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Needs Analysis of Students' English Proficiency and Content Learning Mastery in EMI Courses

Linda Cynthia Sipayung dan Lukman Hakim*
English Language Education Study Program, Faculty of Language and Literature Education,
Universitas Pendidikan Indonesia, Jl. Dr. Setiabudhi No. 229 Bandung 40154, West Java, Indonesia

ABSTRACT
EMI programs have gained popularity in higher education in recent years, and English proficiency plays a vital role in students achieving academic success. This research investigates the students' English proficiency in understanding academic courses. With a case study design, twenty-one students from an international program in science education at a public university in Bandung were voluntarily involved in the study. Questionnaires and observations were used to collect the data in this study. The findings show that most students were aware of their English proficiency and believed there was a correlation between their English proficiency and content mastery in EMI programs, indicating that the participants with good English proficiency believed that it enabled them to master the science content. However, despite having positive beliefs about their proficiency, the participants still seemed to face difficulties understanding technical terminology related to science.

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INTRODUCTION

Nowadays, English is considered a global language. Antony et al. (2015) believe that English is being more widely used and rapidly growing, including in Indonesia. Moreover, English is widely selected as an international language in the globalization era, making it one of the dominant languages, and even some countries have made the ability to communicate in English one of their lifelong learning objectives to prepare for the competitiveness of the twenty-first century (Chen, 2018; Syakur et al., 2020; Zhang & Liu, 2018). This condition has caused some higher education to attempt to create English medium instruction (EMI) programs for internalization. The spread of English across many academic areas due to internationalization is achieved through the "Englishization" of the curriculum at many higher education institutions (Rose et al., 2019). Due to the shift in the medium of instruction, English has become a crucial educational language used for learning and teaching all academic disciplines, as opposed to being introduced as a foreign language alongside other education courses. Macaro (2018) defined EMI as the practice of using English to teach academic courses (other than English itself) in nations or regions where the majority of the population does not speak English as their first language (L1).

* Corresponding email: lukman_hakim@upi.edu

Furthermore, Brochier (2016) asserts that EMI is more concerned with academic content than language acquisition. This praxis means the focus of EMI is on the content of the educational course, and improving language skills is considered an additional advantage in learning. Gu and Lee (2019) reported that with the marketization and internationalization of higher education in recent decades, universities worldwide have (1) increasingly adopted English as their medium of instruction (EMI) and (2) become representative sites for super-diversity, with constellations of cultural and linguistic repertories at the individual and group-specific levels. Furthermore, To address the rising local, national, and worldwide demands for English proficiency, EMI has developed to improve students' English language proficiency and raise the competitiveness of higher education (Wilang & Nupong, 2022). Additionally, a growing number of higher education institutions worldwide are competing to increase the international competitiveness of their systems and better prepare students for the global workforce, which is why EMI is still growing (Ali, 2021).

Even so, EMI programs in higher education have some benefits and drawbacks. EMI programs provide some advantages. Galloway et al. (2017) claimed that EMI programs have four advantages. The first advantage is that EMI allows students to advance academically and enhance their English language simultaneously because they receive significant exposure to the English language during their study completion. The second advantage is that EMI allows students to have friends from different countries, enabling them to understand the intercultural dimensions among students. The third advantage is that EMI will give students more career opportunities in and outside the country. Lastly, the EMI program provides students with some opportunities. Besides EMI bringing benefits, EMI also brings challenges. Tsuneyoshi (2005) outlined the three overarching categories of issues, linguistic, cultural, and structure, that may occur when providing EMI at the tertiary level of education. Bradford (2016) presented a fourth type of institution through interviews with administrators, academics, and support personnel at three Japanese institutions. These four categories characterize the majority of EMI issues (with "institutional" recast as "identity"). One of the issues relies on linguistic challenges.

In the EMI practice, linguistic issues are encountered. Bradford (2016) stated that Linguistic challenges were experienced by both instructors and students enrolled in EMI programs. The language issues include difficulties comprehending the English accent of non-native lecturers and difficulties understanding lecture content provided in general English (Ammann & McConnell, 2002. Hellekjaer, 2010). Furthermore, the most challenging linguistic issue relies on the inadequacy of English proficiency (Martínez, 2016). Moreover, Wächter and Maiworm (2014) argued that the diversity of students' levels of English proficiency is considered a problem in EMI. The issue emerges in how the instructors handle the students' different degrees of English proficiency.

English proficiency plays a vital role in succeeding in academic courses in EMI programs. According to Oliver et al. (2012), English language proficiency is critical for success in higher education. Prospective students, therefore, should be sure they have adequate academic English language proficiency to fulfill the requirements of their intended courses. If students lack the necessary academic English proficiency, their material learning could also suffer, which influences their university performance and post-graduation future job prospects (Walkinshaw et al., 2017). Galloway and Ruegg (2020) argued that if students lack English language acquisition, students may have trouble adjusting to an environment where only English is spoken. According to studies (Galloway, Kriukow, & Numajiri, 2017; Hellekjaer, 2010; Andrade, 2006; Krkgöz, 2005), learners with inadequate language proficiency have a variety of difficulties, including difficulties in comprehending academic texts, writing notes, communicating disciplinary content, and requiring more time to accomplish an assignment. According to Wilang and Nupong (2022), English proficiency is one of the critical indicators of EMI success. Effective implementation of EMI relies on students excellently mastering English (Dearden, 2015; Galloway et al., 2017; Simpson, 2019).

Furthermore, Hellekjær (2010) conducted research that described the students who lack English proficiency struggling to understand the lecture. Likewise, Hellekjaer (2010) and Chang (2010) discovered that students struggled to grasp the material being taught because of their low vocabulary and sluggish reading speed. Furthermore, Le (2015) claims that students with inadequate English proficiency frequently read dictionaries when unfamiliar with the terminology, which is time-consuming. This is aligned with Ibrahim's (2001) observation that students with insufficient English proficiency struggle to express themselves and are less likely to ask questions about the lessons on particular topics. In addition, Galloway et al. (2017) also found that Students' performance in environments where English is not the primary language is affected in many different ways by their level of English proficiency. This involves challenges with obtaining topic knowledge, taking longer to complete courses, increasing drop-out rates, and communication issues with course content. A study by Kang and Park (2005) also examines the impact of inadequate English proficiency, which leads to difficulty understanding the lectures and increases anxiety in the classroom.

From the discussion above, it can be inferred that mastering English proficiency is essential in EMI settings. However, research investigating how students perceive their language proficiency to master science in higher education has not been investigated thoroughly. Also, the research examines how Indonesian students who study in an EMI program where English is a foreign language have not been investigated extensively. Therefore, this paper is aimed at analyzing students' self-assessment of their English proficiency and how it helps them succeed in an EMI academic setting in Indonesia.

METHOD

This research used a case study design. The phenomenon in this study was the students' language proficiency perceived by the students. The research also employed a small-scale survey. According to Creswell (2012), survey research is a popular model in the education field. Creswell (2012) defined survey research design as the technique in quantitative research when researchers deliver a survey to a population sample to characterize the population's attitudes, views, behaviors, or features. Moreover, In this approach, survey researchers collected quantitative, numerical data using interviews (e.g., one-on-one interviews) or questionnaires (e.g., postal questionnaires), statistically analyzed the data, and then reported trends concerning replies to questions to test research questions or hypotheses (Creswell, 2012). In this research, questionnaires are used to collect the data.

There were 21 participants involved in this study who were in the third semester of the program. The participants were from one of the universities in Bandung and enrolled in an international program, specifically science education, at a university in Bandung, West Java. This major was purposively selected because it is an EMI program where English is mainly used as a language of instruction in their learning activities. This correlates with the aim of this study, which is to explore the English proficiency of students in EMI programs to master the academic courses. Twenty-one participants filled out the first questionnaire. However, only 17 students participated in the second questionnaire. This was due to some participants not attempting the class.

The instruments used in this study are two questionnaires, which were used in this study. The first questionnaire adapted from the framework by Chatsungoen (2015) related to needs analysis. Moreover, the second questionnaire was adapted from the framework by Yip et al. (2007), Evans (2000), and Tatzl (2011). Five-point Likert scales were employed to analyze each item. The data were obtained from two cycles. The first cycle is distributing the first questionnaire. The first questionnaire described the needs analysis 2022 through Google Forms. The second cycle distributes the second questionnaire. The second questionnaire described the students' learning mastery. The questionnaires consisted of four-point Likert items and five Likert items.

The first questionnaire used a four-point Likert, while the second questionnaire used a five-point Likert scale. The data will be calculated using the formula below.

FINDINGS AND DISCUSSION

After the participants filled out the first questionnaire, the data on students' duration of learning English can be mapped, as seen in Table 1.

Table 1
Participants' Years of Studying English

Year of Study	Frequency	%
1-3 years	0	0
4-6 years	0	0
7-10 years	6	28.6
>10 years	15	71.4

The data above shows that most participants have learned English for over ten years. Of the 21 participants, 15 (71.4%) have learned English for over 10 years. Moreover, 6 participants (28.6%) have learned English for over seven to ten years. However, no participants learn English for one to six years. From the table, it is clear that most participants have experience in learning English, probably from primary school.

Table 2
Reasons to Learn English

Reason	Frequency	%
Because it's a compulsory subject	10	47.61
Because it is one of the requirements to pass my major	14	66.66
Because it is necessary to help with my academic studies	16	76.19
Because it is easy to learn and can increase my GPA	4	19.04
Because it is necessary for my career target	11	52.38
Because it's exciting and I like to learn it	14	66.66
Because I am interested in British culture	2	9.50
Because it is needed when traveling abroad	14	19.04
Because I need it for daily activities	8	38.09
Because it will make me a more authoritative and educated person	6	28.57
Because it will broaden my knowledge and perspectives	16	76.19
It is fun to talk in English	1	4.70
Increase the vocabulary	1	4.70

Most participants learn English because they consider it essential to help their academic studies and widen their knowledge and perspectives. Sixteen participants (76.19%) and 16 participants (76.19) consider English essential to learn because they consider it necessary to help in their academic studies and widen their knowledge and perspectives. Moreover, 14 participants (66.66%) consider it crucial to learn English because it is one of the requirements to pass the major, and also 14 participants (66.66%) consider it crucial to learn English because it is exciting and they like to learn it. Furthermore, 14 participants (66.66%) consider learning English important because it is needed when traveling abroad. Also, 11 participants (52.38) consider it important to learn English because it is necessary for their career target. Moreover, 10 participants (47.61%) consider English essential because it's compulsory. This data indicates that most participants are aware of the importance of their English proficiency to their academic mastery. It can be seen that the majority of participants consider it important to master it because it can help in their academic

studies, which shows that having good English proficiency will make it easier for them to achieve the learning material.

Table 3
Participants' Language Preferences

Language that participants prefer to use to work in the future	Frequency	%
Only Indonesian language	1	4.76
Only English	0	0
English and Indonesian language	21	95.23

Most participants prefer to use English and Indonesian language in their future careers. Besides being aware of English proficiency for their academic success, they also prefer to use English and Indonesian language in their future careers. However, one participant still selected to use the Indonesian language for a future career.

Table 4
The Learning English Excitement

Excitement in learning English in their major	Frequency	%
Very exciting	13	61.90
Exciting	8	38.09
Not exciting	0	0
Very not exciting	0	0

Learning English in the participants' major is considered fun. 38.09% of participants considered learning English fun, and 61.90% considered learning English as very exciting. This indicates that lecturers could provide a suitable environment for students to enjoy learning,

Table 5
Students' Perception of Their English Proficiency

Skill	Excellent	Good	Bad	Very bad
Speaking	0	18 (85.71%)	3 (14.28%)	0
Listening	0	17 (80.95%)	4 (19.04%)	0
Writing	0	17 (80.95%)	4 (19.04%)	0
Reading	2 (9.52%)	17 (80.95%)	2 (9.52%)	0
Vocabulary	1 (4.76%)	15 (71.42%)	4 (19.04%)	1 (4.76%)
Grammar	0	7 (33.33%)	13 (61.90%)	1 (4.76%)

According to the data, in terms of speaking ability, three students are considered to have bad speaking skills, and 18 students are considered to have good English skills. In terms of listening skills, four students are considered to have bad listening skills, and 17 students are considered to have good listening skills. In writing skills, there are four students who are considered to have bad writing skills, and there are 17 students who are considered to have good writing skills. In reading skills, there are two students who are considered to have bad listening skills, 17 students who are considered to have good reading skills, and two students who have excellent reading skills. In vocabulary, there is one student who has very skill in vocabulary, four students who are considered to have low vocabulary and there are 15 students who are considered to have good vocabulary, and there is one student who is excellent and has vocabulary. Moreover, seven participants were considered to have good grammar, 13 participants were considered to have bad grammar, and one student was considered to have very bad grammar. The data showed that most students consider their language skills to be good or bad. However,

the majority of students considered their English skills as good. Yet, it cannot be denied that the number of students who consider themselves to have bad English skills is still high.

Table 6
Students' Perception of the Urgency English Skill in Their Future Career

Skill	Very Not Important	Not Important	Important	Very Important
Speaking			3 (14.28%)	18 (85.71%)
Listening			5 (23.80%)	16 (76.19)
Writing			6 (28.57%)	15 (71.42%)
Reading			8 (38.09%)	13 (61.90%)
Vocabulary			3 (14.28%)	18 (85.71%)
Grammar			8 (38.09%)	13 (61.90%)

Most participants consider having good speaking skills and vocabulary to be crucial for their future careers. All the participants consider all English skills important for their future careers. However, they consider speaking skills and vocabulary to be the most important skills for their future career. Writing skill is also considered as important. This is due to the fact that science uses a lot of terminology, so having a good vocabulary is considered as important to understanding the terminology. Moreover, participants consider speaking skills to be important as they are expected to be teachers who need good speaking skills to deliver the materials and also deliver their research related to sciences. Writing skills are considered important, too, because they require writing in journals or papers related to the sciences. So, those skills are considered as important. However, it cannot be denied that besides those skills, listening skills, reading skills, and grammar are still important to master.

Table 7.
Difficulties in Listening Skill

Indicator	Very easy	Easy	Difficult	Very difficult
Listen to instructions, directions, and suggestions from lecturers.	1 (4.76%)	17 (80.95%)	3 (14.28%)	0
Listen to material or presentations from various learning media.	1 (4.76%)	13 (61.90%)	7 (33.33%)	0
Listen and participate in class discussions.	2 (9.52%)	13 (61.90%)	5 (23.80%)	0

The majority of participants believe they are able to listen to instructions, directions, and suggestions from lecturers. 80.95% of participants consider it easy for them to understand the instructions, directions, and suggestions from the lecturers. 4.76% of the participants consider it very easy to understand the instructions, directions, and suggestions. However, 14.28% consider it difficult. Moreover, 61.90% of the participants consider it easy to listen to material or presentations from various learning media, and 4.76% of participants consider it very easy. However, 33.33% of the participants considered it as difficult. Furthermore, 61.90% of participants consider it easy to listen and participate in class discussions, and 9.52% consider it very easy. However, 23.80% of participants consider it as difficult. This implies that the majority of participants are able to listen to the academic lesson well in English. However, the number of students who have difficulty listening cannot be denied.

The majority of participants consider it difficult for them to read and understand scientific papers. 66.67% of participants consider it difficult for them to read and understand various scientific modules and articles related to science, and 9.52% consider it very difficult. However, 23.80% of participants consider it as easy. Moreover, 61.90% of the participants consider it difficult to read and comprehend scientific graphics and data, and 4.76 % of the participants

consider it very difficult. However, 33.33% of the participants consider it as easy. Furthermore, 47% of the participants consider it easy to read and comprehend the guidelines and instructions for science-related applications, and 9.52% consider it very easy. However, 38.09% of participants consider it as difficult, and 4.76% of the participants consider it as very difficult. This implies that reading skills should be given more attention as the students still find it difficult to understand the graphs, modules, and papers related to sciences.

Table 8
Difficulties in Reading Skill

Indicator	Very easy	Easy	Difficult	Very difficult
Read and understand various scientific modules and articles related to science.	0	5 (23.80%)	14 (66.67%)	2 (9.52%)
Read and comprehend scientific graphics and data.	0	7 (33.33%)	13 (61.90%)	1 (4.76%)
Read and comprehend the guidelines and instructions for science-related applications.	2 (9.52%)	10 (47.61%)	8 (38.09%)	1 (4.76%)

Table 9
Difficulties in Speaking Skill

Indicator	Very easy	Easy	Difficult	Very difficult
Do presentations related to material and science.	0	10 (47.61%)	11 (52.38%)	0
Report graphs and data related to science orally to lecturers, laboratory assistants, and friends.	0	6 (28.57%)	15 (71.42%)	0
Interact with people who are experts in a particular field of science. (such as a lecturer or speaker at a science seminar)	1 (4.76%)	5 (23.80%)	15 (71.42%)	0

Most participants consider it challenging to use English orally in an academic setting. 52.38% of participants believe doing presentations related to material and science is complicated. However, 47.61% of participants consider it as easy. Moreover, 71.42% of participants consider reporting graphs and science-related data orally to lecturers, laboratory assistants, and friends difficult, and 28.57% of participants consider it easy. Furthermore, 71.42% consider interacting with people who are experts in a particular field of science (such as a lecturer or speaker at a science seminar) as difficult. However, 23.80% of participants consider it easy, and 4.76% consider it very easy. This indicates that participants still consider using English orally for academic purposes difficult.

Table 10
Difficulties in Writing Skill

Indicator	Very easy	Easy	Difficult	Very difficult
Create or write lab reports or scientific articles related to science.	1 (4.76%)	7 (33.33%)	13 (61.90%)	0
Write Curriculum Vitae and Resume in preparation for work in science.	1 (4.76%)	7 (33.33%)	12 (57.14%)	1 (4.76%)

Participants consider writing lab reports, scientific articles, and curriculum vitae as difficult. 61.90% of participants consider writing lab reports or scientific articles related to science difficult. However, 33.33% of participants consider it easy, and 4.76% of participants consider it very easy. Moreover, 57.14% of participants consider writing Curriculum Vitae and resumes in preparation

for work in science as difficult, and 4.76% consider it very difficult. However, 33.33% of participants consider it as easy, and 4.76% of them consider it as very easy. This implies that the majority of participants face difficulties while writing lab reports or scientific articles related to science and writing curriculum vitae and resumes in preparation for work in science.

Table 11
Difficulties in Grammar

Indicator	Very easy	Easy	Difficult	Very difficult
Understand and use grammatical structures in scientific discourse (active/passive voice, if conditionals, etc.)	4 (19.04%)	16 (76.19%)	1 (4.76%)	0
Understand and use grammatical structures in professional conversation (tenses, modalities, gerunds, etc.)	1 (4.76%)	19 (90.47%)	1 (4.76%)	0
Understand and use grammatical structures in daily conversations with lecturers, laboratory assistants, and friends (tenses, modalities, gerunds, etc.)	1 (4.76%)	8 (38.09%)	12 (57.14%)	0

The majority of participants are able to use grammatical structures. 76.19% of participants consider understanding and using grammatical structures in scientific discourse, for instance, active/passive voice, if conditionals, etc, as easy, and 19.04% of participants consider it as very easy. However, 4.76% of participants consider it as difficult. Moreover, 90.47% of participants consider understanding and using grammatical structures in professional conversation, for instance, tenses, modalities, gerunds, etc, as easy, and 4.76% of participants consider it as very easy. However, 4.76% of participants consider it as difficult. Furthermore, 57.14% of participants consider understanding and using grammatical structures in daily conversations with lecturers, laboratory assistants, and friends as difficult. However, 38.09% of participants consider it as easy, and 4.76% of participants consider it as very easy. This indicates that participants are able to understand and use grammatical structures in scientific discourse and professional conversations. However, participants face difficulties while having conversations with lecturers, laboratory assistants, and friends.

Table 12
Difficulties with Vocabulary

Indicator	Very easy	Easy	Difficult	Very difficult
Understand the general science-related vocabulary.	1 (4.76%)	8 (38.09%)	12 (57.14%)	0
Understand vocabulary related to biology terms.	2 (9.52%)	8 (38.09%)	11 (52.38%)	0
Understand vocabulary related to physics terms.	0	9 (42.85%)	11 (52.38%)	1 (4.76%)
Understand vocabulary related to chemistry terms.	0	7 (33.33%)	13 (61.90%)	1 (4.76%)
Understand vocabulary related to mathematical terms.	0	13 (61.90%)	8 (38.09%)	0

The majority of participants have difficulty understanding terminology related to sciences. 57.14% of participants consider it difficult to understand the general science-related vocabulary. However, 38.09% of participants consider it as easy, and 4.76% of participants consider it as very easy. Moreover, 52.38% of participants consider it difficult to understand the biology terms. However, 38.09% of the participants consider it as easy, and 9.52% of the participants consider it

as very easy. Furthermore, 52.38% of participants consider it difficult to understand the physics terms, and 4.76% of participants consider it very difficult. However, 42.85% of participants consider it as easy. In addition, 61.90% of the participants consider it difficult to understand the chemistry terms, and 4.76% of the participants consider it very difficult. In contrast, 33.33% of participants consider it as easy. Another finding is that 61.90% of the participants consider it easy to understand the mathematical terms. However, 38.09% of the participants consider it as difficult. The majority of the participants consider understanding the terms of general science, physics, biology, and chemistry as difficult. However, the majority of participants consider it easy to understand the mathematical terms. However, this finding shows that the difference between the difficult and the easy is significant, showing that there are a small number of differences.

Learning Mastery

The majority of participants have good scores in English courses, which indicates they could master the content of learning in EMI programs. Table 13 shows that all of the students have good scores in English courses, which are A and B. Most students pass biology courses, physics courses, chemistry courses, and mathematics courses, which are compulsory courses for the major. This indicates that participants have good English proficiency, which enables them to understand and pass the courses. This is because if they have sufficient English proficiency, they will be able to understand the learning courses. This is in line with Kang and Park (2005), who stated that if students have inadequate English proficiency, they will face difficulties in understanding the lectures.

Table 13

Participants' Score in Science Courses

Course	A	B	C	D
Course related to biology	14 (82.4%)	2 (11.8%)	1 (5.9%)	-
Course related to physics	10 (58.8%)	7 (41.2%)	-	-
Course related to chemistry	6 (35.3%)	10 (58.8%)	1 (5.9%)	-
Course related to mathematics	6 (35.3%)	10 (58.8%)	1 (5.9%)	-
English Course	4 (23.5%)	13 (76.5%)	-	-

The majority of the participants use English in the classroom. From Table 14, Most of the participants use English to answer the lecturer's questions, ask the lecturer, explain science vocabulary, and explain scientific phenomena. By doing this, participants will be able to recognize the terminology that will affect their English proficiency. Their English proficiency will be improved to allow them to understand the content of materials that affect their learning mastery.

Table 14

Participants' Evaluation of How Frequently They Use English

Activity	5	4	3	2	1
In the learning process, I use English to answer the lecturer's questions	3 (17.6%)	11 (64.7%)	3 (17.6%)	-	-
In the learning process, I use English to ask questions to the lecturer	4 (23.5%)	12 (70.6%)	1 (5.9%)	-	-
I use English in discussion	1 (5.9%)	7 (41.2%)	8 (47.1%)	1 (5.9%)	-
I use English to interact with friends	1 (5.9%)	4 (23.5%)	8 (47.1%)	4 (23.5%)	-
I use English to interact with the lecturer	2 (11.8%)	14 (82.4%)	1 (5.9%)	-	-
I use English to discuss the assignment given by the lecturer	1 (5.9%)	8 (47.1%)	6 (35.3%)	2 (11.8%)	-

I use English in explaining vocabulary about science	1 (5.9%)	11 (64.7%)	4 (23.5%)	1 (5.9%)	-
I use English to explain scientific phenomena	1 (5.9%)	9 (52.9%)	5 (29.4%)	2 (11.8%)	-
By connecting current events to scientific phenomena, I explain scientific phenomena in English.	1 (5.9%)	8 (47.1%)	5 (29.4%)	3 (17.6%)	-
I explain the instructions to my friend in the experiment (either in the laboratory or in class) using English	1 (5.9%)	6 (35.3%)	7 (41.2%)	3 (17.6%)	-
I respond to friends' instructions in experiments (either in the laboratory or in class) by using English	1 (5.9%)	8 (47.1%)	4 (23.5%)	4 (23.5%)	-

The majority of the participants consider learning science to be interesting. From Table 15, most students consider learning science interesting and outstanding. Moreover, 29.4% of participants thought their achievement in science was better than in other fields. Furthermore, the majority of the participants enjoy learning science.

Table 15
Participants' Perspectives on Their Academic Achievement

Activity	**5**	**4**	**3**	**2**	**1**
My achievements in science are better than in other fields	2 (11.8%)	3 (17.6%)	10 (58.8%)	2 (11.8%)	-
My performance in science is always good	1 (5.9%	3 (17.6%)	11 (64.7%)	2 (11.8%)	-
I enjoy attending science courses	3 (17.6%)	7 (41.2%)	6 (35.3%)	-	1 (5.9%)
Science is very easy	1 (5.9%)	1 (5.9%)	10 (58.8%)	4 (23.5%)	1 (5.9%)
I think learning science is very interesting and outdare	4 (23.5%)	10 (58.8%)	3 (17.6%)	-	-

English proficiency plays an essential role in mastering content learning. The findings showed that the majority of students are aware of English proficiency. The participants show there is a correlation between English proficiency and learning mastery in EMI programs. This study indicates that the participants have good English proficiency, which enables them to master the knowledge content. However, as already described above, the participants found it difficult to understand technical terminology related to science. Although the participants considered their English proficiency low, the score found from the compulsory courses indicates they can master the learning content.

CONCLUSION AND SUGGESTIONS

EMI programs require students with good English proficiency to master the learning content. This research examines the students' English proficiency to master the learning outcomes. There are 21 participants in the first cycle and 17 participants involved in the second cycle. The finding shows that the majority of students are aware of English proficiency. The participants show there is a correlation between English proficiency and learning mastery in EMI programs. This study indicates that the participants have good English proficiency, which enables them to master the knowledge content. However, as already described above, the participants found it difficult to understand technical terminology related to science. Although the participants considered their

English proficiency low, the score found from the compulsory courses indicates they can master the learning content.

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