THESIS

EXPLORING JUNIOR HIGH SCHOOL STUDENTS' SELF-EFFICACY IN AN ENGLISH AS A MEDIUM OF INSTRUCTION (EMI) CLASSROOM CONTEXT

By

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ENGLISH EDUCATION DEPARTMENT

FACULTY OF EDUCATION AND TEACHER TRAINING

ISLAMIC STATE UNIVERSITY OF MAULANA MALIK IBRAHIM MALANG

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2026

APPROVAL SHEET

APPROVAL SHEET

This is to certify that the thesis submitted by:

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LEGITIMATION SHEET

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EXPLORING JUNIOR HIGH SCHOOL STUDENTS' SELF-EFFICACY IN AN ENGLISH AS A MEDIUM OF INSTRUCTION (EMI) CLASSROOM CONTEXT

THESIS

by:

Aurel Keisha Jessenianta (220107110005)

Has been defended in front of the board of examiners at the date of 22 April 2026 and declared PASS.

Accepted as the requirement for the degree of English Language Teaching (S.Pd) in the English Education Department, Faculty of Tarbiyah and Teacher training.

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Matter : Thesis of Aurel Keisha Jessenianta

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The Honorable,

To the Dean of Faculty of Tarbiyah and Teacher Training

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In

Malang

Assalamu'alaikum Wr. Wb.

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Name	: Aurel Keisha Jessenianta
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Therefore, we believe that the thesis of Aurel Keisha Jessenianta has been approved the advisor for the further approval by the board of examiners.

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DECLARATION OF AUTHORSHIP

Bismillahirrahmanirrohim,

Here with me,

Name : Aurel Keisha Jessenianta

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Department : English Education

Faculty : Tarbiyah and Teacher Training

Declare that:

1. This thesis has never been submitted to any other tertiary education institution for any other academic degree.
2. This thesis is the sole work of the author and has not been written in collaboration with any other person, nor does it include, without due acknowledgement, the work of any other person.
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Malang, 10 April 2026

Aurel Keisha Jessenianta

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MOTTO

"For indeed, with hardship comes ease. Indeed, with hardship comes ease."

(Q.S Al-Insyirah 5-6)

"I risked my mother's life to come into this world, so it is impossible that my life has no meaning."

"Without Allah SWT, I probably wouldn't have made it this far."

DEDICATION

This thesis is lovingly dedicated to my beloved mother and father, Mrs. Dina Susilowati and Mr. Khairuman Imron, for your endless love, sacrifices, and prayers that have shaped who I am today, to my beloved little sister, Hafiza Zahra Asy'ari, who always brings joy and strength into my life, to my grandmother, Intyas Wilujeng, for her constant support and prayers, to my brothers, Gandi Puguh Purnandriyo (Alm.), Gandi Rizal Fauzi and Gandi Bismo Prayogo who will always remain in my heart and continue to inspire me, and to my thesis advisor, Mrs. Wahyu Indah Mala Rohmana, M.Pd who has guided me with patience, wisdom, and encouragement throughout this journey. Your valuable insights and support have been truly meaningful in the completion of this work. Thank you all for being part of my academic journey.

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Praise be to Allah SWT, the Almighty and the Most Helpful of His servants. Thanks to the abundance of His grace and guidance, this thesis can finally be completed. Peace and salutation are always delivered to Prophet Muhammad SAW, who has guided mankind towards goodness.

The thesis entitled **"Exploring Junior High School Students' Self-Efficacy in an English as a Medium of Instruction (EMI) Classroom Context"** is compiled to fulfill the requirements for a Bachelor's degree in English Education (S.Pd), Faculty of Tarbiyah and Teacher Training, Maulana Malik Ibrahim State Islamic University Malang. The writer researcher realizes that this thesis will never be successful without the support and contribution of other parties. Therefore, the writer researcher sincerely thanks the following parties for their contribution to the process of completing this thesis.

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    Hopefully, in the future, the writer will continue to grow into a stronger, more patient

person who appreciates every process in life.

Finally, the researcher realized that this thesis is not perfect. Suggestions and constructive criticism are most welcome. Hopefully, this thesis can be beneficial and provide insight for readers, as well as for her.

Malang, 10 April 2026
The Researcher,

Aurel Keisha Jessenianta

LATIN ARABIC TRANSLITERATION GUIDE

Based on the collective decision of the Minister of Religious Affairs of the Republic of Indonesia and the Minister of Education and Culture of the Republic of Indonesia Number 158 of 1987 and Number 0543b/U/1987, it has been decided that the Arabic-Latin transliteration guidelines used in this thesis are as follows:

A. **Words**

ا	**= a**	ز	**= z**	ق	**= q**
ب	**= b**	س	**= s**	ك	**= k**
ت	**= t**	ش	**= sy**	ل	**= l**
ث	**= ts**	ص	**= sh**	م	**= m**
ج	**= j**	ض	**= dl**	ن	**= n**
ح	**= h**	ط	**= th**	و	**= w**
خ	**= Kh**	ظ	**= zh**	ه	**= h**
د	**= d**	ع	**= ‘**	ء	**= ’**
ذ	**= dz**	غ	**= gh**	ي	**= y**
ر	**= r**	ف	**= f**		

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ABSTRACT

Jessenianta, Aurel Keisha, 2026, Exploring Junior High School Students' Self-Efficacy in an English as a Medium of Instruction (EMI) Classroom Context. Thesis, English Education Department. Faculty of Education and Teacher Training. The Islamic State University of Maulana Malik Ibrahim Malang.

Advisor: Wahyu Indah Mala Rohmana, M.Pd

Keyword: Self-efficacy, EMI, mathematics learning, junior high school students, Bandura's theory

This study aims to explore junior high school students' self-efficacy in understanding mathematics content through English as a Medium of Instruction (EMI) and to identify the factors influencing their self-efficacy. This study employed a qualitative approach with a case study design. Data were collected through questionnaires, classroom observations, and semi-structured interviews. The analysis was based on Albert Bandura's theory of self-efficacy, which includes three dimensions: magnitude, strength, and generality, as well as four sources of self-efficacy: mastery experience, vicarious experience, verbal persuasion, and physiological states. The findings revealed that students' self-efficacy levels fell into the moderate category across all three dimensions, indicating that students had sufficient confidence in understanding mathematics through EMI, although their confidence was not yet fully stable across different learning situations. The findings also showed that mastery experience was the most dominant factor influencing students' self-efficacy, followed by verbal persuasion and physiological states, while vicarious experience showed a moderate influence. In addition, students' difficulties were not only related to understanding mathematical concepts but also to processing English as the language of instruction, creating a double cognitive load that affected their confidence and participation in learning. This study concludes that students' self-efficacy in EMI-based mathematics learning is shaped by the interaction of academic experiences, social support, emotional conditions, and language challenges. The findings provide practical implications for teachers and schools to implement strategies such as translanguaging, scaffolding, and CLIL-based teacher training to strengthen students' self-efficacy in EMI classrooms.

الملخص

جيسينيانتا، أوريل كيشا، ٢٠٢٦. استكشاف الكفاءة الذاتية لدى طلاب المرحلة الإعدادية في فهم الرياضيات في سياق التدريس باللغة الإنجليزية كلغة وسيطة (EMI). أطروحة، قسم تعليم اللغة الإنجليزية، كلية التربية وإعداد المعلمين، جامعة مولانا مالك إبراهيم الإسلامية الحكومية مالانج..

المشرفة: واهيو إنداه مالا روحمانا، ماجستير في التربية

تهدف هذه الدراسة إلى استكشاف الكفاءة الذاتية لدى طلاب المرحلة الإعدادية في فهم مادة الرياضيات في سياق التدريس باستخدام اللغة الإنجليزية كلغة وسيطة (EMI)، وكذلك التعرّف على العوامل التي تؤثر في هذه الكفاءة. اعتمدت الدراسة المنهج النوعي بتصميم دراسة الحالة، حيث تم جمع البيانات من خلال الاستبيانات، والملاحظات الصفية، والمقابلات شبه المنظمة. استند التحليل إلى نظرية باندورا في الكفاءة الذاتية، والتي تشمل ثلاثة أبعاد، وهي: مستوى الصعوبة (Magnitude)، وقوة الثقة (Strength)، وعمومية التطبيق (Generality)، بالإضافة إلى أربعة مصادر للكفاءة الذاتية، وهي: الخبرة المباشرة (Mastery Experience)، والخبرة غير المباشرة (Vicarious Experience)، والإقناع اللفظي (Verbal Persuasion)، والحالات النفسية والانفعالية (Physiological States). أظهرت النتائج أن مستوى الكفاءة الذاتية لدى الطلاب يقع في الفئة المتوسطة عبر الأبعاد الثلاثة، مما يدل على أن الطلاب يمتلكون مستوى كافيًا من الثقة في فهم مادة الرياضيات من خلال التدريس باللغة الإنجليزية، إلا أن هذه الثقة لم تكن مستقرة بشكل كامل في مختلف مواقف التعلم. كما أظهرت النتائج أن عامل الخبرة المباشرة كان العامل الأكثر تأثيرًا في تشكيل الكفاءة الذاتية لدى الطلاب، يليه الإقناع اللفظي والحالات النفسية، بينما كان تأثير الخبرة غير المباشرة في المستوى المتوسط. وكشفت النتائج أيضًا أن الصعوبات التي يواجهها الطلاب لا ترتبط فقط بفهم المفاهيم الرياضية، بل أيضًا بمعالجة اللغة الإنجليزية كلغة للتدريس، مما يخلق عبئًا معرفيًا مزدوجًا يؤثر في مستوى الثقة والمشاركة أثناء عملية التعلم. وتخلص الدراسة إلى أن الكفاءة الذاتية لدى الطلاب في تعلم الرياضيات القائم على EMI تتشكل من خلال التفاعل بين الخبرات الأكاديمية، والدعم الاجتماعي، والحالات النفسية، والتحديات اللغوية. كما تقدم هذه الدراسة دلالات عملية للمعلمين والمؤسسات التعليمية لتطبيق استراتيجيات مثل الترجمة التربوية (Translanguaging)، والدعم التدريجي (Scaffolding)، والتدريب القائم على منهجية CLIL من أجل تعزيز الكفاءة الذاتية لدى الطلاب في بيئات التعلم القائمة على EMI.

ABSTRAK

Jessenianta, Aurel Keisha, 2026, Exploring Junior High School Students' Self-Efficacy in an English as a Medium of Instruction (EMI) Classroom Context. Skripsi, Tadris Bahasa Inggris. Fakultas Ilmu Tarbiyah dan Keguruan. Universitas Islam Negeri Maulana Malik Ibrahim Malang.

Pembimbing: Wahyu Indah Mala Rohmana, M.Pd

Kata kunci: Self-efficacy, EMI, pembelajaran matematika, siswa SMP, teori Bandura

Penelitian ini bertujuan untuk mengeksplorasi self-efficacy siswa sekolah menengah pertama dalam memahami materi matematika melalui English as a Medium of Instruction (EMI) serta mengidentifikasi faktor-faktor yang memengaruhinya. Penelitian ini menggunakan pendekatan kualitatif dengan desain studi kasus. Data dikumpulkan melalui kuesioner, observasi kelas, dan wawancara semi-terstruktur. Analisis penelitian didasarkan pada teori self-efficacy dari Albert Bandura yang meliputi tiga dimensi, yaitu magnitude, strength, dan generality, serta empat sumber self-efficacy, yaitu mastery experience, vicarious experience, verbal persuasion, dan physiological states. Hasil penelitian menunjukkan bahwa tingkat self-efficacy siswa berada pada kategori sedang pada ketiga dimensi, yang menunjukkan bahwa siswa memiliki kepercayaan diri yang cukup dalam memahami matematika melalui EMI, meskipun kepercayaan diri tersebut belum sepenuhnya stabil dalam berbagai situasi pembelajaran. Hasil penelitian juga menunjukkan bahwa mastery experience merupakan faktor yang paling dominan memengaruhi self-efficacy siswa, diikuti oleh verbal persuasion dan physiological states, sementara vicarious experience berada pada kategori sedang. Selain itu, temuan penelitian menunjukkan bahwa kesulitan siswa tidak hanya terletak pada pemahaman konsep matematika, tetapi juga pada pemrosesan bahasa Inggris sebagai bahasa pengantar, sehingga menciptakan double cognitive load yang memengaruhi kepercayaan diri dan partisipasi siswa dalam pembelajaran. Penelitian ini menyimpulkan bahwa self-efficacy siswa dalam pembelajaran matematika berbasis EMI terbentuk melalui interaksi antara pengalaman akademik, dukungan sosial, kondisi emosional, dan tantangan bahasa. Hasil penelitian ini memberikan implikasi praktis bagi guru dan sekolah untuk menerapkan strategi seperti translanguaging, scaffolding, dan pelatihan guru berbasis CLIL guna memperkuat self-efficacy siswa di kelas EMI.

CHAPTER I

INTRODUCTION

This chapter presents the background of the study, research question, objectives of the study, scope and limitation of the study, and the definition of key terms.

1.1 Background of the Study

The use of English as the medium of instruction in bilingual schools has increased in the last two decades because it offers the benefit of learning two languages at once, namely the first and second languages (Pujiani et al., 2023). This practice is known as English as a Medium of Instruction (EMI), which is now increasingly being implemented in bilingual and international schools, including in Indonesia. English as a Medium of Instruction (EMI) is the practice of teaching academic subjects, such as Mathematics, Science, or Social Studies using English instead of the students' native language (Macaro, 2018). In the context of global education, English as a Medium of Instruction (EMI) is seen as a strategy that not only improves students' English proficiency but also strengthens their understanding of the subject matter. This practice is considered capable of preparing students to compete in the international academic and professional world (Rut, 2024).

However, the success of English as a Medium of Instruction (EMI) implementation is not only determined by the quality of teaching materials or teachers' language proficiency, but also depends on students' psychological readiness to accept lessons in a foreign language (Al Hakim, 2021). One important psychological factor in this regard is self-efficacy, or students' academic confidence in their own abilities. Bandura (1997) defines self-efficacy as an individual's belief in their ability to successfully complete a particular task. In the context of English as a Medium of Instruction (EMI), self-efficacy refers to students' belief that they are capable of understanding and following lessons delivered in English. Research related to psychological aspects was also conducted by Sya'idah and Rohmana (2023), who found that

the psychological well-being of pre-service teachers in Indonesia is influenced by self-efficacy, language anxiety, and emotional intelligence. This shows that psychological factors, including self-efficacy, are not only relevant to prospective teachers, but also important to consider for students, especially when they face the dual challenges of academic material and foreign languages in EMI classrooms.

Self-efficacy has a significant influence on students' attitudes and performance when facing learning challenges (Wirawan & Bandu, 2016). Students with high levels of self-efficacy are generally more optimistic, confident, willing to take academic risks, and persistent in completing tasks despite facing difficulties (Popa-Velea et al., 2021). This belief in one's own abilities plays a crucial role in enhancing learning motivation and overall academic achievement (Honicke & Broadbent, 2016). Conversely, students with low self-efficacy tend to feel anxious, easily give up, and struggle to understand complex material, such as mathematics taught in English (Popa-Velea et al., 2021).

In addition, the view of self-efficacy is also in line with Islamic values. One of the verses found by researcher that can provide strong confidence to achieve success and is related to self-efficacy is Q.S. Ali Imran: 60:

ٱلۡحَقُّ مِن رَّبِّكَ فَلَا تَكُن مِّنَ ٱلۡمُمۡتَرِينَ

"(What We have told you) is the truth from your Lord, so do not be among those who doubt." From this verse, there are three main points regarding self-efficacy. First, faith and hope in Allah's mercy and His help. Second, Allah SWT always intervenes in every human affair. Third, the success achieved comes from Allah SWT.

In various educational contexts, mathematics is often considered one of the most challenging subjects because it requires a deep conceptual understanding and advanced

logical thinking skills (Jäder & Johansson, 2025). When the material is presented in a foreign language, such as in English as a Medium of Instruction (EMI) classes, students' learning burden can increase significantly because they must understand complex mathematical concepts while also mastering terms in a foreign language, which can ultimately add to students' cognitive load (Macaro et al., 2018). This raises important questions about how confident students are in facing these dual challenges, both in terms of mastering the material and language proficiency. Thus, students' psychological readiness and self-efficacy levels become determining factors in their success in participating in mathematics learning in bilingual or international classrooms.

Previous studies on English as a Medium of Instruction (EMI) in Indonesia and other Asian countries have highlighted students' positive perceptions as well as the challenges that arise. For example, Kurniati (2024) found that junior high school students tend to have positive perceptions of English as a Medium of Instruction (EMI), particularly regarding its benefits for future studies and careers, although they still face difficulties in understanding technical terms and limitations in English proficiency among teachers. Meanwhile, Hasanah et al. (2021) showed that self-efficacy significantly influences students' academic performance in science subjects, although the study was not conducted in the context of English as a Medium of Instruction (EMI). At the university level, Thompson et al. (2019) found that Japanese students with high levels of self-efficacy tend to be more successful in EMI classes because they view challenges as opportunities to learn. Additionally, Signori et al. (2024) studied the self-efficacy of Indonesian non-ELT teachers during international teaching practice in an English as a Medium of Instruction (EMI) context, and the results showed that successful experiences and social support strengthened their confidence in teaching subject matter using English. Although Anggraini (2023) has discussed general perceptions of English as a Medium of Instruction (EMI), there is still little research

exploring how self-efficacy helps junior high school students understand complex subject matter in classes that use English as the medium of instruction.

However, most existing research still focuses on general perceptions, language development, or contexts at the university level, with little attention paid to how self-efficacy supports younger students' understanding of academic material when learning is conducted through English as a Medium of Instruction (EMI) (Anggraini, 2023; Thompson et al., 2019; Signori et al., 2024). Although Kurniati (2024) investigated junior high school students' perceptions of EMI and Hasanah et al. (2021) examined the role of self-efficacy in science learning at the same level, these studies did not specifically explore how self-efficacy operates within the context of EMI-based mathematics instruction. This gap is important because middle school students often face additional psychological and linguistic barriers compared to college students. Additionally, mathematics subjects that require deep conceptual understanding and high-level logical reasoning can pose greater challenges when taught through English as a Medium of Instruction (EMI) (Daroczy, et al. 2016).

Therefore, this study aims to explore junior high school students' self-efficacy in understanding mathematics material in English as a Medium of Instruction (EMI) classroom context, as well as to identify internal and external factors that influence self-efficacy. The uniqueness of this study lies in its focus on positioning English as a Medium of Instruction (EMI) as merely a context, while self-efficacy is examined as the key factor influencing students' understanding of complex academic material in bilingual education at the secondary level in Indonesia. The implications of this study are to provide insights for teachers, curriculum designers, and policy makers in developing a learning environment that not only supports the improvement of English language skills but also fosters students' confidence in learning challenging subjects through EMI. The results of this study are expected to serve as

a basis for designing more effective and responsive learning approaches to the psychological needs of students in the context of bilingual education at the junior high school level.

1.2 Research Question

From the explanation provided in the background of the study, the researcher aims to examine junior high school students' self-efficacy in understanding mathematics content delivered through English as a Medium of Instruction (EMI). The research questions for this study are:

1. How is junior high school students' self-efficacy in understanding mathematics content through English as a Medium of Instruction (EMI)?
2. What factors influence students' self-efficacy in learning mathematics through English as a Medium of Instruction (EMI)?

1.3 Objectives of the Study

In accordance with the research question. The objectives of this study are as follows:

1. To explore junior high school students' self-efficacy in understanding mathematics content delivered through English as a Medium of Instruction (EMI).
2. To identify the factors that influence students' self-efficacy in learning mathematics in English as a Medium of Instruction (EMI)-based classrooms.

1.4 Significance of the Study

The finding is expected to provide a significant contribution whether theoretical or practical matters regarding junior high school students' academic self-efficacy in understanding mathematics material delivered through English as a Medium of Instruction (EMI).

1. **Theoretically,** the researcher expects that this study can contribute to the literature by exploring junior high school students' academic self-efficacy in understanding

mathematics material delivered through English as a Medium of Instruction (EMI). It addresses a relatively underexplored area, especially at the junior high school level and within a subject known for its conceptual difficulty. By examining how students' self-efficacy influences their comprehension in a bilingual context, this study enhances the understanding of learner psychology in EMI settings.

2. **Practically,** the researcher expects that the findings of this study will benefit various stakeholders. For teachers, the insights can help inform the development of more supportive teaching strategies that consider students' confidence and language readiness. For students, the study can raise awareness of their own challenges and strengths in learning mathematics through English, potentially encouraging more effective learning strategies. For educational institutions, the results can serve as a reference in designing bilingual class policies that consider not only language development but also students' psychological preparedness.

1.5 Scope and Limitation of the Study

This study focuses on exploring the academic self-efficacy of junior high school students in understanding mathematics material delivered through the English as a Medium of Instruction (EMI) approach. Specifically, this study examines how students view their own ability to understand mathematics lessons when delivered in English, as well as the factors that influence their self-confidence in the learning process.

The scope of this study is limited to junior high school students at one school that implements bilingual classes using English as a Medium of Instruction (EMI) in mathematics instruction. This study does not address students' general English proficiency but rather emphasizes their perceptions and beliefs about their academic abilities in the context of English as a Medium of Instruction (EMI). Additionally, this study employs a qualitative

approach with a case study design, so the research findings are not intended to be generalized to the entire population but rather to provide an in-depth understanding of the context and learning experiences of students in the English as a Medium of Instruction (EMI) environment under investigation.

1.6 Definition of Key Terms

To prevent any misunderstanding regarding the key terms in this research, the following terms are defined accordingly:

1. **English as a Medium of Instruction (EMI)**

   English as a Medium of Instruction (EMI) is a learning practice in which English is used as the medium of instruction for teaching non-language subjects, such as mathematics or science. In the context of this study, English as a Medium of Instruction (EMI) refers to the use of English in delivering mathematics lessons in bilingual classes at the junior high school level.

2. **Self-Efficacy**

   Self-efficacy is an individual's belief in their ability to complete a specific task or achieve a specific goal. In this study, self-efficacy refers to students' academic beliefs in their ability to understand and follow mathematics lessons delivered in English.

3. **Junior high school students**

   The term “junior high school students” in this study refers to students in junior high school (grades 7 to 9) who participate in bilingual classes or classes that implement EMI in the teaching and learning process, particularly in mathematics.

CHAPTER II
LITERATURE REVIEW

This chapter explains theories related to this research. These theories include the definition and dimensions of self-efficacy, the factors influencing it, the role of self-efficacy in academic learning, as well as the concept of English as a Medium of Instruction (EMI) and the challenges and benefits arising from its implementation. Additionally, this chapter outlines previous relevant studies to support the analysis in this research.

2.1 Self-Efficacy

Self-efficacy is a concept in educational psychology that is widely used to understand how self-confidence affects student learning behavior. This concept was first introduced by Albert Bandura through Social Cognitive Theory and has since become a key reference in various educational studies (Bandura, 1997; Schunk & DiBenedetto, 2020). In the context of learning, self-efficacy is considered a key factor that determines how students respond to challenges, choose learning strategies, and achieve academic success (Honicke & Broadbent, 2016).

2.1.1 The Definition of Self-Efficacy

The concept of self-efficacy was first introduced by Bandura (1977) within the framework of Social Cognitive Theory. Bandura (1997) defined it as an individual's belief in their ability to organize and carry out the actions necessary to achieve a certain level of performance. It is important to note that self-efficacy is not the same as an individual's actual ability, but rather a subjective perception of that ability, which can influence how an individual views challenges and opportunities (Loppez-Garrido, 2023). This perception is dynamic, can change with learning experiences, and is greatly influenced by the

environmental context and situations faced by the individual (Schunk & DIBenedetto, 2020). In other words, two people with the same objective abilities may have different levels of self-efficacy depending on their experiences, social support, and psychological conditions.

Several researchers have provided similar definitions with varying emphases. Schunk & DiBenedetto (2020) describe self-efficacy as “an individual's perception of their ability to complete a task or achieve a specific goal, which plays an important role in determining the level of effort, persistence, and emotional response to challenges.” This definition highlights the close relationship between self-efficacy and students' learning motivation and emotional response when facing difficulties. Dalley et al. (2025) adds that self-efficacy is domain-specific, meaning that an individual's level of confidence may vary across different domains; for example, someone may be highly confident in mathematics but less confident in writing. This understanding helps us see that interventions to enhance self-efficacy must be tailored to a specific context or domain. Thus, self-efficacy is not merely a general trait that a person possesses, but rather a specific belief related to a particular type of task (Honicke & Broadbent, 2016).

In the context of mathematics learning, mathematical self-efficacy is defined as students' belief in their ability to complete mathematical tasks, such as solving algebra problems, understanding geometric concepts, or applying mathematical principles in real-life situations (Street et al., 2022). This belief can influence how students prepare themselves, the strategies they use, and their perseverance in facing challenging problems (Zakariya, 2022). When mathematics is taught in a foreign language such as English, self-efficacy encompasses dual beliefs: the ability to understand mathematical material and the ability to understand the language of instruction (Alnaimi et al., 2022). This creates an additional layer of challenge, especially for students who are not yet proficient in English, making perceptions of self-efficacy a determining factor in learning success. Therefore, studying self-efficacy in the

context of English as a Medium of Instruction (EMI) is highly relevant for understanding the dynamics of student learning (Thompson et al., 2019).

Drawing together the perspectives presented above, it can be concluded that self-efficacy is a person's belief in their ability to complete a task or achieve a specific goal, which is influenced by subjective perceptions, previous experiences, and the environmental context faced (Bandura, 1997; Lopez-Garrido, 2023; Schunk & DiBenedetto, 2020). Self-efficacy is specific to a particular field or context, so it cannot be fully generalized to all aspects of life (Dalley et al., 2025; Honicke & Broadbent, 2016). This belief influences behavior, motivation, learning strategies, and academic outcomes, both directly and indirectly (Schunk & DiBenedetto, 2020; Zakariya, 2022). In the context of this study, self-efficacy refers to junior high school students' belief that they are capable of understanding and mastering mathematics material taught using English as the medium of instruction. Understanding this concept will be an important foundation for analyzing how students adapt and develop in the English as a Medium of Instruction (EMI) classroom context (Thompson et al., 2019).

2.1.2 Dimensions of Self-Efficacy

Bandura (1997) explains that self-efficacy has three main dimensions that serve as an important framework for understanding and measuring a person's self-confidence, namely magnitude, strength, and generality. These dimensions not only help researchers identify a person's level of confidence, but also serve as a guide in designing accurate measurement instruments. As research has progressed, researchers have emphasized that these three dimensions must be analyzed separately to obtain a comprehensive picture of an individual's confidence profile (Schunk & DiBenedetto, 2020). In other words, these dimensions serve as a map showing where students' self-confidence stands when facing a particular task. This

becomes increasingly important in the context of mathematics learning based on English as a Medium of Instruction (EMI), as the complexity of the material is compounded by language challenges.

The first dimension is **magnitude or level of difficulty**, which indicates how difficult a task an individual believes they can complete (Bandura, 1997). In mathematics learning, magnitude can be measured through students' confidence in their ability to solve problems of varying complexity, ranging from basic problems to open-ended problems requiring higher-order reasoning (Herset et al., 2023). Recent research indicates that magnitude can be influenced by prior learning experiences and familiarity with problem types (Usher et al., 2019). In the context of English as a Medium of Instruction (EMI), magnitude includes the ability to understand technical mathematical terms presented in English, which often adds to the cognitive load (Soruc et al., 2021). Therefore, magnitude measurement instruments need to integrate language aspects so that the results truly reflect students' beliefs (Thompson et al., 2019).

The second dimension is **strength**, which relates to how stable or fragile a person's beliefs are when faced with challenges (Bandura, 1997). High strength means that the belief remains firm even when the individual faces failure or obstacles (Schunk & DiBenedetto, 2020). Recent studies have found that students with strong self-efficacy tend to be more persistent, use effective learning strategies, and recover more quickly from academic failure (Usher et al., 2019; Popa-Velea et al., 2021; Zakariya, 2022). In mathematics learning via English as a Medium of Instruction (EMI), strength also includes the ability to persevere when experiencing difficulties understanding the teacher's instructions delivered in a foreign language (Soruc et al., 2021). Thus, strengthening strength requires not only practice questions but also familiarization with the academic vocabulary used in teaching (Thompson, 2019).

The third dimension is **generality**, which measures the extent to which a person's self-confidence applies across various situations or domains (Bandura, 1997). High generality means that confidence extends across topics or subjects, while low generality only applies to specific contexts (Zhou et al., 2021). For example, a student may be confident in solving algebra problems but unsure when faced with geometry or statistics (Zhou et al., 2021). In English as a Medium of Instruction (EMI)-based learning, generality is crucial because language challenges can affect confidence in several topics at once (Cui & Gardiner, 2025). Therefore, the measurement of generality must consider the diversity of material and language variation used in learning (Zakariya, 2022).

Methodologically, understanding these three dimensions is essential to ensure the validity of self-efficacy measurement instruments (Bandura, 1997). Recent research emphasizes that a good instrument must be task-specific and contextual, especially when used in English as a Medium of Instruction (EMI) setting where language factors become additional variables (Alnaimi et al., 2024). Such instruments will be better able to predict student learning behaviors, such as participation levels, effort, learning strategies, and resilience in the face of difficulties (Schunk et al., 2022). This aligns with the findings of Street et al. (2022), which show that students' self-efficacy can change dynamically depending on the difficulty of the material and the support provided. Thus, the dimensions of magnitude, strength, and generality cannot be separated but rather complement each other in forming students' self-efficacy profiles.

2.1.3 Factors Affecting Self-Efficacy

According to Bandura (1997), there are four main factors that influence the formation of self-efficacy, and contemporary research has confirmed their relevance in the context of modern education. The first factor is **Mastery Experiences**, or experiences of success, which

are the strongest source of self-confidence. Consistent success in completing tasks strengthens students' perception that they are capable, thereby enhancing their confidence in tackling future challenges (Herset et al., 2023; Zakariya, 2022). Conversely, repeated failure without adequate support or problem-solving strategies can weaken this belief, even in students who previously had high self-efficacy (Street et al., 2022). In the context of mathematics learning with English as a Medium of Instruction (EMI), the experience of success becomes more complex because students must master both the academic material and the language of instruction (Cui & Gardiner, 2025).

The second factor is **Vicarious Experiences**, which occur when individuals observe the success of others, especially those considered similar in ability or background. Seeing peers successfully overcome challenging tasks can foster confidence that they too are capable of doing the same (Thompson et al., 2019). This modeling effect is stronger when the observed model shares similarities in ability level, language, or academic background (Signori et al., 2024). Research by Soruc et al. (2021) shows that in English as a Medium of Instruction (EMI) classrooms, observing peers who successfully understand the material despite language barriers can inspire other students to improve their learning strategies. Thus, the use of collaborative learning and group discussions can reinforce the positive effects of representative experiences.

The third factor is **Social Persuasion** or **verbal and social support**, which includes encouragement, motivation, and positive feedback from teachers, parents, or peers. This encouragement can influence students' interpretations of success and failure and shape a mindset that is more resilient to academic obstacles (Alnaimi et al., 2024). In an English as a Medium of Instruction (EMI) environment, effective social persuasion not only provides academic support but also helps reduce language barriers by providing clear and adaptive communication strategies (Anggraini, 2023). Research by Pujiani et al. (2023) emphasizes

that teachers who are able to provide constructive feedback on an ongoing basis can help students see failure as a learning opportunity, not proof of incompetence. Therefore, creating a supportive classroom atmosphere that recognizes students' efforts is an important strategy for improving self-efficacy.

The fourth factor is **Physiological and Affective States**, which influence how individuals interpret their abilities. Feelings of anxiety, stress, or fatigue can lower self-confidence, while positive emotions and good physical condition can strengthen it (Popa-Velea et al., 2021). In English as a Medium of Instruction (EMI)-based mathematics learning, anxiety levels can increase because students face a double cognitive load—processing mathematical concepts and a foreign language simultaneously (Al Hakim, 2021). A study by Daley et al. (2025) shows that emotional support from teachers and connection to the school environment can reduce stress levels, thereby helping to maintain academic self-efficacy. Managing these emotional factors becomes crucial, especially in learning environments that require simultaneous adaptation of language and concepts.

Overall, these four factors interact in shaping and modifying students' self-efficacy. Mastery experiences provide empirical evidence of ability, vicarious experiences offer inspiration, social persuasion builds support, and physiological states influence the interpretation of ability. In the context of English as a Medium of Instruction (EMI), all these factors take on an additional dimension due to language challenges, which can either strengthen or hinder the development of self-efficacy (Macaro et al., 2018). Recent research confirms that teaching strategies that consider all four sources simultaneously are more effective in improving students' learning motivation and academic achievement (Usher et al., 2019; Zakariya, 2022). Therefore, a deep understanding of these factors is an important foundation for designing effective learning interventions in English as a Medium of Instruction (EMI)-based mathematics classrooms.

2.1.4 The Impact of Self-Efficacy on Academic Learning

Self-efficacy plays a fundamental role in determining students' motivation and choice of learning activities. Students with high levels of self-efficacy tend to choose challenging tasks, set ambitious goals, and take the initiative to seek additional learning resources (Schunk & DiBenedetto, 2020). They are not only more active in class discussions but also willing to seek feedback to improve their academic performance (Usher et al., 2019). Research by Honicke and Broadbent (2016) indicates that self-efficacy positively correlates with academic engagement, particularly in subjects requiring complex problem-solving such as mathematics. In the context of learning through English as a Medium of Instruction (EMI), this motivation becomes even more crucial as students face the dual challenge of understanding both the subject matter and the language of instruction (Cui & Gardiner, 2025).

In addition to influencing motivation, self-efficacy also impacts students' effort levels and perseverance in completing academic tasks. Students with high self-efficacy tend to invest more energy, persist longer in the face of obstacles, and seek alternative strategies when encountering difficulties (Street et al., 2022). Conversely, students with low self-efficacy are more likely to give up quickly when faced with initial failure, ultimately limiting their chances of academic success (Usher et al., 2019). Herset et al.'s (2023) study in the context of mathematics shows that strong self-confidence helps students stay focused even when faced with highly complex problems. This suggests that strengthening self-efficacy can act as a protective factor against decreased motivation in English as a Medium of Instruction (EMI)-based learning.

Another significant impact is on the use of learning strategies and self-regulation. Students with high self-efficacy are more likely to apply metacognitive strategies such as planning, monitoring, and evaluating learning outcomes (Schunk & DiBenedetto, 2020).

They are able to adjust their learning approaches according to the difficulties they face, for example, switching from passive reading to intensive problem-solving exercises if necessary (Jäder & Johansson, 2025). Research by Popa-Velea et al. (2021) confirms that this self-regulation ability enhances learning efficiency and reduces academic stress. In mathematics learning via English as a Medium of Instruction (EMI), self-regulation also helps students manage the cognitive load resulting from the use of a foreign language.

Self-efficacy also has a direct relationship with academic achievement and student resilience. Empirical evidence shows that math self-efficacy positively correlates with math test scores, both in the context of mother tongue learning and English as a Medium of Instruction (EMI) (Zakariya, 2022). Interventions targeting the mastery experience aspect have been proven to improve students' average performance in a relatively short time (Herset et al., 2023). Additionally, self-efficacy acts as a buffer against the negative effects of math anxiety on academic performance (Alnaimi et al., 2024). This is particularly relevant in English as a Medium of Instruction (EMI) learning, where language anxiety can exacerbate subject anxiety (Al Hakim, 2021). Therefore, enhancing self-efficacy not only impacts cognitive outcomes but also students' psychological well-being.

Overall, self-efficacy influences nearly all aspects of academic learning, from motivation, perseverance, learning strategies, to final outcomes. In mathematics learning within the English as a Medium of Instruction (EMI) classroom context, this impact becomes more complex as it involves the interaction between academic ability and language competence (Macaro et al., 2018). Teachers who understand this role can design learning that supports all four sources of self-efficacy—mastery, vicarious experience, social persuasion, and physiological states—simultaneously. This approach will strengthen intrinsic motivation, enhance adaptability, and reduce affective barriers that often arise in English as a Medium of Instruction (EMI) classrooms (Pujiani et al., 2023). Therefore, strengthening self-efficacy

should be a top priority in the design of English-based mathematics instruction at the secondary school level.

2.2 English as a Medium of Instruction (EMI)

The concept of English as a Medium of Instruction (EMI) was first introduced through international studies by Dearden (2014), who mapped the trends in the use of English as a medium of instruction in various non-English-speaking countries. Along with the increasing flow of globalization, EMI began to develop rapidly in the 1990s until now, especially in Asia, as a strategy for the internationalization of education (Macaro, 2018). This model then became one of the research focuses in the field of language education and higher education policy in various countries.

2.2.1 The Definition of English as a Medium of Instruction (EMI)

English as a Medium of Instruction (EMI) is generally defined as the use of English to teach non-language subjects in countries or regions where English is not the official or primary language (Macaro, 2018). This definition emphasizes that EMI is not merely a substitute for the local language of instruction, but also a means of simultaneously integrating academic content mastery and English language skills (Macaro et al., 2018). In practice, EMI is applied at various levels of education, from secondary school to higher education, particularly in institutions seeking to enhance global competitiveness (Dearden & Macaro, 2016). Soruc et al. (2021) assert that EMI has a dual purpose: to expand students' access to international literature and to improve academic communication competence in English. Therefore, EMI has become one of the most widely adopted strategies for educational internationalization in developing countries (Dearden & Macaro, 2016).

In the Indonesian context, the implementation of EMI has begun to develop rapidly, particularly in international and bilingual schools and some university study programs (Al Hakim, 2021). This model is seen as one of the efforts to prepare students to face the challenges of globalization, both in the academic and professional worlds. Anggraini (2023) highlights that English as a Medium of Instruction (EMI) in EFL (English as a Foreign Language) classrooms does not only focus on language skills but also on enhancing subject matter understanding through intensive exposure to the English language. A study by Pujiani et al. (2023) even found that the use of EMI can influence the acquisition of first language (L1) and second language (L2) in bilingual school students in Indonesia. This indicates that EMI has interrelated linguistic and cognitive implications in the learning process.

The implementation of EMI has several characteristics that distinguish it from conventional English language teaching methods. First, the focus of learning remains on subject content, while English language development serves as a supporting objective (Talaue & Kim, 2020). Second, classroom interactions in EMI are typically more complex because students must process academic material in a language that is not their native tongue, which can impose additional cognitive load (Cui & Gardiner, 2025). Third, the success of EMI depends heavily on the English proficiency of teachers and students, as well as the teaching strategies employed (Wang, 2021). Rut's (2024) research found that well-structured EMI can improve students' English skills while enhancing their academic understanding. Therefore, EMI curriculum design must balance linguistic and academic objectives (Kamasak & Sahan, 2024).

The implementation of EMI in non-English-speaking countries is also influenced by social, economic, and national education policy factors (Macaro et al., 2018). In some Asian countries, EMI is often seen as an effort to modernize and improve the quality of higher education. However, challenges such as differences in language proficiency among students

and limitations in teacher training remain significant barriers (Thompson et al., 2019). Therefore, the success of EMI depends heavily on the readiness of teachers, students, and the education system as a whole.

Overall, EMI is an educational approach that integrates content and language learning with the aim of improving students' academic and global communication competencies. In Indonesia, the implementation of EMI continues to grow in line with increasing international job market demands and the need for graduates with global competencies (Pujiani et al., 2023; Al Hakim, 2021). However, to maximize its benefits, strategies must consider linguistic, pedagogical, and psychological aspects of students. Recent research also highlights the importance of comprehensive educational policy support to ensure the sustainability of EMI (Soruc et al., 2021). With careful planning, EMI can become an effective tool for enhancing the competitiveness of national education on the international stage.

2.2.2 Challenges and Advantages of Learning in English as a Medium of Instruction (EMI)

The implementation of English as a Medium of Instruction (EMI) presents a number of challenges that educators and institutions need to be aware of. One of the main challenges is the language barrier, where students' limited academic vocabulary and language structure can hinder conceptual understanding, especially when teachers use technical terms without adequate scaffolding (Soruc et al., 2021; Cui & Gardiner, 2025). This challenge can be further explained through Cognitive Load Theory proposed by John Sweller, which explains that learners have limited working memory capacity when processing new information. In EMI-based mathematics learning, students experience a double cognitive load because they must understand mathematical concepts while simultaneously processing English as the language of instruction. This dual demand may increase learning difficulty, slow down

comprehension, and reduce learning effectiveness, especially for students with limited English proficiency. Academic anxiety also frequently arises, such as fear of making mistakes or embarrassment about asking questions, which can reduce active participation in class and affect self-efficacy (Daley et al., 2025; Signori et al., 2024). The quality of instruction and teacher readiness are other critical factors; the success of EMI depends heavily on teachers' ability to simplify language without compromising the essence of concepts, as well as adequate institutional support (Wang, 2021; Dearden & Macaro, 2016).

On the other hand, EMI offers significant benefits for students' academic and language development (Feng & Yiganmu, 2023). Intensive exposure to academic language can enrich domain-specific vocabulary and improve scientific communication skills, making students better prepared to engage with international literature and discussions (Macaro et al., 2018; Rut, 2024). Additionally, access to global resources becomes easier as scientific literature, online materials, and international journals are generally available in English (Al Hakim, 2021; Talaue & Kim, 2020). Learning activities in EMI, such as presentations, discussions, and collaborative projects, also encourage the development of transversal competencies, including critical thinking, cooperation, and effective communication (Pujiani et al., 2023; Anggraini, 2023). Research indicates that students accustomed to learning through EMI tend to have higher self-efficacy because they perceive progress in both language proficiency and academic understanding (Thompson et al., 2019; Schunk & DiBenedetto, 2020). Thus, despite the challenges, EMI has the potential to be an effective approach that integrates academic content mastery and language skills, provided it is supported by appropriate teaching strategies and institutional policies (Thompson et al., 2019).

Overall, EMI-based teaching requires a balance between linguistic challenges, cognitive load, and pedagogical support with significant academic and linguistic benefits

(Soruc et al., 2021). Challenges such as language barriers, cognitive load, and anxiety can be minimized through scaffolding, material adaptation, and ongoing teacher training (Kamaşak & Sahan, 2024; Wang, 2021). Meanwhile, the advantages of EMI, such as improved academic language, access to global resources, and the development of transversal competencies, support students' readiness for international education and careers (Al Hakim, 2021; Rut, 2024). Institutional support, teacher readiness, and appropriate learning strategies are key to the success of EMI in bilingual or international classrooms. Therefore, the implementation of EMI must be systematically planned so that students can maximize its benefits while minimizing the obstacles that arise (Macaro, 2018; Soruc et al., 2021). This balanced approach can make EMI a means of strengthening students' academic, linguistic, and psychological capacities simultaneously (Soruc et al., 2021).

2.2.3 Self-Efficacy in the Context of English as a Medium of Instruction (EMI)

Self-efficacy in the context of English as a Medium of Instruction (EMI) has different characteristics compared to learning in the mother tongue. In mathematics learning through EMI, self-efficacy is not only related to students' belief in their ability to understand mathematical concepts, but also their belief in their ability to understand instructions and explanations in English (Thompson et al., 2019; Signori et al., 2024). Research indicates that students with high self-efficacy are more likely to maintain their motivation to learn even as their English language skills continue to develop (Cui & Gardiner, 2025; Honicke & Broadbent, 2016). This self-confidence allows them to try various problem-solving strategies and not give up easily when faced with complex mathematical problems. This shows that self-efficacy plays a dual role: as a driver of academic success and as a factor that helps students adapt to linguistic challenges.

Early success experiences in mathematics learning through EMI play a crucial role in shaping students' self-efficacy. When students are able to understand and solve a mathematics topic in English, they tend to have a positive perception of their abilities in subsequent topics (Street et al., 2022; Herset et al., 2023). This improvement can trigger a positive cycle, where self-confidence influences active participation in class, which in turn deepens understanding of the material (Zakariya, 2022; Usher et al., 2019). Conversely, repeated failure experiences without proper support can lower self-efficacy and affect student achievement (Popa-Velea et al., 2021; Ernawati et al., 2022). Therefore, teachers need to design learning experiences that provide repeated opportunities for success so that students' perceptions of their abilities remain positive throughout the learning process.

In addition to learning experiences, social and learning environment factors also influence students' self-efficacy in EMI. Support from teachers, peers, and a positive academic environment can enhance students' confidence in their ability to understand mathematical content in English (Daley et al., 2025; Anggraini, 2023). A supportive environment provides students with a sense of security to ask questions, discuss, and express their opinions without fear of language errors (Al Hakim, 2021; Kamaşak & Sahan, 2024). Recent research also indicates that students' perceptions of the quality of instruction and the clarity of teachers' explanations significantly influence their self-efficacy (Macaro et al., 2018; Wang, 2021). Thus, personal and contextual factors work synergistically to shape students' levels of self-efficacy in mathematics learning through EMI. This understanding is crucial for designing effective learning strategies, particularly at the junior high school level, which is the focus of this study.

2.3 Previous Studies

The research conducted by Kurniati (2024) entitled Students' Perceptions of English Medium Instruction (EMI) in Secondary School Bilingual Classes: A Case Study discusses junior high school students' perceptions of the implementation of English as a Medium of Instruction (EMI) in bilingual classes. The focus of this study is on the benefits of EMI for students' future education and careers, as well as the challenges they face in the learning process. Using a case study method with in-depth interviews and observations, Kurniati found that most students have a positive view of EMI, but still face challenges in understanding technical terms and the limitations of teachers' English language skills. These results confirm that linguistic and pedagogical support is urgently needed at the junior high school level. However, this study has not linked these positive perceptions to students' ability to understand complex academic material such as mathematics, leaving room for further research focusing on the role of self-efficacy in the context of EMI in that subject.

Furthermore, Hasanah, Sholihin, and Nugraha (2021) in their study An Investigation of Junior High School Students' Science Self-Efficacy and Its Correlation with Their Science Achievement in Different School Systems examined the relationship between junior high school students' self-efficacy in science and their academic achievement. Using a quantitative approach through self-efficacy questionnaires and science achievement tests, this study found a significant positive correlation between self-efficacy and students' learning outcomes. This means that the higher the students' self-efficacy, the higher their achievements. Although this finding is relevant in demonstrating the importance of self-efficacy in learning, the research context was limited to science subjects and did not consider the influence of using English as the medium of instruction. This opens up opportunities to investigate the relationship between self-efficacy and academic achievement in the context of EMI, particularly in mathematics at the junior high school level.

At the higher education level, Thompson, Aizawa, Curle, and Rose (2019) investigated the relationship between self-efficacy and the success of Japanese students in EMI-based learning through their article Exploring the role of self-efficacy beliefs and learner success in English medium instruction. Using quantitative surveys and interviews, the study found that students with high self-efficacy tend to view language challenges as opportunities for learning, which in turn positively impacts their academic outcomes. This study reinforces the argument that self-efficacy is a key factor in learning success in EMI classrooms. However, the focus on university students means that the results may not fully reflect the conditions of junior high school students who face both linguistic and cognitive barriers in complex subjects such as mathematics.

Research by Signori, Drajati, and Putra (2024) titled Indonesian non-ELT pre-service teachers' self-efficacy in EMI context: Voices from international teaching practicum in Thailand highlights the self-efficacy of non-ELT pre-service teachers during teaching practice in Thailand in the context of EMI. Using a qualitative approach through in-depth interviews and written reflections, this study found that successful teaching experiences, social support, and mastery of the subject matter were the main factors that increased participants' self-efficacy. These findings show that both external and internal factors can strengthen self-confidence in teaching using English. Although focused on prospective teachers, this study provides important insights that experience and support can be determining factors in enhancing self-efficacy, which is relevant for students in EMI-based mathematics learning.

Anggraini's (2023) study in The Use of English as a Medium of Instruction in EFL Classrooms examines teachers' and students' perceptions of EMI implementation in English as a foreign language (EFL) classrooms. Using a qualitative descriptive method through interviews and observations, this study found that EMI increases students' exposure to English and enriches their academic vocabulary, but there are still obstacles in the form of

limited vocabulary and appropriate teaching materials. This study provides an overview of perceptions and challenges in implementing EMI but does not address its relationship with self-efficacy or mastery of non-language content. This underscores the need for research positioning EMI as the context and self-efficacy as a key factor in understanding students' success in learning complex mathematics content at the junior high school level.

Based on these five studies, it can be seen that the study of EMI and self-efficacy has been quite developed in various contexts, ranging from higher education to secondary school, and from language learning to general subjects (Kurniati, 2024; Anggraini, 2023; Signori et al., 2024; Thompson et al., 2019; Hasanah et al., 2021). However, most previous studies have focused on general perceptions of EMI, language teaching strategies, or the relationship between self-efficacy and language skills (Anggraini, 2023; Thompson et al., 2019; Signori et al., 2024). Research that specifically relates EMI to students' self-efficacy in subjects that are conceptual and require logical thinking skills, such as mathematics, is still rare, especially at the junior high school level (Hasanah et al., 2021).

In addition, most existing studies tend to discuss self-efficacy broadly without separating it into the context of specific academic tasks, thus lacking a detailed description of how students' self-efficacy is formed and plays a role in understanding mathematical concepts taught in English (Thompson et al., 2019; Signori et al., 2024). This study fills the gap by positioning EMI as the learning context, while self-efficacy becomes the key variable that is analyzed in depth.

The novelty of this study lies in its focus that positions EMI only as a context, while self-efficacy becomes a key factor that influences students' understanding of complex academic materials in bilingual education at the junior high school level in Indonesia. The implication of this study is to provide insights for teachers, curriculum designers, and policy

makers in developing learning environments that not only support the improvement of English language skills, but also foster students' self-efficacy in learning challenging subjects through EMI (Kurniati, 2024; Hasanah et al., 2021; Thompson et al., 2019). The results of this study are expected to serve as a basis for designing learning approaches that are more effective and responsive to students' psychological needs in the context of bilingual education at the junior high school level.

CHAPTER III

RESEARCH METHOD

The research methodology employed in this study is covered in this chapter. The explanation covers the following topics: research design, subject of the study, research instrument, data collection, data analysis techniques.

3.1 Research Design

This study uses a qualitative approach with a case study design to explore the level of confidence of junior high school students in understanding mathematics material in the context of classes with English as the Medium of Instruction (EMI) and the factors that influence it. A qualitative approach was chosen because it is suitable for gaining an in-depth understanding of students' experiences, perceptions, and self-beliefs in the context of bilingual learning. According to Creswell and Poth (2016), qualitative research is based on an interpretive framework that investigates the meaning individuals give to social or human phenomena. In line with this view, this study explores how students' self-confidence is formed and influenced by learning experiences, and how factors such as mastery experiences, vicarious experiences, verbal persuasion, and physiological conditions play a role in this process (Yin, 2018). A case study design was chosen because it allows for in-depth analysis of phenomena in the specific context of one class, taking into account student-teacher interactions and the use of English as the medium of instruction (Yin, 2018).

3.2 Subject of the Study

This study was conducted at a junior high school in Malang City that uses English as a Medium of Instruction (EMI) in mathematics lessons. The school uses English as the medium of instruction for several subjects, including mathematics, with the aim of improving students' English language skills and academic understanding. The research subjects consist

of 20 ninth-grade students enrolled in the same class. All students first completed a questionnaire regarding their level of self-efficacy in understanding mathematics material delivered through English as a Medium of Instruction (EMI).

Based on the questionnaire results, the researcher selected five students for in-depth interviews. The selection was made by considering variations in self-efficacy levels (high, medium, low) so that the interviews could represent the spectrum of student experiences more comprehensively. The determination of interview participants also considers the recommendations of subject teachers to ensure that the selected students are actively involved in learning and able to reflect on their experiences verbally. Purposive sampling (Etikan et al., 2016) is used to ensure that the selected participants are truly relevant to the research objectives and able to provide rich data. With this strategy, the research is expected to explore not only the general picture of students' self-efficacy levels but also the factors that influence its formation.

3.3 Research Instruments

This study uses three main instruments to collect data relevant to the research objectives, namely questionnaires, observations, and semi-structured interviews. These three instruments were developed based on Bandura's (1997) self-efficacy theory, which includes three dimensions (magnitude, strength, generality) and four sources of self-efficacy (mastery experiences, vicarious experiences, verbal persuasion, physiological states). The selection of these three instruments aims to obtain complementary data, so that the research results have stronger validity through the data triangulation process (Creswell & Poth, 2016).

3.3.1 Questionnaire

The questionnaire was designed to measure students' self-efficacy levels in mathematics learning in an English as a Medium of Instruction (EMI) classroom context. The instrument was developed based on Albert Bandura's self-efficacy theory, which covers three dimensions of self-efficacy: magnitude, strength, and generality. It also examines four sources of self-efficacy, namely mastery experiences, vicarious experiences, verbal persuasion, and physiological states. Several questionnaire items were adapted from the work of Dale H. Schunk and Maria K. DiBenedetto (2020) to fit the context of EMI mathematics learning. This adaptation was intended to ensure the instrument was relevant to the research context.

The questionnaire consisted of 24 statements divided into two sections. The first section contained 12 items measuring students' self-efficacy levels based on the three dimensions of self-efficacy. The second section consisted of 12 items identifying the factors influencing students' self-efficacy based on the four sources of self-efficacy. A five-point Likert scale was used in this questionnaire, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). This scale helped the researcher measure students' responses systematically.

All 20 ninth-grade students participated in completing the questionnaire as the initial stage of data collection. The questionnaire was distributed to obtain data about students' self-efficacy levels in EMI mathematics learning. The results of the questionnaire were analyzed to identify the level of students' self-efficacy and its influencing factors. The findings also served as a basis for selecting participants for the interview session. The complete questionnaire items are presented in Appendix 1.

3.3.2 Observation Guidelines

Observation guidelines were used to record students' behaviors that reflected self-efficacy and the factors influencing it during mathematics learning in an English as a Medium of Instruction (EMI) classroom. The observation focused on students' behavioral responses during the learning process to support the questionnaire and interview data. This instrument was developed based on Albert Bandura's self-efficacy theory, particularly the dimensions and sources of self-efficacy. The observation aimed to identify how students demonstrated confidence, persistence, and responses to difficulties in EMI mathematics learning. This process helped the researcher gain direct evidence of students' self-efficacy in the classroom.

The observations were conducted as non-participant observations during three classroom meetings to obtain a consistent and comprehensive understanding of students' behaviors. The researcher observed the classroom activities without directly participating in the teaching and learning process. Several aspects were observed, including active participation, strategies for overcoming difficulties, courage to ask questions, cooperation with peers, and expressions of confidence. These aspects were derived from behavioral indicators related to the dimensions and sources of self-efficacy proposed by Albert Bandura (1997). Conducting observations in multiple meetings allowed the researcher to compare students' behaviors across different learning situations.

The observation instrument was designed in the form of a checklist using Yes or No responses. Each observed behavior was marked based on whether it appeared during the learning process. In addition to the checklist, a field note column was provided to record important classroom events and contextual details. These field notes were used to provide

additional explanations for the observed behaviors. The complete observation guideline and checklist are presented in Appendix 2.

3.3.3 Interview Questions

Semi-structured interview guidelines were used to obtain in-depth information about students' self-efficacy levels and the factors influencing them in learning mathematics through English as a Medium of Instruction (EMI). The interview questions were developed based on Albert Bandura's self-efficacy theory, including the three dimensions of self-efficacy: magnitude, strength, and generality. The interview also explored the four sources of self-efficacy, namely mastery experiences, vicarious experiences, verbal persuasion, and physiological states. The use of semi-structured interviews allowed the researcher to explore students' experiences more deeply while maintaining the focus of the study. This instrument was intended to gain richer explanations beyond the questionnaire and observation results.

The participants were selected purposively based on the questionnaire results and their willingness to participate in the interview process. The selection considered variations in students' self-efficacy levels to represent different perspectives and experiences. A total of five students were chosen as the interview participants in this study. Each interview lasted approximately seven to ten minutes and was conducted individually. This process allowed the researcher to gather personal and detailed responses from each participant.

The interview data were used to strengthen and complement the findings from the questionnaire and observation through data triangulation. The responses helped the researcher understand students' confidence, learning experiences, and emotional conditions in EMI mathematics learning. The interview also provided explanations about how external and internal factors influenced students' self-efficacy. All interview questions were prepared in

simple language to make them easier for students to understand and answer. The complete interview guidelines are presented in Appendix 3.

3.4 Data Collection

The data collection techniques in this study were designed to provide a comprehensive picture of students' self-efficacy in EMI-based mathematics learning. Three techniques would be used: questionnaires, observations, and semi-structured interviews, which are selected to complement each other through triangulation (Creswell & Poth, 2018;). The data collection sequence begins with questionnaires administered to all students, followed by classroom observations during three sessions, and concludes with interviews with a selected group of students. This sequential strategy facilitates initial mapping, verification of actual classroom behavior, and then deeper understanding from the students' perspective.

3.4.1 Observation

Observations were conducted non-participatively during three mathematics learning sessions with EMI to identify behaviors that reflect students' levels and sources of self-efficacy. The observation guidelines used a checklist format containing nine statements based on Bandura's dimensions of self-efficacy, namely magnitude (the level of difficulty that students believe they can overcome), strength (the strength of belief when facing challenges), and generality (the scope of belief in various situations). The aspects to be observed include active participation, initiative in asking questions, responses to challenges, expressions of self-confidence, and other indicators relevant to these three dimensions. The checklist is supplemented with field notes to record details of the context of teacher-student and student-student interactions. During the observation, the researcher sat at the back of the

classroom and was not directly involved in the learning process to avoid influencing the students' natural behavior.

3.4.2 Questionnaire

This questionnaire would be used to measure students' self-efficacy levels and identify factors that influence them in the context of learning mathematics through EMI. This tool consists of 24 statements in the form of a 1–5 Likert scale, with 12 items to measure self-efficacy and 12 items to identify the factors that shape it. Each item is arranged based on three dimensions and four sources of self-efficacy according to Bandura (1997). The questionnaire would be printed on paper and distributed to all 20 ninth-grade students after the learning activity is completed. Students would be given 15 minutes to complete it, and the researcher would ask the teacher for additional time so that the questionnaire can be completed calmly and with focus.

3.4.3 Semi-structured Interview

The semi-structured interviews in this study focused on exploring students' self-efficacy in learning mathematics through EMI and the factors that influence it. Five students were purposively selected based on questionnaire scores (high, medium, low) to obtain a variety of perspectives. The interview questions were designed with reference to the three dimensions of self-efficacy (magnitude, strength, and generality) and its four sources according to Bandura (1997), so that the topics discussed include students' feelings when dealing with math problems in English, the influence of previous experiences, past successes, the role of peers, support from teachers and friends, and their emotional state during learning. The interviews were conducted face-to-face at school, with each interview lasting about 7-10 minutes, recorded with the participants' permission, and all data would be anonymized to maintain confidentiality.

3.5 Data Analysis Techniques

The data analysis process in this study follows the interactive model of Miles et al. (2014), which consists of three main stages, namely data reduction, data presentation, and conclusion drawing. This model was chosen because it is in line with the qualitative case study approach and allows for systematic analysis based on data obtained from questionnaires, observations, and interviews. Each stage of analysis was explained further in the following subsections to show how the data was processed to produce the research findings.

3.5.1 Data Reduction

Data reduction in this study was carried out by filtering information from questionnaires, observations, and interviews to focus on findings relevant to the research objectives. The questionnaire data consists of 24 items organized based on three dimensions of self-efficacy (magnitude, strength, and generality) and four sources (mastery experience, vicarious experience, verbal persuasion, and physiological states). Students' answers to each item are calculated and averaged to obtain scores per dimension and per source, so that researchers no longer display item answers in detail, but rather summary scores that are easier to analyze. From the results of observations during three learning sessions, the data, which was initially in the form of checklist notes and field notes, will be summarized into the frequency of relevant behaviors, such as active participation, initiative to ask questions, and effort in facing difficulties. These frequencies were then added up to provide an overview of the observation scores per student. Meanwhile, the verbatim interview data would be transcribed and coded into units of meaning in line with the dimensions and sources of self-efficacy. Irrelevant or repetitive quotes were set aside, while representative quotes were selected to reinforce the main themes. The entire reduction process was recorded in the form

of code notes and analytical memos so that the researcher's decision-making process remained transparent. In this way, the initially diverse data can be condensed into systematic findings that are ready for the next stage of presentation.

3.5.2 Data Presentation

The results of data reduction in this study were presented by combining tables, graphs, and descriptive narratives to make them easy to understand. Questionnaire data were displayed in tables or graphs showing the average scores for each dimension (magnitude, strength, generality) and the four sources of self-efficacy (mastery, vicarious, verbal persuasion, physiological). These tables were supplemented with narratives explaining general student attitudes, such as which dimensions were strongest and which factors were most influential. Observation data were presented in behavior frequency tables, such as the number of students who actively asked questions, answered questions, or showed hesitation, which were supplemented with contextual narratives from field notes to describe the classroom situation. Meanwhile, interview data would be analyzed thematically based on dimensions and sources of self-efficacy, then presented in the form of main themes reinforced with direct quotes from students. These quotes would be written anonymously (e.g., Student 1, Student 2) to maintain confidentiality. In this way, the results of the questionnaire, observation, and interview can complement each other and provide a complete picture of the level of student confidence in EMI-based mathematics learning.

3.5.3 Drawing Conclusion

Conclusions in this study would be drawn in steps after the data from the questionnaires, observations, and interviews are presented and compared. This process begins with making preliminary conclusions based on patterns that emerge from each instrument, followed by rechecking with the original data to ensure that the patterns are truly consistent

and relevant. Triangulation between instruments were used to examine the consistency of findings, for example, whether questionnaire scores are in line with observed behavior and student statements in interviews. If there are differences, the researchers review the data to revise or clarify the initial conclusions. The final result is a comprehensive picture of students' levels of self-efficacy in EMI-based mathematics learning, along with the internal and external factors that influence it.

3.6 Data Validity

To ensure the credibility and reliability of the findings, this study uses triangulation techniques, namely by utilizing data from questionnaires, observations, and semi-structured interviews. In addition, the validation process was also carried out from the instrument development stage. The questionnaire was tested for readability by several students outside the research subjects to ensure that the language and statements were easy to understand, then it was reviewed by the supervising lecturer as an expert judgment to ensure that it is in accordance with Bandura's (1997) theoretical construct. The observation guidelines were validated through consultation with the relevant mathematics teacher to ensure that the behavioral indicators observed are relevant to the learning practices in EMI classes. Meanwhile, the interview guidelines were reviewed by English education experts and the supervising lecturer to assess the suitability of the questions with the dimensions and sources of self-efficacy. The input from the experts and the readability test will be used to revise the instruments before they are used in the field. Furthermore, data validation was carried out through triangulation between instruments, namely by comparing the questionnaire results with actual behavior in observations and student statements in interviews. With this step, the data obtained will be more accurate, contextual, and mutually reinforcing.

CHAPTER IV

FINDINGS AND DISCUSSIONS

This chapter presents the findings and discussion of the study based on the two research questions. The first research question explores junior high school students' self-efficacy in understanding mathematics content through English as a Medium of Instruction (EMI). The second research question focuses on identifying the factors that influence students' self-efficacy in learning mathematics in an EMI classroom context. The findings are derived from three sources of data, namely questionnaires, classroom observations, and semi-structured interviews. These data are then analyzed and discussed to provide a comprehensive understanding of students' self-efficacy in EMI-based mathematics learning.

4.1 Research Finding

These findings were obtained through three data collection methods: questionnaires, observations, and interviews. Each method was used to provide different yet complementary perspectives in understanding the phenomenon under study. Questionnaire data were used to provide an overview of students' self-efficacy levels, while observations and interviews were used to reinforce and deepen these results. The presentation of these research findings is organized according to each research question to ensure a more systematic and easily understandable structure.

4.1.1 Junior High School Students' Self-Efficacy in Understanding Mathematics Content through English as a Medium of Instruction (EMI)

This section presents findings related to the first research question, which is to explore students' self-efficacy in understanding mathematics material through English as a Medium of Instruction (EMI). Self-efficacy in this study refers to students' belief in their ability to

complete mathematics content presented in English. This concept is based on the theory of self-efficacy proposed by Albert Bandura, which states that self-efficacy consists of three main dimensions: magnitude, strength, and generality. To address this research question, data were collected through questionnaires, observations, and interviews. These three data sources were used to complement and strengthen the research findings. To interpret the questionnaire results, this study used the following classification of self-efficacy levels based on mean scores.

Table 1. Self-Efficacy Level Based on Mean Scores

Mean Scores	**Level**
1.00 - 2.33	Low
2.34 - 3.67	Moderate
3.68 - 5.00	High

Source: Adapted from Likert scale interpretation (Sugiyono, 2017).

Based on the table, the mean score is used to determine whether students' self-efficacy levels are low, moderate, or high. These categories are adapted from the interpretation of Likert scales used in educational research. With these categories, researchers can group students' confidence levels more systematically. These categories also help explain trends in students' responses to the statements in the questionnaire. Thus, the questionnaire results can be interpreted more clearly and in a structured manner. In addition, the overall distribution of students' self-efficacy levels is presented in the following table.

Table 2. Level of Students' Self-Efficacy

Level	Frequency	Presentation
High	9	30%
Moderate	18	60%
Low	3	10%

Based on the table, most students are in the moderate category, with a total of 18 students (60%). Meanwhile, 9 students (30%) are categorized as having high self-efficacy, and 3 students (10%) are in the low category. This indicates that the majority of students have a sufficient level of confidence in learning mathematics through EMI. However, there are still some students who experience low self-efficacy. This finding shows that students' confidence levels are not evenly distributed.

The questionnaire results indicate that students' self-efficacy falls into the moderate category across all three dimensions: magnitude, strength, and generality. This suggests that students possess a sufficient level of confidence in understanding mathematics through EMI, though it is not yet fully developed. Variations in students' responses also indicate that not all students possess the same level of self-confidence. To provide a more comprehensive understanding, the findings are further presented based on each dimension of self-efficacy, namely magnitude, strength, and generality, by integrating the results from questionnaires, observations, and interviews. Therefore, learning support is needed to enhance students' self-efficacy more effectively.

a. Magnitude Dimension

The magnitude dimension refers to students' beliefs about their ability to complete tasks of varying levels of difficulty. This dimension shows how confident students are when facing easy to difficult mathematics problems, especially in an EMI context.

Table 3. Observation Results of Students' Self-Efficacy Based on Magnitude Dimensions

No.	Aspects Observed	Results Observation		
		1st	2nd	3rd
1.	**Magnitude** Students can finish the questions before time runs out. *Siswa bisa menyelesaikan soal sebelum waktu habis.*	**Yes**	**Yes**	**Yes**
2.	**Magnitude** Students ask questions when they encounter difficulties. *Siswa bertanya ketika mengalami kesulitan.*	**Yes**	**Yes**	**Yes**

Based on the observations, the students showed behaviors that reflected a fairly good level of self-efficacy in the magnitude dimension. Most students were able to complete tasks before the time ran out. Students also asked questions when they encountered difficulties in understanding the material. This indicates that students made efforts to deal with the level of difficulty in mathematics problems. Thus, the observation results show that students have sufficient confidence in handling difficult tasks. The questionnaire results for the magnitude dimension are presented in the following table.

Table 4. Questionnaire Results of Students' Self-Efficacy (Magnitude Dimension)

Variable	SA (5)	A (4)	N (3)	D (2)	SDA (1)
I am confident that I can solve math problems given by my teacher in English. *Saya yakin bisa menyelesaikan soal matematika yang diberikan guru menggunakan bahasa*	23,3%	26,7%	33,3%	16,7%	0%

Inggris.					
I am able to solve difficult math problems even when they are presented in English. *Saya mampu mengerjakan soal matematika yang sulit meskipun disampaikan dalam bahasa Inggris.*	6,7%	26,7%	40%	20%	6,7%
I am confident that I can answer math questions correctly even if I am not familiar with the material at first. *Saya yakin bisa menjawab soal matematika dengan benar meskipun awalnya tidak familiar dengan materi.*	0%	16,7%	33,3%	30%	20%
I am confident that I can complete additional math exercises independently. *Saya yakin bisa menyelesaikan latihan matematika tambahan secara mandiri.*	10%	13,3%	53,3%	16,7%	6,7%
Average	10%	20,8%	40%	20,8%	8,3%
	3,0 (Moderate)				

Based on the questionnaire results table for the magnitude dimension, an average score of 3.00 was obtained, which falls into the moderate category. The distribution of responses shows that the majority of students fall into the neutral category, accounting for 40%. Additionally, there is a balance between students who agree and those who disagree with the given statements. This indicates that students possess a sufficient level of confidence in handling the difficulty level of math problems in English. Thus, students' self-efficacy on the magnitude dimension is at a moderate level.

The interview results also support these findings. Student E stated, *E "I'm not too sure if the questions are hard, but I still try because I'm used to it."* In contrast, Student N

stated, *"Not very confident. If the question is hard, sometimes I feel like I can't do it even before I try."* Additionally, Student A also remarked, *"I'm pretty confident, but if the question looks really hard, I usually get doubtful right away. I still try, though, but I'm often not sure about my own answer."* This indicates that perceptions of difficulty influence students' confidence. Thus, the magnitude dimension shows variation in students' self-efficacy.

b. Strength Dimension

The strength dimension refers to how strong and stable students' beliefs are in their ability to complete tasks. This dimension reflects whether students remain confident when facing difficulties or challenges in learning mathematics through EMI.

Table 5. Observation Results of Students' Self-Efficacy Based on Strength Dimensions

No.	Aspects Observed	Results Observation		
		1st	2nd	3rd
3.	**Strength** Students show signs of frustration (sighing, closing books, complaining). *Siswa menunjukkan ekspresi frustasi (menghela napas, menutup buku, mengeluh).*	**Yes**	**No**	**No**
4.	**Strength** Students actively participate in class discussions. *Siswa berpartisipasi aktif dalam diskusi kelas.*	**Yes**	**Yes**	**Yes**
5.	**Strength** Students shift their attention (e.g., chatting, playing, or remaining silent) after failing to answer a question.	**No**	**Yes**	**Yes**

	Siswa mengalihkan perhatian (misalnya ngobrol, main, atau diam saja) setelah gagal mengerjakan soal.			
6.	**Strength** Students demonstrate confident expressions (gestures, tone of voice, body language). *Siswa menunjukkan ekspresi percaya diri (gesture, nada suara, sikap tubuh).*	**Yes**	**Yes**	**Yes**

Based on the observations, students showed behaviors related to the strength dimension of self-efficacy. Students continued to try to complete tasks and actively participated in class discussions. Some students also demonstrated confident expressions through their gestures, tone of voice, and body language. However, some students showed signs of hesitation, such as shifting their attention after failing to answer questions. This indicates that students' confidence is present but not yet fully stable. The questionnaire results for the strength dimension are presented in the following table.

Table 6. Questionnaire Results of Students' Self-Efficacy (Strength Dimension)

Variable	**SA (5)**	**A (4)**	**N (3)**	**D (2)**	**SDA (1)**
I am confident in my ability to understand math material through EMI. *Saya percaya diri dengan kemampuan saya dalam memahami materi matematika melalui EMI (EMI=pembelajaran menggunakan bahasa Inggris sebagai bahasa pengantar).*	23,3%	50%	20%	6,7%	0%

I am confident that I can follow math lessons in English without constant help from my teacher. *Saya yakin dapat mengikuti pelajaran matematika dalam bahasa Inggris tanpa bantuan guru terus-menerus.*	13,3%	46,7%	26,7%	10%	3,3%
I feel confident when asking questions or answering the teacher's questions in English. *Saya merasa percaya diri saat mengajukan pertanyaan atau menjawab pertanyaan guru dalam bahasa Inggris.*	13,3%	30%	36,7%	16,7%	3,3%
I feel confident explaining my answers to my peers. *Saya merasa percaya diri menjelaskan jawaban saya kepada teman sebaya.*	20%	16,7%	36,7%	26,7%	0%
Average	17,5%	35%	30%	15%	1,6%
	3,5 (Moderate)				

Based on the questionnaire results table for the “strength” dimension, an average score of 3.52 was obtained, which falls into the “moderate” category. Most students showed a fairly high level of agreement with statements related to confidence in completing math tasks. However, there were still students who felt uncertain about their abilities, as indicated by neutral and disagree responses. This suggests that students’ confidence levels are fairly stable but not yet fully strong. Thus, students’ self-efficacy on the strength dimension is also at a moderate level.

The interview results further explain these findings. Student K stated that their confidence level was *“about 9 out of 10.”* Meanwhile, Student A said, *“I still try, though, but I’m often not sure about my own answer.”* In addition, Student H mentioned, *“It depends on*

the subject. I'm pretty confident with algebra, but not so much with geometry." This indicates that students' confidence is influenced by specific conditions. Thus, the strength dimension is not yet consistent among all students.

c. Generality Dimension

The generality dimension refers to the extent to which students' self-efficacy can be applied across different tasks and learning situations. This dimension shows whether students' confidence in mathematics through EMI can influence their performance in other contexts or subjects.

Table 7. Observation Results of Students' Self-Efficacy Based on Generality Dimensions

No.	Aspects Observed	Results Observation		
		1st	2nd	3rd
7.	**Generality** Students are only active in certain types of assignments (e.g., writing), but become passive during oral discussions in English. *Siswa hanya aktif dalam bentuk tugas tertentu (misalnya tulisan), tapi pas diskusi lisan dalam bahasa Inggris jadi pasif.*	**Yes**	**Yes**	**Yes**
8.	**Generality** Students work together with their peers. *Siswa bekerja sama dengan teman sebaya.*	**Yes**	**Yes**	**Yes**
9.	**Generality** Students participate in discussions when their	**No**	**No**	**No**

	friends explain things, but do not want to speak when the teacher points directly at them. *Siswa ikut berdiskusi ketika teman menjelaskan, tapi tidak mau berbicara ketika guru menunjuk langsung.*			

Based on the observations, students showed behaviors related to the generality dimension. Students were able to work together with their peers and participate in discussions. However, some students were only active in certain types of tasks and became passive during oral discussions in English. Some students also preferred to respond when supported by peers rather than directly by the teacher. This indicates that students' confidence is not fully transferable across different situations.

Table 8. Questionnaire Results of Students' Self-Efficacy (Generality Dimension)

Variable	**SA (5)**	**A (4)**	**N (3)**	**D (2)**	**SDA (1)**
My confidence in mathematics also influences my ability in other subjects that use English. *Kepercayaan diri saya dalam matematika juga mempengaruhi kemampuan saya dalam mata pelajaran lain yang menggunakan bahasa Inggris.*	6,7%	40%	33,3%	20%	0%
I feel confident in facing other academic problems after successfully completing EMI math assignments. *Saya merasa percaya diri menghadapi masalah akademik lain setelah berhasil menyelesaikan tugas matematika EMI (EMI=pembelajaran menggunakan bahasa Inggris*	16,7%	36,7%	23,3%	23,3%	0%

sebagai bahasa pengantar).					
I am confident that my ability to understand mathematics in English helps me learn English in general. *Saya yakin kemampuan saya memahami matematika dalam bahasa Inggris membantu saya belajar bahasa Inggris secara umum.*	33,3%	46,7%	16,7%	3,3%	0%
My confidence in math class affects how I learn in other classes. *Kepercayaan diri saya di kelas matematika memengaruhi cara saya belajar di kelas lain.*	6,7%	23,3%	43,3%	16,7%	10%
Average	15,8%	36,6%	29,1%	15,8%	2,5%
	3,47 (Moderate)				

Based on the questionnaire results table for the generality dimension, an average score of 3.47 was obtained, which falls into the moderate category. These results indicate that students are reasonably capable of applying their self-confidence in various learning situations. Most students agreed with statements regarding the transfer of skills to other contexts. However, there were still some students who felt uncertain about applying these skills. Thus, students' self-efficacy in the generality dimension is also at a moderate level.

The interview results also support these findings. Student E stated, *"It has a significant impact, especially on science because it also uses English."* Meanwhile, Student A remarked, *"Sometimes, if I'm still confused in math, I also start to feel unsure in other subjects that use English."* Additionally, Student N noted, *"It has a slight impact, but sometimes if I'm not confident in math, I also become less confident in other subjects."* This

indicates that the ability to transfer confidence still varies among students. Thus, the generality dimension is at a moderate level.

Overall, the triangulation results indicate that students' self-efficacy in EMI-based mathematics learning falls into the moderate category across the dimensions of magnitude, strength, and generality. This suggests that students have a sufficient level of confidence in understanding mathematical concepts through English, although this confidence is not yet fully stable. The consistency of findings from questionnaires, observations, and interviews shows that students are generally able to complete tasks, participate in learning activities, and persist when facing difficulties, despite experiencing uncertainty in certain situations. In addition, individual differences are evident, as some students still hesitate when dealing with difficult problems or when required to use English directly. This indicates that students' self-efficacy is influenced by their learning experiences, language proficiency, and the learning context. Therefore, students' self-efficacy still needs to be developed through appropriate learning support.

4.1.2 Factors Influencing Students' Self-Efficacy in Learning Mathematics through English as a Medium of Instruction (EMI)

This section presents findings related to the second research question, which is to identify the factors influencing students' self-efficacy in mathematics learning through English as a Medium of Instruction (EMI). These factors are based on Albert Bandura's theory of self-efficacy, which identifies four primary sources: mastery experience, vicarious experience, verbal persuasion, and psychological states. To address this research question, data were collected through questionnaires and interviews. The questionnaire data were used to identify the level of influence of each factor, while interviews were conducted to gain a

deeper understanding of students' experiences. The findings are presented based on each factor influencing students' self-efficacy.

a. Mastery Experience

Mastery experience refers to students' previous successful experiences in completing learning tasks, which can strengthen their confidence in facing similar tasks in the future. This factor is considered the strongest source of self-efficacy according to Bandura's theory. In the context of EMI-based mathematics learning, successful experiences help students feel more capable in understanding both the material and the language used. Therefore, mastery experience becomes an important factor in shaping students' self-efficacy. The findings of this factor are presented based on questionnaire and interview data.

Table 9. Questionnaire Results of Factor Influencing Students' Self-Efficacy (Mastery Experience)

Variable	SA (5)	A (4)	N (3)	D (2)	SDA (1)
I feel more confident when I successfully solve math problems. *Saya merasa lebih percaya diri ketika berhasil menyelesaikan soal matematika sebelumnya.*	53,3%	33,3%	6,7%	6,7%	0%
Successful experiences in math assignments make me confident in facing the next assignment. *Pengalaman sukses dalam tugas matematika membuat saya yakin menghadapi tugas berikutnya.*	40%	40%	20%	0%	0%
Solving math problems correctly makes me confident in my abilities. *Menyelesaikan soal matematika*	40%	40%	16,7%	3,3%	0%

dengan benar membuat saya yakin dengan kemampuan saya.					
Average	44,4%	37,7%	14,4%	3,33%	0%
	4,2 (High)				

Based on the questionnaire results, the mastery experience factor received an average score of 4.2, which falls into the “high” category. Most students agreed that the experience of successfully solving math problems increased their self-confidence. The percentage of responses showed a dominance in the “strongly agree” and “agree” categories compared to the other categories. This indicates that direct experience has a very strong influence on students' self-efficacy. Thus, mastery experience is the most dominant factor in shaping students' self-confidence.

This finding is supported by interview results which show that students’ successful experiences significantly influence their confidence. Student K stated, *“I often get high scores, even 100.”* Indicating that success strengthens confidence. Similarly, Student H explained that previous learning experiences help in understanding the material more easily. However, Student A stated, *“It boosts my confidence a bit, but not for very long. Sometimes when I encounter a difficult problem again, I get unsure again.”* In addition, Student N mentioned that previous experiences are helpful but do not always consistently boost confidence. These findings indicate that mastery experience strongly influences self-efficacy, although its impact may vary among students.

b. Vicarious Experience

Vicarious experience refers to students’ observations of others’ success, which can influence their belief in their own abilities. This factor occurs when students compare themselves to peers who are considered similar. In EMI-based mathematics learning, observing peers can either motivate or discourage students. Therefore, this factor plays a role

in shaping students' self-efficacy through social comparison. The findings of this factor are presented based on questionnaire and interview data.

Table 10. Questionnaire Results of Factor Influencing Students' Self-Efficacy (Vicarious Experience)

Variable	SA (5)	A (4)	N (3)	D (2)	SDA (1)
Seeing my friends successfully solve math problems makes me believe that I can do the same. *Melihat teman berhasil menyelesaikan soal matematika membuat saya percaya bisa melakukan hal yang sama.*	16,7%	30%	40%	10%	3,3%
Observing classmates actively asking or answering questions boosts my confidence. *Mengamati teman yang aktif bertanya atau menjawab soal meningkatkan kepercayaan diri saya.*	6,7%	33,3%	36,7%	20%	3,3%
Watching my friends successfully understand the material increases my confidence that I can do it too. *Menyaksikan teman berhasil memahami materi meningkatkan keyakinan saya bahwa saya juga bisa.*	13,3%	33,3%	30%	20%	3,3%
Average	12,2%	32,2%	35,5%	16,6%	3,3%
	3,3 (Moderate)				

The vicarious experience factor scored an average of 3.3, which falls into the moderate category. These results indicate that observing peers can influence students' self-efficacy, though not as strongly as personal experience. Some students feel motivated when they see their peers successfully solve math problems. However, there are also students

who feel less confident when comparing themselves to more capable peers. Thus, vicarious experience has a moderate influence on students' self-efficacy.

This is supported by interview results which show varied responses among students. Student E stated, *"Yes, I'm often motivated by seeing friends who are better at it."* indicating a positive influence. However, Student A said, *"Sometimes I get motivated, but sometimes I also feel insecure when they can do it quickly while I'm still confused."* showing mixed feelings. Additionally, Student N stated, *"Sometimes I want to be able to do it too, but most of the time I just feel like I'm falling behind."* These responses indicate that peer comparison does not always lead to increased confidence. Thus, vicarious experience influences students differently depending on individual perceptions.

c. Verbal Persuasion

Verbal persuasion refers to encouragement, feedback, and support received from teachers and peers. This factor can strengthen students' belief in their abilities through positive reinforcement. In EMI-based mathematics learning, support from teachers and peers becomes important in helping students overcome both language and content difficulties. Therefore, verbal persuasion plays a significant role in shaping students' self-efficacy. The findings are presented based on questionnaire and interview data.

Table 11. QuestionnaireResults of Factor Influencing Students' Self-Efficacy (Verbal Persuasion)

Variable	SA (5)	A (4)	N (3)	D (2)	SDA (1)
I feel confident when the teacher gives me praise and encouragement. *Saya percaya diri ketika guru*	43,3%	40%	16,7%	0%	0%

memberikan pujian dan dorongan kepada saya.					
My friends support and motivate me when I face math difficulties. *Teman-teman mendukung dan memotivasi saya ketika menghadapi kesulitan matematika.*	16,7%	56,7%	10%	16,7%	0%
The teacher provides feedback that helps me improve my answers. *Guru memberikan masukan yang membantu saya memperbaiki jawaban saya.*	30%	53,3%	10%	6,7%	0%
Average	30%	50%	12,2%	7,7%	0%
	4,0 (High)				

The verbal persuasion factor received an average score of 4.0, which falls into the "high" category. These results indicate that support from teachers and peers plays a significant role in boosting students' self-confidence. Most students feel more confident when they receive praise, encouragement, or positive feedback. This suggests that social interactions during learning have a significant impact on self-efficacy. Thus, verbal persuasion is one of the key factors in building students' self-confidence.

This finding is strengthened by interview results. Student K stated, *"It's very helpful because it provides validation."* indicating that encouragement increases confidence. Student H also mentioned that support from teachers and peers makes them more confident and brave. However, Student A stated that such encouragement sometimes only provides temporary confidence. In addition, Student N explained that support helps, but they still feel doubtful. These findings indicate that verbal persuasion has a strong but sometimes temporary influence on students' self-efficacy.

d. Psychological States

Psychological states refer to students' emotional conditions, such as feeling nervous, calm, or confident during learning. These emotional responses can influence how students perceive their abilities. In EMI-based mathematics learning, language challenges may increase anxiety levels. Therefore, students' emotional conditions play an important role in shaping their self-efficacy. The findings are presented based on questionnaire and interview data.

Table 12. Questionnaire Results of Factor Influencing Students' Self-Efficacy (Psychological States)

Variable	SA (5)	A (4)	N (3)	D (2)	SDA (1)
I don't feel nervous when learning math in English. *Saya tidak merasa gugup saat belajar matematika dalam bahasa Inggris.*	30%	36,7%	23,3%	10%	0%
I feel calm and focused when working on EMI math problems. *Saya merasa tenang dan fokus ketika mengerjakan soal matematika EMI (EMI=pembelajaran menggunakan bahasa Inggris sebagai bahasa pengantar).*	26,7%	26,7%	36,7%	10%	0%
I feel comfortable following math lessons even though they are in English. *Saya merasa nyaman mengikuti pelajaran matematika meskipun dalam bahasa Inggris.*	36,7%	40%	20%	3,3%	0%
Average	31,3%	34,4%	26,6%	6,6%	0%
	3,8 (High)				

The psychological states factor had a mean score of 3.8, which falls into the high category. These results indicate that students' emotional states such as feeling calm, comfortable, and not nervous, influence their self-efficacy. Students who feel calmer tend to be more confident in understanding mathematics material through EMI. Conversely, students who feel nervous tend to have lower self-confidence. Thus, psychological states are a key factor in shaping students' self-efficacy.

This is supported by interview findings which show variations in students' emotional experiences. Student E stated that they feel normal because they are already used to it, while Student K said they were nervous at first but are now more comfortable. However, Student A stated, *"I get nervous sometimes, especially when I'm asked to do something in front of others or answer right away."* Additionally, Student N stated, *"I often get nervous and am afraid of making mistakes, especially if I don't understand the material yet."* These responses indicate that emotional conditions significantly influence students' confidence. Thus, psychological states play a significant role in shaping students' self-efficacy.

Overall, the research results indicate that students' self-efficacy is influenced by four main factors: mastery experience, vicarious experience, verbal persuasion, and psychological states. Based on the questionnaire results, mastery experience, verbal persuasion, and psychological states fall into the high category, while vicarious experience is in the moderate category. Among these factors, mastery experience shows the highest mean score, indicating that it is the most dominant factor influencing students' self-efficacy. This finding is supported by interview data, where students emphasized the importance of successful experiences in increasing their confidence. Therefore, mastery experience can be considered the main factor influencing students' self-efficacy in learning mathematics through EMI.

4.2 Research Discussions

4.2.1 Discussion of Junior High School Students' Self-Efficacy in Understanding Mathematics Content through English as a Medium of Instruction (EMI)

The results of the study indicate that students' self-efficacy levels fall into the moderate category across all three dimensions: magnitude, strength, and generality. This finding is also supported by the distribution of students' self-efficacy levels, where 60% of students are in the moderate category, 30% are in the high category, and 10% are in the low category. These findings suggest that students have sufficient confidence in understanding mathematical concepts through EMI, but this confidence is not yet fully consistent across various situations. Self-efficacy is an individual's belief in their ability to complete a specific task, which does not always reflect actual ability but rather a subjective perception (Bandura, 1997). This condition indicates that students' self-efficacy is dynamic and influenced by their individual experiences and conditions (Schunk and DiBenedetto, 2020).

Regarding the magnitude dimension, the research findings indicate that students have varying levels of self-confidence when facing the difficulty levels of math problems in English. According to Jamil (2018), magnitude relates to an individual's perception of the difficulty level of tasks they can complete. Some students tend to keep trying even when they feel less confident, while others tend to feel incapable before attempting difficult problems. This difference indicates that previous learning experiences play a significant role in shaping perceptions of difficulty (Usher et al., 2019). Additionally, in the context of EMI, Soruc et al. (2021) explain that the use of English increases cognitive load, which can influence students' confidence when facing complex problems.

Regarding the strength dimension, the research findings indicate that students' confidence in maintaining self-belief remains at a moderate level. Strength relates to the

extent to which an individual remains confident in their abilities despite facing difficulties or challenges (Jamil, 2018). Some students show strong confidence in their abilities, while others tend to feel doubtful when encountering more complex problems. These findings indicate that not all students can consistently maintain their confidence, especially when facing more challenging situations. This aligns with Zakariya's (2022) research, which states that students with lower self-efficacy tend to easily lose confidence when facing academic difficulties.

Regarding the generality dimension, the research results indicate that students' self-efficacy has not yet been fully applied consistently across various learning contexts. Siboro et al. (2022) states that generality relates to the extent to which an individual's beliefs can be transferred to other situations or domains. Some students are able to apply their confidence to other subjects, while others tend to feel doubtful when facing different academic contexts. This indicates that the transfer of self-confidence across subjects still varies among students. This finding aligns with Zhou et al. (2021), who state that generality does not always develop uniformly, particularly in learning contexts with varying levels of difficulty.

Overall, the results of this study indicate that students' self-efficacy is at a moderate level due to a balance between positive experiences and challenges in EMI learning. In the EMI context, students face difficulties not only in understanding mathematical concepts but also in understanding the language of instruction used. This difficulty can be explained through Cognitive Load Theory, which states that students have limited working memory capacity when processing new information (Sweller, 2011). In EMI-based mathematics learning, students experience a double cognitive load because they must understand mathematical concepts while simultaneously processing English as the language of instruction. This dual demand increases learning complexity and may reduce students'

confidence, especially when they encounter unfamiliar mathematical vocabulary (Soruc et al., 2021). Thompson et al. (2019) explain that EMI creates a double burden that can affect students' self-efficacy in learning. This condition indicates the presence of linguistic barriers that influence students' confidence in learning. Therefore, students' self-efficacy in the EMI context is influenced by the interaction between academic ability and language ability (Alnaimi et al., 2022).

4.2.2 Discussion of Factors Influencing Students' Self-Efficacy in Learning Mathematics through English as a Medium of Instruction (EMI)

The results of the study indicate that the factor most influencing students' self-efficacy is mastery experience, followed by verbal persuasion and physiological states, which fall into the high category, as well as vicarious experience, which falls into the moderate category. These findings align with Bandura's (1997) theory, which states that mastery experience is the primary source in the development of self-efficacy. This is evident from the interview results, in which several students showed that frequent success in completing tasks and achieving high scores contributed to increased self-confidence. In contrast, some students indicated that their self-confidence did not last very long because they became doubtful again when faced with difficult questions. This indicates that experiences of success have a strong influence, but consistency is needed to form stable self-efficacy (Herset et al., 2023).

Regarding the mastery experience factor, successful experiences have proven to be the most dominant factor in boosting students' self-confidence. Kabir & Rabby (2023) explains that successful experiences provide concrete evidence of an individual's ability to complete tasks. This is supported by interview findings showing that students who frequently succeed in completing tasks feel more confident and experience improvement in their self-efficacy over time. These findings are also consistent with Herset et al. (2023), who state that repeated

success can significantly strengthen self-efficacy. Thus, learning experiences that provide opportunities for success are crucial in EMI learning.

Regarding the vicarious experience factor, the research findings indicate that its influence is not as strong as that of the mastery experience. Observing others' success can boost an individual's confidence, especially if the individual feels a sense of similarity (Kabir & Rabby, 2023). Interview findings show that some students feel motivated when seeing their peers succeed, while others tend to feel less confident due to comparison with more capable peers. These findings indicate that vicarious experiences can have both positive and negative effects depending on students' perceptions. This aligns with the research by Signori et al. (2024), which states that the influence of social models depends on individuals' interpretations of those experiences.

Regarding verbal persuasion, support from teachers and peers has been shown to play a significant role in boosting students' self-confidence. Verbal support can help individuals believe in their abilities, especially when provided by a trusted figure (Lisnawati et al., 2019). Interview findings indicate that encouragement, praise, and feedback from teachers and peers can make students feel more confident and motivated in learning. However, some students also indicated that this confidence may not always be long-lasting. These findings align with Alnaimi et al. (2024), who noted that positive feedback from teachers can significantly enhance students' self-efficacy.

These findings also need to be understood within the school context as an EMI-based learning environment. The school provides an annual teacher development program through CLIL (Content and Language Integrated Learning) training for teachers in the international program. Institutional support through teacher professional development is important because it helps teachers improve their pedagogical and language-integrated teaching competence in

EMI classrooms (Lo, 2020). Through this training, teachers may develop more effective strategies such as translanguaging, scaffolding, and structured explanations to support students' understanding of mathematics and English simultaneously (Marshalina, 2026). This support may contribute to strengthening students' self-efficacy in EMI-based mathematics learning.

In terms of physiological states, students' emotional conditions also influence their level of self-confidence in learning mathematics through EMI. Feelings such as nervousness, calmness, or self-confidence can influence an individual's interpretation of their own abilities (Lisnawati et al., 2019). Interview findings show that some students still feel nervous and afraid of making mistakes, while others have begun to adapt and feel more comfortable in EMI learning situations. These findings suggest that adaptation to the EMI environment can help reduce students' anxiety. This aligns with the research by Popa-Velea et al. (2021), which states that stable emotional states can support increased self-efficacy.

Overall, the research findings indicate that the four factors of self-efficacy interact with one another in shaping students' self-confidence in EMI-based mathematics learning. Mastery experience is the most dominant factor, followed by verbal persuasion and physiological states, while vicarious experience has a moderate influence. In the context of EMI, the language factor also becomes an additional variable influencing students' self-confidence. This is reflected in interview findings where some students feel more comfortable using their first language when facing difficulties. Therefore, the development of self-efficacy in EMI learning must simultaneously consider aspects of experience, social support, and emotional state.

CHAPTER V

CONCLUSION AND SUGGESTION

This chapter presents the conclusions from the research conducted on students' self-efficacy in understanding mathematics in English as a Medium of Instruction (EMI) classroom context. The conclusions are based on the research findings analyzed in the previous chapter, including results from questionnaires, observations, and interviews. In addition, this chapter also presents recommendations for relevant parties based on the research findings. These recommendations are expected to contribute to improving students' self-efficacy in EMI-based learning. Thus, this chapter serves as a conclusion that summarizes the research findings while providing direction for future development.

5.1 Conclusion

This study explored junior high school students' self-efficacy in understanding mathematics in an English as a Medium of Instruction (EMI) classroom and the factors influencing it. The findings showed that students' self-efficacy was at a moderate level across the three dimensions of self-efficacy: magnitude, strength, and generality. This indicates that students were able to participate in EMI-based mathematics learning, but their confidence was not yet fully stable in different learning situations. The findings also revealed that the difficulties faced by students were not only related to understanding mathematical concepts, but also to understanding English as the language of instruction. This supports the idea that EMI-based mathematics learning creates a double cognitive load, where students process mathematical content and English simultaneously, which may influence their confidence and classroom participation.

This study also found that mastery experience was the most dominant factor influencing students' self-efficacy. Students who had previous successful experiences in solving mathematics problems showed stronger confidence in facing similar tasks, indicating

that successful learning experiences play an important role in shaping self-efficacy. In addition, verbal persuasion and physiological states also contributed significantly to students' confidence, while vicarious experience showed a lower influence compared to the other factors. These findings indicate that students' self-efficacy in EMI mathematics learning is shaped by academic experiences, emotional conditions, and social support. Therefore, strengthening positive learning experiences and reducing students' cognitive burden are essential to improve their self-efficacy in EMI classrooms.

This study provides practical implications for EMI-based mathematics learning. Teachers need to apply strategies such as translanguaging, scaffolding, and clear step-by-step explanations to help students understand both mathematical concepts and English instructions more effectively. Schools are also encouraged to strengthen teacher competence through continuous professional development, such as CLIL (Content and Language Integrated Learning) training, to support effective EMI implementation. These practical strategies can help reduce students' learning difficulties and improve both teacher readiness and student confidence. Ultimately, strengthening students' self-efficacy is important to support their academic participation, resilience, and success in EMI mathematics learning.

5.2 Suggestion

Based on the findings of this study, several suggestions can be offered for students, teachers, schools, and future researchers. For students, it is important to actively engage in mathematics learning, practice regularly, and build confidence by viewing mistakes as part of the learning process. Students are also encouraged to improve their English proficiency gradually, as language understanding plays an important role in EMI-based learning. Developing both content knowledge and language skills can help reduce the cognitive burden experienced during mathematics lessons. This can support stronger self-efficacy and better academic performance.

For teachers, it is recommended to implement practical teaching strategies such as translanguaging, scaffolding, visual support, and simplified explanations to help students understand mathematical concepts more effectively. Teachers should also provide positive feedback, encouragement, and gradual learning tasks to create mastery experiences that strengthen students' confidence. In addition, teachers can use technology, such as AI-based tools or digital learning platforms, to help students verify understanding and practice independently. For schools, continuous professional development programs such as CLIL training should be strengthened to improve teachers' EMI teaching competence. Strong institutional support is important to create a more effective EMI learning environment.

For future researchers, it is recommended to conduct similar studies with larger numbers of participants and in different educational contexts to obtain broader findings. Future studies may also explore the relationship between language proficiency and self-efficacy in EMI classrooms more deeply. In addition, the use of mixed-method approaches can provide richer and more comprehensive data. Researchers may also investigate specific teaching strategies that effectively reduce students' double cognitive load in EMI mathematics learning. Through these efforts, future research can contribute to improving EMI practices and students' academic confidence.

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APPENDICES

Appendix 1. The Research Instrument used for the Classroom Questionnaire

No.	Dimension / Source of Self-Efficacy	Question
Self-efficacy level		
1.	**Magnitude**	I am confident that I can solve math problems given by my teacher in English. *Saya yakin bisa menyelesaikan soal matematika yang diberikan guru menggunakan bahasa Inggris.*
2.	**Magnitude**	I am able to solve difficult math problems even when they are presented in English. *Saya mampu mengerjakan soal matematika yang sulit meskipun disampaikan dalam bahasa Inggris.*
3.	**Magnitude**	I am confident that I can answer math questions correctly even if I am not familiar with the material at first. *Saya yakin bisa menjawab soal matematika dengan benar meskipun awalnya tidak familiar dengan materi.*
4.	**Magnitude**	I am confident that I can complete additional math exercises independently. *Saya yakin bisa menyelesaikan latihan matematika tambahan secara mandiri.*
5.	**Strength**	I am confident in my ability to understand math material through EMI. *Saya percaya diri dengan kemampuan saya dalam memahami materi matematika melalui EMI.*
6.	**Strength**	I am confident that I can follow math lessons in English without constant help from my teacher. *Saya yakin dapat mengikuti pelajaran matematika dalam bahasa Inggris tanpa bantuan guru terus-menerus.*
7.	**Strength**	I feel confident when asking questions or answering the teacher's questions in English. *Saya merasa percaya diri saat mengajukan pertanyaan atau menjawab pertanyaan guru dalam bahasa Inggris.*
8.	**Strength**	I feel confident explaining my answers to my peers.

		Saya merasa percaya diri menjelaskan jawaban saya kepada teman sebaya.
9.	**Generality**	My confidence in mathematics also influences my ability in other subjects that use English. *Kepercayaan diri saya dalam matematika juga mempengaruhi kemampuan saya dalam mata pelajaran lain yang menggunakan bahasa Inggris.*
10.	**Generality**	I feel confident in facing other academic problems after successfully completing EMI math assignments. *Saya merasa percaya diri menghadapi masalah akademik lain setelah berhasil menyelesaikan tugas matematika EMI.*
11.	**Generality**	I am confident that my ability to understand mathematics in English helps me learn English in general. *Saya yakin kemampuan saya memahami matematika dalam bahasa Inggris membantu saya belajar bahasa Inggris secara umum.*
12.	**Generality**	My confidence in math class affects how I learn in other classes. *Kepercayaan diri saya di kelas matematika memengaruhi cara saya belajar di kelas lain.*
Factors Influencing Self-Efficacy		
13.	**Mastery Experience**	I feel more confident when I successfully solve math problems. *Saya merasa lebih percaya diri ketika berhasil menyelesaikan soal matematika sebelumnya.*
14.	**Mastery Experience**	Successful experiences in math assignments make me confident in facing the next assignment. *Pengalaman sukses dalam tugas matematika membuat saya yakin menghadapi tugas berikutnya.*
15.	**Mastery Experience**	Solving math problems correctly makes me confident in my abilities. *Menyelesaikan soal matematika dengan benar membuat saya yakin dengan kemampuan saya.*
16.	**Vicarious Experience**	Seeing my friends successfully solve math problems makes me believe that I can do the same.

		Melihat teman berhasil menyelesaikan soal matematika membuat saya percaya bisa melakukan hal yang sama.
17.	**Vicarious Experience**	Observing classmates actively asking or answering questions boosts my confidence. *Mengamati teman yang aktif bertanya atau menjawab soal meningkatkan kepercayaan diri saya.*
18.	**Vicarious Experience**	Watching my friends successfully understand the material increases my confidence that I can do it too. *Menyaksikan teman berhasil memahami materi meningkatkan keyakinan saya bahwa saya juga bisa.*
19.	**Verbal Persuasion**	I feel confident when the teacher gives me praise and encouragement. *Saya percaya diri ketika guru memberikan pujian dan dorongan kepada saya.*
20.	**Verbal Persuasion**	My friends support and motivate me when I face math difficulties. *Teman-teman mendukung dan memotivasi saya ketika menghadapi kesulitan matematika.*
21.	**Verbal Persuasion**	The teacher provides feedback that helps me improve my answers. *Guru memberikan masukan yang membantu saya memperbaiki jawaban saya.*
22.	**Physiological States**	I don't feel nervous when learning math in English. *Saya tidak merasa gugup saat belajar matematika dalam bahasa Inggris.*
23.	**Physiological States**	I feel calm and focused when working on EMI math problems. *Saya merasa tenang dan fokus ketika mengerjakan soal matematika EMI.*
24.	**Physiological States**	I feel comfortable following math lessons even though they are in English. *Saya merasa nyaman mengikuti pelajaran matematika meskipun dalam bahasa Inggris.*

Source: Adapted from Bandura's Self-Efficacy Theory (Bandura, 1997).

Appendix 2. The Research Instrument used for the Classroom Observation

No.	Aspects Observed	Results Observation			Field Notes
		1st	2nd	3rd	
1.	**Magnitude** Students can finish the questions before time runs out. *Siswa bisa menyelesaikan soal sebelum waktu habis.*	Yes/No	Yes/No	Yes/No	
2.	**Magnitude** Students ask questions when they encounter difficulties. *Siswa bertanya ketika mengalami kesulitan.*	Yes/No	Yes/No	Yes/No	
3.	**Strength** Students show signs of frustration (sighing, closing books, complaining). *Siswa menunjukkan ekspresi frustasi (menghela napas, menutup buku, mengeluh).*	Yes/No	Yes/No	Yes/No	
4.	**Strength** Students actively participate in class discussions. *Siswa berpartisipasi aktif dalam diskusi kelas.*	Yes/No	Yes/No	Yes/No	
5.	**Strength** Students shift their attention (e.g., chatting, playing, or remaining silent) after failing to answer a question. *Siswa mengalihkan perhatian (misalnya ngobrol, main, atau diam saja)*	Yes/No	Yes/No	Yes/No	

	setelah gagal mengerjakan soal.				
6.	**Strength** Students demonstrate confident expressions (gestures, tone of voice, body language). *Siswa menunjukkan ekspresi percaya diri (gesture, nada suara, sikap tubuh).*	Yes/No	Yes/No	Yes/No	
7.	**Generality** Students are only active in certain types of assignments (e.g., writing), but become passive during oral discussions in English. *Siswa hanya aktif dalam bentuk tugas tertentu (misalnya tulisan), tapi pas diskusi lisan dalam bahasa Inggris jadi pasif.*	Yes/No	Yes/No	Yes/No	
8.	**Generality** Students work together with their peers. *Siswa bekerja sama dengan teman sebaya.*	Yes/No	Yes/No	Yes/No	
9.	**Generality** Students participate in discussions when their friends explain things, but do not want to speak when the teacher points directly at them. *Siswa ikut berdiskusi ketika teman menjelaskan, tapi tidak mau berbicara ketika guru menunjuk langsung.*	Yes/No	Yes/No	Yes/No	

Source: Adapted from Bandura's Self-Efficacy Theory (Bandura, 1997).

Appendix 3. The Research Instrument used for the Classroom Observation

Interview Questions
Dimensions: Magnitude, Strength, Generality 1. How do you feel when doing math problems in English? 2. How confident are you that you can solve difficult math problems? 3. Does your previous experience help you in learning math now? 4. Does your confidence in math affect other subjects? Can you explain? *1.Bagaimana perasaanmu saat mengerjakan soal matematika dalam bahasa Inggris?* *2.Seberapa yakin kamu bisa menyelesaikan soal matematika yang sulit?* *3.Apakah pengalaman sebelumnya membantu kamu dalam belajar matematika sekarang?* *4.Apakah percaya dirimu di matematika memengaruhi pelajaran lain? Bisa jelaskan?*
Source: Mastery Experience 5. Can you share your successful experience in solving previous math problems? 6. How did that experience affect your confidence now? *5. Bisa ceritakan pengalaman suksesmu saat menyelesaikan soal matematika sebelumnya?* *6. Bagaimana pengalaman itu mempengaruhi kepercayaan dirimu sekarang?*
Source: Vicarious Experience 7. Does seeing your friends successfully solve problems make you more confident? Can you explain? 8. What did you learn from your successful friends? *7. Apakah melihat teman berhasil memecahkan soal membuatmu lebih percaya diri? Bisa jelaskan?* *8. Apa yang kamu pelajari dari teman yang sukses?*
Source: Verbal Persuasion 9. How do teachers or friends encourage you to be confident? 10. Do the words of teachers/friends make you more courageous to try difficult questions? *9. Bagaimana guru atau teman memberikan dorongan agar kamu percaya diri?* *10. Apakah kata-kata guru/teman membuatmu lebih berani mencoba soal sulit?*
Source: Physiological States 11. How do you feel (nervous, calm, confident) when learning mathematics with EMI? 12. Is there anything that makes you feel more comfortable or focused while studying? *11. Bagaimana perasaanmu (gugup, tenang, percaya diri) saat belajar matematika dengan EMI?* *12. Apakah ada hal yang membuatmu merasa lebih nyaman atau fokus selama belajar?*

Source: Adapted from Bandura's Self-Efficacy Theory (Bandura, 1997).

Appendix 4. Survey Permit

KEMENTERIAN AGAMA REPUBLIK INDONESIA
UNIVERSITAS ISLAM NEGERI MAULANA MALIK IBRAHIM MALANG
FAKULTAS ILMU TARBIYAH DAN KEGURUAN
JalanGajayana 50, Telepon (0341) 552398 Faximile (0341) 552398 Malang
http:// fitk.uin-malang.ac.id. email : fitk@uin_malang.ac.id

Nomor : 446/Un.03.1/TL.01.04/01/2026 28 Januari 2026
Sifat : Penting
Lampiran : -
Hal : **Izin Survey**

Kepada

Yth. Kepala SMP LAB UM
di
Malang

Assalamu'alaikum Wr. Wb.

Dengan hormat, dalam rangka penyusunan proposal Skripsi pada Jurusan Pendidikan Bahasa Inggris (TBI) Fakultas Ilmu Tarbiyah dan Keguruan (FITK) Universitas Islam Negeri Maulana Malik Ibrahim Malang, kami mohon dengan hormat agar mahasiswa berikut:

Nama	:	Aurel Keisha Jessenianta
NIM	:	220107110005
Tahun Akademik	:	Genap - 2025/2026
Judul Proposal	:	**Exploring Junior High School Students' Self-Efficacy in an English as a Medium of Instruction (EMI) Classroom Context .**

Diberi izin untuk melakukan survey/studi pendahuluan di lembaga/instansi yang menjadi wewenang Bapak/Ibu

Demikian, atas perkenan dan kerjasama Bapak/Ibu yang baik disampaikan *terimakasih.*

Wassalamu'alaikum Wr. Wb.

Dekan,

Prof. Dr. Muhammad Walid, MA
NIP. 19730823 200003 1 002

Tembusan :
1. Ketua Program Studi TBI
2. Arsip

Appendix 5. Research Letter

KEMENTERIAN AGAMA REPUBLIK INDONESIA
UNIVERSITAS ISLAM NEGERI MAULANA MALIK IBRAHIM MALANG
FAKULTAS ILMU TARBIYAH DAN KEGURUAN
JalanGajayana 50, Telepon (0341) 552398 Faximile (0341) 552398 Malang
http:// fitk.uin-malang.ac.id. email : fitk@uin-malang.ac.id

Nomor : 844/Un.03.1/TL.01.04/03/2026 05 Maret 2026
Sifat : Penting
Lampiran : -
Hal : **Izin Penelitian**

Kepada Yth.
SMP Laboratorium UM
di
Tempat

Assalamu'alaikum Wr. Wb.

Dengan hormat, dalam rangka menyelesaikan tugas akhir berupa penyusunan skripsi mahasiswa Fakultas Ilmu Tarbiyah dan Keguruan (FITK) Universitas Islam Negeri Maulana Malik Ibrahim Malang, kami mohon dengan hormat agar mahasiswa berikut:

Nama	:	Aurel Keisha Jessenianta
NIM	:	220107110005
Jurusan	:	Tadris Bahasa Inggris (TBI)
Semester - Tahun Akademik	:	Genap - 2025/2026
Judul Skripsi	:	**Exploring Junior High School Students' Self-Efficacy in an English as a Medium of Instruction (EMI) Classroom Context**
Lama Penelitian	:	**Maret 2026** sampai dengan **Mei 2026** (3 bulan)

diberi izin untuk melakukan penelitian di lembaga/instansi yang menjadi wewenang Bapak/Ibu.

Demikian, atas perkenan dan kerjasama Bapak/Ibu yang baik di sampaikan terimakasih.

Wassalamu'alaikum Wr. Wb.

Dekan,

Prof. Dr. Muhammad Walid, MA
NIP. 19730823 200003 1 002

Tembusan :
1. Yth. Ketua Program Studi TBI
2. Arsip

Appendix 6. Validation Sheet

VALIDATION SHEET

Instrument Validation Sheet for Research Entitled

"EXPLORING JUNIOR HIGH SCHOOL STUDENTS' SELF-EFFICACY IN AN ENGLISH AS A MEDIUM OF INSTRUCTION (EMI) CLASSROOM CONTEXT"

Validator: Wahyu Indah Mala Rohmana, M.Pd

NIP: 199210302019032017

Expertise:

Validation Date: 12 Maret 2026

A. Introduction

This Validation sheet is used to obtain an assessment from the validator on the research instrument that will be used in this research. Every feedback is essential to improve the quality of the research instrument. The researcher owes a lot for the willingness of the validator in filling out this validation sheet.

B. Guidance

Please give a score on each item of the statement using the sign (✓) in the scale as follows: 1 = Very Poor, 2= Poor, 3 = Average, 4 = Good, 5 = Very Good.

C. Assessment Rubric

No.	Indicators	Score					Feedback/ Suggestions
		1	2	3	4	5	
1.	The research instrument is well constructed.					✓	
2.	The research instruments are reliable with the research questions.					✓	
3.	The research instruments are clear and understandable for students.				✓		
4.	The research instruments are relevant to the English as a Medium of Instruction (EMI) mathematics classroom context.					✓	

Scanned with CamScanner

5.	The research instruments are easy to understand.				✓		
6.	The research instruments can help the researcher collect accurate and detailed classroom data.					✓	

D. Suggestion

The instrument is well written and can be used to collect the data

E. Conclusion

Based on the validation sheet above, it can be concluded that the instruments that have been made is:

Please give a strikethrough (example) on the answer that does not match your conclusion.

1. Appropriate to be used to collect data without revision.
2. Appropriate to be used to collect data within the revision.
3. Not appropriate to be used to collect data.

Malang, 12 Maret 2026

Validator,

Wahyu Indah Mala Rohmana, M.Pd

NIP. 199210302019032017

Scanned with CamScanner

Appendix 7. Transcript Interviews

Interview Questions
Dimensions: Magnitude, Strength, Generality 1. How do you feel when doing math problems in English? **Answer:** E "I'm already used to it because I've been learning math in English since elementary school, so I didn't have much trouble in middle school." K "At first, it was quite a culture shock because I'd been using Indonesian in public elementary school, so I had to adapt. But after 8th and 9th grade, I got used to it and actually understood English better." H "It was hard at first because I had to get used to the English terms, but once I understood them, I became more confident, and now it's actually easier." A "It's pretty comfortable, but sometimes I still get confused when there's a word I've never seen before. So I have to read slowly to understand what the question means. Sometimes I get the math part, but I'm confused by the language." N "Sometimes I'm really confused, especially if there's a word I don't understand at all. So I have to read it over and over, but sometimes I still don't get the question." 2. How confident are you that you can solve difficult math problems? **Answer:** E "I'm not too sure if the questions are hard, but I still try because I'm used to it." K "About 9 out of 10. Once I got used to it, I actually understood English better than Indonesian." H "It depends on the subject. I'm pretty confident with algebra, but not so much with geometry." A "I'm pretty confident, but if the question looks really hard, I usually get doubtful right away. I still try, though, but I'm often not sure about my own answer." N "Not very confident. If the question is hard, sometimes I feel like I can't do it even before I try." 3. Does your previous experience help you in learning math now? **Answer:** E "Yes, because I've been studying since elementary school, so it's really helpful." K "Yes, practicing with sample questions makes it easier to understand." H "Yes, I learn from YouTube and look up the terms, so I understand better." A "Yes, it helps, but not always. If the question is similar, I can do it, but if it's even slightly different, I sometimes get confused all over again." N "Yes, it helps, but if the question is even slightly different, I get confused right away." 4. Does your confidence in math affect other subjects? Can you explain? **Answer:** E "It has a significant impact, especially on science because it also uses English." K "It has an impact, because it expands vocabulary and helps with understanding word problems." H "Yes, it helps with using terminology and communicating in English." A "Yes, it has an impact, but not a huge one. Sometimes, if I'm still confused in math, I also start to feel unsure in other subjects that use English." N "It has a slight impact, but sometimes if I'm not confident in math, I also become less confident in other subjects." *1.Bagaimana perasaanmu saat mengerjakan soal matematika dalam bahasa Inggris?*

Answer:
E "Saya sudah terbiasa karena dari SD sudah belajar matematika pakai bahasa Inggris, jadi waktu SMP tidak terlalu kesulitan."
K "Awalnya cukup culture shock karena dari SD negeri pakai bahasa Indonesia, jadi perlu adaptasi. Tapi setelah kelas 8 dan 9, jadi terbiasa dan malah lebih paham yang bahasa Inggris."
H "Awalnya susah karena harus menyesuaikan dengan istilah bahasa Inggris, tapi setelah paham jadi lebih percaya diri dan sekarang malah lebih mudah."
A "Lumayan nyaman sih, tapi kadang masih bingung kalau ada kata yang belum pernah aku lihat. Jadi harus baca pelan-pelan biar ngerti maksud soalnya. Kadang ngerti matematikanya, tapi bingung di bahasanya."
N "Kadang bingung banget, apalagi kalau ada kata yang nggak ngerti sama sekali. Jadi harus baca berkali-kali, tapi kadang tetap nggak paham maksud soalnya."
2.Seberapa yakin kamu bisa menyelesaikan soal matematika yang sulit?
Answer:
E "Saya tidak terlalu yakin kalau soal sulit, tapi tetap mencoba karena sudah terbiasa."
K "Sekitar 9 dari 10. Setelah terbiasa, saya justru lebih paham soal bahasa Inggris dibanding bahasa Indonesia."
H "Tergantung materinya. Kalau aljabar cukup percaya diri, tapi kalau geometri kurang percaya diri."
A "Aku cukup yakin, tapi kalau soalnya udah kelihatan susah banget, biasanya langsung ragu. Tetap coba sih, tapi seringnya nggak yakin sama jawabanku sendiri."
N "Nggak terlalu yakin. Kalau soalnya susah, kadang sebelum nyoba udah merasa nggak bisa."
3.Apakah pengalaman sebelumnya membantu kamu dalam belajar matematika sekarang?
Answer:
E "Iya, karena sudah belajar sejak SD jadi sangat membantu."
K "Iya, dari adaptasi dan latihan soal jadi lebih mudah memahami."
H "Iya, saya belajar dari YouTube dan translate istilah, jadi lebih memahami."
A "Iya membantu, tapi nggak selalu. Kalau soalnya mirip aku bisa, tapi kalau beda sedikit aja kadang bingung lagi dari awal."
N "Iya membantu, tapi kalau soalnya beda sedikit aja aku bisa langsung bingung lagi."
4.Apakah percaya dirimu di matematika memengaruhi pelajaran lain? Bisa jelaskan?
Answer:
E "Sangat berpengaruh, terutama ke IPA karena juga menggunakan bahasa Inggris."
K "Berpengaruh, karena menambah vocabulary dan membantu memahami soal cerita."
H "Iya, membantu dalam penggunaan istilah dan komunikasi dalam bahasa Inggris."
A "Iya ada pengaruhnya, tapi nggak terlalu besar. Kadang kalau di matematika masih bingung, di pelajaran lain yang pakai bahasa Inggris juga jadi ikut ragu."
N "Sedikit berpengaruh, tapi kadang kalau di matematika nggak pede, di pelajaran lain juga jadi ikut kurang yakin."

Source: Mastery Experience
5. Can you share your successful experience in solving previous math problems?
Answer:
E "I do better on daily assignments than on tests."
K "I often get high scores, even 100."
H "I often get high scores, even 100."
A "I've been able to solve problems on my own, but usually only the ones that aren't too

difficult. For the hard ones, I still often need help."
N "It has a slight impact, but sometimes if I'm not confident in math, I also become less confident in other subjects."
6. How did that experience affect your confidence now?
Answer:
E "It boosts my confidence, though not by much."
K "It boosts it a lot because I get validation and praise."
H "It boosts it a lot because I get validation and praise."
A "It boosts my confidence a bit, but not for very long. Sometimes when I encounter a difficult problem again, I get unsure again."
N "I'm happy, but it doesn't make me confident for long. Because when I encounter a new problem, I get confused again."

5. Bisa ceritakan pengalaman suksesmu saat menyelesaikan soal matematika sebelumnya?
Answer:
E "Lebih sering berhasil di tugas harian daripada ulangan."
K "Sering mendapat nilai tinggi bahkan 100."
H "Sering mendapat nilai tinggi bahkan 100."
A "Pernah bisa ngerjain soal sendiri, tapi biasanya yang nggak terlalu sulit. Kalau yang susah masih sering butuh bantuan."
N "Sedikit berpengaruh, tapi kadang kalau di matematika nggak pede, di pelajaran lain juga jadi ikut kurang yakin."
6. Bagaimana pengalaman itu mempengaruhi kepercayaan dirimu sekarang?
Answer:
E "Meningkatkan kepercayaan diri, walaupun tidak terlalu besar."
K "Sangat meningkatkan karena mendapat validasi dan pujian."
H "Sangat meningkatkan karena mendapat validasi dan pujian."
A "Lumayan nambah percaya diri, tapi nggak terlalu lama. Kadang kalau ketemu soal susah lagi, jadi ragu lagi."
N "Seneng sih, tapi nggak bikin percaya diri lama. Soalnya kalau ketemu soal baru lagi, jadi bingung lagi."

Source: Vicarious Experience
7. Does seeing your friends successfully solve problems make you more confident? Can you explain?
Answer:
E "Yes, I'm often motivated by seeing friends who are better at it."
K "Yes, it makes me want to be better than before."
H "Sometimes I feel insecure, but it can also be a challenge."
A "Yes, sometimes I get motivated, but sometimes I also feel insecure when they can do it quickly while I'm still confused."
N "Yes, sometimes I want to be able to do it too, but most of the time I just feel like I'm falling behind."
8. What did you learn from your successful friends?
Answer:
E "I learn from the way they explain and solve problems."
K "I learn from my friends' progress as they get better."
H "I learn new tricks and ways to solve problems."
A "I usually watch how they do it."

N “I try to watch how they do it, but sometimes I still don’t fully understand.”

7. Apakah melihat teman berhasil memecahkan soal membuatmu lebih percaya diri? Bisa jelaskan?
Answer:
E “Iya, sering termotivasi karena melihat teman yang lebih bisa.”
K “Iya, jadi ingin menjadi lebih baik dari sebelumnya.”
H “Kadang minder, tapi juga bisa jadi tantangan.”
A “Iya kadang jadi termotivasi, tapi kadang juga ngerasa minder kalau mereka bisa cepat sedangkan aku masih bingung.”
N “Iya kadang jadi pengen bisa juga, tapi seringnya malah ngerasa aku ketinggalan.”
8. Apa yang kamu pelajari dari teman yang sukses?
Answer:
E “Belajar dari cara mereka menjelaskan dan mengerjakan soal.”
K “Belajar dari perkembangan teman yang semakin baik.”
H “Belajar trik baru dan cara mengerjakan soal.”
A “Aku biasanya lihat cara mereka ngerjain.”
N “Aku coba lihat cara mereka, tapi kadang masih belum paham sepenuhnya.”

Source: Verbal Persuasion
9. How do teachers or friends encourage you to be confident?
Answer:
E “The teacher gives praise and extra points.”
K “The teacher gives praise and points to those who dare to answer.”
H “The teacher gives advice and classmates offer encouragement.”
A “The teacher usually explains it again if I don’t understand, and classmates sometimes help too. But I still sometimes doubt myself.”
N “I try to watch how they do it, but sometimes I still don’t fully understand.”
10. Do the words of teachers/friends make you more courageous to try difficult questions?
Answer:
E “Teachers offer advice and friends offer encouragement.”
K “It’s very helpful because it provides validation.”
H “It makes me braver and more confident.”
A “Yes, it helps, but sometimes only temporarily. After that, when I encounter a difficult problem again, I’m still unsure.”
N “It helps a bit to give it a try, but I’m still unsure sometimes.”

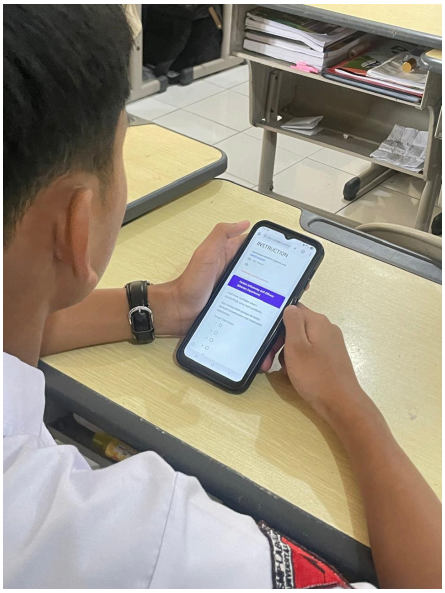
9. Bagaimana guru atau teman memberikan dorongan agar kamu percaya diri?
Answer:
E “Guru memberi pujian dan tambahan poin.”
K “Guru memberi pujian dan poin untuk yang berani menjawab.”
H “Guru memberi nasihat dan teman memberi semangat.”
A “Guru biasanya jelasin lagi kalau aku nggak ngerti, temen juga kadang bantu. Tapi aku kadang masih ragu sama diri sendiri.”
N “Aku coba lihat cara mereka, tapi kadang masih belum paham sepenuhnya.”
10. Apakah kata-kata guru/teman membuatmu lebih berani mencoba soal sulit?
Answer:
E “Guru memberi nasihat dan teman memberi semangat.”
K “Sangat berpengaruh karena mendapatkan validasi.”

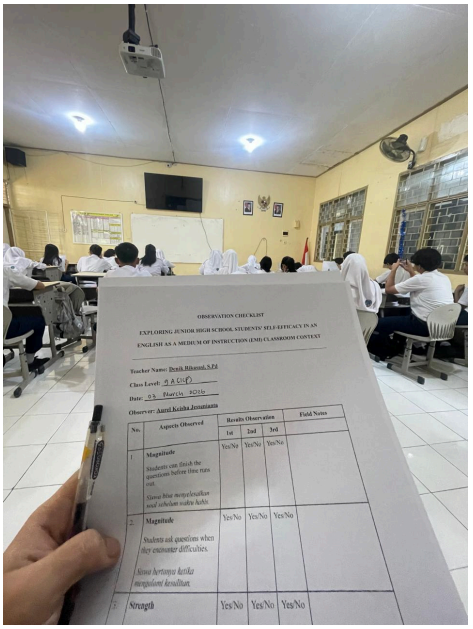
H "Membuat lebih berani dan percaya diri."
A "Iya membantu, tapi kadang cuma sementara. Habis itu kalau ketemu soal susah lagi masih ragu."
N "Lumayan bantu buat nyoba, tapi tetap kadang ragu."

Source: Physiological States
11. How do you feel (nervous, calm, confident) when learning mathematics with EMI?
Answer:
E "I feel fine because I'm used to it."
K "I used to be nervous, but now I'm used to it."
H "I used to be nervous, but now I find it more challenging."
A "I get nervous sometimes, especially when I'm asked to do something in front of others or answer right away."
N "I often get nervous and am afraid of making mistakes, especially if I don't understand the material yet."
12. Is there anything that makes you feel more comfortable or focused while studying?
Answer:
E "Discussing with friends helps me focus."
K "Studying with music or in a specific environment helps me focus."
H "Studying outside the classroom, with music, and discussing with friends."
A "It's more comfortable when things are explained slowly and in Indonesian too. If it's all in English, I sometimes still get confused."
N "It's more comfortable using Indonesian. If it's all in English, I sometimes get even more confused."

11. Bagaimana perasaanmu (gugup, tenang, percaya diri) saat belajar matematika dengan EMI?
Answer:
E "Saya merasa biasa saja karena sudah terbiasa."
K "Dulu gugup, sekarang sudah biasa."
H "Dulu sih gugup, sekarang jadi lebih tertantang."
A "Kadang gugup sih, apalagi kalau disuruh ngerjain di depan atau jawab langsung."
N "Sering gugup, takut salah, apalagi kalau belum ngerti materinya."
12. Apakah ada hal yang membuatmu merasa lebih nyaman atau fokus selama belajar?
Answer:
E "Diskusi dengan teman membuat lebih fokus."
K "Belajar dengan musik atau suasana tertentu membantu fokus."
H "Belajar di luar kelas, dengan musik, dan diskusi dengan teman."
A "Lebih nyaman kalau dijelasin pelan-pelan dan pakai bahasa Indonesia juga. Kalau full English kadang masih bingung."
N "Lebih nyaman kalau pakai bahasa Indonesia. Kalau bahasa Inggris penuh kadang jadi makin bingung."

Appendix 8. Documentations





Appendix 9. Letter of Completion Research

KEMENTERIAN PENDIDIKAN TINGGI, SAINS,
DAN TEKNOLOGI
UNIVERSITAS NEGERI MALANG (UM)
UPT PENGELOLA SEKOLAH LABORATORIUM
Jalan Semarang 5, Malang 65145
Telpon: 0341-551312
Laman: www.um.ac.id

SURAT KETERANGAN
Nomor 12.3.4/UN32.36/KM/2026

Yang bertanda tangan di bawah ini:

nama	: Dr. Hj. Endang Sri Andayani, M.Si
NIP	: 196206121987012001
pangkat/golongan	: Pembina Utama Muda, IV/c
jabatan	: Kepala

dengan ini menerangkan bahwa:

Nama	: Aurel Keisha Jessenianta
NIM	: 220107110005
Program Studi	: Tadris Bahasa Inggris (TBI)
Instansi	: FITK UIN Maulana Malik Ibrahim Malang

benar-benar telah melaksanakan penelitian yang berjudul "*Exploring Junior High School Students' Self-Efficacy in an English as a Medium of Instruction (EMI) Classroom Context*", yang dilaksanakan di SMP Laboratorium UM pada bulan Maret 2026.

Demikian surat keterangan ini dibuat untuk dapat dipergunakan sebagaimana mestinya.

12 Maret 2026
Kepala,

Dr. Hj. Endang Sri Andayani, M.Si
NIP 196206121987012001

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Appendix 10. Curriculum Vitae

CURRICULUM VITAE

Nama Lengkap	: Aurel Keisha Jessenianta
Tempat, Tanggal Lahir	: Denpasar, 24 Oktober 2004
Jenis Kelamin	: Perempuan
Agama	: Islam
Fakultas, Jurusan	: FITK, Tadris Bahasa Inggris
Perguruan Tinggi	: UIN Maulana Malik Ibrahim Malang
Alamat Rumah	: Giri Hill Permata X/9 Lingk. Menesa, Benoa, Kuta Selatan Badung Bali
No. HP/Telepon	: 082339923060
Alamat E-mail	: aurelkeishaaaa@gmail.com
Nama Wali	: Khairuman Imron

Riwayat Pendidikan

1.	TK Aisyiyah Bustanul Athfal 1 Denpasar	2009-2010
2.	SD Muhammadiyah 1 Denpasar	2010-2016
3.	MTS Hidayatullah Denpasar	2016-2019
4.	MAN 1 Banyuwangi	2019-2022
5.	UIN Maulana Malik Ibrahim Malang	2022-sekarang

Malang, 05 April 2026
The Researcher,

Aurel Keisha Jessenianta
NIM. 220107110005