

English as a Medium of Instruction in non-English Subject: Exploring the Students' Language Proficiency

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ABSTRACT

In facing the current era of globalization, it is necessary to implement an application that supports students to improve their English proficiency. The research aims to investigate the implementation of English as a Medium of Instruction (EMI) in non-English subjects and students' language proficiency during joining EMI-based classes. The researchers used the descriptive qualitative case study method. The subject of the research was 17 students at Maahad Tahfiz Al-Qur'an Darul Falah Selangor, Malaysia. The instruments were field observation, interviews, questionnaires. The research highlighted the dual role of EMI in improving English language proficiency while facilitating content mastery, despite challenges such as code-switching and students' varying levels of self-confidence. EMI improved language skills: its effectiveness depends on strategies tailored to support students' diverse needs. These insights contribute to optimizing EMI practices and advancing education policies that align with global academic demands. The integration of language and subject knowledge through EMI prepares students for academic success and equips them with the linguistic and cognitive skills. The recommendation is further researching the other scope of EMI is needed to explore the long-term impact of EMI on students' academic performance and language proficiency, particularly in diverse educational contexts to serve as a valuable tool for promoting inclusive and effective educational environment.

Keywords: English as a medium of instruction; language proficiency; non-English subject

INTRODUCTION

Innovative approaches are a necessity in educational processes, one of which is in teaching foreign languages. One such innovative approach is English as a Medium of Instruction (hereafter EMI), which is described as the use of English language for teaching academic subjects in communities where the majority of the population's first language is not English (Dearden, 2016). It is also known as a general term for academic subjects taught through English as it does not refer directly to the goal of improving students' English (Briggs et al., 2018). The EMI approach primarily focuses on subject matter in English, meaning that the language is used as a tool to convey subject content, or the consequence of subject learning. In a broader point of view, EMI is distinguished from 'Content and Language Integrated Learning' in not having language learning as a goal in itself. By containing the aim of

increasing international mobility and academic cooperation (Kyeyune, 2003), EMI is becoming increasingly relevant in the current era of globalization, where the demand for cross-cultural communication skills is getting bigger.

Owing to the strong influence of globalization and internationalization, the proliferation of EMI programs in higher education institutions has experienced a significant increase since 2012 (Rose et al., 2019). English-medium instruction has garnered significant attention in higher education due to its potential impact on language proficiency development and content knowledge acquisition, particularly in the field of philosophy education. EMI involves using English as the primary language of instruction in academic settings, presenting both challenges and opportunities for students and educators (Macaro et al., 2017). As universities worldwide increasingly adopt EMI, understanding its implications on language proficiency and content learning becomes imperative.

The phenomenon of EMI has rapidly expanded in higher education, reflecting a global shift towards English as a lingua franca in academic contexts (Macaro et al., 2017). While EMI offers the advantage of enhancing students' English language skills, it also poses challenges related to language proficiency levels and instructional quality. The implementation of EMI policies without adequate support systems and consideration of instructors' and students' language competencies has raised concerns about its effectiveness. With a variety of goals and details of practice, EMI has become a prevalent global educational practice. Likewise, research related to EMI is mushrooming in the academic field of Education.

The literature on EMI covers a wide range of research areas. Previous studies have explored various aspects of EMI, including its impact on students' English proficiency, academic achievement, and socio-cultural development. Research has also highlighted the importance of prior English proficiency in determining the effectiveness of EMI in improving students' language skills and content knowledge (Yuksel et al., 2023). Although previous research concentrated on conceptual examinations such as language policies and their implementation in different contexts (e.g., Evans, 2000; Kırkgöz, 2009), as well as implementation strategies and techniques, recent research has shifted towards exploring students' and teachers' beliefs, perceptions and attitudes towards EMI (Briggs et al., 2018).

Several studies have investigated the influence of individual differences such as self-efficacy, self-concept, thought patterns, motivation on academic success in EMI, and anxiety. Some examples of these articles are research on the implementation of EMI in the subjects of mathematics and science (Ismail et al., 2011; Fadhili et al., 2009), chemistry (Firmayanto et al., 2020), physics (Syakira, 2020), management (Li, 2020), and IT (Alhamami, 2021; Lau & Yuen, 2011).

English as a Medium of Instruction (EMI) has garnered significant attention as a pedagogical approach to delivering academic content in English, particularly in regions where English is not the first language. EMI aims to enhance students' English proficiency while facilitating content knowledge acquisition, often within the framework of globalization and internationalization of education. This review synthesizes key studies exploring the effectiveness of EMI in various academic disciplines, highlighting its benefits, challenges, and implications for future research. Ismail et al. (2011) investigated students' inclinations toward EMI in the teaching of science and mathematics. This study, involving 291 students from the Universiti Kebangsaan Malaysia, revealed that students from the Faculty of Science and Technology showed a stronger preference for EMI than those from the Faculty of Education. Factors such as linguistic background and race influenced students' inclinations, while gender did not. The study underscores a critical gap: the need to evaluate the relationship between students' preference for a language medium and their academic performance, proposing future research to connect language mastery with educational outcomes. Similarly, Lau and Yuen (2011) examined the impact of EMI on computer programming education in Hong Kong

secondary schools. Their findings highlighted that academic ability was the primary determinant of success in programming, though students from Chinese-medium schools outperformed their English-medium counterparts in specific knowledge domains like procedural and contextual understanding. This study emphasizes the nuanced role of EMI in influencing subject-specific learning outcomes and points to the complex interplay between language proficiency and academic achievement.

The experiences and challenges faced by educators in EMI settings are well-documented in the work of Mohamad Fadhili et al. (2009). Their study, which surveyed 26 science and mathematics teachers in Malaysia, found that while teachers supported the EMI policy, they faced obstacles in explaining complex concepts due to language barriers. The research highlighted the importance of specialized training programs to enhance teachers' proficiency in subject-specific English, demonstrating the need for institutional support to ensure successful EMI implementation. Meanwhile, Syakira (2020) explored students' perceptions of EMI in a Physics International Class Program at Makassar State University. Using qualitative methods, she identified that students appreciated EMI for its dual role in improving their English skills and delivering subject content. However, challenges such as limited vocabulary for specialized terms were noted. The study emphasized the necessity of refining EMI program design to optimize learning outcomes, particularly in language-intensive disciplines.

EMI differs from Content and Language Integrated Learning (CLIL) in its approach, focusing on subject mastery rather than explicit language instruction (Carrió-Pastor & Bellés-Fortuño, 2020). Collaborative classroom interactions within EMI environments foster student motivation and align with Vygotsky's sociocultural theory, which posits that knowledge is constructed through social and individual processes (John-Steiner & Mahn, 1996). These interactions enable students to enhance their language skills through meaningful communication with peers and instructors. Blaj-Ward (2017) further underscores the importance of providing structured language support through English for Academic Purposes (EAP) courses, conversational practice, and extracurricular activities. A holistic approach, integrating formal and informal learning opportunities, ensures continuous language development while aligning with students' academic needs.

Despite its advantages, EMI poses challenges in balancing language proficiency with content knowledge. Research highlights the need for tailored language support that addresses specific skill gaps in writing, speaking, and reading (Delalić, 2020). In addition, standardized language assessments like TOEIC can serve as benchmarks for evaluating students' readiness for EMI programs.

Future research should focus on longitudinal studies to examine how students' language skills and content knowledge evolve over time in EMI settings. Such studies would address the gaps identified by Ismail et al. (2011) and Lau & Yuen (2011), providing insights into the long-term impacts of EMI on academic success and career readiness. The reviewed studies collectively highlight the potential of EMI as an innovative educational approach that integrates language learning with subject-specific content delivery. While EMI enhances students' English proficiency and prepares them for globalized academic and professional environments, its effectiveness depends on addressing challenges such as language barriers, teacher preparedness, and program design. A nuanced understanding of EMI's impacts, coupled with targeted support strategies, will ensure its success in fostering academic excellence and linguistic competence.

However, there is still limited research about the implementation of EMI in non-English learning programs. Therefore, this study aims to fill this knowledge gap by exploring the role of EMI in language learning and content understanding in non-English subjects by addressing two main aspects; how is the implementation of EMI in non-English subjects? and how is the

students' class language proficiency situation during joining the EMI-based class? This research is essential for several reasons. Firstly, it will contribute to the existing literature by providing insights into the specific impact of EMI on language proficiency and content knowledge acquisition in non-English subjects. Secondly, understanding the relationship between EMI, language development, and academic achievement can inform educators and policymakers on effective strategies for implementing EMI in non-English subjects. Lastly, by elucidating the role of EMI in enhancing students' linguistic and cognitive skills, this research can pave the way for optimizing teaching practices and curriculum design in non-English subjects.

From the explanation above, language proficiency in the context of EMI refers to the improvement of students' English skills to be able to learn the material and actively participate in the learning process that uses English as the medium. Some relevant language proficiency benchmarks in this context are the ability to listen, speak, read, and write in English by including mastery of academic/technical vocabulary, the ability to communicate and argue critically, and understanding academic content.

This language skills development can not only be achieved through formal language classes, but also involves students' informal experiences outside the classroom such as extracurricular activities, group discussions, and daily language implementation. In addition, continuous feedback from lecturers and peers is essential to meaningfully develop students' language skills. By integrating formal and non-formal approaches and providing targeted feedback, it is hoped that students' language proficiency in attending EMI courses can continue to improve meaningfully to be able to maximize the achievement of learning outcomes. Therefore, language professional development is one of the most critical factors of student success in study programs that implement EMI.

METHODOLOGY

This study employs a descriptive qualitative case study design to gain an in-depth understanding of the implementation of English as a Medium of Instruction (EMI) and its impact on students' language proficiency and content knowledge. A case study is a research approach focused on providing a detailed analysis of a particular program, event, activity, or process within a bounded time and environment (Vaismoradi et al., 2013). This method is particularly suitable for exploring complex phenomena in their natural context, offering rich insights into the current state of the subject under investigation.

The research was conducted at Maahad Tahfiz Al-Qur'an Darul Falah Selangor, located in Sungai Besar, Selangor Province, Malaysia. The study was carried out from August 26, 2024, to September 15, 2024. EMI is implemented in the teaching of Akhlak (Islamic morals), making this class program relevant and adequate for the study's objectives. The participants consisted of 17 students enrolled in the program.

Data were collected through a combination of observations and semi-structured interviews, ensuring a comprehensive exploration of the participants' experiences and perspectives. These methods are foundational in qualitative research, allowing for the collection of rich and detailed data (Doody & Noonan, 2013). Observations were conducted to capture students' behaviors and interactions during EMI classes, offering real-time insights into the teaching-learning process and the application of English in content delivery. Semi-structured interviews were employed to provide flexibility in exploring students' experiences, attitudes toward EMI, and perceptions of how language proficiency influences their learning of Akhlak. This method allowed for the inclusion of follow-up questions based on participants' responses, enabling the collection of nuanced data. Additional data were gathered through the

review of students' worksheets and assessment results, including both formative and summative evaluations. These documents provided insights into students' academic performance and how it correlated with their responses in the interviews.

The data were analyzed using thematic analysis and content analysis, two complementary qualitative methods that facilitate a rigorous examination of participants' experiences and the instructional context. Thematic analysis involves identifying, analyzing, and reporting patterns or themes within the data (Mandiri et al., 2022). This method was applied to the observation notes and interview transcripts, allowing the researchers to uncover key themes related to students' language proficiency, their challenges, and the impact of EMI on content knowledge acquisition. Meanwhile, content analysis was used to systematically organize and analyze information from students' worksheets and assessments. This approach enabled the identification of trends and patterns in students' academic performance, aligning these findings with themes derived from the interviews and observations. Krippendorff (2018) highlights the utility of content analysis in drawing reliable and meaningful conclusions from textual data within its context.

The data analysis process involved triangulating findings from observations, interviews, and documentation to ensure a comprehensive and reliable understanding of the research problem. The integration of thematic and content analysis provided a structured and systematic framework for interpreting the data, allowing the researchers to address the study's objectives effectively. This methodology ensures a robust exploration of EMI's role in enhancing students' language skills and content knowledge, offering valuable insights for educators and policymakers.

RESULT AND DISCUSSION

This study primarily aims to explore the use of English as a Medium of Instruction (EMI) in educational settings. The findings from the observations reveal several aspects of EMI implementation that have a significant impact on both language proficiency and subject knowledge. Key insights from the data collected will be highlighted and analyzed in the following discussion. The observation results indicate that the implementation of EMI aligns with several indicators outlined in the literature. Teachers conduct the entire learning process in English, including instruction, material delivery, discussions, presentations, and assignments. This approach offers students multiple opportunities to use English in different learning contexts, supporting EMI's objective of internationalizing education (Belhiah & Elhami, 2015). No summative assessments were conducted during the observation period, possibly because teachers focus more on content mastery than on language assessment in the initial stages of EMI implementation.

Classroom interaction is a crucial aspect of EMI implementation. Observations reveal that students often resort to sign language when struggling to speak in English. This indicates that, despite the policy of using English during discussions, students still seek alternative methods of communication. According to Doiz et al. (2014), meaningful interaction within the EMI context can enhance students' motivation and sense of belonging to the learning process. The use of language in these interactions helps to build shared knowledge.

The use of English in tasks and formative assessments demonstrated consistency in the implementation of EMIs, even though no summative assessments were conducted during the study. While this might suggest that EMI has not yet been fully integrated into the evaluation system, teachers intend to conduct summative assessments in English moving forward. This reflects the expectation that students will become increasingly accustomed to using English in an academic context. The adoption of EMI in learning can be seen as an effort to improve

English proficiency among students. As stated by Carrió-Pastor and Bellés-Fortuño (2020), EMI not only serves as a tool to convey content, but also to develop students' language skills (Carrió-Pastor & Bellés-Fortuño, 2020). The implementation of EMI is expected to encourage students to be more active in using English in everyday and academic contexts, which in turn will strengthen their position in the global environment. Despite the benefits of EMI, challenges persist, such as code-switching between English and the mother tongue by both teachers and students. When communication becomes difficult, both groups often revert to their first language. This indicates that EMI implementation focuses not only on language learning but also on knowledge mastery, as emphasized by Carrió-Pastor and Bellés-Fortuño (2020). The use of the first language helps facilitate understanding when challenges arise, aligning with sociocultural theory, which posits that knowledge is constructed through social interaction (John-Steiner & Mahn, 1996). This phenomenon supports Dearden's research, which emphasizes the need for flexibility in language use, particularly in contexts where the language of instruction is not the students' mother tongue (Dearden, 2016). While code-switching can be an effective strategy for overcoming communication barriers, it also highlights students' limitations in English proficiency.

The presentation sessions conducted in English revealed that while students followed instructions, there was a lack of innovation in their vocabulary usage. The language barrier led students to communicate nonverbally, which impacted the quality of their presentations, making them less creative in vocabulary use, though there were improvements in nonverbal aspects such as gestures. This suggests that language proficiency has not yet fully supported content learning. However, from another perspective, this can be seen as a positive outcome, as students demonstrated creativity through their use of gestures, attempting to compensate for their verbal limitations. This highlights the need to boost students' confidence in using English, which is crucial for their success in a global context (Belhiah & Elhami, 2015). The use of code-switching to the mother tongue during classroom interactions indicates a need to further enhance students' English proficiency. This situation fosters an environment where students feel more at ease using their native language, which may impede the progress of their English language development.

Overall, the initial implementation of EMI is generally in line with its basic concept of utilizing English for internationalized learning. However, more support is needed to strengthen students' language skills in order to maximize the benefits of EMI on the development of both language and knowledge. Thus, it can be understood that the implementation of EMI in learning provides a significant opportunity to improve students' English language proficiency and content knowledge. Despite its challenges, such as the frequent use of code-switching, the implementation of EMI shows the potential to build bilingual and multilingual learning communities. Social interactions formed in the context of EMI can support the development of students' knowledge and language skills, in accordance with the principles of constructivism. Further research is needed to evaluate the long-term impact of EMI in other learning contexts and to develop strategies that can reduce reliance on mother tongue in classroom interactions.

The second data was revealed based on interviews with students, various aspects related to language mastery, the impact of switch codes, and challenges faced in the EMI learning process were revealed. This analysis aims to relate the findings to the relevant literature. Students' attitudes towards confidence in learning also vary. Students who feel positive, such as Ila, Sinta, and Aleesya, consider challenges as part of an enjoyable learning experience. Some students commented that EMI did not have much impact on their confidence. On the other hand, students like Nadia and Insyirah feel depressed by the difficulties they face. This suggests that while EMI can increase students' motivation, significant language challenges can reduce their confidence.

The importance of self-confidence in learning is explained by Vygotsky's theory, which states that knowledge is built through social interaction and individual experience (John-Steiner & Mahn, 1996). Students' uncertainty about their English language skills can be a barrier to meaningful interactions. Therefore, it is important for teachers to provide support and strategies that can help students overcome language difficulties, so that they can increase their confidence. The majority of students report that EMI has a positive impact on their English proficiency. For example, Insyirah stated, "I have to force myself to understand and therefore my English skills have improved." Other students also indicated that although they initially found it difficult, they eventually got used to it and became more proficient. This is in line with the findings of Rose et al (2019) and Xie & Curle (2022), which show that EMI can be an effective tool in improving students' language skills through constant interaction with English-language materials.

However, there are students like Nadia and Iman who find it difficult, with Nadia revealing, "I can't, because I still can't speak English." This suggests that not all students are ready to adapt to the use of English in an academic context, potentially hindering their learning achievement. It also points to the need for a differentiated approach in EMI teaching, so that students with varying language skills can still get appropriate support (Delalić, 2020). Switching code between English and Indonesian seems to play a dual role in the learning process. Many students, including Farhana and Nadia, feel that switch code helps them in understanding the material, especially for those who are still weak in English. As Farhana stated, "I think it helps me a lot, because I am weak in English." However, there are also those who feel that the use of Indonesian can hinder the challenges they should face in improving their English proficiency. This is in line with the views of Kohnke & Jarvis (2023) who emphasized the importance of balancing the use of language in the context of EMI to encourage better language mastery. Some students reported difficulties in understanding new vocabulary, as stated by Sinta, "Not understanding some new vocabulary, I still need to revisit." This difficulty demonstrates the importance of mastery of academic vocabulary in the context of EMI, which has been identified as one of the important aspects of language proficiency (Thompson et al., 2022). On the other hand, students like Syakira and Dania find no significant difficulties, suggesting that learning experiences can vary greatly. The majority of students overcome their difficulties by asking questions to the teacher, discussing with friends, or reviewing the material. This approach is in line with Blaj-Ward's recommendation on the importance of continuous feedback from teachers and peers to support the development of language skills (Blaj-Ward, 2017). Students who feel embarrassed to ask questions, like Puteri, point out that there is a need to create a more inclusive and supportive learning environment, where students feel comfortable actively participating.

The above discussion shows that the implementation of EMI can have a significant impact on the students' English proficiency. Students who feel supported in the learning process tend to show greater improvement in their language skills. However, it is important to pay attention to the challenges faced by students who have diverse language backgrounds. Integrating formal and non-formal teaching approaches, as well as providing constructive feedback, is an important step to improve EMI effectiveness. Thus, language proficiency development in the context of EMI not only supports content learning, but also equips students with the language skills necessary to succeed in a global world.

Additionally, it is important for teachers to identify strategies that can help students improve their confidence and language skills. With the right approach, EMI can be an effective bridge between language mastery and content knowledge, preparing students to face the global challenges of the future. Further research is needed to dig deeper into the factors that affect students' experiences in EMI classrooms and how teaching strategies can be optimized to meet their needs.

These findings also show that EMI-based education has great potential to improve students' content knowledge, although it is not without challenges. While many students enjoy their learning experience, there are also those who feel the pressure of mastering new material and a foreign language at the same time. To maximize the effectiveness of EMI, it is important to consider the individual needs of students and create a supportive learning environment. With the right approach, EMI can be an effective tool in facilitating the development of content knowledge and language proficiency simultaneously. Further research is needed to identify the best strategies in the context of EMI and establish clear benchmarks to assess student progress.

CONCLUSION AND RECOMMENDATION

One of the fundamental objectives of EMI is to enhance students' English language proficiency alongside content mastery. The findings of this study indicate that EMI plays a crucial role in improving students' abilities in reading, writing, speaking, and listening in English. Students reported that their proficiency in academic and technical vocabulary has increased as they were exposed to English across various subjects. In particular, the students emphasized the benefits of practicing academic discussions and writing, which pushed them to expand their vocabulary and develop critical thinking skills when presenting arguments. Challenges also emerged, with students expressing difficulties in mastering complex academic language. This barrier underscores the necessity for ongoing language support, both inside and outside the classroom. Students like Nadia noted that understanding new vocabulary in EMI classes was a recurring issue, while others, like Farhana, found that switching between their mother tongue and English helped them overcome language barriers. This previous literature highlights the significance of providing consistent language support throughout EMI programs.

Students benefited greatly from classroom discussions and peer interaction, which enabled them to practice English in real-time academic settings. However, the research also pointed out that students who lacked confidence or had limited language exposure outside the classroom felt overwhelmed, especially when faced with both content learning and language acquisition simultaneously. Hence, continuous and constructive feedback from teachers, coupled with extracurricular activities designed to foster informal language use, is deemed essential for maximizing language learning outcomes in EMI. Moreover, the study highlighted the role of teachers in addressing these challenges clear explanations, offered vocabulary support, and used engaging teaching methods were more successful in helping students navigate the complexities of EMI. The study emphasized the need for teachers to be not only content experts but also proficient in English, as their language competence directly influenced the students' learning experience. Finally, the study pointed to the importance of creating a supportive learning environment where comfortable practicing their English skills without fear of making mistakes. This, combined with formal language classes and informal language use outside the classroom, helped build students' confidence over time, which is crucial for their success in EMI. This study has demonstrated that EMI has a significant impact in language proficiency. While it presents unique challenges, particularly in terms of language barriers and cognitive load, the potential benefits of EMI are substantial. Students who engage in EMI programs not only improve their English language skills but also deepen their understanding of equipping them with valuable tools for academic and professional success in a globalized world.

Finally, the researchers recommend that further research in other areas is needed to explore the long-term impact of EMI on students' academic performance and language proficiency, particularly in diverse educational contexts. By addressing these challenges and implementing these recommendations, EMI can continue to serve as a valuable tool for promoting both

language learning, fostering a more inclusive and effective educational environment. The integration of language and subject knowledge through EMI not only prepares students for academic success but also equips them with the linguistic and cognitive skills necessary to thrive in an increasingly interconnected world.

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