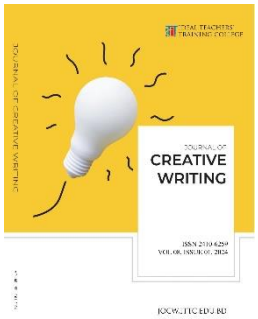

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UNDERGRADUATE STUDENTS' READINESS TOWARD ENGLISH MEDIUM INSTRUCTION IN HIGHER STUDIES IN BANGLADESH: A COMPARISON OF POSSIBILITIES OF PUBLIC AND PRIVATE UNIVERSITIES' INTERNATIONALIZATION

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ABSTRACT
Assessing students' readiness for English Medium Instruction (EMI) is crucial for understanding the efficacy of EMI as a pathway to internationalization in non-native English-speaking higher education contexts. This study investigates undergraduate students' readiness for EMI in higher education in Bangladesh, compares the preparedness of students of public and private universities. The objective is to assess how readiness—defined by perceived ability, engagement, attitudes toward EMI, and perceived challenges—varies across different academic years and institutional types. Using a cross-sectional correlational design, data were collected from 267 undergraduate students from public and private universities through a structured survey questionnaire. Key variables included perceived ability to succeed in EMI (PASE), attitude towards EMI and internationalization (ATEI), learning engagement of students in EMI (LESE), and perceived challenges of facing EMI (PCFE). Independent samples t-tests, one-way ANOVA, and multiple regression analyses were employed. Results

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showed no significant differences in EMI readiness across the four academic years, meaning that progression in readiness is limited despite increased exposure to EMI. The t-test revealed significant differences only in perceived challenges (PCFE) between public and private universities, with private university students reporting higher challenges. Regression analysis indicated that PASE, ATEI, and PCFE significantly predicted LESE, with ATEI having the strongest impact on learning engagement. These findings suggest that sustained exposure to EMI alone may be insufficient to enhance readiness, especially without institutional language support and resources. Therefore, universities must take care of the strategic goals of internationalization in higher education.

KEYWORDS
English Medium Instruction (EMI), Student Readiness, Internationalization in Higher Education, Learning Engagement, Public vs. Private Universities

INTRODUCTION

The use of English as a Medium of Instruction (EMI) has gained prominence in many non-English speaking countries as a response to the increasing demand for global competitiveness and internationalization in higher education. In Bangladesh, the adoption of EMI, particularly in higher education institutions, let the students to prepare for global career opportunities. EMI also improves the international standard of universities. However, the readiness of students to adjust with EMI, especially in terms of language proficiency, learning engagement, and institutional support, remains a critical concern. This study seeks to assess undergraduate students' readiness toward EMI in both public and private universities, and highlights differences in institutional preparedness and the implications for internationalization.

Furthermore, by comparing students in different years (1st through 4th), this study can investigate whether there is indeed a developmental progression in readiness for EMI. English competency is a skill that develops through consistent practice over time. In the context of EMI, as students progress through their academic years, their perceived abilities, attitudes, and engagement improve, while challenges diminish. This logical progression is supported by various language acquisition theories, educational psychology frameworks, and empirical studies on EMI. For example, previous studies have shown that language learning follows a developmental trajectory (Lightbown & Spada, 2006), where learners' abilities improve with time and practice, which supports the rationale for comparing different student groups. Furthermore, such comparisons can provide insights into whether certain groups (e.g., 1st-year students) require additional support to reduce challenges and enhance readiness for EMI.

Despite the growing adoption of EMI in Bangladeshi higher education institutions, there is limited empirical research on students' readiness to engage with this medium of instruction, especially when comparing public and private universities. The varying levels of support and resources available across these institutions may impact students' ability to succeed academically and prepare for future international opportunities. This study aims to bridge this gap by investigating the factors influencing students' readiness, attitudes, and challenges toward EMI, and how these vary between public and private universities.

CONCEPTUAL FRAMEWORK

This study posits that English competency is a matter of practice and takes time. This position is supported by many educational empirical studies. All past literature emphasized the importance of continuous exposure and active practice in language acquisition. All of the following concepts restrengthen the conceptual framework of this study.

ENGLISH COMPETENCY AND PRACTICE

According to Krashen's Input Hypothesis (1985), second language acquisition occurs when learners are exposed to comprehensible input slightly beyond their current proficiency level. This input needs to be understood through contextual clues, and over time, this leads to internalizing language structures. This means that regular and consistent use of English in an academic setting, such as English Medium Instruction (EMI), facilitates gradual language acquisition through practice.

Similarly, Vygotsky's Social Development Theory (1978) also highlights the role of interaction in learning. Learners acquire language skills through social interactions, especially in environments where the target language (English) is regularly used for instruction and communication.

PROGRESSION OF SKILLS OVER ACADEMIC YEARS

As students move through their academic years, their exposure to English in EMI classes increases. Cummins (2000) finds difference between Basic Interpersonal Communicative Skills (BICS) and Cognitive Academic Language Proficiency (CALP). His thought suggests that academic language proficiency, which is required for understanding complex lectures and texts in EMI, develops over time with deliberate and continuous academic engagement. For example, in their first year, learners may rely more on BICS, but by the fourth year, they are expected to have developed CALP. This advancement of English enables the learners to understand complex academic content delivered in English.

Furthermore, the Language Learning Theory (Ellis, 1997) supports this idea too. According to him, language learning is a gradual process that benefits from exposure, practice, and feedback over time. Thus, in the context of EMI, learners' language skills improve progressively as they receive more exposure to the academic use of English throughout their program. Both thoughts are connected to the second hypothesis of this study.

ATTITUDE TOWARD EMI AND INTERNATIONALIZATION

Learners' attitudes toward EMI and internationalization improve over time as they become more comfortable with using English in academic settings. Dörnyei's Motivation Theory (2001) points out that motivation is a crucial factor in language learning. As learners progress through their university years, they often see the practical benefits of EMI, such as better preparation for global job markets. Therefore, their attitudes toward EMI should be enhanced.

LEARNING ENGAGEMENT IN EMI CLASSES

Engagement in learning tends to increase as students progress through their academic program too. They become more confident in their language abilities and adjust to the expectations of EMI. Schaufeli and Bakker's (2004) work on learning engagement describes engagement as consisting of dedication in academic work. As engagement increases, students are more likely to participate actively in discussions, complete assignments with greater effort, and feel a sense of achievement.

CHALLENGES TO EMI OVER TIME

The Affective Filter Hypothesis (Krashen, 1985) posits that learners' affective states—such as anxiety and self-confidence—can impact language acquisition. Early in their academic journey, students may face significant challenges including understanding course materials and engaging in discussions. However, over time, as their confidence and competence in English improve, these challenges are likely to decrease as their proficiency and comfort level with the language increase. Research on EMI in non-English speaking countries (Hamid et al., 2013) has shown that students who persist in EMI environments experience a gradual reduction in perceived challenges or gradual increase in perceived resilience.

VARIABLES OF STUDY

Based on the conceptual framework, this study has two types of variables. Independent variables are year of study and type of university, learners' perceived ability and skill of attending classes with EMI, attitude toward EMI, perceived challenges. In contrast, dependent variables are learning engagement, and institutional readiness. Learning engagement directly assesses readiness because they capture how students feel engaged in daily classes. Besides, institutional readiness is measured by perceived institutional comparison.

RESEARCH QUESTIONS

Based on the conceptual framework, this study answers the following research questions:

1. How does students' readiness for EMI differ between public and private university students?
2. What are the differences in students' readiness for English Medium Instruction (EMI) across different years of study (1st, 2nd, 3rd, and 4th year)?
3. What are the determinants of learning engagement in EMI among students, and how do perceived ability, attitude, and perceived challenges influence it?

These research questions collectively investigates the drivers of readiness based on the data of perceived skills, attitudes, and challenges to actual engagement. This can also help to identify which factors are most important for promoting successful adaptation to EMI.

LITERATURE REVIEW

The shift to EMI in non-native English-speaking countries, particularly in Asia, has been widely discussed in the context of internationalization and its implications for student learning outcomes. Studies suggest that EMI improves students' employability in the global market and enhances the international reputation of universities (Dearden, 2014). However, many students face challenges due to insufficient English language proficiency, lack of institutional support, and inadequate faculty training (Aguilar, 2017). In Bangladesh, research on EMI is still in its infancy. Few studies compares the readiness of students from public and private universities. Private universities, often perceived as more internationally oriented, may offer more robust support systems for EMI, while public universities face challenges such as resource limitations and resistance to change (Hamid et al., 2013).

EMI AS AN INDICATOR OF INTERNATIONALIZATION

The adoption of English as a Medium of Instruction (EMI) is considered as a key indicator of internationalization in higher education. EMI not only aims to enhance students' English language proficiency but also prepares them for global academic and career opportunities (Dearden, 2014). Many universities of non-native English-speaking countries have implemented EMI as part of their strategy to increase competitiveness on the global stage and attract international students (Aguilar, 2017). To position universities as potential players in the international education market introducing EMI inside and outside university's classroom is important (Hamid et al., 2013).

Research has shown that EMI creates such educational environment that is conducive to internationalization such as exposing students to a globalized curriculum and enhancing their intercultural competencies (Aguilar, 2017). Private universities in Bangladesh are often viewed as more internationally oriented. These have embraced EMI to attract both domestic and international students, as well as to improve graduates' employability in the global market (Hamid et al., 2013). However, this shift also presents challenges, as many students may lack adequate language skills to thrive in an EMI environment. Consequently, the success of EMI as an internationalization strategy is often contingent on institutional support, such as language resources and faculty training, which vary widely between public and private institutions (De Wit, 2013).

Moreover, the introduction of EMI as an internationalization tool is associated with the perceived benefits of better preparing students for participation in international collaborations and career opportunities. The shift to EMI is therefore not only a pedagogical decision but a strategic one aimed at positioning institutions in a globalized educational landscape (Dearden, 2014).

READINESS TOWARD EMI

Readiness for English as a Medium of Instruction (EMI) encompasses not only linguistic proficiency but also the psychological and behavioral readiness of students to engage with an English-based academic environment. Readiness in this context is multidimensional, incorporating language skills, motivational attitudes, and the ability to navigate challenges, all of which are essential to succeed in EMI settings (Dörnyei, 2001; Schunk et al., 2014). The following variables are critical in measuring students' readiness for EMI:

PERCEIVED ABILITY AND SKILL

Perceived ability in EMI reflects students' confidence in their linguistic capacity to function in an English-medium learning environment. This construct captures students' linguistic readiness, which includes their ability to understand lectures, engage in class discussions, and complete assignments in English. Research has highlighted that language proficiency is a fundamental aspect of success in EMI, as it directly impacts comprehension and academic performance (Macaro et al., 2018). High levels of perceived ability and language skills contribute to a student's academic self-efficacy, or belief in their capacity to succeed in specific tasks, which in turn fosters resilience and persistence in EMI (Bandura, 1997; Cummins, 2000).

ATTITUDES TOWARD EMI AND INTERNATIONALIZATION

Students' attitudes toward EMI and internationalization play a key role in their readiness. Positive attitudes foster motivation and a willingness to engage with the challenges associated with studying in a second language, ultimately enhancing readiness (Dörnyei, 2001). In the context of EMI, students who recognize the benefits of English for future career prospects and global engagement are often more receptive to EMI (Dearden, 2014). Furthermore, attitudes toward internationalization are closely linked to the global orientation of educational institutions, where students perceive EMI as a gateway to global opportunities and cross-cultural competence (Aguilar & Rodríguez, 2012). These attitudes support students in overcoming the psychological barriers associated with EMI and encourage them to engage actively in the learning process.

LEARNING ENGAGEMENT

Learning engagement is indicative of how effectively students participate in their studies and is often viewed as an outcome of readiness. High engagement levels imply that students are coping well with EMI, demonstrating focus, motivation, and a willingness to exert effort in their studies (Gray & Diloreto, 2016). Engagement, according to Schaufeli and Bakker (2004), includes vigor, dedication, and absorption in academic tasks, all of which contribute to a student's persistence in navigating the demands of EMI. Therefore, if a student is highly engaged, it suggests they are not only prepared linguistically but are also psychologically ready to succeed in an EMI environment. Some researchers suggest that learning engagement could serve as a proxy for readiness itself, indicating that readiness involves both the active use of language skills and a proactive approach to learning (Schunk et al., 2014).

PERCEIVED CHALLENGES

Perceived challenges serve as indirect indicators of readiness, reflecting potential obstacles that students need to overcome in adapting to EMI. These challenges can include difficulties

in understanding course content, limited institutional support, and the psychological strain of transitioning to English-based learning (Aguilar, 2017; Hamid et al., 2013). Students facing fewer challenges generally show greater readiness to adapt to EMI, as they demonstrate a higher comfort level in managing academic tasks in English. Conversely, students who perceive more challenges may experience lower readiness, as these obstacles can hinder their academic performance and engagement (Krashen, 1985).

LEARNING ENGAGEMENT AS A MEASURE OF READINESS TO EMI

Learning engagement is often seen as a direct measure of readiness for EMI, as active engagement implies that students can meet the academic demands of an EMI setting. However, perceived ability and skill also provide valuable insights into readiness, as they capture students' confidence in their language proficiency and academic capabilities (Macaro et al., 2018). Therefore, readiness can be understood as a combination of both learning engagement and perceived ability, where students who feel linguistically prepared and are actively engaged demonstrate the highest levels of readiness for EMI.

HYPOTHESIS OF STUDY

H_{01}: There is no significant difference in students' readiness for EMI between public and private university students.

H_{02}: There is no significant difference in students' readiness for EMI across different years of study (1st, 2nd, 3rd, and 4th year).

H_{O3}: None of the Perceived ability, attitude, and perceived challenges do not significantly influence learning engagement in EMI among students.

METHODOLOGY

Design

This will be a cross-sectional correlational design with multiple regression analysis. This study ultimately uses a quantitative approach. The study collected data from four groups of undergraduate students (1st, 2nd, 3rd, and 4th years) across public and private universities in Bangladesh. Here cross-sectional refers to collecting data at a single point in time from different participants (e.g., students in different years and from public/private universities). This design helps researchers compare groups and examine relationships at a specific moment by means of correlation and multiple regression analysis. Correlational implies investigating the relationships between variables (e.g., how perceived ability, attitudes, and challenges relate to learning engagement or readiness for EMI). Multiple regression analysis is the statistical technique used to examine the relationships between multiple independent variables (e.g., perceived ability, attitude, and challenges) and a dependent variable (e.g., learning engagement or readiness).

Thus, the research design of this study is cross-sectional correlational study with the use of multiple regression analysis to identify the predictive power of various independent variables.

Participants

267 Undergraduate students from some selected public and private universities of Dhaka, across all four academic years, have been participated in the survey. The participants studied in various academic departments such as Computer Science and Engineering (CSE), English Language and Literature, Textile Engineering, Business Administration, Telecommunication Engineering (ETE), Islamic Studies, Environmental and Natural Sciences, Pharmacy, Social Sciences, Mathematics. Besides some academic departments are not available in private universities therefore, few participants from public universities filled the survey questionnaire

from History, Education, Medicine, Philosophy, Bangla, Japanese Language and Culture, Mass Communication & Journalism, Management Information Systems (MIS), and Physics.

Sampling Procedure

In this study stratified random sampling would be appropriate to ensure that each group of students (by year and university type) is adequately represented. The topic of EMI involves personal perceptions of one's own language abilities. Questions on EMI can evoke feelings of inadequacy or embarrassment. Participants may fear that their responses could reflect poorly on their academic abilities or their opinions about the institution's policies. Online anonymous methods minimize this concern. Therefore, when participants are reluctant to answer survey questions, especially on sensitive or complex topics such as the learners' perceptions and abilities regarding EMI, online anonymous surveys are often considered the most appropriate method. In Bangladesh ability and competence in EMI is considered as social desire, so in overcoming response hesitancy, this approach is effective because. Studies have shown that when participants are guaranteed anonymity, they are more likely to provide honest and accurate responses, particularly on sensitive topics like perceptions of personal abilities, attitudes, or controversial educational practices. The anonymity reduces social desirability bias, where respondents might otherwise answer in a way they believe is expected or acceptable.

A meta-analysis by Joinson (1999) highlighted that anonymity in surveys increases the likelihood of truthful responses and decreases the fear of judgment. This is particularly relevant when discussing topics like EMI, where students may fear that their true perceptions could affect their academic standing or be seen as critical of the institution. Similarly Online Surveys Are Convenient and Reduce Pressure to some extent. In this method of conducting survey, participants can take online surveys in their own time and in a comfortable environment, which reduces the pressure associated with in-person interviews or paper surveys. This is especially important when respondents are hesitant to participate due to the nature of the subject.

Despite the limitations of online survey, Dillman et al. (2014), Tourangeau and Yan (2007) in their work on survey methods argue that online surveys offer flexibility, reduce social interaction pressures, and are useful in cases of social stigma or self-assessment where respondents are hesitant to express their opinions. Research shows that for sensitive or controversial topics, online anonymous methods are often the most appropriate as they allow respondents to avoid potential embarrassment or discomfort.

Besides, personal perceptions (such as language ability in EMI) are more accurately captured using anonymous online surveys, as respondents are less influenced by social desirability and more willing to express their true thoughts (Singer and Couper 2017, Groves et al. 2009)

When participants are unwilling or hesitant to engage with certain survey questions, anonymity can help reduce non-response bias. This engagement led the researchers to collect more comprehensive data. Non-response bias occurs when certain groups (e.g., those less confident in EMI) do not respond. Nonresponse thus skew the results.

Measure

The structured survey questionnaire employed in this study utilized constructs based on the Knowledge, Attitude, and Practice (KAP) model, commonly used in research to assess individuals' awareness, attitudes, and behaviors toward a particular subject (Launiala, 2009). Specifically, the questionnaire comprised five key sections: Perceived Ability and Skill in EMI, Attitudes toward EMI and Internationalization, Learning Engagement, Perceived

Challenges, and Institutional Comparison, each measured using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The inclusion of KAP constructs allowed for a comprehensive evaluation of students' readiness for EMI by capturing their perceived linguistic abilities, attitudes toward the adoption of EMI, engagement in academic activities, and challenges faced in the EMI environment. This framework aligns with prior research that emphasizes the role of knowledge, attitude, and practices in shaping behavior and adaptation in academic contexts (Launiala, 2009). All constructs were measured using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The survey consisted of multiple sections addressing key aspects of students' readiness for English Medium Instruction (EMI), including perceived ability, attitudes, learning engagement, and perceived challenges.

Perceived Ability to Succeed in EMI (PASE)

This construct directly measures students' confidence and capacity to participate in EMI, focusing on their linguistic readiness. It assesses how well students believe they can understand lectures, engage in classroom discussions, and complete academic tasks in English. Sample items include 'I feel confident using English in my academic studies.', 'I can read academic texts in English effectively.', 'I am able to write assignments and exams in English without significant problems.,

Attitudes Toward EMI and Internationalization (ATEI)

Attitudes toward EMI capture students' willingness to adopt English as the medium of instruction and its perceived importance for their future international career prospects. While not directly related to language proficiency, these items reflect the psychological readiness and motivation that contribute to successful adaptation to EMI. Sample items include 'I believe that English should be the primary medium of instruction in Bangladeshi universities.', 'EMI will prepare me better for future international career opportunities.', 'I prefer English over Bengali as the medium of instruction in higher studies.'

Learning Engagement of Students in EMI (LESE)

Learning engagement reflects how actively students participate in their studies under EMI. Higher engagement suggests that students are coping well and are ready to learn in an EMI environment. This construct is considered an outcome of readiness, as it indicates how effectively students engage with their academic work. Sample items include 'I am fully concentrated and focused when studying.', 'I put a lot of effort into my studies, even when things are difficult.', 'I approach my studies with enthusiasm.'

Perceived Challenges of Facing EMI (PCFE)

Perceived challenges reflect the barriers students face in adapting to EMI. These challenges include linguistic difficulties, inadequate institutional support, and the transition from Bengali to English. Lower perceived challenges suggest greater readiness for EMI. Sample items include 'I sometimes struggle with understanding course content in English.', 'I find the transition from Bengali to English in higher studies challenging.', 'I believe that faculty members need more training to effectively teach in English.'

Data Analysis

First, to analyze the general trends in readiness researchers conducted descriptive statistics (mean, standard deviation). They conduct an independent samples t-test to compare readiness between public and private university students. They then used ANOVA to compare readiness between the different year groups. To justify how the variables in the questionnaire can measure Readiness toward English Medium Instruction (EMI) in higher studies, researchers needed to establish the relationship between the constructs they have included and the concept of readiness. Therefore, they performed regression analysis to examine the variance explained

the independent variables such as Attitudes toward EMI and Internationalization, Learning Engagement in EMI, Perceived Challenges in EMI

RESULTS

Descriptives

Based on the descriptive statistics output from SPSS Out of the 267 respondents, 74.9% (n = 200) are from private universities, while 25.1% (n = 67) are from public universities. The majority of respondents are male (69.3%, n = 185), with females making up 30.7% (n = 82). The average age of the respondents is 22.98 years with a standard deviation of 2.82 years. The age distribution shows a wide range of participants, predominantly between the ages of 18 and 26. The largest age group is 22 years old (18%, n = 48), followed by 21 years old (15.7%, n = 42).

In terms of current study program, a large portion of the sample is pursuing an undergraduate (UG) program, with 88.4% (n = 236) enrolled in UG programs. A smaller percentage of 8.2% (n = 22) are pursuing postgraduate (PG) studies. While a wide variety of majors are represented in the sample. The largest group of students are studying English (16.9%, n = 45), followed by those in Computer Science and Engineering (CSE) and related fields such as ETE (4.1%, n = 11). Other notable majors include Textile Engineering (8.2%, n = 22) and Marketing (various percentages across several cases). The respondents are distributed across different academic years. Such as first-year students make up 44.6% (n = 119) of the sample, second-year students account for 30.7% (n = 82), third-year students constitute 16.5% (n = 44), and fourth-year students comprise 8.2% (n = 22).

The majority of participants come from private universities, and the sample is predominantly male. Most students are in their early 20s, with a significant portion in their first and second years of study. The distribution of study programs highlights a strong representation from undergraduate students, particularly in fields like English, Computer Science and Engineering (CSE), and Textile Engineering.

This distribution of respondents will be helpful in analyzing how readiness for English Medium Instruction (EMI) and attitudes toward internationalization vary across different demographic groups, academic majors, and years of study.

Reliability of the Constructs

The results of the scale reliability analysis based on Cronbach's alpha for different sections of the questionnaire are found satisfactory. Details are as follows:

Firstly, perceived ability to succeed in EMI has Cronbach's Alpha of 0.847 (N= 7). This reliability score indicates good internal consistency, suggesting that the items measuring students' perceived ability and skill in EMI are reliable.

Attitudes toward EMI and internationalization has the Cronbach's Alpha of 0.873 (N= 8). This alpha value shows high reliability, and indicates that the items measuring students' attitudes toward EMI and internationalization are consistent in capturing the construct.

Learning engagement in EMI has Cronbach's Alpha of 0.882 (N= 8). The reliability coefficient here indicates excellent internal consistency for the items measuring learning engagement. Therefore, this scale is highly reliable.

Perceived challenges in EMI has Cronbach's Alpha of 0.747 (N= 5). This value reflects acceptable reliability, suggesting that the items related to perceived challenges in EMI provide a moderately consistent measurement.

These reliability scores indicate that the scales used in the survey have a good level of internal consistency, and it is appropriate to proceed for further data analysis.

Result of Independent Sample T Test

In this study, first research question was How does students' readiness for EMI differ between public and private university students. An independent samples t-test was conducted to compare the readiness scores for EMI between public and private university students across several factors.

PASE (Perceived Ability to Succeed in EMI)

There was no significant difference in the scores for public universities (M = 3.70, SD = 0.65) and private universities (M = 3.83, SD = 0.66); t(265) = -1.453, p = .147.

ATEI (Attitude Towards EMI and Internationalization)

No significant difference was found between public universities (M = 3.87, SD = 0.53) and private universities (M = 3.94, SD = 0.66); t(265) = -0.776, p = .438.

LESE (Learning Engagement of Students in EMI)

Similarly, no significant difference was observed between public universities (M = 3.86, SD = 0.53) and private universities (M = 3.95, SD = 0.64); t(265) = -1.051, p = .294.

PCFE (Perceived Challenges of Facing EMI)

However, there was a significant difference in scores between public universities (M = 3.82, SD = 0.49) and private universities (M = 3.56, SD = 0.72); t(265) = 2.764, p = .006.

The findings suggest that while public and private university students show no significant difference in terms of perceived ability, engagement, and learning engagement in EMI, there are significant differences in their perception of challenges, with public university students perceiving fewer challenges than their private university counterparts.

Effect Size based on T-Test

The effect size provides a measure of the magnitude of the differences observed between public and private university students in terms of their readiness for English as a Medium of Instruction (EMI) and Internationalization. Cohen's d is used to report the effect sizes for the independent samples t-test, allowing for a clearer understanding of the practical significance of the findings.

For PASE (Perceived Ability to Succeed in EMI), the effect size is small (Cohen's d = -0.205), indicating that while there is a difference between public and private university students, the magnitude of this difference is minimal. Similarly, for ATEI (Attitude Towards EMI and Internationalization), the effect size is small (Cohen's d = -0.110), suggesting that the difference in engagement between the two groups is also negligible.

The effect size for LESE (Learning Engagement of Students in EMI) is small as well (Cohen's d = -0.148), reflecting a minor difference in learning engagement between public and private university students. In contrast, PCFE (Perceived Challenges of Facing EMI) presents a larger effect size (Cohen's d = 0.390), indicating a more notable difference in how public and private university students perceive the challenges of EMI.

These effect sizes suggest that while statistical differences between public and private university students exist in terms of their readiness for EMI, the practical implications of these differences are relatively small, with the exception of the perceived challenges, where the difference is more obvious.

Result of One Way Analysis Of Variance (ANOVA)

Second research question was what the differences in students' readiness for EMI across different years of study (1st, 2nd, 3rd, and 4th year) are. To answer this question, a one-way

ANOVA was conducted to examine differences in students' readiness for English Medium Instruction (EMI) across four academic years (1st, 2nd, 3rd, and 4th year) based on four key variables: PASE, ATEI, LESE, and PCFE.

Homogeneity of Variances

Levene's test indicated that the assumption of homogeneity of variances was not violated for any of the four variables. In the SPSS output, Levene's test produced p-values greater than 0.05 for all the variables: PASE p = .442, ATEI p = .786, LESE p = .592, PCFE p = .389

Descriptive Statistics

Table 1 shows the means and standard deviations for the four variables across different years of study. PASE (Perceived Ability to Succeed in EMI) showed a slight increase from 1st year (M = 3.74, SD = 0.69) to 3rd year (M = 3.94, SD = 0.55), but a decrease in the 4th year (M = 3.56, SD = 0.81). ATEI (Attitude Towards EMI and Internationalization) was relatively stable in the 1st and 2nd years (M = 3.93, SD = 0.66; M = 3.91, SD = 0.63), peaked in the 3rd year (M = 4.02, SD = 0.48), and decreased in the 4th year (M = 3.68, SD = 0.66). LESE (Learning Engagement of Students in EMI) remained relatively consistent across all years, with the highest mean in the 2nd year (M = 3.98, SD = 0.52) and slightly lower in the 1st and 4th years (M = 3.88, SD = 0.67; M = 3.90, SD = 0.79). PCFE (Perceived Challenges of Facing EMI) varied slightly across years, with the 4th year showing the highest mean (M = 3.72, SD = 0.78) and the 1st year having the lowest (M = 3.58, SD = 0.72).

Table 1: Descriptive of 4 groups of Learners based on Academic Year

		N	Mean	SD	SE
PASE	First Year	119	3.7431	.69029	.06328
	Second Year	82	3.8589	.60796	.06714
	Third Year	44	3.9383	.54629	.08236
	Fourth Year	22	3.5649	.81110	.17293
	Total	267	3.7961	.65905	.04033
ATEI	First Year	119	3.9349	.66281	.06076
	Second Year	82	3.9055	.62687	.06923
	Third Year	44	4.0199	.47993	.07235
	Fourth Year	22	3.6818	.65775	.14023
	Total	267	3.9190	.62645	.03834
LESE	First Year	119	3.8803	.66849	.06128
	Second Year	82	3.9771	.52157	.05760
	Third Year	44	3.9602	.52949	.07982
	Fourth Year	22	3.8977	.79023	.16848
	Total	267	3.9246	.61457	.03761
PCFE	First Year	119	3.5798	.71658	.06569
	Second Year	82	3.6561	.58818	.06495
	Third Year	44	3.6273	.68416	.10314
	Fourth Year	22	3.7182	.77744	.16575

		N	Mean	SD	SE
	Total	267	3.6225	.67708	.04144

ANOVA Results

The ANOVA table from the analysis provides statistical information about the differences in students' readiness for EMI across the four years of study. Table 2 is a summary of the ANOVA table results. Table 2 includes only 'Between Groups' row of the SPSS output, because it tells the researchers whether there are statistically significant differences in readiness for EMI across the years of study (the groups). In contrast, the 'Within Groups' row of the SPSS output provides background information about the individual variability within each group. However, the focus of the interpretation is whether the 'Between Groups' variation is large enough to be significant (Pallant, 2020).

Table 2: ANOVA Table

Variables	F	Sig.
PASE	2.116	.099
ATEI	1.478	.221
LESE	.467	.706
PCFE	.369	.775

Table 2 shows PASE (Perceived Ability to Succeed in EMI) has $F(3, 263) = 2.116$, $p = .099$. This indicates that there is no statistically significant difference in PASE across the four years of study, as the p-value is greater than 0.05. Secondly, ATEI (Attitude Towards EMI and Internatinalization) scored $F(3, 263) = 1.478$, $p = .221$. The ANOVA test shows no significant difference in ATEI scores across the years, with the p-value above 0.05. Thirdly, LESE (Learning Engagement of Students in EMI) has $F(3, 263) = 0.467$, $p = .706$ which means the test reveals no significant difference in LESE scores across the years of study, as indicated by a high p-value (greater than 0.05). Lastly, PCFE (Perceived Challenges of Facing EMI) has $F(3, 263) = 0.369$, $p = .775$. The last one has also no significant difference in PCFE scores across the four years, with a p-value much greater than 0.05.

All comparisons, of ANOVA table indicate that none of the variables (PASE, ATEI, LESE, or PCFE) show statistically significant differences across the 1st, 2nd, 3rd, and 4th years of study. All p-values are above the 0.05 threshold, meaning that the variation in readiness for EMI across the different academic years is not statistically significant.

Effect Size based on ANOVA

The effect sizes for the ANOVA analysis, measured by Eta-squared (η^2), indicate the proportion of total variance in each variable explained by differences between the academic years of study. In this case, the effect sizes for all variables—PASE, ATEI, LESE, and PCFE—are small.

PASE: $\eta^2 = 0.024$, which is considered a small effect size, suggesting that only 2.4% of the variance in perceived ability to succeed in EMI can be attributed to differences across years. ATEI: $\eta^2 = 0.017$, also a small effect size, indicating that 1.7% of the variance in engagement towards English instruction is explained by the year of study. LESE: $\eta^2 = 0.005$, a minimal effect size, showing that only 0.5% of the variance in learning engagement in English studies is due to differences between the years. PCFE: $\eta^2 = 0.004$, a small effect size,

meaning that 0.4% of the variance in perception of challenges facing EMI is associated with academic year differences.

These small effect sizes suggest that differences in students' readiness for EMI across the various years of study are minimal, with each variable showing only a small proportion of variance explained by academic year. This indicates that readiness for EMI is relatively consistent across students in different years (Cohen, 1988).

Post-Hoc Comparisons (Tukey HSD)

The post hoc test (Tukey's HSD) was conducted to identify specific pairwise differences between the years of study for the four variables: PASE, ATEI, LESE, and PCFE. However, the results of the post hoc comparisons indicate that no significant differences were found between any pair of academic years for any of the variables.

PASE

No significant pairwise differences were observed between the 1st, 2nd, 3rd, and 4th years. For instance: The difference between 1st year (M = 3.74) and 2nd year (M = 3.86) was not significant (p = .607). The difference between 1st year and 4th year (M = 3.56) also failed to reach significance (p = .607). This suggests that students across different years have similar levels of perceived ability to succeed in EMI.

ATEI

While there were slight differences in mean scores, no pairwise comparisons were statistically significant. The comparison between 1st year (M = 3.93) and 3rd year (M = 4.02) had a p-value of .883, indicating no significant difference. Similarly, the difference between 4th year (M = 3.68) and 3rd year (M = 4.02) was not significant (p = .980). These results indicate that students' engagement with English instruction remains consistent across all years.

LESE

The post hoc tests also showed no significant pairwise differences for LESE. The difference between 1st year (M = 3.88) and 2nd year (M = 3.98) was not significant (p = .693). The comparison between 3rd year (M = 3.96) and 4th year (M = 3.90) was also insignificant (p = .867). This suggests that students' learning engagement in English studies is relatively stable across different academic years.

PCFE

No significant differences were observed between years for PCFE. The comparison between 1st year (M = 3.58) and 2nd year (M = 3.66) yielded a p-value of .863, indicating no significant difference. Similarly, the difference between 3rd year (M = 3.63) and 4th year (M = 3.72) was not significant (p = .980). This suggests that the perception of challenges faced in EMI is consistent across different academic years.

The post hoc tests (Tukey HSD) revealed no significant pairwise differences between the years of study for any of the variables (PASE, ATEI, LESE, and PCFE). This further supports the conclusion from the ANOVA that students' readiness for EMI does not differ significantly based on their year of study. Despite some slight variations in means, these differences are not large enough to be statistically meaningful.

To sum up, the above all ANOVA results suggest that there are no statistically significant differences in students' readiness for EMI (measured by PASE, ATEI, LESE, and PCFE) across 1st, 2nd, 3rd, and 4th-year students. While some slight variations in mean scores exist, they are not large enough to be statistically significant, and the effect sizes indicate that the differences are small.

Result of Multiple Regression Analysis

Thirdly, the research question was what the determinants of learning engagement in EMI among students are, and how do the perceived ability, attitude, and perceived challenges influence it. A multiple regression analysis was conducted to examine the effect of PASE, ATEI, and PCFE on LESE.

Fulfillment of Assumptions

The scatterplot of standardized residuals versus standardized predicted values showed a random pattern, indicating that the assumption of linearity was met (Figure 1). The normal probability plot (P-P plot) of standardized residuals showed points falling close to the diagonal line, suggesting that the residuals are approximately normally distributed. The scatterplot also showed no clear pattern, indicating that the assumption of homoscedasticity was not violated too. Collinearity diagnostics showed acceptable variance inflation factors (VIFs) below 10 (PASE = 1.775, ATEI = 1.928, PCFE = 1.127), indicating no multicollinearity issues.

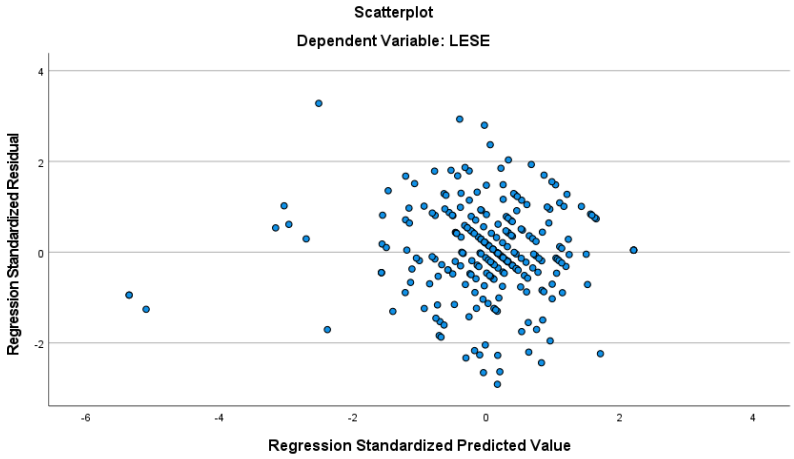

Figure 1: Scatterplot

Model Summary

In the regression model, dependent variable was LESE (Learning Engagement of Students in EMI) and independent variables were PASE (Perceived Ability to Succeed in EMI), ATEI (Attitude Towards EMI and Internationalization), PCFE (Perceived Challenges of Facing EMI).

The regression model explained 60.5% of the variance in LESE ($R^2 = .605$, Adjusted $R^2 = .600$), which indicates that the model has a strong predictive power.

The F-test was significant ($F(3, 263) = 134.244$, $p < .001$), suggesting that the model significantly predicts the outcome variable.

ANOVA Table

The ANOVA results demonstrated that the regression model was statistically significant ($p < .001$), confirming that at least one of the independent variables significantly predicts LESE.

Coefficients

Table 3 shows main results of the regression analysis. PASE has a significant positive impact on LESE, indicating that a higher perceived ability to succeed in EMI is associated with higher learning engagement ($B = 0.246$, $SE = 0.048$, $\beta = 0.264$, $t = 5.119$, $p < .001$). ATEI has the strongest positive effect on LESE, suggesting that greater engagement towards English

instruction significantly increases learning engagement (B = 0.487, SE = 0.053, β = 0.496, t = 9.226, p < .001). PCFE also has a significant positive impact on LESE, meaning that a higher perception of challenges in EMI is linked with increased learning engagement (B = 0.170, SE = 0.037, β = 0.188, t = 4.561, p < .001).

Table 3: Coefficients

Model	Unstandardized		Standardized Coefficients	T	Sig.		
	B	SE	Beta			Partial	Part
(Constant)	.463	.181		2.561	.011		
PASE	.246	.048	.264	5.119	.000	.301	.198
ATEI	.487	.053	.496	9.226	.000	.494	.358
PCFE	.170	.037	.188	4.561	.000	.271	.177

The regression equation for predicting LESE based on PASE, ATEI, and PCFE is

$$LESE=Constant+(B_{PASE}\times PASE)+(B_{ATEI}\times ATEI)+(B_{PCFE}\times PCFE$$

Substituting the coefficients from the regression analysis

$$LESE=0.463+(0.246\times PASE)+(0.487\times ATEI)+(0.170\times PCFE)$$

This equation indicates that for every one-unit increase in PASE, LESE is expected to increase by 0.246 units, holding the other variables constant. Similarly, for every one-unit increase in ATEI, LESE is expected to increase by 0.487 units, holding the other variables constant. Lastly, for every one-unit increase in PCFE, LESE is expected to increase by 0.170 units, holding the other variables constant. This equation helps predict learning engagement based on perceived ability, engagement toward English instruction, and perception of challenges in EMI.

Residual Statistics

The standardized residuals ranged from -2.911 to 3.281, and no significant outliers were detected based on the residual statistics.

To sum, the regression analysis shows that all three independent variables—PASE, ATEI, and PCFE—significantly predict learning engagement (LESE). The model accounts for a substantial portion of the variance in LESE, with ATEI being the most influential predictor.

DISCUSSION

The findings of this study revealed no statistically significant differences in students' readiness for English Medium Instruction (EMI) across the different years of study, from 1st to 4th year. This outcome was observed in key variables, including PASE, ATEI, LESE, and PCFE. The lack of significant progression in these variables suggests that increased time spent in an EMI environment does not necessarily lead to improved language proficiency or readiness for EMI. According to Cummins (2000), language proficiency, especially in academic settings, develops over time through sustained and deliberate practice. However, this progression may require structured support, including dedicated language development resources, which appear limited across the surveyed institutions, particularly in public universities in Bangladesh (Hamid et al., 2013).

The comparison between public and private university students showed no significant difference in PASE, ATEI, and LESE but a significant difference in PCFE, with public university students perceiving fewer challenges. This aligns with the notion that private universities in Bangladesh often adopt EMI as part of their internationalization strategies, which can result in additional challenges due to increased expectations for English proficiency and adaptation (Aguilar, 2017; Hamid et al., 2013). Private universities may emphasize EMI to align with international standards, but without adequate language support, students may feel overwhelmed, impacting their perception of challenges (Dearden, 2014).

In the regression analysis, LESE was the dependent variable, with PASE, ATEI, and PCFE serving as independent variables. All three variables significantly predicted LESE, with ATEI having the strongest positive effect, suggesting that students who have positive attitude toward EMI and Internationalization are more likely to actively participate in their academic activities. This outcome aligns with Schaufeli and Bakker's (2004) work on engagement, which emphasizes the importance of attitude and motivation. The positive effect of PASE on LESE also highlights the role of self-efficacy in learning engagement, supporting Bandura's (1997) concept that confidence in one's abilities drives greater persistence and engagement. Additionally, the positive relationship between PCFE and LESE may indicate that students who face and overcome challenges develop resilience, ultimately enhancing engagement (Dörnyei, 2001).

CONCLUSION

Based on the conceptual framework and findings, it can be concluded that readiness for EMI among Bangladeshi undergraduate students remains consistent across different years of study, indicating a lack of cumulative improvement in English proficiency and engagement as students progress. This may be attributed to insufficient institutional support for language development, which is essential for gradual skill acquisition (Krashen, 1985; Vygotsky, 1978). Additionally, while private universities are more internationally oriented and emphasize EMI, the lack of tailored support services may hinder students' adaptation to EMI, resulting in greater perceived challenges compared to their public university counterparts (Hamid et al., 2013).

The significant predictors of learning engagement, particularly ATEI, suggest that encouraging a supportive and engaging academic environment is an important factor to student success in EMI settings. Institutions aiming to enhance student readiness for EMI should focus on creating comprehensive support systems that improve students' linguistic confidence and learning engagement. This study contributes to the understanding of EMI readiness in non-native English-speaking contexts and underscores the need for targeted interventions to ensure that EMI fulfills its potential as a pathway for internationalization and academic success.

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APPENDIX: SURVEY QUESTIONNAIRE

Students' Readiness toward EMI and Internationalization in Higher Studies

Perceived Ability to Succeed in EMI (PASE)

I feel confident using English in my academic studies.
I understand lectures that are conducted in English without difficulty.
I can read academic texts in English effectively.
I am comfortable participating in classroom discussions in English.
I am able to write assignments and exams in English without significant problems.
I believe my English language skills are adequate for pursuing higher studies.
I find it easier to follow lessons in English compared to Bengali.

Attitudes toward EMI and Internationalization (ATEI)

I prefer English over Bengali as the medium of instruction in higher studies.
EMI will prepare me better for future international career opportunities.
I believe that English should be the primary medium of instruction in Bangladeshi universities.
I am aware of internationalization strategies implemented by my university.
My university encourages international collaboration and exchange programs.
I feel more ready to study abroad or participate in international exchange programs because of EMI.
EMI will help Bangladeshi universities improve their international reputation.
I believe that using EMI will improve my employability in the global market.

Learning Engagement of the Students with EMI (LESE)

My studies are challenging and push me to improve.
I feel inspired by my coursework.
I approach my studies with enthusiasm.
I am proud of the progress I make in my studies.
I find meaning and purpose in the subjects I study.
I am fully concentrated and focused when studying.
I put a lot of effort into my studies, even when things are difficult.
I feel excited about applying what I learn in real-life situations.

Perceived Challenges of Facing EMI (PCFE)

I sometimes struggle with understanding course content in English.
I feel that the availability of English support resources (e.g., language labs, tutoring) is inadequate in my university.
I find the transition from Bengali to English in higher studies challenging.
I believe that faculty members need more training to effectively teach in English.
I have faced difficulty adjusting to EMI compared to my peers.

Institutional Comparison

Public Universities

Public universities are better prepared to implement EMI compared to private universities.
Public universities provide more diverse resources for learning English compared to private universities.

Private Universities

Private universities offer better support for students adapting to EMI compared to public universities.
I believe that students from private universities are more ready for EMI than those from public universities.