

# *A Systematic Review of Student Success in English-Medium Instruction in Higher Education*

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**Abstract:** English-Medium Instruction (EMI) refers to the teaching of academic subjects in English in contexts where English is not the students' first language. EMI has expanded rapidly in higher education worldwide over the past two decades as part of university internationalization, student mobility, and academic competitiveness. However, the extent to which EMI contributes to student success-beyond simply using English in instruction-remains debated. This review synthesizes empirical and theoretical research on student success in EMI settings, focusing on academic achievement, language development, classroom engagement, learning experience, and equity. The evidence indicates that EMI has the potential to support students' disciplinary learning and English proficiency; however, success is most likely when there are adequate language supports, informed pedagogy, teacher capacity, and inclusive institutional policies. Without such supports, EMI may exacerbate language challenges and learning inequities.

## **1. Introduction**

English English-Medium Instruction (EMI) has become a prominent feature of higher education globally. Defined as the use of English to teach academic subjects to students in contexts where English is not the primary language of the wider society, EMI has grown in policy significance, particularly in Europe, Asia, and the Middle East [1–3]. Universities adopt EMI to enhance international visibility, attract mobile students, improve graduate employability, and engage with a global academic community.

Despite its widespread adoption, EMI has generated debate regarding student success. Advocates argue that EMI equips students with English proficiency and disciplinary competence simultaneously [3–5]. Critics caution that using a second language as the medium of instruction may impose cognitive and linguistic burdens that hinder content learning, especially for students with limited English proficiency [6–8].

The purpose of this review is to examine the conceptualizations of student success in EMI research and to identify the conditions under which EMI contributes positively to student outcomes. Specifically, we address three questions:

How is student success defined and measured in EMI research?

What does the research indicate about EMI's impact on student learning outcomes?  
What factors facilitate or impede student success in EMI environments??

## 2. Methods

This review adopts a systematic approach synthesizing literature from peer-reviewed journals, meta-analytic studies, and influential reports on EMI in higher education. Searches were conducted using combinations of keywords including “English-Medium Instruction,” “higher education,” “student success,” “learning outcomes,” “academic achievement,” “language proficiency,” and “EMI classroom challenges.” Studies were included if they involved higher education learners in EMI contexts and discussed outcomes related to student learning, engagement, or language development. Both quantitative and qualitative studies were considered, along with comprehensive reviews and theoretical frameworks.

In EMI research, student success encompasses multiple domains. Traditional metrics such as course grades or test scores are insufficient on their own because EMI simultaneously involves content learning and second language use. Therefore, success in EMI contexts is commonly understood to include:

- 1) Academic achievement: mastery of disciplinary knowledge and ability to perform in assessments.
- 2) Language development: growth in academic English proficiency, including reading, listening, speaking, and writing skills.
- 3) Classroom engagement: active participation, interaction with instructors and peers, and contributions to discussion.
- 4) Learning experience and attitudes: student perceptions of their confidence, anxiety, and satisfaction with EMI.
- 5) Equity of access and outcomes: considerations of how language background and prior preparation affect opportunities for success.

This multidimensional view recognizes that EMI demands both cognitive and linguistic resources. Student success thus reflects the intersection of language ability, disciplinary understanding, motivation, instructional design, and institutional support.

## 3. Results

### 3.1 Academic Achievement in EMI

Several studies have investigated whether EMI enhances or impedes academic achievement. In a comprehensive systematic review, Macaro et al. (2018) reported mixed results: some studies show similar academic performance in EMI and non-EMI tracks, while others find advantages or disadvantages tied to language proficiency levels [2].

Peng et al.'s (2021) meta-analysis of EMI in Chinese higher education found modest positive effects of EMI on academic performance when compared with non-EMI equivalents, particularly in professional science and engineering fields [3]. However, this effect appeared contingent on students' English proficiency and teacher preparedness.

A recurring theme in EMI research is that students' English ability significantly mediates content learning outcomes. Students with strong English skills are better positioned to grasp nuanced disciplinary concepts and perform well in assessments [4,9]. Conversely, students with lower proficiency may focus cognitive resources on decoding language, leaving less capacity for deep content processing [6].

For example, qualitative classroom studies have documented that students often struggle with

lectures and exams not because of content complexity per se but due to difficulties in comprehending academic language structures and unfamiliar vocabulary [7].

### **3.2. EMI and Language Development**

A central assumption behind EMI is that sustained exposure to English in academic settings will enhance language proficiency. Many studies report improvements in receptive skills (listening and reading), largely because students engage with authentic academic input through lectures, textbooks, and scholarly materials [2,3].

However, gains in productive skills (speaking and writing) are less consistently reported. Airey (2011) noted that many disciplinary instructors do not explicitly teach language but focus on content, which can limit students' opportunities to practice and develop academic English spontaneously [5].

Similarly, students in EMI contexts sometimes rely on translation strategies or revert to their first language when expressing complex ideas, which can curtail long-term oral proficiency [8].

The literature suggests that language development in EMI is most effective when English language support is embedded in the curriculum. This can include academic English modules, scaffolded writing tasks, targeted vocabulary instruction, and opportunities for peer interaction in controlled language environments [3,6]. Such supports help bridge the gap between content mastery and language proficiency, aiding overall student success.

### **3.3. Student Engagement and Classroom Dynamics**

EMI classrooms present specific interactional challenges. Students may hesitate to speak or participate due to fear of making mistakes, perceived inadequacy in English, or cultural norms regarding classroom discourse [7,8]. This phenomenon, sometimes referred to as "classroom silence," can reduce engagement and impede learning.

Active learning strategies, collaborative group work, and small-group discussions are associated with higher levels of participation in EMI settings. When instructors structure tasks that encourage low-stakes language use and provide clear expectations, students are more comfortable participating and demonstrating understanding [10].

Additionally, the classroom climate plays a critical role. Inclusive environments that respect linguistic diversity and allow scaffolded language use encourage students to take intellectual risks—an important aspect of engagement and success.

### **3.4. Learning Experience, Attitudes, and Affective Factors**

Research on student attitudes toward EMI reveals complexity. Many students value EMI for its potential to enhance employability and international mobility, and they report positive perceptions of English exposure [7]. However, these positive attitudes coexist with frustration, anxiety, and pressure when language demands exceed students' proficiency.

EMI learners often report increased cognitive load, especially when processing lectures and reading dense academic texts in English [6]. This heightened demand can lead to stress and negative affective responses, which in turn influence engagement and performance.

Therefore, student success in EMI is not purely cognitive—it also involves emotional and psychological dimensions that interact with language and content learning.

### 3.5. Equity and Access in EMI

A critical ethical concern in EMI research is educational equity. Because EMI privileges English language proficiency, students from disadvantaged linguistic backgrounds or regions with limited English education may be disproportionately disadvantaged. Wächter and Maiworm (2014) observed that in European programs taught in English, students with stronger English skills-often linked to socio-economic advantage-are more likely to thrive [8].

Without appropriate preparatory support or bridging programs, EMI can inadvertently reinforce existing inequalities, creating “elite” tracks accessible primarily to linguistically advantaged students. This underscores the need for equitable implementation of EMI that addresses differential needs and ensures all students have the resources necessary to succeed.

### 3.6. Institutional and Pedagogical Factors Affecting Success

The degree to which EMI contributes to student success is strongly shaped by institutional policies, teacher competence in bilingual pedagogy, and curriculum design.

Instructors in EMI settings require more than subject matter expertise-they need skills in bilingual pedagogical strategies, language awareness, and formative assessment practices that account for second-language processing [6,10]. Professional development focused on these competencies improves classroom instruction and student engagement.

Well-designed EMI courses explicitly integrate language supports (e.g., vocabulary pre-teaching, reading guides, writing workshops) with disciplinary content. When curriculum development teams collaborate across language and disciplinary specialists, students benefit from coherent scaffolding throughout the course.

University policies that provide systematic language placement assessments, academic English support centers, tutoring programs, and clear success metrics for EMI enhance student outcomes. In contrast, policies that tokenize English instruction without structural support risk superficial implementation and limited impact on learning.

## 4. Recommendations for Enhancing Student Success in EMI

Based on the literature, several evidence-based recommendations emerge:

- 1) Define clear learning outcomes that include both disciplinary mastery and communicative competencies.
- 2) Embed language support within EMI curricula, rather than relying solely on standalone language courses.
- 3) Invest in professional development for EMI instructors focused on language-aware teaching strategies.
- 4) Promote active learning techniques that encourage student interaction in structured and supportive ways.
- 5) Adopt equitable admission and support practices to ensure that all students have access to preparatory resources.
- 6) Monitor and evaluate EMI programs longitudinally to assess impacts on both content learning and language development.

## 5. Conclusion

English-Medium Instruction has the potential to facilitate student success in higher education by nurturing disciplinary knowledge, enhancing academic English proficiency, and expanding

international opportunities. However, success is not automatic. It is shaped by students' language skills, instructional design, teacher expertise, and institutional support structures.

To fulfill the promise of EMI, stakeholders must adopt comprehensive, research-informed practices that address cognitive, linguistic, affective, and equity dimensions of student success. Future research should include longitudinal and cross-national comparative studies to better understand how EMI can be optimized in diverse contexts.

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