Improving Effectiveness of English Medium Instruction Economics Classes: Students' Perceptions in China

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***Abstract*—English Medium Instruction (EMI) is widely implemented in Business English (BE) programs in higher education in China to help students improve English proficiency and master subject matter. Positive impact of EMI on language and content learning has been reported, but using English as the Medium of Instruction (MOI) has also given rise to a number of concerns, such as the loss of subject content and inadequate integration of content and language. To address these concerns, the present study explores the impact of EMI on students' learning by investigating their perceptions and learning experience of Economics, an EMI core course in the BE program. A questionnaire survey was conducted among 180 BE students to evaluate the pedagogy and teaching quality of the course, revealing improvement areas pertaining to instructional practices and teaching methodology. Based on the findings, the study yields pedagogical implications to improve the quality of EMI and students' capacity to learn disciplinary content in another language.**

***Keywords*—English Medium Instruction (EMI), Business English (BE), economics**

I. Introduction

A high level of English proficiency and a basic command of business knowledge and skills are core competencies Business English (BE) students at tertiary level in China should develop. To achieve both ends, English Medium Instruction (EMI) has been widely implemented and promoted in the BE context for its dual commitment to language development and course content delivery.

Though researches in other settings reveal that subject content taught through the medium of English brings benefits and challenges alike, EMI in the BE context has not received much attention, as the program is still in its adolescence in higher education in China. Despite the positive effects, EMI still remains controversial as proof remains inconclusive. Students may or may not exhibit improvement in language competence, or they may experience more difficulties in learning disciplinary content. Therefore, further researches need to be conducted, and effective teaching methods should be adopted to deal with the challenges.

The present study helps to address these concerns by evaluating the effectiveness of EMI in the BE program and offering recommendations for pedagogical development. Drawing on data from 180 BE students in the subject of Economics through questionnaires, students' attitudes, learning experiences and difficulties are explored. In this paper, an overview of researches on EMI in higher education at home and abroad will be provided, then the study design presented and findings reported. Pedagogical practices to improve the quality of EMI will also be discussed.

II. Literature Review

EMI is a relatively new and burgeoning field of academic endeavor, yet few attempts have been made to define it. Definitions remain scant and fragmentary, and EMI is used interchangeably with Content-Based Instruction (CBI), Content and Language Integrated Learning (CLIL), and immersion education. The first established and the most comprehensive definition was given by Macaro 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" [1] (p. 20).

Though the above definition makes no reference to improving English competence of learners, the beneficial impact of EMI on language proficiency cannot be ignored. EMI creates an immersion environment in an English-as-a-Foreign-Language (EFL) context, which is conducive to developing better English proficiency [2]. Previous studies also indicate that EMI has led to an improvement in students' overall English proficiency [3, 4], in particular listening comprehension [5, 6]. However, findings are somewhat inconclusive, as other studies show that students have demonstrated no significant increase in language proficiency [7, 8].

The definition also suggests a greater focus on content learning, yet there is insufficient evidence that EMI is or is not having a detrimental impact on students' learning of academic subjects [1] (p. 181). Results remain

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inconsistent; some researchers report that the use of EMI does not lower academic achievement as no difference is found in EMI students' learning outcomes compared with non-EMI learners [9–11], while other studies suggest EMI may "hinder students' acquisition of the subject matter being taught" [3] as students have more difficulties in content learning. Students also participate less actively in the classroom and are more reluctant to ask and answer questions in class [12].

Despite the conflicting results, it is still too early to discontinue with EMI because a review of EMI in the context of higher education reveals a dearth of research on the impact of EMI on improving students' English proficiency and content learning [13]. Moreover, learning outcomes depend to a great extent on teaching methodologies, but researches in this aspect are not sufficient as well. Empirical studies on the implementation and development of EMI in BE programs are particularly lacking, as they are mostly clustered in fields of engineering [2] and accounting [9, 11, 14]. Similarly, EMI studies in China concentrate heavily on medicine [15], while a few studies explore effective EMI methods for courses such as International Marketing [16] and tourism [17].

Even though recent years have witnessed a sharp rise in the implementation of EMI in BE courses in China, empirical researches in this area remain scarce. Therefore, the current study addresses this deficiency by examining the effects of EMI and proposes teaching methods and practices to improve its effectiveness.

III. Methodology

The present study aims to identify the strengths and limitations of English-medium teaching and learning by investigating students' perceptions of the EMI course of Economics in the BE program at South China Business College, Guangdong University of Foreign Studies (SCBC). Based on a diagnosis of students' learning attitudes, motivations and experience, suggestions for useful teaching methods are hoped to be put forward to increase effectiveness of EMI.

The following research questions are formulated:

First, what are identified as the strengths and drawbacks of the EMI Economics classes?

Second, what measures are necessary to improve EMI in a disciplinary context?

Economics is chosen as the subject under study because it is a core compulsory course for BE students. By learning the basic concepts and principles of Economics, students could acquire a basic understanding of the workings of the economy and develop the economic way of thinking, which results in efficient utilization of resources and sound business decisions. Subject content taught in English can also help improve students' language competence. The course takes 32 teaching hours and lasts 16 weeks in a term. The lecturer has over ten years' experience in teaching the subject in English, and possesses a high level of interest in teaching pedagogy.

Participants in this study are 180 second-year BE students in SCBC. At the end of the term, students completed an anonymous questionnaire to evaluate their experience. The questionnaire contains 21 items, eliciting students' perceptions of EMI Economics in terms of their attitudes, motivations, learning strategies and experiences, difficulties and challenges. Students were also asked to rate the usefulness of the course, the content, teaching methods, and their satisfaction levels. The last open-ended question asks students to identify areas for improvement and provide additional comments. Reliability analysis was computed to validate the reliability of the questionnaire. The total Cronbach's alpha is 0.885, indicating high reliability.

IV. Results

A total of 180 valid questionnaires were gathered. All participants are second-year BE students, and 92% are in the 20–21 age group with an average age of 20.4. A majority of respondents are female due to the fact that language programs are more popular with female students.

In terms of motivation, 60% of students express a high level of interest in learning Economics, and 83.3% consider it a very useful subject. Only a negligible number of students think the subject uninteresting and useless. Students take the course mainly to increase business knowledge (82.2%), develop the economic way of thinking (76.1%), better future career prospects (58.3%) and improve language proficiency (45.6%).

However, as many as 90.6% of participants consider Economics highly difficult, and up to 64% report constant feelings of anxiety during the learning process. This is probably because most language majors normally do not excel in mathematical ability and logical thinking. As seen in Table I, students are not optimistic about lecture comprehension either; only a third feel their English is sufficient for understanding most of the lectures. When asked their preferred language of instruction, students' opinions are almost equally divided over English, Chinese and bilingual teaching. However, more than half favor Chinese as their language of communication in class, as their limited oral English competence prevent them from expressing ideas freely and satisfactorily.

Participants also identify a number of obstacles and challenges in their study, including (1) subject-specific terms and concepts (75.6%); (2) subject-specific principles and laws (68.9%); (3) comprehension problems due to English used as the medium of instruction (MOI) (51.7%); (4) difficulties in memorizing and retaining disciplinary knowledge (46.1%); (5) superficial learning resulted from learning in English (33%).

Table II shows that students utilize a number of learning strategies to cope with the difficulties, among which the most frequently used are highlighting and note-taking, discussion with classmates, rereading, summarizing and mind maps. Results also show that a very small number of students adopt higher-level strategies such as self-evaluation and reflection to monitor their learning processes and read related English books and materials after class to expand their horizon.

TABLE I. STUDENTS' DEMOGRAPHICS AND ATTITUDES TOWARDS EMI

		Number of students	Percentage
Gender	Male	32	18%
	Female	148	82%
Class year	Sophomore	180	100%
Lecture comprehension	Over 80%	66	36.7%
	50%–80%	90	50%
	Less than 50%	24	13.3%
Preferred Language of instruction	English	62	34.4%
	Chinese	50	27.8%
	Bilingual	68	37.8%
Preferred Language of communication	English	31	17.2%
	Chinese	95	52.8%
	Not sure	54	30%

TABLE II. LEARNING STRATEGIES ADOPTED BY STUDENTS

Learning strategies	Number of students	Percentage
Highlighting and note-taking	138	76.7%
Discussion with classmates	114	63.3%
Rereading	111	61.7%
Summarizing	107	59.4%
Mind maps	87	48.6%
Reading relevant materials	22	12.2%
Self-evaluation and reflection	16	8.9%

In class, participants consider the following teaching and assessing methods quite useful, including providing classroom recordings and extracurricular readings, assigning problem-solving and essay-writing, and administering quizzes after each chapter. They suggest that the class should be made more interesting (58%) and more interactive (32.8%), and the teacher should provide more opportunities for language practicing (30%) and organize more classroom activities (24.4%).

On the whole, students report a relatively high level of satisfaction with the course, scoring an average of 3.9 out of a five-point Likert scale. Table III shows that EMI has exerted a more positive impact on students' listening and reading skills than on speaking and writing, which is confirmed by paired t-test in Table IV. This happens probably because of a large quantity of teacher and textbook input. Compared with progress in English proficiency, participants respond more favorably to improvement in business knowledge and skills, as it is noticed in Table V. They also exhibit a greater increase in interest in learning business subjects than in learning English after the completion of the course.

TABLE III. EMI'S IMPACT ON STUDENTS' ENGLISH LANGUAGE SKILLS

Language skills	Mean	Standard Deviation
Listening	3.05	0.95
Speaking	3.02	0.86
Reading	2.67	0.78
Writing	2.7	0.82

TABLE IV. PAIRED DIFFERENCES IN LANGUAGE SKILLS

Pair	t	p value
Listening-Speaking	7.098	0.000***
Listening-Writing	6.544	0.000***
Reading-Speaking	−6.726	0.000***
Reading-Writing	6.186	0.000***
Listening-Reading	0.532	0.596
Speaking-Writing	−1.349	0.181

TABLE V. EMI'S IMPACT ON BUSINESS KNOWLEDGE AND SKILLS

Business knowledge and skills	Mean	Standard Deviation
Cognitive ability	3.22`	0.87
Ways of thinking	3.2	0.88
Business knowledge	3.11	0.91
Decision-making capability	3.1	0.94

To sum up, students have made satisfactory progress in both language competence and subject content through EMI, but problems still exist in its implementation. Besides the challenges posed by the difficult nature of Economics itself, an L2 used as the MOI causes comprehension problems, constant fallback to L1, superficial learning, and a teacher-centered classroom.

V. SUGGESTIONS

EMI faces many challenges that need to be addressed, and the findings above prompt the necessity to develop an effective teaching pedagogy. Teachers should take greater care to help students overcome the hurdles caused by the presence of an L2. The following measures are proposed to benefit students from further improvement in both language development and subject content mastery.

Firstly, provide additional language support. The study findings suggest that limitations in language ability have adverse effects on content learning, and the specific terminology poses a big challenge to students. Therefore, teachers should support student's learning to ease the pressure of acquiring disciplinary literacy in English. For example, a glossary of terms can be offered before class to familiarize students with the subject terminology, and multimedia resources can also be provided to increase students' exposure to relevant content, leading to better comprehension of the course content. In class, lecturers can make subject content more comprehensible through paraphrasing, exemplification, analogies, and even brief switches to L1. Delivering content through English and expecting students to pick up the language naturally do not suffice, teachers should purposefully incorporate language teaching into EMI courses. Strategies include occasionally shifting attention to language features, providing language practice on subject topics, developing language and content integrated tasks, and pushing students to produce output in English. In this way students can build up ESP vocabulary and become fully socialized with the academic register.

Secondly, create an interactive learning environment. EMI lectures are normally characterized by large quantities of teacher input, so less language production is required from students. However, lectures become more effective if learners are encouraged to check their understanding by asking questions of what the teacher is saying or ask for clarification and repetition [18]. Therefore, instructors are suggested to stop and ask for signals of confirmation to ensure comprehension. Besides this, they could also adopt a more communicative approach and create more opportunities to engage students in interactive activities, such as discussions, debates, teamwork and pair work tasks, presentations,

and even games. For example, students can discuss or even debate whether GDP is a good measure of well-being. They can also play games such as prisoner's dilemma and pig's payoffs to better understand game theory and Nash equilibrium. Moreover, the flipped classroom has great potential to foster interactive and effective learning activities for all learners by incorporating peer instruction and discussion [19]. Online learning communities can also be established to promote student involvement and invite the expression of sophisticated thoughts and reflections. By fostering an interactive and a collaborative atmosphere, a more student-centered pedagogy can be developed.

Thirdly, encourage students to use effective learning strategies. As students are directing their learning effort to two disciplines, it is imperative they do so to reap more efficient and fruitful outcomes. However, techniques frequently used by students, such as summaries, mental imagery, rereading and highlighting are of low effectiveness for long-term learning [20]. Therefore, it is up to teachers to utilize highly effective teaching techniques on which learners' strategic behavior depends. Instead of simply imparting knowledge, teachers should allow students to build up an understanding of the subject topic by using their own reasoning abilities while they tackle problems. They could also create opportunities for students to actively retrieve information from memory by using practice tests [21]. Some class time should be allocated for review, and students also need help in making plans to review content. Furthermore, students need to develop high levels of self-questioning about their learning process and self-evaluation about their progress [1] (p. 170). This cannot be achieved unless teachers constantly guide them to do so. By taking a more active part in subject content and language learning, students can further benefit their learning and achievement.

Fourthly, diversify the assessment methods. As students usually develop skills that match the assessment they are measured by [11], teachers should adopt a variety of assessment methods to ensure that students meet the teaching objective. Acquisition and understanding of content knowledge is not enough, students should also be able to link theories with reality, make better decisions, and develop the economic way of thinking. Therefore, assessment should be more formative instead of summative. The conventional assessment methods, such as students' participation in class, coursework collected throughout the term, and written exams, should not simply serve as a check on whether students have mastered content knowledge and internalized learning. Instead, they should be treated as opportunities to promote high-level cognitive and metacognitive abilities. Instructors can also design thought-provoking projects, assign students to solve problems in business contexts and write essays on the application of theories in real settings, to stimulate their interest in exploring their thinking and continue their study outside class.

VI. Conclusion

The present study evaluates students' learning experience of EMI Economics in the BE program, identifying strengths and limitations of the teaching method. Results show that students have scored progress in language competence and business knowledge and skills, but an L2 used as the MOI poses obstacles to content learning and raises a number of concerns. Therefore, improvements in current teaching pedagogy should be made to address these concerns and enhance the effectiveness of EMI. It is proposed that teachers should offer language support, create an interactive learning environment, encourage students to adopt useful learning strategies and diversify the assessment methods to produce better language and content learning outcomes and help students thrive in an EMI context.

Conflict of Interest

The authors declare no conflict of interest.

Author Contributions

Xuemin Peng conducted the research, analyzed the data and wrote the paper; Prof. Guihang Guo offered insightful suggestions and revised the paper. All authors approved the final version.

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