

Review

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Posted Date: 17 February 2025

doi: 10.20944/preprints202502.1277.v1

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Review

Bridging Language Gaps in Medical Education: The Role of English Language Teaching in English-Medium Instruction

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Abstract: This qualitative narrative synthesis examines the impact of English as a Medium of Instruction (EMI) in medical education through an English Language Teaching (ELT) lens. By reviewing studies from Scopus, Web of Science, and other reputable sources, we identify key themes: cognitive load in learning medicine in a second language, disparities in learning outcomes, faculty challenges, and pedagogical innovations. Findings highlight the importance of structured linguistic support, such as English for Medical Purposes programs and bilingual scaffolding, to enhance both medical competence and academic English proficiency. Integrating ELT strategies into EMI frameworks can improve comprehension, critical thinking, and communication skills, ensuring better learning experiences for non-native English-speaking students.

Keywords: English as a Medium of Instruction (EMI); English Language Teaching (ELT); medical education; bilingual pedagogy; academic language proficiency

Resumen

Este estudio de síntesis narrativa cualitativa examina el impacto del inglés como medio de instrucción (EMI) en la educación médica desde la perspectiva de la enseñanza del inglés (ELT). A través del análisis de estudios de Scopus, Web of Science y otras fuentes reconocidas, identificamos temas clave: carga cognitiva del aprendizaje de medicina en un segundo idioma, disparidades en los resultados de aprendizaje, desafíos del profesorado e innovaciones pedagógicas. Los hallazgos destacan la importancia del apoyo lingüístico estructurado, como los programas de inglés para propósitos médicos y el andamiaje bilingüe, para mejorar tanto la competencia médica como el dominio académico del inglés. La integración de estrategias ELT en los marcos EMI puede optimizar la comprensión, el pensamiento crítico y las habilidades comunicativas de los estudiantes no nativos del inglés.

Palabras clave: Inglés como Medio de Instrucción (EMI); Enseñanza del Inglés (ELT); Educación Médica; Pedagogía Bilingüe; Dominio del Lenguaje Académico

Introduction

The widespread adoption of EMI in medical education has led to significant changes in teaching and learning dynamics. While EMI aligns with globalization trends, accreditation standards, and international collaboration (Macaro et al., 2020), it also raises concerns about accessibility and effectiveness in non-English-speaking countries. EMI is not only a tool for delivering content but also an implicit language learning mechanism. Therefore, its success is highly dependent on structured English Language Teaching (ELT) practices to support both faculty and students in language acquisition alongside medical education.

A key advantage of EMI is its role in facilitating access to cutting-edge medical knowledge, much of which is published in English. By adopting EMI, medical institutions align their curricula with global standards, enabling students to participate in international collaborations and professional mobility (Wilkinson, 2021). Furthermore, EMI fosters academic English skills crucial for medical discourse, research publication, and global engagement (Bradford, 2019). However, linguistic barriers persist, particularly for students and faculty with limited formal English training. Without structured ELT-based interventions, EMI may inadvertently disadvantage learners from non-English-speaking backgrounds, affecting comprehension, retention, and overall academic success (Hu & Lei, 2022).

Given these challenges, integrating ELT methodologies into EMI curricula is essential. Approaches such as English for Medical Purposes (EMP) courses, bilingual instruction models, and translanguaging strategies offer promising solutions to enhance both language acquisition and subject mastery. This study explores the intersection of ELT and EMI in medical education, emphasizing strategies that align with second-language acquisition theories to support academic achievement in EMI settings.

Methods

This study employs a qualitative narrative synthesis approach, incorporating elements of discourse analysis to examine the intersection of ELT and EMI in medical education. Data sources include peer-reviewed literature from Scopus, Web of Science, and specialized journals in ELT and Applied Linguistics. Thematic analysis was applied to identify major patterns related to linguistic challenges, pedagogical interventions, and faculty adaptation strategies in EMI contexts.

Selection criteria for reviewed studies included:

1. Empirical research on EMI in medical education within the last five years.
2. Studies integrating ELT strategies within EMI frameworks.
3. Research discussing bilingual and translanguaging approaches in medical education.

Results and Discussion

The implementation of English as a Medium of Instruction (EMI) in medical education presents a complex interplay of benefits and challenges. While EMI facilitates access to global medical knowledge and enhances professional mobility, it also imposes linguistic and cognitive demands on students and faculty, particularly in non-English-speaking environments.

This study reviewed 63 articles published in peer-reviewed journals over the last ten years, focusing on the impact of EMI on medical education. After screening for relevance and methodological rigor, 37 studies were examined in detail, and 15 were ultimately included in the discussion. The key themes emerging from the literature include cognitive load and learning outcomes, faculty challenges and pedagogical innovations, and bilingual integration strategies. By examining these aspects, we highlight the implications of EMI on medical education and discuss strategies to optimize learning experiences while maintaining academic and clinical excellence.

Cognitive Load and Learning Outcomes

Students in EMI settings often experience increased cognitive load due to processing medical content in a second language. This can hinder comprehension, retention, and critical thinking. Research indicates that structured ELT support—such as contextual vocabulary instruction, scaffolding techniques, and interactive language-based learning—can mitigate these difficulties (Evans & Morrison, 2018). By integrating ELT-based pedagogies, students enhance both their linguistic confidence and disciplinary literacy (Gutiérrez Eugenio, 2021).

A case study conducted in Japan found that medical students enrolled in an EMI program with embedded ELT support performed significantly better in clinical reasoning tasks than those without language assistance (Kuteeva & McGrath, 2023). This suggests that effective language instruction can

enhance domain-specific cognitive processing, leading to improved clinical competency. Additionally, multimodal ELT interventions—such as visual aids, simulations, and interactive group discussions—have been shown to reduce cognitive overload and enhance student engagement in EMI environments (Sahan et al., 2022).

Faculty Challenges and ELT-Informed Pedagogical Innovations

Faculty members teaching in EMI settings face unique challenges, particularly in integrating effective ELT strategies into subject teaching. Non-native English-speaking lecturers may struggle with academic phrasing, spontaneous discussions, and adapting ELT-informed methodologies (Dearden & Macaro, 2019). Faculty development programs that incorporate ELT methodologies, such as specialized EMI teaching certifications, have been found to improve instructional effectiveness in EMI contexts (Lasagabaster, 2020).

A notable innovation in EMI pedagogy is the incorporation of **English for Specific Purposes (ESP)** frameworks within medical education. ESP-based EMI programs tailor language instruction to medical terminology, communication in clinical settings, and academic writing skills, ensuring that students develop both linguistic and professional competencies simultaneously. Research in European medical schools has demonstrated that **ESP-integrated EMI curricula** significantly enhance students' confidence in patient communication and professional writing (Wang et al., 2023).

Additionally, AI-driven language tools have begun to play a role in EMI settings, offering real-time translations, pronunciation coaching, and grammar correction. While these tools cannot replace structured ELT instruction, they serve as valuable supplements that enhance language accessibility for both students and faculty (Chen et al., 2022).

Bilingual Integration and Translanguaging Strategies

An emerging approach in EMI settings involves bilingual integration strategies that align with translanguaging frameworks. Studies show that allowing students to alternate between their native language and English fosters deeper comprehension and confidence in professional communication (Sahan et al., 2022). By adopting a structured bilingual framework, medical schools can balance content instruction in English while reinforcing critical thinking and patient communication skills in students' native languages (Wang et al., 2023). These approaches align with best practices in ELT, which emphasize language transfer and cross-linguistic competency in bilingual education.

Conclusion

The implementation of EMI in medical education presents both opportunities and challenges. While EMI facilitates access to global medical knowledge and enhances international career mobility, linguistic and cognitive barriers must be addressed through structured ELT interventions. This study underscores the importance of integrating ELT methodologies—including EMP courses, bilingual scaffolding, and translanguaging strategies—into EMI frameworks to ensure equitable learning experiences for diverse student populations.

Future research should explore interdisciplinary collaborations between applied linguistics and medical education to refine EMI implementation strategies. Additionally, longitudinal studies assessing the long-term impact of ELT-driven EMI interventions on student proficiency and professional preparedness are needed. By adopting an ELT-informed approach to EMI, institutions can enhance both linguistic and disciplinary competencies, ensuring academic success and professional readiness for non-native English-speaking medical students.

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