

# English-Medium Instruction Motivation and Anxiety in Business Administration: A Mixed-Methods Study at a Vietnamese University

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Received April 20, 2025; revised November 3, 2025; accepted November 4, 2025

## Abstract

This mixed-methods study examined how English Medium Instruction (EMI) motivation and anxiety developed over one semester among Vietnamese business administration students. It also explored factors that may influence these psychological constructs. Using an explanatory sequential design, quantitative data were collected from 320 students at three points through questionnaires. Semi-structured interviews were then conducted with 20 participants to elaborate on the survey findings. Analyses identified three motivational trajectories: declining immediate experiential motivation, stable future-oriented components, and growing international orientation. Anxiety patterns showed temporal complexity. Communication apprehension and fear of negative evaluation followed inverted U-shaped patterns, whereas test anxiety remained persistently high, especially for qualitative assignments. Hierarchical regression analysis suggested that linguistic competence, pedagogical approaches, and professional identity development were key predictors of both motivation and anxiety. These models explained 48% of the variance in motivation and 52% of the variance in anxiety. Professional aspirations functioned both as motivational resources and as sources of anxiety, creating complex psychological dynamics. Overall, the findings indicate that business education contexts may generate distinct EMI experiences compared with more general academic settings. They also suggest that EMI programs in professional education may require specialized support that addresses the intersection of language learning, content mastery, and career preparation. Uniform strategies across all disciplines may therefore be insufficient.

**Keywords:** English Medium Instruction, motivation, anxiety, business education, Vietnamese higher education

The rapid expansion of English Medium Instruction (EMI) in higher education can be seen as a significant development in global tertiary education. This expansion is particularly evident in Asia, where it is often described as crossing traditional linguistic boundaries. This growth reflects institutions' aspirations for internationalization and enhanced competitiveness. However, research

examining EMI implementation and effectiveness appears to have lagged behind its adoption (Zhou & Thomas, 2023). This disconnect is particularly pronounced in Asia, where EMI has spread from “outer circle” countries like Singapore and Malaysia to “expanding circle” nations such as Taiwan, Japan, and China (Bolton et al., 2020).

In Vietnam, higher education internationalization has undergone substantial change since the Đổi Mới economic reforms in 1986. Since then, the system has gradually shifted from a Soviet-influenced model toward broader global integration. The Vietnamese government has positioned EMI as an important strategy for improving education quality and international recognition (Dang & Moskovsky, 2019). This emphasis is reflected in the expansion of joint programs with international partners from 133 in 2007 to approximately 300 by 2019 (Tran & Marginson, 2019). However, implementation often diverges from policy intentions, with institutions sometimes treating English language development as an automatic byproduct rather than as a focus that requires specific pedagogical intervention (Nguyen, 2018).

Business administration programs frequently exemplify these implementation challenges because they emphasize professional communication competence alongside content mastery. Students face the dual task of acquiring disciplinary knowledge. At the same time, they must develop sophisticated discourse abilities for case study analysis, strategic discussions, and professional presentations (Welsh, 2023). This dual demand can become particularly pronounced in Vietnamese contexts. Students typically transition from Vietnamese-medium secondary education to EMI business programs with varying English proficiency and limited exposure to professional English discourse conventions.

Several challenges persist in implementing EMI effectively in Vietnamese universities, particularly with respect to students’ psychological and affective factors. Insufficient English proficiency can hinder students’ ability to access curriculum content and participate effectively in classroom activities (Nguyen et al., 2017; Vu & Burns, 2014). In business education, these linguistic barriers may compound professional development requirements. Students must simultaneously master specialized vocabulary, develop analytical reasoning, and build confidence in professional communication. These challenges may intensify for students from provincial universities. In such settings, proficiency gaps and limited exposure to international business contexts can create compounded learning pressures (Linh, 2022).

Understanding learners’ motivation and anxiety has become increasingly important, as these variables can influence academic achievement and engagement in EMI contexts (Tai & Zhao, 2022). The transition from traditional Vietnamese-medium instruction to EMI may pose considerable challenges for students. It can trigger anxiety and affect their willingness to participate actively in courses (Phan et al., 2023). Recent studies have begun

to document how Vietnamese EMI students may experience moderate to high levels of anxiety despite maintaining positive motivational orientations. This pattern suggests complex psychological dynamics that warrant further investigation (Nguyen et al., 2023). In business education, these dynamics may be further complicated by professional identity development processes. English competence can become intertwined with career preparation and perceptions of professional credibility.

While EMI research has expanded globally, notable gaps remain in understanding students' psychological experiences across disciplines, particularly in emerging EMI contexts. Students' motivation in EMI settings appears dynamic and responsive to environmental factors (Iwaniec & Wang, 2022). Anxiety levels can also impact academic performance and engagement (Zheng, 2021). However, longitudinal investigations examining how these psychological constructs develop over time remain limited, particularly in professional education contexts where English competence extends beyond academic success to career preparation. Understanding temporal patterns is important given evidence that motivational factors may fluctuate throughout academic programs, especially when students encounter increasingly complex subject matter (Le & Nguyen, 2022).

Vietnamese business administration students represent a valuable population for investigating these dynamics. These students often enter EMI programs from predominantly Vietnamese-medium educational backgrounds with limited professional English experience. Yet they face immediate demands for sophisticated business communication competence. Their learning context combines traditional Vietnamese educational approaches with international business education requirements. This combination creates environments where academic achievement intersects with professional identity development. Their career prospects increasingly depend on English proficiency in Vietnam's expanding international business sector, adding external pressure to academic experiences.

The current study seeks to address these knowledge gaps by investigating the temporal development of EMI motivation and anxiety among Vietnamese business administration students over one semester. It also examines factors that may influence these psychological constructs. Drawing on established theoretical frameworks and employing a mixed-methods approach, this research aims to extend understanding of EMI experiences in professional education contexts while offering practical insights for program improvement. This study pursues two research questions:

1. How do Vietnamese university students' motivation toward, and anxiety about, EMI courses develop over the course of a semester?
2. What factors influence Business Administration students' EMI motivation and anxiety in Vietnamese universities?

## Literature Review

### *EMI in Higher Education*

EMI is often described as an important trend in global higher education, particularly in non-English-speaking countries. While its definition has evolved, EMI is commonly understood as the use of English to teach academic subjects in contexts where English is not the majority's first language (An & Macaro, 2022). Akıncıoğlu (2023) offers a definition that encompasses various implementations, including sole use, partial use, and code-switching. This perspective recognizes the complex dynamics between students and content teachers in EMI settings. The expansion of EMI in Asian higher education has been particularly visible and is frequently linked to governmental policies and institutional initiatives. Countries such as South Korea and Japan have launched major government initiatives to support EMI adoption (Bradford, 2016; Kim et al., 2017). These initiatives reflect universities' strategic responses to internationalization pressures, increased student mobility, and efforts to enhance institutional profiles in the global academic landscape (Macaro, 2018).

In Vietnam, EMI implementation has been formally integrated into higher education policy since 2005, when English was designated as the preferred language for tertiary-level instruction (Government, 2005). The government's commitment was further demonstrated through the "Training in advanced programs in some Vietnam university period 2008–2015" project, which provided financial support for EMI programs in key universities (Government, 2008). These initiatives align with Vietnam's broader strategy to modernize its higher education system and enhance graduates' global competitiveness. However, EMI implementation in business education appears to face distinct challenges. Students often struggle with comprehending lectures, engaging in classroom discussions, and understanding business terminology in English (Hoang et al., 2023). These difficulties can be particularly pronounced when students transition from Vietnamese-medium undergraduate programs to EMI graduate studies (Tran et al., 2020). Institutional challenges may further complicate implementation, including inadequate learning resources, varying teacher English proficiency levels, and the need to balance international business concepts with local contexts (Vu & Burns, 2014). Collectively, these issues raise questions about EMI effectiveness in achieving educational outcomes in specialized fields such as business education, where communication skills and conceptual understanding are both essential.

### *Motivation in EMI Contexts*

Motivation is widely regarded as an important factor that can influence learning outcomes in EMI contexts. In these settings, students face the dual challenge

of mastering both content knowledge and English language skills. Dörnyei's (2003) L2 Motivational Self System (L2MSS) has been particularly influential in work on EMI motivation. The framework comprises three key components: the Ideal L2 Self, the Ought-to L2 Self, and the L2 Learning Experience. Together, these components help capture motivational dynamics in EMI settings, where students' goals often extend beyond traditional integrative–instrumental dichotomies.

The Iwaniec and Wang (2022) EMI motivation questionnaire builds on Dörnyei's L2MSS framework by adapting its core components for EMI-specific contexts. Their instrument incorporates the Ideal L2 Self through dimensions such as ideal bilingual professional self and international orientation. It captures the Ought-to L2 Self via external expectations and professional requirements. It also addresses the L2 Learning Experience through enjoyment and perceptions of pedagogy. This theoretical alignment suggests that the questionnaire is suitable for investigating EMI motivation within established frameworks and content-integrated learning demands.

Studies across Asian universities have reported distinctive EMI motivation patterns shaped by regional sociocultural and linguistic factors. Huang (2024) found that instrumental and required orientations strongly shaped Taiwanese learners' motivation, reflecting pragmatic emphases in Asian educational cultures. However, Li (2024) offered a different perspective in a large-scale study of Chinese EMI students. In that study, the Ideal L2 Self emerged as the most powerful motivator. These contrasting findings suggest that English proficiency levels and international exposure may influence motivational orientations in different ways. Higher proficiency students may show stronger future-oriented motivation. By contrast, lower proficiency students may rely more heavily on external requirements.

In Vietnamese contexts, research has reported complex motivational dynamics influenced by pedagogical approaches and professional identity factors. Nguyen and Sercu (2021) found that Vietnamese EMI students were primarily motivated by intrinsic goals and competence-development aspirations rather than external pressures. They also reported strong desires to build international academic connections. However, Le and Nguyen (2022) observed notable motivational fluctuations across academic programs, particularly during the second and third semesters. These fluctuations appeared when students encountered increasingly complex subject matter in English. They were also linked to teaching methodologies and assessment approaches.

The temporal aspect of EMI motivation has begun to receive more scholarly attention. Emerging evidence suggests that professional identity development may affect motivational trajectories. Phuong and Nguyen (2019) documented fluctuations in Vietnamese students' motivational factors across the academic year. These shifts were particularly evident when students faced

challenges with complex content delivery. Tran et al. (2020) reported that vocabulary range, writing proficiency, and teaching methodologies affected students' comprehension in EMI courses. They also influenced students' motivation to persist in these programs. Taken together, these studies suggest that linguistic competence, pedagogical support, and professional aspirations operate as interconnected influences on motivational development. Career-oriented goals may help sustain some students' motivation during periods of academic difficulty.

### ***Foreign Language Anxiety in EMI Settings***

Foreign language anxiety in EMI contexts is often described as a distinct psychological phenomenon that extends beyond traditional language learning anxiety. As conceptualized by Horwitz et al. (1986), this anxiety encompasses self-perceptions, beliefs, feelings, and behaviors specifically related to the language learning process. In EMI settings, anxiety is commonly discussed in terms of three interrelated components: communication apprehension, fear of negative evaluation, and test anxiety. Together, these components can create additional challenges as students navigate both content learning and English language demands simultaneously.

EMI anxiety may exhibit distinctive characteristics stemming from the dual cognitive demands of processing academic content and English language input. Students often report heightened tension related to real-time processing of English academic lectures, participating in subject-specific discussions, and completing discipline-based assessments in English (Hoang et al., 2023; Tran et al., 2020). These manifestations can become particularly acute when pedagogical approaches emphasize spontaneous participation or when assessment formats require extensive English production. In such situations, linguistic limitations may directly impact how academic performance is evaluated (UçAr & Soruc, 2018).

Research across Asian contexts has begun to illuminate EMI anxiety patterns that appear to be influenced by contextual factors. Ahn (2022), for example, found that even high English proficiency students reported significant anxiety in EMI courses. This suggests that language competence alone may not determine anxiety levels. Similarly, Japanese higher education studies reported that 77.4% of instructors exhibited medium to high language anxiety despite advanced proficiency (Machida, 2016). This finding highlights the potentially pervasive nature of EMI-related anxiety.

In Vietnamese contexts, research has yielded emerging insights into EMI anxiety patterns shaped by cultural and pedagogical factors. Nguyen (2023) identified learners themselves, rather than external factors such as teacher behavior or course complexity, as a primary anxiety source. This pattern suggests

that internal psychological processes may be key determinants. Le (2023) reported moderate anxiety levels among Vietnamese EMI students, with the strongest triggers being fear of making mistakes, lack of confidence during speaking tasks, and concerns about peer and teacher judgment. These cultural factors interact with pedagogical approaches. Traditional Vietnamese educational emphasis on accuracy may amplify anxiety when students encounter EMI environments that require risk-taking and active participation.

The dynamic nature of EMI anxiety has gained increasing scholarly attention. Studies suggest that anxiety levels can fluctuate throughout academic programs, depending on assessment periods, course content difficulty, and students' developing language confidence (Le, 2023; Nguyen et al., 2023). Professional identity considerations may also influence anxiety development, particularly in career-oriented programs where evaluations of English competence extend beyond academic assessment to perceived professional credibility (Zhang & Pladevall-Ballester, 2023). Taken together, these variations indicate that EMI anxiety may need to be investigated across extended academic periods to understand developmental patterns and identify appropriate points for intervention.

### ***Temporal Development and Interplay of Motivation-Anxiety in EMI***

Research has established reciprocal relationships between motivation and anxiety in EMI contexts, with empirical evidence demonstrating that these constructs operate interdependently rather than as isolated variables (Ahmetović et al., 2020). Changes in motivation affect anxiety development and vice versa, influencing students' learning trajectories.

Recent research has identified reciprocal relationships between motivation and anxiety in EMI contexts. Empirical evidence suggests that these constructs can operate interdependently rather than as isolated variables (Ahmetović et al., 2020). Changes in motivation affect anxiety development and vice versa, influencing students' learning trajectories.

Longitudinal evidence has begun to reveal developmental patterns in motivation–anxiety relationships throughout EMI programs. Yuksel et al. (2023) documented that students' decreasing language anxiety corresponded with improved motivation and academic performance. Le and Nguyen (2022) observed significant motivational fluctuations among Vietnamese EMI students during periods of heightened course complexity. These findings suggest that understanding EMI experiences requires examination of temporal development rather than reliance on static measurements.

Contextual factors appear to influence both constructs simultaneously. English proficiency levels appear to affect both motivation and anxiety. Higher proficiency students tend to maintain more stable motivation and

experience lower anxiety (Curle et al., 2020). Pedagogical approaches may have dual effects. Interactive teaching methods can enhance motivation but may also increase anxiety for students uncomfortable with spontaneous English production (Le & Nguyen, 2022). Assessment design represents another factor with temporal implications. Different evaluation formats can trigger varying psychological responses that accumulate over academic periods (Nguyen et al., 2023).

Vietnamese contexts may introduce specific factors shaping motivation–anxiety development. Nguyen et al. (2023) documented that Vietnamese EMI students can maintain positive motivational orientations despite experiencing moderate to high anxiety levels. This pattern may indicate complex adaptation processes. Traditional educational emphasis on accuracy may heighten anxiety during EMI transitions, while strong career orientations can sustain motivation through challenging phases. Business education contexts may intensify both career-driven motivation and performance-related anxiety. This combination can create tensions where professional aspirations simultaneously drive engagement and amplify evaluative concerns (Zhang & Pladevall-Ballester, 2023).

The temporal nature of these relationships can have important implications for EMI research and practice. Initial psychological orientations may prove insufficient for sustained engagement without appropriate institutional support (Le & Nguyen, 2022). Some students appear to develop adaptive strategies that moderate anxiety while helping them maintain motivation. Others experience declining motivation as anxiety persists (Yuksel et al., 2023; Zhou et al., 2023). These patterns suggest that temporal investigation of students' psychological experiences can yield insights into EMI effectiveness and support intervention design.

### ***Research Gaps and Current Study***

The existing literature appears to have established a foundation for understanding EMI implementation in higher education. However, two notable gaps can be identified that may limit theoretical understanding and practical application. First, empirical research examining the developmental trajectory of motivation and anxiety over time remains limited, particularly in Vietnamese business education contexts. Several studies have documented these psychological factors. However, their evolution throughout an academic semester and the dynamics of their interplay have not yet been examined in detail. Evidence from Le and Nguyen (2022) and Phuong and Nguyen (2019) indicates that motivational factors can fluctuate significantly during academic programs. Yet temporal patterns and underlying mechanisms remain poorly understood.



Second, previous studies have identified several influences on EMI experiences in higher education. These include factors documented by Curle et al. (2020), Tran et al. (2020), and Vu and Burns (2014). However, there is still limited understanding of the specific factors that shape business administration students' motivation and anxiety in Vietnamese universities. Research has highlighted the importance of linguistic competence, pedagogical approaches, and professional identity development in shaping EMI experiences. These variables have been discussed in studies by Le and Nguyen (2022), Nguyen and Sercu (2021), and Zhang and Pladevall-Ballester (2023). However, their relative influence and interaction patterns remain unclear in professional education contexts where English proficiency directly affects career preparation outcomes.

The theoretical frameworks underpinning this investigation draw on established motivational and anxiety research adapted for EMI contexts. Dörnyei's (2003) L2MSS provides a foundation for understanding motivational development through its three components. Horwitz et al.'s (1986) anxiety conceptualization addresses the emotional barriers students may encounter. The selection of Iwaniec and Wang's (2022) motivation questionnaire aligns with these theoretical foundations. The instrument incorporates EMI-specific dimensions relevant to professional education, including an ideal bilingual professional self and international orientation, which capture career-related motivations.

The current study seeks to address these knowledge gaps. It investigates the temporal development of EMI motivation and anxiety throughout a semester. It also considers key factors that may influence these psychological constructs among Vietnamese business administration students. This research examines how these constructs evolve across three time points in an academic semester to extend theoretical perspectives on motivation–anxiety dynamics. It also seeks to identify context-specific influences on these patterns. It further aims to offer evidence-based insights for enhancing teaching practices and support systems in Vietnamese business education.

## **Methodology**

### ***Research Design***

This study employed an explanatory sequential mixed-methods design, following Creswell and Plano Clark's (2017) framework. It investigated EMI motivation and anxiety among Vietnamese business administration students. The quantitative phase involved administering questionnaires to explore motivation and anxiety patterns. The qualitative phase utilized semi-structured interviews to provide deeper insights into the questionnaire findings. This design was chosen because it allows for systematic investigation of the research

questions through complementary data sources. In this study, qualitative findings were used to help explain and elaborate on quantitative results (Ivankova et al., 2005).

### ***Research Context***

This study was conducted at the Faculty of Business Administration at a public university in Northern Vietnam. The university implements EMI instruction through a bilingual education policy requiring at least 30% of specialized courses to be taught in English. The faculty offers both full EMI and partial EMI courses across various business-related majors, including Marketing, Finance, and International Business. In full EMI courses, all materials and instruction are delivered in English, while partial EMI courses utilize both English and Vietnamese. Faculty members teaching EMI courses are expected to have a minimum English proficiency of IELTS 6.5 or equivalent. Students must demonstrate English proficiency equivalent to IELTS 5.5 to enroll in EMI courses. The faculty provides additional English language support through specialized Business English courses and weekly English conversation clubs. This context can be viewed as broadly representative of EMI implementation in Vietnamese higher education, where institutions seek to balance internationalization goals with local educational needs.

### ***Participants***

Participants were selected through stratified random sampling to help ensure representation across years of study and EMI programs. The sample comprised 320 business administration students. An a priori power analysis using G\*Power 3.1 indicated that a minimum sample size of 287 would be required to detect medium effects ( $f^2 = 0.15$ ) in multiple regression analyses (F-test family) with  $\alpha = 0.05$ , power  $(1-\beta) = 0.95$ , and seven predictors. Of these participants, 57.8% ( $n = 185$ ) were female and 42.2% ( $n = 135$ ) were male, with ages ranging from 18 to 22 years ( $M = 20.3$ ,  $SD = 1.2$ ). The sample distribution across academic years was as follows: first year ( $n = 82$ , 25.6%), second year ( $n = 86$ , 26.9%), third year ( $n = 78$ , 24.4%), and final year ( $n = 74$ , 23.1%). All participants were enrolled in at least two EMI courses per semester, with self-reported English proficiency levels ranging from IELTS 5.5 to 7.0 ( $M = 6.2$ ,  $SD = 0.5$ ).

For the qualitative phase, 20 students were purposively selected based on their questionnaire responses to represent varying levels of motivation and anxiety. This sample included five students from each academic year, with balanced gender representation (11 females, 9 males). Selection criteria included willingness to participate in interviews and ability to articulate their EMI experiences.

## ***Research Instruments***

Two main instruments were employed in this study: quantitative questionnaires and qualitative interview protocols. The quantitative component consisted of two questionnaires: the EMI Motivation Questionnaire and the EMI Anxiety Scale. The EMI Motivation Questionnaire was adapted from Iwaniec and Wang's (2022) instrument, which has been validated in Asian higher education contexts. The questionnaire comprises 38 items across seven dimensions measured on a six-point Likert scale (1 = "strongly disagree" to 6 = "strongly agree"). The dimensions are enjoyment (6 items), ideal bilingual professional self (5 items), instrumentality (4 items), international orientation (6 items), learning subject-specific language and content (7 items), ought-to EMI self (5 items), and EMI pedagogy (5 items). Sample items include "I want to study through English because I really enjoy learning English" (enjoyment) and "Studying my course through English will give me more chances to get a secure job" (instrumentality).

The EMI Anxiety Scale was adapted from Horwitz et al.'s (1986) Foreign Language Classroom Anxiety Scale, with modifications to reflect the EMI context. The scale contains 25 items measuring three dimensions: communication apprehension (12 items), fear of negative evaluation (8 items), and test anxiety (5 items). Sample items include "I get nervous and confused when speaking in my EMI class" and "I perceive peer pressure in the EMI learning process." Both questionnaires underwent translation and back-translation procedures involving three bilingual experts to help ensure linguistic and cultural equivalence between the English and Vietnamese versions.

For RQ2, factors influencing EMI motivation and anxiety were identified through multiple approaches. English proficiency levels were assessed through self-reported IELTS-equivalent scores collected via a demographic questionnaire. Pedagogical factors were examined through questionnaire items addressing experiences of teaching methods and assessment preferences. Professional identity factors were explored through career orientation items and qualitative interview responses focusing on professional development concerns.

For the qualitative phase, semi-structured interviews were developed to explore emerging themes in greater depth. The interview protocol consisted of 12 core open-ended questions: four focusing on motivational development, four examining anxiety experiences, and four exploring influencing factors. Sample questions include "How has your motivation to study through EMI changed since you began your program?" and "What factors influence your anxiety levels in EMI classes?" The protocol was validated through expert review by three EMI researchers and pilot-tested with five students. All interviews

were conducted in Vietnamese to allow participants to express themselves as fully as possible.

### ***Data Collection Procedures***

The quantitative phase began in the first week of August 2024 (Week 1 of the semester). During this phase, the first administration of questionnaires was delivered via Qualtrics. The same questionnaires were administered again in Week 7 (mid-semester) and Week 15 (end of semester) to track changes in motivation and anxiety levels over time. Prior to each administration, participants received detailed information about the study's purpose and provided written consent. To help minimize response bias, questionnaires were available in both English and Vietnamese, and participants could choose their preferred language. Each questionnaire administration took approximately 20–25 minutes to complete. Response rates were 94.1% (Week 1), 91.3% (Week 7), and 89.4% (Week 15).

The qualitative phase commenced in Week 9, after preliminary analysis of the mid-semester quantitative data. Semi-structured interviews were conducted individually in private meeting rooms at the faculty. Each session lasted approximately 45–60 minutes. Following Dörnyei's (2007) recommendations for qualitative interviews, participants were encouraged to use their preferred language to support rich, detailed responses. All interviews were audio-recorded with participants' written permission and transcribed verbatim within 48 hours. Vietnamese interviews were transcribed in Vietnamese and then translated into English by two independent translators, following Brislin's (1970) back-translation procedure to enhance accuracy. Member checking was conducted by sharing interview transcripts with participants for verification and clarification. To maintain confidentiality, all participants were assigned pseudonyms and identifying information was removed from the data.

### ***Data Analysis***

Quantitative data were analyzed using SPSS (Version 28.0). Confirmatory factor analysis was conducted in AMOS (Version 24.0) to evaluate the factor structure of the adapted questionnaires. For RQ1 (temporal development of motivation and anxiety), repeated-measures MANOVA was used to examine changes across three time points. Motivation and anxiety dimensions served as dependent variables, and time was treated as the independent variable. When multivariate effects were significant, follow-up univariate analyses were conducted using repeated-measures ANOVA to identify specific patterns within each construct.

For RQ2 (factors influencing motivation and anxiety), hierarchical multiple regression analyses were performed. Motivation and anxiety composite scores served as dependent variables. Independent variables were English proficiency levels (linguistic factor), teaching method preferences and assessment experiences (pedagogical factors), and career-orientation scores (professional identity factor). Variables were entered hierarchically to examine the unique contribution of each factor category to the explained variance.

Qualitative data were analyzed using Braun and Clarke's (2006) six-step thematic analysis framework in NVivo 13. Initial coding was conducted independently by two researchers, and interrater reliability of .89 (Cohen's kappa) was obtained. The analysis followed an inductive approach so that themes emerged from the data rather than being imposed by predetermined categories. Themes were refined through constant comparison until thematic saturation appeared to have been reached.

Mixed-methods integration followed Creswell and Plano Clark's (2017) joint-display approach. Quantitative findings regarding temporal patterns and factor influences were compared with qualitative themes to provide explanatory depth. Convergent findings were used to strengthen interpretations, whereas divergent results highlighted areas that may warrant further investigation. This integration strategy allowed quantitative patterns to be interpreted through participants' reported experiences, while qualitative insights remained closely linked to the empirical trends identified in the survey data.

### ***Validity and Reliability***

Several measures were implemented to help ensure research quality. For the quantitative data, construct validity was examined through confirmatory factor analysis using AMOS 24.0. The EMI Motivation model showed good fit to the data:  $\chi^2(467) = 856.34$ ,  $\chi^2/df = 1.83$ , CFI = .96, RMSEA = .051, 90% CI [.046, .056], SRMR = .048. Factor loadings ranged from .64 to .89 ( $M = .76$ ). The EMI Anxiety model also showed acceptable fit:  $\chi^2(272) = 402.18$ ,  $\chi^2/df = 1.48$ , CFI = .97, RMSEA = .039, 90% CI [.033, .045], SRMR = .042. Factor loadings ranged from .61 to .87 ( $M = .74$ ). All fit indices were within commonly recommended thresholds (Hu & Bentler, 1999), and all factor loadings were significant,  $ps < .001$ . Taken together, these indices support the factorial validity of the adapted instruments.

Reliability analysis indicated good internal consistency for all dimensions. For the EMI Motivation Questionnaire, Cronbach's alpha coefficients were: enjoyment ( $\alpha = .87$ ), ideal bilingual professional self ( $\alpha = .84$ ), instrumentality ( $\alpha = .82$ ), international orientation ( $\alpha = .85$ ), subject-specific learning ( $\alpha = .88$ ), ought-to-EMI self ( $\alpha = .81$ ), and EMI pedagogy ( $\alpha = .86$ ). For the EMI Anxiety Scale, Cronbach's alpha coefficients were: communication apprehension

( $\alpha = .91$ ), fear of negative evaluation ( $\alpha = .88$ ), and test anxiety ( $\alpha = .83$ ). All values were above the commonly recommended threshold of .80, suggesting satisfactory internal consistency (Nunnally & Bernstein, 1994).

For the qualitative data, trustworthiness was enhanced through researcher triangulation. Two independent coders conducted the initial coding and achieved interrater reliability of .89 (Cohen's kappa). Member checking involved sharing interview transcripts with participants for verification and clarification. An audit trail documented coding decisions and theme development procedures (Lincoln & Guba, 1985).

Mixed-methods legitimation was considered through sample integration, inside–outside legitimation, and paradigmatic mixing (Onwuegbuzie & Johnson, 2006). All analytical procedures were documented in detail to facilitate potential replicability.

## Results

### *Development of EMI Motivation Over the Semester*

Analyses indicated complex patterns of change in EMI motivation across the semester, with distinct variations among different motivational components. A repeated-measures MANOVA showed a significant multivariate effect for time, Wilks'  $\lambda = .86$ ,  $F(14, 306) = 12.34$ ,  $p < .001$ , partial  $\eta^2 = .14$ . Subsequent univariate analyses showed specific patterns within each motivational dimension (see Table 1).

**Table 1**

*Changes in EMI Motivation Dimensions Across Time Points*

Dimension	Beginning <i>M(SD)</i>	Middle <i>M(SD)</i>	End <i>M(SD)</i>	<i>F(2,318)</i>	<i>p</i>	partial $\eta^2$
Enjoyment	3.82(0.74)	3.56(0.82)	3.41(0.88)	15.34	<.001***	.091
Ideal Bilingual Professional Self	4.12(0.68)	4.08(0.71)	4.15(0.67)	1.87	.156	.012
Instrumentality	4.28(0.63)	4.31(0.59)	4.35(0.58)	2.21	.112	.014
International Orientation	4.05(0.71)	4.11(0.68)	4.18(0.65)	3.45	.033*	.022
Subject-Specific Learning	3.95(0.69)	3.78(0.75)	3.62(0.81)	12.87	<.001***	.075
Ought-to EMI Self	3.88(0.77)	3.92(0.74)	3.90(0.75)	0.89	.412	.006
EMI Pedagogy	3.95(0.82)	3.45(0.88)	3.28(0.92)	14.56	<.001***	.084

Note. \* $p < .05$ . \*\*\* $p < .001$ .

Immediate experiential motivational dimensions showed statistically significant declines across the semester. Enjoyment,  $F(2, 318) = 15.34$ ,  $p < .001$ , partial  $\eta^2 = .091$ , subject-specific learning motivation,  $F(2, 318) = 12.87$ ,  $p < .001$ , partial  $\eta^2 = .075$ , and EMI pedagogy perceptions,  $F(2, 318) = 14.56$ ,  $p < .001$ , partial  $\eta^2 = .084$ , all decreased over time. Post hoc analyses with Bonferroni correction indicated that the most pronounced changes occurred between the beginning and middle of the semester ( $p < .001$ ). Interview analysis suggested a decline in academic enthusiasm among 12 participants, as illustrated by S15: “The initial excitement faded when business concepts became more complex, making it challenging to maintain enthusiasm while struggling with both content and language.”

Future-oriented motivational components appeared relatively stable throughout the semester despite the declining immediate experiences. Ideal bilingual professional self,  $F(2, 318) = 1.87$ ,  $p = .156$ , instrumentality,  $F(2, 318) = 2.21$ ,  $p = .112$ , and ought-to EMI self,  $F(2, 318) = 0.89$ ,  $p = .412$ , showed no statistically significant changes across time points, with effect sizes indicating negligible variation (partial  $\eta^2 < .015$ ). Career aspiration resilience featured in 15 participants’ responses, for example: “Current difficulties don’t change my vision of becoming an international business professional” (S11). In addition, eight participants described a transformation in motivation sources within the ought-to EMI self-dimension, such as “External pressure from family initially drove me, but now I’ve internalized the importance of EMI for my career development” (S4).

International orientation uniquely increased among the motivational dimensions, creating a contrasting pattern with other academic-related components. This dimension showed a statistically significant increase,  $F(2, 318) = 3.45$ ,  $p = .033$ , partial  $\eta^2 = .022$ , with post hoc comparisons indicating improvement between the beginning and end of the semester ( $p = .028$ ,  $d = 0.19$ ). Qualitative accounts from 14 participants pointed to enhanced global business awareness, for instance: “Each case study of multinational companies strengthens my understanding of why English is essential for global business operations” (S19). This positive trajectory occurred alongside the decline in subject-specific learning motivation.

The temporal analysis suggested that the main motivational changes occurred during the first half of the semester, with relative stabilization after mid-semester across all dimensions. Effect sizes ranged from negligible for stable components (partial  $\eta^2 = .006$ – $.014$ ) to large for declining components (partial  $\eta^2 = .075$ – $.091$ ). The growing component showed a small but potentially meaningful effect (partial  $\eta^2 = .022$ ).

### ***Development of EMI Anxiety Over the Semester***

Analysis of EMI anxiety indicated statistically significant changes across the semester, with distinct patterns emerging among different anxiety components. A repeated-measures MANOVA showed a significant multivariate effect

for time, Wilks'  $\lambda = .82$ ,  $F(6, 314) = 15.67$ ,  $p < .001$ , partial  $\eta^2 = .18$ . Table 2 presents the univariate analysis results for each anxiety component.

**Table 2**  
*Changes in EMI Anxiety Components Across Time Points*

Component	Beginning <i>M(SD)</i>	Middle <i>M(SD)</i>	End <i>M(SD)</i>	<i>F(2,318)</i>	<i>p</i>	partial $\eta^2$
Communication Apprehension	3.25(0.82)	3.68(0.79)	3.42(0.85)	16.45	<.001***	.094
Fear of Negative Evaluation	3.42(0.76)	3.85(0.72)	3.58(0.78)	14.23	<.001***	.082
Test Anxiety	3.38(0.88)	3.92(0.75)	3.75(0.82)	18.34	<.001***	.103

Note. \*\*\* $p < .001$

Communication apprehension demonstrated an inverted U-shaped pattern across the semester,  $F(2, 318) = 16.45$ ,  $p < .001$ , partial  $\eta^2 = .094$ , peaking at mid-semester before showing partial recovery. Post hoc analyses revealed significant increases from beginning to middle,  $p < .001$ , and significant decreases from middle to end,  $p < .01$ . However, end-semester levels remained significantly higher than initial levels,  $p < .05$ . Interview patterns from 13 participants supported this trajectory: “Mid-semester was most challenging because business presentations required more sophisticated vocabulary and concepts” (S8). However, 9 participants described persistent communication difficulties: “Even after adjusting to regular discussions, expressing complex business ideas in English remained difficult” (S16).

Fear of negative evaluation followed a similar inverted U-shaped trajectory,  $F(2, 318) = 14.23$ ,  $p < .001$ , partial  $\eta^2 = .082$ , with fluctuations aligning closely with assessment periods. Post hoc analyses confirmed significant increases from beginning to middle,  $p < .001$ , and decreases from middle to end,  $p < .01$ . Professional image concerns emerged from 11 participants' responses: “I worry that language mistakes during presentations might make me appear less professionally competent” (S19). This anxiety component appeared particularly sensitive to high-stakes academic evaluations that required English production.

Test anxiety exhibited the most pronounced and persistent elevation,  $F(2, 318) = 18.34$ ,  $p < .001$ , partial  $\eta^2 = .103$ , with more limited recovery after mid-semester than was observed for the other components. Significant increases occurred from beginning to middle,  $p < .001$ . However, the decrease from middle to end was minimal and non-significant,  $p = .08$ . Assessment format analysis indicated notable differences. Qualitative assignments generated higher anxiety than quantitative assessments,  $t(319) = 4.56$ ,  $p < .001$ ,  $d = 0.48$ . Sixteen participants described sustained pressure in analytical tasks: “Writing



analytical reports creates intense pressure because they demand both business knowledge and advanced language skills” (S13).

Correlation analysis examined relationships between anxiety components across time points. Early communication apprehension correlated significantly with later test anxiety,  $r = .38, p < .001$ . This pattern suggests potential cascading effects, in which initial communication difficulties may contribute to subsequent assessment anxiety. However, 7 participants reported developing adaptive strategies: “Creating bilingual terminology lists and extensive presentation practice helped manage anxiety levels” (S12). These coping mechanisms appeared more effective for communication apprehension than for test anxiety.

### ***Factors Influencing EMI Motivation and Anxiety***

Hierarchical multiple regression analyses examined the relative contributions of three factor categories to EMI motivation and anxiety levels. The regression models explained significant variance in motivation,  $R^2 = .48, F(7, 312) = 41.2, p < .001$ . They also accounted for significant variance in anxiety,  $R^2 = .52, F(7, 312) = 48.6, p < .001$ . Table 3 presents the standardized regression coefficients for each factor category’s contribution to the dependent variables.

**Table 3**

*Hierarchical Regression Results for Factors Influencing EMI Motivation and Anxiety*

<b>Factor Category</b>	<b>Motivation <math>\beta</math></b>	<b>Motivation <math>p</math></b>	<b>Anxiety <math>\beta</math></b>	<b>Anxiety <math>p</math></b>
Linguistic Factors:				
English Proficiency	.42	<.001***	-.38	<.001***
Pedagogical Factors				
Interactive Teaching Methods	.35	<.001***	.16	.02*
Assessment Design	.31	<.001***	.28	<.001***
Professional Identity Factors				
Career Orientation	.39	<.001***	-.12	.08
Professional Image Concerns	-.18	.01*	.33	<.001***

*Note.* \* $p < .05$ . \*\*\* $p < .001$ .

Linguistic factors emerged as the strongest predictors of both constructs. English proficiency was a substantial predictor of motivation ( $\beta = .42, p < .001$ ) and anxiety ( $\beta = -.38, p < .001$ ). Students with higher proficiency levels reported more stable motivation patterns and lower anxiety across all components. Business-specific language demands appeared to create additional complexity, as described by 15 participants: “Understanding general English isn’t enough; the specialized vocabulary in finance and marketing creates additional pressure” (S17). However, 12 participants with higher proficiency

still reported notable anxiety during complex business presentations. This pattern suggests that linguistic competence alone may not eliminate EMI-related challenges.

Pedagogical factors showed differential effects on motivation and anxiety outcomes. Interactive teaching methods positively predicted motivation ( $\beta = .35, p < .001$ ) and had a weaker but still statistically significant effect on anxiety reduction ( $\beta = .16, p = .02$ ). Assessment design also influenced both constructs. Project-based assessments were associated with higher motivation ( $\beta = .31, p < .001$ ) but also with elevated anxiety ( $\beta = .28, p < .001$ ) compared with traditional examinations. Interview analysis illustrated this dual nature among 14 participants: “Group discussions about business cases are engaging but stressful because they require quick thinking in English” (S9). Traditional lecture-based approaches were criticized by 18 participants for offering limited interaction opportunities, although some students acknowledged that these approaches reduced immediate anxiety.

Professional identity factors showed contrasting influences on motivation and anxiety. Career orientation strongly predicted motivation maintenance ( $\beta = .39, p < .001$ ) but did not significantly predict anxiety levels ( $\beta = -.12, p = .08$ ). In contrast, professional image concerns negatively predicted motivation ( $\beta = -.18, p = .01$ ) while contributing significantly to anxiety ( $\beta = .33, p < .001$ ). This duality appeared in 16 participants’ accounts: “Knowing English is essential for my business career keeps me motivated, but it also increases pressure to perform professionally in class” (S14). Eight participants described how professional aspirations sustained them through difficult periods, whereas 11 reported heightened anxiety about appearing incompetent during English-medium professional tasks.

Factor interaction analysis suggested complex relationships among the three categories. Higher English proficiency appeared to moderate the relationship between pedagogical approaches and student outcomes. More proficient students seemed to benefit more from interactive methods, while less proficient students reported greater anxiety in those settings. Professional identity factors interacted with both linguistic and pedagogical elements, creating reinforcing cycles in which career motivation enhanced engagement with challenging pedagogical approaches despite associated anxiety increases. These interaction patterns were evident among 13 participants who demonstrated resilience despite concurrently high motivation and anxiety levels.

## **Discussion**

### ***Development Patterns of EMI Motivation in Business Education***

The three motivational trajectories observed in this study offer insights into how Dörnyei’s (2003) L2 Motivational Self System operates in business education contexts. The stability of future-oriented components (ideal bilingual professional self and instrumentality), alongside declining immediate experiences, appears to contrast with Li’s (2024) findings of uniform motivational decline

in Chinese EMI contexts. This difference may reflect the stronger career focus inherent in business programs, where professional English competence directly impacts employment prospects. The pattern suggests that when language learning is explicitly linked to career advancement, certain motivational components may demonstrate resilience against immediate academic difficulties.

The decline in immediate experiential motivation is broadly consistent with previous Vietnamese EMI research. Le and Nguyen (2022) documented similar motivational fluctuations during periods of increased academic complexity, and Nguyen and Serco (2021) found that Vietnamese students tended to maintain intrinsic motivation despite challenges. The current findings help reconcile these apparently contradictory results by indicating that different motivational components respond in distinct ways to EMI challenges. Immediate learning experiences may weaken, whereas career-oriented motivations can remain relatively stable. This pattern suggests that Vietnamese business students develop differentiated motivational responses based on the perceived relevance of EMI to their professional goals.

The increase in international orientation represents a noteworthy finding that differs from the general pattern of motivational decline reported in broader EMI literature. This growth occurred despite declining subject-specific learning motivation. It suggests that exposure to international business content may enhance students' global awareness even when they struggle with immediate academic tasks. Zhang and Pladevall-Ballester (2023) identified similar patterns among Chinese business students, where international exposure strengthened career motivation. The Vietnamese context may intensify this effect, possibly reflecting the country's rapid economic integration and growing emphasis on international business competency.

The cultural dimension of motivational development emerges clearly in the ought-to EMI self-findings. While quantitative measures remained stable, qualitative data indicated a shift from external family pressure to more internalized professional recognition. This process reflects Vietnam's cultural emphasis on family expectations while illustrating how students adapt these influences to personal career goals. Huang's (2024) research in Taiwan reported similar shifts from external to internal forms of motivation. This pattern may be characteristic of Confucian-influenced educational contexts, where family obligations gradually align with personal aspirations.

These findings may contribute to EMI motivation theory by suggesting that professional education contexts create distinct motivational dynamics. The differentiated responses of various motivational components indicate that broad EMI motivation models may not fully capture patterns in specialized educational settings. The emphasis on career preparation in business programs appears to create motivational buffers that protect some components while leaving others more vulnerable to academic pressures. This understanding implies that EMI implementation in professional education may require closer attention to how career relevance shapes motivational development over time.

Overall, the findings provide empirical support for the usefulness of Dörnyei's (2003) L2 Motivational Self System while illustrating how its components can operate differently in professional EMI contexts. The Ideal L2 Self, reflected in the stable ideal bilingual professional self and the growing international orientation dimensions, showed notable resilience despite declining immediate enjoyment. This future-oriented self-concept remained intact even when current learning experiences became challenging. It supports the view that ideal self-guides can help sustain motivation during difficult periods in career-focused programs. The Ought-to L2 Self appeared to undergo transformation rather than simple stability, as students gradually internalized external family expectations and reframed them as personal professional commitments. This evolution suggests that, in business education contexts, obligatory motivation can merge with aspirational motivation when students perceive alignment between external expectations and career goals. The L2 Learning Experience proved most vulnerable to immediate academic pressures, as indicated by declining enjoyment and less positive pedagogy perceptions. However, the concurrent growth in international orientation suggests that professional education contexts may create bifurcated learning experiences: on the one hand, demanding classroom challenges; on the other, broader professional development opportunities. This bifurcation may represent a useful refinement to L2MSS applications in specialized academic settings.

### ***Development Patterns of EMI Anxiety in Business Education***

The temporal development of EMI anxiety components reveals distinct patterns that help clarify how business education contexts shape student psychological experiences. Communication apprehension and fear of negative evaluation followed inverted U-shaped trajectories, peaking at mid-semester before partially recovering, whereas test anxiety showed more persistent elevation throughout the program. These differentiated patterns suggest that business EMI anxiety may operate through multiple mechanisms rather than through a uniform response to language challenges. This observation aligns with Horwitz et al.'s (1986) original conceptualization of anxiety as multidimensional, while also indicating that professional education contexts can influence each component in different ways.

The persistence of test anxiety, in contrast to the partial recovery of communication apprehension, suggests that assessment-related concerns may be less amenable to natural adaptation processes than interpersonal communication challenges. Le's (2023) research among Vietnamese EMI students similarly documented high assessment anxiety, although without the temporal focus provided here. The present findings extend this work by indicating that qualitative business assessments may create particularly sustained anxiety compared with quantitative formats. This pattern may reflect the combined linguistic and analytical demands of business writing tasks, which require students to demonstrate both content knowledge and professional discourse competence.

The relationship between early communication difficulties and later test anxiety offers additional insight into how business EMI anxiety can develop over time. Students who experienced greater difficulty with initial communication tasks were more likely to report heightened assessment anxiety later. This pattern suggests that early negative experiences may establish self-perceptions and anxiety trajectories that influence subsequent academic performance. The finding resonates with Nguyen's (2023) identification of internal psychological processes as primary anxiety sources among Vietnamese EMI students. It also suggests that self-perceived competence may be particularly salient in professional education contexts where career implications are explicit.

The emergence of professional competence concerns in student interviews constitutes an important observation that appears to extend existing EMI anxiety frameworks. Students reported fears about appearing professionally incompetent during English-medium tasks, suggesting that career-oriented programs may generate anxiety sources beyond those traditionally documented in EMI anxiety research. While much of the current literature emphasizes linguistic and academic concerns (Horwitz et al., 1986; Le, 2023), the present findings indicate that perceived professional credibility may represent an additional anxiety dimension in business education contexts. This observation is consistent with broader arguments that different academic disciplines create distinct EMI challenges (UçAr & Soruc, 2018).

The development of adaptive coping strategies among some students, particularly in relation to communication apprehension, indicates that business EMI anxiety is not uniformly intractable. However, the limited effectiveness of these strategies for test anxiety suggests that different anxiety components may require tailored forms of support. This understanding has implications for EMI program design. It points to the value of anxiety interventions that target specific components rather than treating EMI anxiety as a single, undifferentiated construct. The persistence of test anxiety, despite improvements in communication-related anxiety, also suggests that assessment design and academic support may warrant particular attention in business EMI contexts.

### ***Interplay of Factors in Business EMI Context***

The three factor categories collectively explained substantial variance in student motivation and anxiety. This pattern suggests that EMI experiences may result from multiple interacting influences rather than single determinants. English proficiency emerged as the strongest predictor for both constructs, broadly consistent with findings by Curle et al. (2020) across various EMI contexts. However, the persistence of anxiety among higher proficiency students during complex business presentations suggests that specialized discourse demands create challenges beyond general language competence. This observation aligns with research indicating that academic language proficiency can differ from professional communication requirements in business settings.

Pedagogical factors revealed apparent contradictions that further illustrate the complexity of business EMI instruction. Interactive teaching methods enhanced student motivation while providing only limited anxiety relief, creating a tension between engagement and comfort. Similarly, project-based assessments increased both motivation and anxiety simultaneously. This pattern suggests that authentic professional tasks may generate dual psychological responses. These patterns appear to differ from Le and Nguyen's (2022) findings of more consistent pedagogical effects. One possible explanation is the heightened salience of professional competence demonstration in business education contexts.

Professional identity factors created the most complex relationships. Career orientation strengthened motivation, whereas professional image concerns elevated anxiety levels. This finding resonates with Zhang and Pladevall-Ballester's (2023) identification of strong instrumental motivation among business students. At the same time, the current study suggests that the same career focus can simultaneously protect and undermine psychological well-being. This paradox implies that Vietnamese business students may experience professional English competence as both opportunity and threat. It may also reflect the high-stakes nature of English proficiency for career advancement in Vietnam's developing economy.

Factor interactions provided additional insight into individual variation in EMI experiences. English proficiency appeared to moderate the relationship between pedagogical approaches and student outcomes. More proficient students tended to benefit from interactive methods, whereas less proficient students reported greater anxiety in these same contexts. This interaction may help explain inconsistent findings in EMI pedagogy research, where similar teaching approaches yield different results across studies and contexts. The pattern suggests that pedagogical effectiveness may depend heavily on student linguistic preparation rather than on universal design principles. These findings point to a need for context-sensitive approaches to EMI program design and support. The factor interactions observed in Vietnamese business education may not apply universally to other professional programs or cultural contexts. They limit generalizability while providing specific insights for similar settings. The complexity of factor relationships also suggests that simple interventions targeting single factors may often prove insufficient, and that integrated approaches addressing linguistic, pedagogical, and professional dimensions simultaneously are likely to be more productive. Future research should examine whether comparable factor patterns emerge in other professional education contexts before broader theoretical conclusions are drawn.

## **Conclusion**

This mixed-methods study examined the temporal development of EMI motivation and anxiety among Vietnamese business administration students over one semester. The analysis indicated distinct patterns shaped by professional

aspirations, academic demands, and cultural influences. Three motivational trajectories emerged: declining immediate experiential motivation, stable future-oriented components, and growing international orientation. Anxiety patterns were also differentiated, with communication apprehension and fear of negative evaluation following inverted U-shaped trajectories, whereas test anxiety showed more persistent elevation. Linguistic competence, pedagogical approaches, and professional identity development appeared as key influences on EMI experiences, with professional aspirations functioning both as motivational resources and as sources of anxiety.

The differentiated motivational responses provide support for Dörnyei's (2003) L2 Motivational Self System (L2MSS), while suggesting that professional education contexts may create distinct interaction patterns among its components. The observed transformation of the Ought-to L2 Self into a more idealized professional self can be seen as a possible refinement of L2MSS in career-focused settings. The anxiety findings illustrate how the dual language-content demands of business education affect different anxiety components in different ways. Assessment-related concerns seemed less responsive to natural adaptation than communication-related difficulties. The persistent elevation of test anxiety alongside partial recovery in communication apprehension suggests that Horwitz et al.'s (1986) three-component model may benefit from temporal specification, with components following distinct developmental trajectories rather than a single pattern. Taken together, these contributions may extend understanding of how EMI-related psychological constructs operate in specialized professional education rather than in more general academic contexts, although further work is needed to examine transferability to other settings.

The findings also point to several practical implications for EMI program design and implementation. First, support systems may need to distinguish between experiential and identity-based motivation. Immediate classroom interventions could target enjoyment and perceived pedagogy quality, while parallel initiatives reinforce career connections through industry partnerships, international business projects, and alumni mentoring. This dual approach could address declining immediate enjoyment while consolidating future-oriented motivational anchors. Second, the persistent elevation of test anxiety indicates that assessment design warrants careful attention. Business EMI programs might consider scaffolded assessment sequences. Early-semester evaluations could focus primarily on content knowledge with reduced linguistic complexity, with language demands gradually increasing as students gain confidence. Portfolio-based approaches that combine multiple assessment formats may help distribute anxiety across tasks rather than concentrating pressure in single high-stakes examinations. Third, the proficiency-dependent effectiveness of pedagogical approaches suggests a need for differentiated instruction. Higher-proficiency students seem to benefit from authentic professional communication tasks, whereas lower-proficiency students require

more structured linguistic and procedural support before engaging in highly interactive activities. Pre-semester English proficiency assessment could therefore inform pedagogical planning, rather than functioning solely as an entry criterion. Finally, institutional support may need to extend beyond general English language development to address professional identity concerns. Business communication workshops that explicitly focus on managing professional image in English could help students reframe language mistakes as part of normal professional growth rather than as threats to perceived competence.

Several limitations should be acknowledged. The single-site design constrains the extent to which the findings can be generalized to other Vietnamese universities with different EMI models, student profiles, or resource conditions. The one-semester timeframe captures short-term developmental patterns but not longer-term trajectories across full degree programs or into early career stages. The focus on business administration limits inferences about other professional fields where EMI demands may differ. Self-reported English proficiency measures do not offer the precision of direct standardized assessments. In addition, the study examined naturally occurring EMI instruction without experimental control of pedagogical variables, which restricts causal claims about teaching method effects.

Future research could address these limitations in several ways. Multi-site comparative studies across Vietnamese universities would help clarify which findings reflect institution-specific conditions and which reflect broader national EMI dynamics. Longitudinal research that follows students from program entry through graduation and early employment would illuminate whether motivational anchors sustain engagement over longer periods and whether test anxiety diminishes with extended exposure. Intervention studies that trial scaffolded assessment designs or differentiated instructional approaches could provide stronger evidence for specific pedagogical recommendations. Cross-disciplinary comparisons among business, STEM, and humanities EMI programs would help determine whether the observed links between career motivation and anxiety operate similarly across fields. Qualitative case studies of students who maintain relatively high motivation and comparatively low anxiety despite challenges could identify resilience factors to guide targeted support.

Overall, this research contributes to understanding EMI experiences in professional education by illustrating how career preparation contexts may generate distinctive psychological dynamics that differ from those in general academic settings. The complex interactions among language learning, content mastery, and professional identity development highlight the need for continued investigation. Such work can inform more context-sensitive EMI implementation strategies in specialized higher education programs.



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