TO INVESTIGATE THE BENEFITS AND CHALLENGES OF ENGLISH-MEDIUM INSTRUCTION (EMI) IN HIGHER EDUCATION IN TAIWAN

Ching-Yi Tien
I-Shou University
Taiwan
tien@isu.edu.tw

ABSTRACT

English has become prevalent in all settings due to the growth of international trading, entertainment, and leisure activities. As a result, higher education has become more globalized, and using English as a medium of instruction (EMI) is a new trend worldwide. This study is conducted to investigate the benefits and challenges that university students experience in an EMI context. Building on the theoretical and conceptual base, the research centered on the following questions: 1. What factors could potentially impact a student's academic performance in the EMI context? 2: What do students believe are the advantages of EMI instruction? 3: What challenges do students face when it comes to EMI instruction? The study involved 86 participants from a private university in southern Taiwan, with 35 students from the Department of Applied College of Language Arts and 51 from the Department of Entertainments and Managements of International College. The study found that English listening skills are crucial for students to comprehend EMI lessons and identified several benefits and drawbacks of EMI instruction.

Keywords: English-medium instruction, listening skills, speaking skills, vocabulary knowledge, accents.

INTRODUCTION

English has become prevalent in all settings due to the growth of international trading, entertainment, and leisure activities. As a result, higher education has become more globalized, and using English as a medium of instruction (EMI) is a new trend worldwide. Kachru's (1985) Three Concentric Circles Model has explicitly categorized that English native speakers are the ones in the inner circle; the outer circle consists of countries that use English as a Second Language; the expanding circle, where English is used as a foreign language. According to Ethnologue (2022), there are 1,453 million individuals who speak English. Of this number, 373 million are native speakers who use English as their first language, while 1,080 million are non-native speakers who use English as their second language. This statistical figure highlights the importance of English and leads to the urgency of learning English for people in non-English speaking countries.

In 2018, the Taiwan government made a significant announcement declaring its intention to become a bilingual nation by 2030. As a result, the Ministry of Education (MOE) has taken steps to promote English education across all sectors. In line with this objective, the MOE has proposed an I-BEST project aimed at supporting universities qualified to offer EMI instruction from 2022. The researched school is one of the institutes funded under the I-BEST program, and it is essential to assess the benefits and challenges that students perceive with EMI instruction. Examining how students are trained or cope with such academic pedagogy

is crucial. It is hoped that the results of this study will shed some light on EMI instruction and offer some practical suggestions for others considering adopting EMI instruction.

LITERATURE REVIEW

The widely used definition of English as a Medium of Instruction was proposed by Marcaro (2018). He defined EMI as "the use of the 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" (ibid, p. 19). A similar concept of such a teaching method is derived from Direct Method. The basic principle of the Direct Method is that no translation is allowed (Diller, 1978), meaning using the target language to teach either language courses or content courses. Hence, it is understood that both EMI instruction and Direct Method heavily relied on using the target language in the classroom. The term EMI in this research pertains to a teaching method wherein instructors use English as the medium of instruction to impart knowledge to their students.

Due to the promotion of EMI instruction worldwide, research on these issues was promptly spread among European and Asian countries. McKinley & Rose (2022) reviewed numerous studies reporting language-related challenges as the main barrier to implementing EMI successfully. The reviewed studies include language-related difficulties in EMI, academic language-related English support in EMI, and Disciplinary difficulties in English needs. They also explored linking ELT with EMI success and collaboration in ELT and EMI. In the final section, the researchers suggested re-positioning EAP and ESAP, situating ELT as a central part of EMI, and accounting for contextual differences. The researchers stressed that integrating ELT into EMI serves the best interests of researchers and the moral and ethical responsibilities of universities.

Kőksal & Tercan (2019) investigated students' perspectives on English Language Teaching (ELT), International Posture (IP), and EMI instruction in Turkey. A total of 58 students participated in the study, and one of the results showed that students highly agreed that the EMI courses help to improve their English listening and speaking abilities. The study suggested that EMI courses should be treated as an open door to develop learners' English language proficiency. Kim & Kim (2021) examined how students perceive feedback and experiential learning in the English-medium instruction classroom. The study was conducted at a science and technology-oriented university located in South Korea. Three hundred fifty-two participants were recruited. The results of the study suggested that EMI teachers should be more aware of learners' linguistic limitations, providing more scaffolding tools to reduce learners' language anxiety in order to help learners feel at ease under English-only instruction. In addition to the European research, some were based in Taiwan. Chang (2010) investigated EMI instruction for subject courses in tertiary education in Taiwan, looking at students' reactions, influences, and difficulties in their EMI courses. One of the results indicated that English listening proficiency level is vital for students to succeed in EMI. The researcher also suggested in the study that "students complained that they were unable to have a good comprehension of the English lectures was that some of their professors did not speak good English" (ibid, p. 75). Furthermore, Yeh (2014) explored Taiwanese students' experiences and attitudes toward English-Medium courses in tertiary education. The study involved 476 students from 25 EMI courses at six universities. The results revealed that students were satisfied with the EMI instruction; however, they reported some learning difficulties, such as content difficulty, particular terminologies, heavy learning load, instructors' accents, and learners' own insufficient English ability.

It is essential to address learners' challenges regarding EMI instruction. In a recent study by Chien and Valcke (2020) on spoken interaction in a Belgian higher education context, the research highlights students' difficulties and the need for instructional support. The research found that student's willingness to communicate in English as a second language was influenced by their English language self-efficacy, study topic, and environment. Additionally, students' academic content and attitudes toward the learning activity determined their ability and willingness to communicate in English. Soruc & Griffiths (2018) looked at students' strategies in EMI instruction. The study aimed to discover what difficulties EMI learners face and what strategies they use to deal with them. The difficulties were categized into difficulties with speaking and listening (e.g., a heavy accent of other international students), lectures in poor English, trouble with understanding the vocabulary used in the class or the terminologies, and affective/ cognitive difficulties. The study suggested that awareness of students' EMI learning difficulties should be raised, and teachers should be informed about providing more effective instructions to help students who are coping with learning tasks or materials not in their own language. Speaking difficulty seems to be one of the significant concerns in EMI instruction. Yildiz (2021) investigated the factors causing English-speaking anxiety in non-English major academics while using English as a medium of instruction in Turkey. The results were categorized into five factors, such as individual factors (e.g., English proficiency), learner factors (e.g., learner behaviors), cultural factors (e.g., cultural differences), academics' self-evaluation (e.g., academics' over-monitoring their own speech, fear of negative evaluation), and learner inadequacies (e.g., learners' lack of an acceptable level of English proficiency). The study proposed that learners enhance their English proficiency and transfer their knowledge to productive language skills to decrease English-speaking anxiety levels.

Apart from speaking challenges in EMI instruction, the problem with vocabulary seems to be one of the major issues among second language learners. A lack of vocabulary may lead to problems in listening comprehension during lectures, and some studies supported this argument (e.g., Behforouz & Ghaithi, 2022; Hanh, 2021; Hsu, 2022; Madrid & Julius, 2020). To solve the problem of insufficient vocabulary knowledge among language learners, Chou (2018) explored Taiwanese students' perceptions of active explicit vocabulary instruction in an English medium course. The study involved 56 students, and active explicit vocabulary instruction was conducted for 18 weeks. The study results revealed that students strongly agreed with the effectiveness of such vocabulary instruction and suggested that active explicit vocabulary instruction should be used in EMI courses. Aside from active vocabulary explicit instruction, students also recommended implementing a student-centered interactive vocabulary teaching approach to arouse learners' interest in learning academic vocabulary. The emergence of innovative technology has changed the current teaching and learning process, especially the convenience of Internet service and handy applications of mobile phones. Kai & Hua (2021) investigated using the Google Translate mobile application to improve indigenous learners' English language vocabulary. The study results indicated that almost all the participants achieved high scores in the post-test. Data from the interviews also revealed that all participants affirmed that such mobile phone application supported their English vocabulary learning and helped to increase their English proficiency.

Numerous studies have been conducted in Taiwan on implementing EMI instruction, but they remain limited, and specific questions are yet to be answered. This research explores the advantages and difficulties university students encounter in an EMI setting. The findings of this study can provide valuable insights into EMI in higher education, especially in classrooms with specific numbers of international students.

Research Questions

This study was conducted to investigate the benefits and challenges the university students experienced in an EMI context. Building on the theoretical and conceptual base, the researcher center on the following questions:

Question 1: What factors could potentially impact a student's academic performance in the EMI context?

Question 2: What do students believe are the advantages of EMI instruction?

Question 3: What challenges do students face when it comes to EMI instruction?

METHODOLOGY

This research investigates the implementation of the EMI approach made available to students in English majors at the College of Arts and International Entertainment Management of the International College. A mixed method was utilized. The survey was distributed in the last week of the second semester of 2022, and a follow-up online one-on-one interview was conducted two weeks later to evaluate students' perceived benefits and challenges of the EMI instruction. A total of 86 respondents were recruited from a private university in southern Taiwan from the Department of Applied College of Language Arts (N=35) and the Department of Entertainments and Managements of International College (N=51).

In order to investigate the Taiwanese university students' perceptions, attitudes, strategies, and challenges toward English-medium instruction, a questionnaire that was utilized in the author's preliminary study was adopted with some minor modifications to meet the purpose of this study. The updated student questionnaire consisted of three sections: Section one provided the demographic information, including respondents' gender, colleges, birthplace, self-rated English proficiency, and self-rated English listening proficiency. In addition, questions regarding colleges of study (College of Language Arts and International College) and birthplace were added to investigate whether there are different views between these two colleges, particularly between local Taiwanese students and international students. To distinguish the geographical difference and to avoid unnecessary confusion the participants may have, the term "birthplace" was used instead of "nationality." Section two remained the same with twenty-five item questions based on a five-point summated Likert-type response, ranging in scale from 5 (strongly agree) to 1 (strongly disagree) and one open-ended question at the end of the survey. The questionnaire showed an internal consistency coefficient of .886 (Cronbach's alpha, n= 25).

Regarding the survey implementation, this study adopted an anonymous online questionnaire designed in English. The researcher issued the URL of the online questionnaire on Moodle (the school-provided learning platform) and invited participants to respond to the survey freely. Instructions of the questionnaire on the front page explicitly informed the participants of the purpose of the research and their rights to join or drop out of this study at any time during the participation. All the participants were aware that their participation was voluntary, anonymous, and confidential; more importantly, they could decide whether to participate in this study without any fear or penalty. Two weeks later, an online interview was conducted to investigate respondents' views on the EMI instruction. Two main questions asked were: 1. What difficulties do you face in the EMI classroom? Any English problems or content knowledge problems? 2. If so, how do you deal with these difficulties? Respondents willing to participate in the interview could sign up in a different form to leave their email addresses to be added to Microsoft Teams for the online interview, and 48 respondents did

so. The one-on-one online interviews were conducted, and each interviewee lasted five to ten minutes.

RESULTS AND DISCUSSION
Background of the subjects
A total of 86 respondents were recruited from a private university in southern Taiwan from the Department of Applied College of Language Arts (N=35) and the Department of Entertainments and Managements of International College (N=51). Table 1 provide background information on the respondents.

Table 1. Participant demography

Participants	*n*	Percentage	Cumulated Percentage
Gender			
Male	33	38.40%	38.40%
Female	53	61.60%	100.00%
Colleges			
International College	51	59.30%	100.00%
Language Arts	35	40.70%	40.70%
Birthplace			
Indonesia	3	3.50%	3.50%
Japan	3	3.50%	7.00%
Hong Kong	6	7.00	14.00%
Taiwan	69	80.20%	94.20%
Thailand	1	1.20%	95.30%
Vietnam	2	2.30%	97.70%
others	2	2.30%	100.00%
English proficiency (CEFR)			
C1-C2	7	8.10%	8.10%
B2	30	34.90%	43.00%
B1	40	46.50%	89.50%
A2	9	10.50%	100.00%
English listening ability			
Excellent	7	8.10%	8.10%
Good	41	47.70	55.80%
Fair	35	40.70%	96.50%
Poor	3	3.50%	100.00%

As shown in Table 1, 33 male (38.40%) and 53 female students (61.60%) participated in the study; 51 (59.30%) were from the International College, and 35 (40.70%) were from the College of Language Arts. Both international (N=17) and local Taiwanese (N= 69) students were included in the study. Participants were asked to report their birthplace instead of their nationalities to distinguish the regional difference, such as Hong Kong and Taiwan. The statistical figure for respondents' self-reported English proficiency level and English listening proficiency were also presented. Seven (8.10%) rated themselves as highly proficient in English (C1-C2), 30 (34.90%) were at Level B2, 40 (46.50%) were at Level B1, and 9 (10.50%) were at Level A2. It is noted that the Taiwan Ministry of Education suggested that the ideal English proficiency level for participating in EMI courses is B2. However, the self-reported data in this study showed that more than half of the respondents did not consider themselves with the required English proficiency level. Regarding the English listening ability, students reported with positive satisfaction that 7 (8.10%) reported being excellent, 41 (47.70%) good, 35 (40.70%) fair, and 3 (3.50%) poor.

The Factors of Influence

To investigate the factors of influence on EMI learning, section two of the student questionnaire had twenty-five item questions subdivided into three specified categories: influence of EMI on English improvement and disciplinary learning (11 items) are grouped as SA, reactions, and beliefs (7 items) are grouped are SB, learning strategies (7 items) are grouped as SC. The statistical data was then computed via one-way ANOVA of the SPSS. The results show that gender did not influence the EMI approach, p>.005. To further investigate whether the student's English proficiency (CEFR C1-C2, CEFR B2, CEFR B1, CEFR A2) for EMI was the factor for the EMI approach, one-way ANOVA was calculated, and an analysis of variance showed that English proficiency was not significant, p>.005. Finally, to find out whether the English listening ability (excellent, good, fair, poor) for EMI was the factor, one-way ANOVA was calculated again, and the results show that English listening ability, particularly for SA (English improvement and disciplinary learning) is highly significant, $F(3,82)=9.718$, p<.001. This result seems to suggest that a higher level of English listening proficiency is an important factor for students to succeed in EMI instruction, and this argument is in line with the study by Chang (2010), Kőksal & Tercan (2019), and Tien (2021). It is clear that sitting in a class where English listening skills are poor can hinder one's ability to fully understand the lecture, leading to frustration among learners. In order to address the issue, it is recommended that the institution review its English for Academic Purposes (EAP) courses and provide additional training in academic English listening for learners. Furthermore, an English for Specific Purposes (ESP) course should be introduced as a transitional course prior to the adoption of EMI courses.

The Benefits of EMI Instruction

To explore the benefits of EMI instruction, mean scores, and standard deviation were calculated. Significant results showed that the statement "EMI teaching help with further studies or future work" (M=3.76, SD=0.853) followed by the statement "My content knowledge is enhanced" was the second highest mean (M=3.72, SD=0.777). The respondents also reported that their motivation in using English is enhanced (M=3.71, SD=0.81). The majority of the participants agreed that their language skills were improved through EMI instruction, such as reading ability (M=3.69, SD=0.756), listening ability (M=3.66, SD=0.776), overall English proficiency (M=3.56, SD=0.716), and speaking ability (M=3.64, SD=0.88). Table 2 presents the statistical results.

Table 2. Benefits of the EMI instruction

Statements	Mean	SD
6. EMI teaching help with further studies or future work.	3.76	0.853
7. My content knowledge is enhanced.	3.72	0.777
5. My English motivation is enhanced.	3.71	0.81
2. My reading ability is enhanced.	3.69	0.756
4. My listening ability is enhanced.	3.66	0.776
6. Overall English proficiency is enhanced.	3.65	0.716
3. My speaking ability is enhanced.	3.64	0.88

As presented in Table 2, it is evident that students in this study are highly positive toward the EMI instruction in their institute and assured that such teaching method could advent their future careers. The result is confirmed by Madrid & Julius (2020) and Yeh (2014). It is reasonable to expect learners to improve their linguistic skills after four years in an EMI learning environment, provided they study diligently and attend classes regularly.

The Challenges of EMI Instruction
Vocabulary Difficulties
The EMI instruction has received support from participants, but students have reported encountering challenges. Of the 86 students who were interviewed online, 48 participated and shared their concerns and experiences with EMI instruction. The most significant challenge mentioned was related to vocabulary. 70% of the students (34 out of 48) reported difficulty understanding technical terms in the textbook or lecture PowerPoint slides. This study's finding aligns with the research conducted by Soruc & Griffiths (2018). When asked the participants of this study how they dealt with this issue, 32% (15 out of 48) relied on Google Translation, while four students always used a translation app on their mobile phones. The study by Kai and Hua (2021) proved that using Google Translate or mobile applications improved students' English vocabulary learning and increased English proficiency. Another four students in this current study took notes during class, while others sought help from their peers or ignored the words they did not understand. It is worth pointing out that a Taiwanese student said, "Unlike most of the students in the International College, I graduated from a vocational high school which does not stress the importance of English courses; therefore, I only know very limited English vocabulary" (S19). From a bottom-up teaching approach point of view, vocabulary is the foundation of language or content learning. Therefore, students who lack sufficient vocabulary knowledge or technical terms will find it more challenging to succeed in EMI courses. A possible solution could be to motivate students to utilize technology, like Google Translation or mobile apps, to aid them in understanding unfamiliar words during their lessons.

Difficulties with Speaking
In this study, some respondents expressed challenges related to speaking in English. Specifically, 20% of the 48 respondents, namely Taiwanese students, mentioned being afraid of speaking in English due to difficulty in proper pronunciation and concern that their message may be misunderstood. Similarly, 22% of respondents expressed anxiety when communicating in English due to fear of being misunderstood or not understanding others. Some respondents attributed their struggles to inadequate studying. The results of speaking difficulty are confirmed by Soruc & Griffiths (2018) and Chien & Valcke (2020). Many students may hesitate to speak in English during an EMI setting due to a lack of confidence and anxiety about their pronunciation, especially if native English speakers are in the same learning atmosphere. During classroom observation, the researcher noted that fewer local students tended to participate in class discussions when more fluent international students were present. This could be attributed to the fear expressed by interviewees who shared concerns about being judged for their English pronunciation or feeling embarrassed if they mispronounced words. The study also indicates that local students are reluctant to speak English in class to avoid embarrassment. The researcher would like to propose that lecturers should skillfully invite local students to participate in class discussions or pair local students with international students to have more opportunities to interact and practice speaking in the EMI lessons.

Difficulties with Listening
This study also revealed a significant concern regarding the accents of English teachers or peers. According to nine students, they faced substantial difficulties in understanding foreign teachers' accents, particularly those who are non-native English speakers. These students emphasized that they had to rely on self-study as they could not comprehend the lecturers' pronunciations. This comment is also found in Chang's (2010) study. In international communication, accents are often encountered, particularly when English is used as a lingua

franca. However, upon hearing the concerns of certain students, the researcher began to reevaluate the role of accents in educational settings. If a teacher's accent creates difficulties for students in understanding, then the onus is on the teacher to work on improving their English pronunciation. Although attaining native-like fluency may be difficult due to the influence of one's first language, it is still the teacher's responsibility to strive toward clearer communication.

CONCLUSIONS

This study aims to investigate the benefits and challenges university students experience in a higher education EMI context in Taiwan. Building on the theoretical and conceptual base, the research center on the following questions: 1. What factors could potentially impact a student's academic performance in the EMI context? 2: What do students believe are the advantages of EMI instruction? 3: What challenges do students face when it comes to EMI instruction? Although participants are optimistic about the EMI instruction, the findings show that English listening ability significantly affects students' understanding of the lecture. Hence, it is suggested that more English listening skill training should be conducted in the EAP courses, and students should take an ESP course before taking EMI lessons. The study also indicates that local students are reluctant to speak English in class to avoid embarrassment. The researcher would like to propose that lecturers should skillfully invite local students to participate in class discussions or pair local students with international students to have more opportunities to interact and practice speaking in the EMI lessons. Regarding the problem of vocabulary knowledge, one of the solutions may be to encourage students to use technology, such as Google Translation or mobile applications, when encountering unknown words that affect their understanding of the lesson. Lastly, the issue concerning teachers' accents should be considered as it affects learners' comprehension of the lecture.

ACKNOWLEDGEMENTS

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