups	5.931	2	2.965	4.780	.014
	Within groups	24.813	40	.620		
	total	30.744	42			
6. Overall English proficiency is enhanced.	Between groups	10.178	2	5.089	14.109	.000
	Within groups	14.427	40	.361		
	total	24.605	42			
7. My content knowledge is enhanced.	Between groups	8.566	2	4.283	7.976	.001
	Within groups	21.480	40	.537		
	total	30.047	42			
11. Generally, I can understand most EMI courses.	Between groups	10.256	2	5.128	6.657	.003
	Within groups	30.813	40	.770		
	total	41.070	42			

Note: *SS* = sum of squares, *MS* = mean square, * $p < .05$, ** $p < .01$, *** $p < .001$

The Tukey and Bonferroni methods were adopted for this study. The results of the two methods show that significant differences occur between students who have excellent listening ability and fair listening ability. Table 5 presents an example of results of a contrast test for the variable of English listening ability (among 1 = excellent, 2 = good, 3 = fair) on English improvement and disciplinary learning, particularly for items 4 (My listening ability is enhanced) and 6 (My overall English proficiency is enhanced).

Table 5 Contrast Test for the Variable of English Listening Ability on English Improvement and Disciplinary Learning

(I) English listening (J) English listening			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Mean		
						Lower Bound	Upper Bound	
4. listening ability	Tukey HSD	1	2	1.086*	0.323	.005	0.3	1.87
			3	1.918*	0.33	.000	1.11	2.72
		2	1	-1.086*	0.323	.005	-1.87	-0.3
			3	.832*	0.212	.001	0.32	1.35
		3	1	-1.918*	0.33	.000	-2.72	-1.11
			2	-.832*	0.212	.001	-1.35	-0.32
	Bonferroni	1	2	1.086*	0.323	.005	0.28	1.89
			3	1.918*	0.33	.000	1.09	2.74
		2	1	-1.086*	0.323	.005	-1.89	-0.28
			3	.832*	0.212	.001	0.3	1.36
		3	1	-1.918*	0.33	.000	-2.74	-1.09
			2	-.832*	0.212	.001	-1.36	-0.3
6. Overall English proficiency	Tukey HSD	1	2	.886*	0.299	.014	0.16	1.61
			3	1.541*	0.306	.000	0.8	2.28
		2	1	-.886*	0.299	.014	-1.61	-0.16
			3	.655*	0.196	.005	0.18	1.13
		3	1	-1.541*	0.306	.000	-2.28	-0.8
			2	-.655*	0.196	.005	-1.13	-0.18
	Bonferroni	1	2	.886*	0.299	.015	0.14	1.63
			3	1.541*	0.306	.000	0.78	2.3
		2	1	-.886*	0.299	.015	-1.63	-0.14
			3	.655*	0.196	.005	0.17	1.15
		3	1	-1.541*	0.306	.000	-2.3	-0.78
			2	-.655*	0.196	.005	-1.15	-0.17

Note: 1. English listening ability (1 = excellent, 2 = good, 3 = fair) 2. * $p < .05$, ** $p < .01$, *** $p < .001$

The results shown in Table 5 are highly significant, meaning that students' English listening skill is a vital factor for comprehending the EMI content course. Unfortunately, there is no related research available to confirm the current study result. To conclude the findings for research question one, it can be said that the EMI approach in this study significantly enhanced learners' English linguistic abilities; particularly, the English listening skill plays an influential role in the EMI course. The EMI instruction also benefits learners' disciplinary learning.

Student reactions and beliefs about EMI

To address the second research question: What are the students' perceptions of and beliefs about EMI as an effective approach to personal learning? (Are gender roles, students' English proficiency levels, and English listening skills the factors of influence?), the results are presented in Table 6.

Table 6 Student reactions and beliefs about EMI

	<i>Mean</i>	<i>SD</i>
7. I prefer using bilingual mode in EMI courses.	3.98	1.035
6. EMI teaching helps with further studies or future work.	3.81	.880
5. The teacher intentionally used simplified English to teach EMI.	3.53	.735
2. I prefer Taiwanese teachers to teach EMI courses.	3.51	.910
4. I tend to convert English into Chinese in the EMI course.	3.49	.935
1. I prefer native English-speaking teachers to teach EMI courses.	3.35	.997
3. EMI teaching has prevented me from expressing opinions in class.	2.81	.880

Many substantial issues are revealed in Table 6. First, although in Tables 2 and 3, students reported exceedingly positive attitudes toward using EMI in the content course, in Table 6, they preferred to adopt bilingual mode in EMI courses ($M = 3.98$, $SD = 1.035$). This finding is in line with the research conducted by Eser and Dikilitaş (2017). Second, the majority of students agreed that EMI helped with their further studies and careers ($M = 3.81$, $SD = .880$). The result is confirmed by Madrid and Julius (2020) and Yeh (2014). Third, the students noticed that the instructor purposefully employed simplified English to teach EMI ($M = 3.53$, $SD = .735$). Lastly, students expressed that they preferred Taiwanese teachers who spoke the same mother tongue to teach EMI courses ($M = 3.51$, $SD = .910$) than to have the course taught by English-speaking teachers ($M = 3.35$, $SD = .997$).

In the open-ended question section, students expressed strong feelings about EMI instruction. The students' statements are presented below:

I think using EMI for the linguistic course is what we need for the future. But this time, maybe some English and Chinese are better than English-only because linguistics has many terminologies. (S 31)

The teacher used only English last semester. I didn't know what I was doing all semester. This semester, the teacher taught in English first and then used Chinese to explain again. Although it takes more time, it does make it easier for people to understand the content. Just look at my mid-term grades. This time, my mid-term grades are twice higher than last semester. (S 29)

I think the EMI course can help me a lot, but I prefer bilingual teaching in some cases. (S22)

EMI teaching is a challenge to students and teachers for courses that contain professional knowledge and vocabulary. Students must devote their time to studying the content of professional courses, and teachers must also use different teaching methods to help students understand the courses better. EMI teaching for content courses is an effective teaching method for students and teachers. (S28)

It is worth pointing out that more than half of the students in the study wrote similar comments that they agreed with EMI as a good teaching approach that would benefit their future study or work. Yet, they reported in the open-ended survey the difficulty of comprehending some linguistic jargon. Many of them strongly suggested that Chinese is needed to assist their comprehension when encountering professional vocabulary, as mentioned in the quotes above.

This finding is in line with research conducted by Phuong and Nguyen in 2019. To rephrase it, the moderate use of learners' native language is a necessary strategy for the EMI pedagogy.

To examine whether gender was one of the influential factors on student reactions and beliefs about EMI, an independent-samples *t* test was computed. The results indicate that gender does not play a substantial role in this category, except for the statement that "I prefer Taiwanese teachers to teach EMI courses" [$t = -2.300$, $df = 41$, $p = .027$]. Male students ($M = 4.00$, $SD = .739$) seem to prefer EMI courses taught by Taiwanese teachers more than do female students ($M = 3.32$, $SD = .909$).

A one-way ANOVA was conducted to investigate further whether the student reactions and beliefs for EMI were factors for English improvement and disciplinary learning. An analysis of variance showed that English proficiency was not a significant factor, $p > .005$. However, it is interesting to note that students whose English proficiency rated the lowest (CEFR A2) strongly preferred that the EMI course should be taught by native English teachers ($M = 4.50$, $SD = .707$) compared with students whose English proficiency was CEFR C1-C2 ($M = 3.25$, $SD = .707$), CEFR B2 ($M = 3.31$, $SD = .946$), and CEFR B1 ($M = 3.29$, $SD = 1.056$). This is a surprising result contradicting generally held beliefs because most people would assume that students with lower English proficiency would prefer lessons to be taught by teachers who spoke the same first language to understand the lectures better.

Another one-way ANOVA was calculated to probe into whether the students' English listening ability for EMI was a factor in students' reactions and beliefs. The analysis was highly significant for statement 1 (I prefer native English-speaking teachers to teach EMI courses, $F(2, 40) = 3.941$, $p = .027$), statement 2 (I prefer Taiwanese teachers to teach EMI courses, $F(2, 40) = 3.918$, $p = .006$), and statement 5 (The teacher intentionally used simplified English to teach EMI, $F(2, 40) = .562$, $p = .006$). In all three statements, students with excellent listening skills prefer EMI courses to be taught by native English teachers ($M = 4.40$, $SD = .894$) and Taiwanese teachers ($M = 4.60$, $SD = .548$). They also strongly agreed that the teacher had used simplified English for instruction ($M = 4.00$, $SD = .707$). Table 7 shows the detailed statistical results.

Table 7 Descriptive analysis of student reactions and beliefs

		N.	Mean	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
1. prefer native teachers	1	5	4.40	.894	3.29	5.51
	2	21	3.10	.944	2.67	3.52
	3	17	3.35	.931	2.87	3.83
	sum	43	3.35	.997	3.04	3.66
2. prefer Taiwanese teachers	1	5	4.60	.548	3.92	5.28
	2	21	3.52	.928	3.10	3.95
	3	17	3.18	.728	2.80	3.55
	sum	43	3.51	.910	3.23	3.79
5. teacher used simplified English	1	5	4.00	.707	3.12	4.88
	2	21	3.76	.700	3.44	4.08
	3	17	3.12	.600	2.81	3.43
	sum	43	3.53	.735	3.31	3.76

Note: English listening skill: 1 = excellent, 2 = good, 3 = fair

It is fascinating to note that students with excellent English listening skills preferred the EMI course to be taught by Taiwanese teachers ($M = 4.60$, $SD = .548$) as well as native English

teachers ($M = 4.40$, $SD = .894$). They had also noticed that the instructor simplified the instructional language in English ($M = 4.00$, $SD = .707$).

Regarding participants' reactions to and beliefs about EMI in this study, the findings are extremely noteworthy, meaning that they strongly positively viewed the benefits of EMI for their studies and future careers. However, when having difficulties with professional terminology in linguistics, it is suggested that offering Chinese explanations is vital to aid students' comprehension of the lectures. Content and Language Integrated Instruction (CLIL) seems to be a better option to solve this problem as CLIL scaffolds learners' language needs and professional content learning.

Learning strategies used in EMI courses

To address the last research question: What are the various learning strategies students use in an EMI content course? (Are gender roles, students' English proficiency levels, and English listening skills the factors of influence?), the detailed statistical results are shown in Table 8.

Table 8 Learning strategies used in EMI courses

	<i>Mean</i>	<i>SD</i>
2. I take notes in class.	4.16	.898
1. I need to be more concentrated in class.	3.65	1.021
5. I spend more time reviewing the text.	3.63	1.113
6. I spend more time studying.	3.53	1.120
3. I seek help from peers.	3.35	1.021
7. I set lower standards for my studies.	2.86	.833
4. I spend more time previewing the text.	2.70	1.036

Table 8 reveals that students were proactively adopting necessary strategies assisting themselves in the EMI course. The top three methods the students applied in this study was taking notes in class ($M = 4.16$, $SD = .898$) followed by being more concentrated ($M = 3.65$, $SD = 1.021$) and spending more time reviewing the text ($M = 3.63$, $SD = 1.113$). The results of this section are in accordance with Yeh's research conducted in 2014.

To examine whether gender was one of the influential factors for EMI learning strategies, an independent-samples *t* test was calculated. The results indicate that gender does not play a substantial role in this category, except for statement 6, that "I spend more time reviewing the text" [$t = 2.073$, $df = 41$, $p = .045$]. Female students ($M = 3.84$, $SD = 1.003$) review the textbook more than male students ($M = 3.08$, $SD = 1.240$).

To further investigate whether the students' English proficiency (CEFR C1-C2, B2, B1, & A2) and English listening ability (excellent, good, fair, poor) for EMI were factors for learning strategies, one-way ANOVA was conducted. An analysis of variance showed that English listening ability was not significant, $p > .005$. English proficiency was not significant except for the statement "I set lower standards for my studies," which was highly considerable $F(3,39) = 3.746$, $p = .019$. Students with lower English proficiency (CEFR A2) reported having set lower standards for themselves ($M = 3.50$, $SD = .707$).

The results presented in this section indicate that to cope with the EMI instruction in the content course, namely Introduction to Linguistics, respondents overtly adopted specific strategies,

such as taking notes and being more concentrated during the lectures. Despite that, gender, students' English proficiency levels, and English listening skills did not play active roles in strategies adopted by participants in this EMI content course.

CONCLUSIONS

This case study surveyed 43 EFL university students taking a linguistics course to investigate their learning experiences and perceptions of the EMI approach. The findings disclose that the participants were exceedingly satisfied with the EMI approach, as it helped them improve both their English language skills and their disciplinary learning. Although students held positive attitudes towards and perceptions of EMI instruction, they preferred bilingual methods over English-only instruction. One student even commented that his scores doubled when the instructor added Chinese in the second semester. Additionally, more than half of the participants suggested that the instructor should offer more Chinese explanations when introducing professional jargon. The concept of EMI instruction is sometimes misinterpreted; some support that EMI lessons should be conducted 100% in English-only, and the learners' first language is prohibited. The statement may not be accurate as suggested by Eser and Dikilitaş (2017), as translation for essential vocabulary benefits learners' survival and later success in EMI courses. According to the findings of this study, the author would like to suggest that in EFL university contexts, the better pedagogical method would be CLIL than EMI with the use of translanguaging. The CLIL approach has dual benefits that can bridge linguistic concepts and subject-specific knowledge (Yang, 2016). To make EMI courses successful, it is also recommended that more attention should be paid to effectively improving learners' English listening skills.

It should be noted that the current study is small-scale research conducted in an Applied English Department in a private university. The language policy in the department is English-only instruction; hence, the participants expected that lectures should be taught with EMI instruction despite their actual English proficiency level, which was much lower than CEFR B2. Thus, the results of this study cannot be generalized as a common phenomenon in Taiwan's higher educational contexts. Further research with a large-scale sample from various academic areas of study should be included to provide a holistic picture of students' perceptions and experiences in EMI courses.

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