English Medium Instruction (EMI) in Higher Education: Insights from Indonesian Vocational Lecturers

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ABSTRACT

Reported studies show that some common reasons for offering courses in English medium instruction (EMI) seem to be pragmatic. The rationales for the internationalization of higher education are to improve the English proficiency of both lecturers and students and to facilitate global mobility. However, this responsive practice has some challenges, including limited understanding among university stakeholders of the implications of implementing EMI. This quantitative study examined lecturers' perceptions of EMI in a selected vocational university in Indonesia. A set of four-point Likert scale questionnaires was distributed to 41 lecturers in eight departments, who were selected through simple random sampling to ensure their status as the department's content lecturers. The survey responses were statistically analyzed using SPSS software version 22. The findings showed that the lecturers agreed with all three main issues: terms used as a reference to EMI, EMI practice in the classrooms, and necessary support for EMI implementation, with average means of 2.10, 1.96, and 1.73, respectively (1 = strongly agree, 2 = agree, 3 = disagree, 4 = strongly disagree). These key findings highlight the existence of higher education internationalization and the tension among lecturers in understanding the pedagogical implications of EMI on language use and the assessment of student learning. The main findings also support the need for clear and specific arrangements for EMI implementation in many contexts globally. In response to the increasing trend of EMI in the future education system, we suggest vocational higher education institutions nurture code-switching in EMI classes, adopt content-based English courses, and collaborate between English and EMI content lecturers.

1. Introduction

Higher education (HE) internationalization has triggered an increasing number of English medium instruction (EMI) practices in countries where English is uncommonly spoken in the society. EMI is used as an instrument to facilitate mobility programs like faculty member and student exchange and to offer courses delivered in English medium to both domestic and international students. For the latter, EMI has different terms. European countries are familiar with EMI (Doiz et al., 2013), English-taught programs or ETPs (Wachter & Maiworm, 2014), partial English medium instruction (Basibek et al., 2014), and content and language integrated learning or CLIL (Coyle et al., 2010). In Asia, EMI and CLIL are the most utilized terms (Floris, 2014; Galloway et al., 2020).

Some studies on EMI have been well documented in the global context. Briggs et al (2018) specifically focused their research on the perceptions of EMI lecturers in 27 countries about EMI practices and identified some challenges faced by these lecturers in preparing EMI course materials. Seeking lecturers' understanding about their own EMI practice, Aguilar (2017) and Block & Moncada-Comas (2019) found that most lecturers perceived themselves only focused on teaching content but overlooked language learning support for their students. Another challenge is related to the performance of EMI lecturers (Floris, 2014; Simbolon, 2017), namely limited English proficiency, limited pedagogy to implement EMI, and skills to use both first language (L1) and target language (L2) to support students' learning (Chen et al., 2020; Floris, 2014; Simbolon, 2017). Despite these reported challenges encountered by university stakeholders, the global trend of EMI practice is expected to continue (Macaro, 2015). One key issue in EMI practice is lack of shared understanding between policymakers and lecturers (Aizawa & Rose, 2019). Previous studies reported the challenges due to this issue, including students' limited English proficiency (Floris, 2014) and content lecturers' challenges to implement EMI in their class (Briggs et al., 2018; Simbolon, 2017)

Another published concern regarding EMI implementation is that EMI practice has triggered some social issues. First, EMI classes have led to the clustering of universities into elite and non-elite higher education. In Asia, including Japan (Shimauchi, 2018) and Indonesia, EMI courses are commonly associated with the high costs of world university rankings and overseas partners engagement. Additionally, some resistance to EMI exists due to national identity as reported by Islam (2013) in Pakistan.

In Indonesian context, studies on EMI for higher education remains lacking. One most current study was by Lamb and his colleagues in 2021, highlighting the organic occurrence of EMI (bottom-up) without coordination, plan, or even monitoring (Lamb et al., 2021). While previous studies have focused on academicHE, the present study scrutinized the perspectives of lecturers of vocational HE in Indonesia on implementing EMI.

Thus, this paper specifically aims to scrutinize the Indonesian vocational higher education lecturers' perspectives on implementing EMI practice. This study aims to fill the gap in issues surrounding EMI which include lecturers' understanding of terms used to refer to EMI and its implication in the classrooms, and the necessary support for the success of EMI implementation. Thorough information was collected using a questionnaire instrument.

2. Literature Review

2.1 English Medium Instruction (EMI)

EMI is defined as "the use of the English language to teach academic subjects in countries or jurisdictions where the first language (L1) of the majority of the population is not English." (Dearden, 2015, p. 4), including Indonesia. One key driver for the massive use of EMI on the global scale is the internationalization of higher education. This process has some implications in universities' goals of attracting international students and facilitating academic staff and student mobility worldwide.

Richards & Pun (2021) suggest the current typology of EMI practice around the globe, from which the terms for referring to and approaches to implement EMI becomes the key point to design EMI program. Content and language integrated learning (CLIL), a dual-focus approach (Coyle et al., 2010) is often used to give a conceptual meaning to current trend of EMI. While many perceive EMI can improve students' English skills (Dearden, 2015; Floris, 2014; Galloway et al., 2017), EMI practice commonly limits and excludes language learning support (e.g., Aguilar, 2017), this study adopts the spectrum of additional language learning proposed by Massler et al. (2014). Teaching a discipline in additional language lies in a continuum between 'L2-medium subjects' and 'L2 classes. The former refers to the discipline taught in additional language (English), and the latter is additional or foreign (read: English) language classes. The context of this reported study in this paper, English language courses mostly use the English for Specific Purposes (ESP) approach (referey adopting a content-based approach, and EMI is the English medium subject taught by content lecturers.

2.2 Studies on EMI practice in higher education

To date, the study foci of EMI vary from different terminologies of EMI to strategies and support necessary for EMI implementation. Morgado & Coelho (2013) compared the terms CLIL and EMI in a Spain university, and found that content lecturers perceived themselves to be less prepared to teach a foreign language class. Hence, they expected EMI students to have better English than CLIL. In a similar context, Aguilar (2017) examined lecturers' perspectives on EMI and CLIL, and observed that lecturers preferred EMI to CLIL because they considered EMI as an approach focusing solely on content learning. This preference can be associated with the use of CLIL approach to promote plurilingualism in Europe (Coyle et al., 2010) through different strategies, such as providing supports for language learning student. Block & Moncada-Comas (2019) further examined the perceptions of six professors of their role in EMI courses in a university in Europe. Their study confirmed earlier findings that EMI lecturers refused to identify their role as English language teachers, and they gave no support for language learning (Block & Moncada-Comas, 2019). Therefore, most EMI lecturers seem to agree to exclude language support given to the students in their EMI practice. In summary, sufficient understanding of terminology as a reference to EMI and its definition (Macaro, 2018), is crucial to a successful implementation of EMI itself.

Other studies focused on teachers' understandings of language use in EMI classrooms. Previous research showed that the teacher supports their students by delivering the materials in students' first language (L1) to compensate their limited English proficiency. Examining EMI lecturers in one Indonesian university classroom, Floris (2014) reported that lecturers had to use L1 due to students' limited English. Similarly, Simbolon (2017) interviewed some EMI lecturers and conducted class observations in two classrooms of a university in Indonesia. The findings showed that the lecturers implemented code-switching in two main ways, namely providing L1 translation most of the time and translanguaging of both languages in specific teaching sessions. While using L1 is recommended systematically (Lin, 2015), most lecturers seemed to use L1 without adequate understanding of code-switching strategy, which in fact would provide more potential benefits in the classroom. For example, Mazak & Herbas-Donoso (2014) conducted fifteen classroom observations in a university in Puerto Rico followed by interviews with the lecturers to examine the use of Spanish and English in their teaching. They found that implementing L1-English codeswitching

could enrich students' English learning. If compared to lecturers in Simbolon's (2017), study these Puerto Rican lecturers seem to have better understanding of codeswitching because they have planned in which session of teaching to use L1 or English.

Another similar study by Fang & Liu (2020) which specifically examined lecturers' perceptions of translanguaging in a university in China showed that most lecturers admitted the effectiveness of using L1 in English medium classes, especially to enhance students' understanding of the content learning and to build rapport with the students.

Studies on the perceived support of EMI practice have been conducted in different contexts, but many suggested the importance of providing professional development to EMI lecturers. For instance, Vu & Burns (2014) in their investigation of a public university in Vietnam highlighted three main aspects of lecturers practicing EMI: linguistics, content knowledge, and EMI pedagogy. In a broader scope, Briggs et al. (2018) conducted a global online survey to EMI teachers from schools and universities in 27 countries. One of their key findings indicated that teachers encounter challenges in preparing the lessons and learning materials for EMI subjects. Next, Simbolon et al. (2020) found that lecturers in a university in Indonesia indicated a tension of their understanding towards EMI, thus suggesting the need for professional development, particularly in learning materials selection and students' learning assessment in an EMI environment. In a different context, Chen et al. (2020) identified similar issue in a university in China. Focusing on lecturers' practice of teaching EMI subjects, they found that the lecturers need professional development, especially in teaching approach that enables students to apply their knowledge. This Bloom taxonomy's higher-order thinking skills definitely require lecturers to have a certain level of both EMI pedagogical and English language skills to help students express their knowledge in the target language simultaneously. Macaro et al. (2016) examined the experiment to give supports for EMI teachers in form of collaboration between content lecturers and English lecturers in lesson planning in Turkey, and found that the teachers perceived this collaboration positively.

To summarise, the key issues around EMI implementation include EMI lecturers' understanding of EMI and practical implications of language use in the classrooms, and necessary support for EMI teachers to teach EMI courses successfully. While these topics are essential for the development of EMI practice in Indonesian higher education, there are limited studies to address these issues. The present study focuses on examining lecturers' understanding on

a)   The terms used as a reference to EMI

b)   Strategies of practicing EMI in the classroom

c)   Support necessary to EMI implementation

3. Method

The study took on a quantitative research approach (Bryman, 2008) and administered questionnaires to content lecturers of eight departments of Pontianak State Polytechnic in 2021.

3.1 Data Collection and Analysis

The questionnaire items were adopted from the survey instrument designed in a doctoral study (Simbolon, 2016) where the questionnaire was designed in a structured way (Bryman, 2008). Simple random sampling (Creswell, 2012) was used to make sure all content lecturers in eight departments participated in the survey and the interpretation of the study findings could represent the research context (the institution). Due to the recent global pandemic of COVID-19, questionnaires were distributed online using Google Forms, and the link was given to the lecturers via the University WhatsApp group early in 2021. The link remained open for four weeks and forty-one lecturers completed the forms.

3. 2 Data Analysis

Data analysis used the SPSS statistical software version 22. The results of descriptive statistics of mean and standard deviation for the three scales of the lecturers' perceptions of EMI practice are presented in Table 1.

Table 1. Descriptive Statistics for Each Scale in the Questionnaire

Issues	Av. mean	Av. standard deviation
Terms for EMI (2 variables)	2.10	.55
Practices of EMI (10 variables)	1.96	.65
Supports to EMI implementation (7 variables)	1.73	.58

As indicated in Table 1, the lower average mean value indicates the higher degree of lecturers' agreement with each statement. The standard deviation value was > .5, suggesting that participants' responses be somewhat dynamic, particularly in the issue of "practices of EMI".

3.3 Validity and Reliability

Content validity was performed to the translation version of this instrument using criterion-related validity checks and relational approach, focusing on the clarity of interpretation of the instrument items for the

participants. Instrument pilot testing was done with some peer lecturers from different universities. Convergent validity and discriminant validity results are presented in Table 2.

Table 2. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling	
Adequacy	.552
Bartlett's Test of Sphericity	609.355
Approx. Chi-Square	
df	300
Sig.	.000

The instrument's appropriateness is supported by Bartlett's Test of Sphericity being statistically significant ($<.05$). The figure shows relationships between variables within the particular sub-themes in the instrument.

Table 3. The Cronbach's Alphas of The Instrument

Issues	No. of items	Cronbach's Alpha
Terms for EMI (2 variables)	2	0.791
Practices of EMI (10 variables)	10	0.614
Support to EMI implementation (variables)	7	0.816

Table 3 shows that the Cronbach's Alpha of all variables' internal consistency was confirmed. It means that familiarity with the terms seemed to affect lecturers' responses to the question regarding the terminology used as a reference to EMI, and it was shown that the value was approximately the same as the value of "Support necessary to EMI implementation." Therefore, the overall instrument was considered reliable.

4. Results

Three main issues are presented in this section: the terms used as the reference to EMI, strategies in the implementation of EMI, and necessary support to implementing EMI. Findings showed that there was no significant correlation between the lecturers' teaching experience and educational background and their perceptions of EMI practice, but was association between their perceptions of language use in EMI and support necessary for the implementation of EMI.

4.1 Demographic Information

The demography of participants information is summarised in Table 4.

Tabel 4. Lecturers' Demographic Information (N=41)

Item	Description	Number	Percentage
Age (years)	25-31	2	4.9
	32-38	9	22
	39-45	14	34.1
	46-52	10	24.4
EB***	Above 53	6	14.6
	Masters	35	85.4
	Doctoral	6	14.6
EMI	Yes*	13	311.7
Experience	No	28	68.3
Taught subjects	Core	38	92.7
	Non-core**	3	7.3

*The length of EMI teaching is less than 5 years

**Islam Religion, Citizenship, and Indonesian Language

***EB Educational Background

Table 4 shows that most participants were middle-aged of 39-45 years, had Master's degree, and had no experience in EMI practise. It is worth noting that a few non-core subject lecturers participated in the survey.

4.2 Perspectives on issues surrounding EMI

The lecturers' responses to the survey are presented in Table 5, in which most of them agreed with the issues surrounding EMI practice.

Table 5. Statistical Results of Lecturers' Perception of EMI Practice (N=41)

	Statements	M	SD	SA (%)	A (%)	D (%)	SD (%)
1.	EMI practice is suitable for the courses I teach	1.93	.57	19.5	68.3	12.2	-
2.	EMI and bilingual classes refer to the same practice	2	.50	9.8	82.9	4.9	2.4
3.	EMI practice and international classes are the same thing	2.2	.60	9.8	61.0	29.2	-
4.	EMI practice should be introduced gradually	1.54	.55	48.8	48.8	2.4	-
5.	EMI practice should use both English and Indonesian languages	1.71	.64	36.6	58.5	2.4	2.4
6.	Indonesian (the students' first language - L1) should be used for translation during EMI practice	2.02	.65	17.1	65.9	14.6	2.4
7.	L1 should be used for the delivery of key content during EMI practice	2.10	.66	14.6	63.4	19.5	2.4
8.	Current textbooks are used for EMI practice without translating them into Indonesian	2.17	.67	14.6	53.7	31.7	-
9.	To practice EMI, learning materials such as modules and handouts need to be presented using English and Indonesian versions.	2	.71	24.4	51.2	24.4	-
10.	Multimedia learning materials are necessary for use in the EMI classroom	1.41	.50	58.5	41.5	-	-
11.	Collaborative work between content and English lecturers is necessary for practicing EMI	1.46	.55	56.1	41.5	2.4	-
12.	Parallel classes of EMI are potential to implement at the University	1.93	.52	17.1	73.2	9.8	-
13.	A bridging course program for the students is necessary for EMI practice	1.66	.48	34.1	65.9	-	-
14.	EMI practice requires students to have a minimum English proficiency	1.83	.59	26.8	63.4	9.8	-
15.	International events for students and lecturers are necessary to support EMI practice	1.56	.55	46.3	51.2	2.4	-
16.	EMI practice should be supported by adopting a content-based English course'	1.59	.59	46.3	48.8	64.9	-
17.	The number of English course hours should be increased in order to support EMI practice	2.10	.77	22.0	48.8	26.8	2.4
18.	40 % total academic grade of an EMI course should be from students' attendance and classroom participation.	2.22	.76	17.1	46.3	34.1	2.4
19.	To practice EMI in my course/s, only English should be used for assessment purposes	2.50	.75	7.3	43.9	41.5	7.3

As indicated in Table 5, the majority of the lecturers in the survey agreed that EMI and bilingual classes referred to the same practice as evidenced by the mean (M) score of 2.00 with 92.7% either strongly agree or agree with Statement (2) and even a lower score of deviation (.50) suggesting a small disparity in the lecturers' perceptions. Meanwhile, Statement (3), asking if EMI and International Classes are the same, had a slightly higher mean score of 2.2 than Statement (2), but only about 70% of lecturers either strongly agree or agree to Statement (3). The standard deviation value (.60) also indicated a somewhat larger spread of participants' responses. It is worth noting that these two terms should not be considered categorical responses but rather indicate the continuum of lecturers' perceptions. Some participants perceived EMI as a full English instruction while others regarded it a partial English instruction. It was reflected from their responses to the questions concerning strategies in EMI practice (Statements 5-7) in the following section.

Table 5 also indicates somewhat diverse responses from lectures, reflecting a discrepancy in their understanding of EMI. The mean values ranged from 1.71 to 2.1, with approximately 80% of the participants either strongly agree or agree. It is worth noting that about 90 % of lecturers both agreed and strongly agreed to code-switching practice. These figures show coherence between the lecturers' answers to these statements and their views on the term used to reference EMI practice. This particular finding seems to link with the lecturers' perception of the monolingual practice of English (Statement 19). The majority of the lecturers responded "strongly agree" and "agree" with the Statement "To practice EMI in my course/s, only English should be used for assessment purposes." The statistical analysis of correlations (see Table 6 in Appendix 1) also shows that the Bilingual Classes term was significantly correlated with these particular issues.

Table 6 in Appendix 1 showed a significant relationship between the term Bilingual Classes and the use of both languages (L1 and L2/English) in EMI classroom ($r = .34$) and sectional uses of L1 and L2 ($r = .32$) (all ps (2-tailed) $<.01$). Statistical analysis also indicated no significant relationship between the term Bilingual Classes and the use of translation in teaching, meaning no association between the two. It is worth noting that Statements 6 and 7 were meant to examine the lecturers' understanding of different translation models in EMI practice (Statement 6) and contextualized use of L1 and L2 for EMI practice (Statement 7). The former referred to the provision of translation of each English instruction in the classroom, and the latter was the sectional use of L1 and L2 for certain phases of teaching. For example, greetings and lesson introduction should be delivered in L2/English, whereas key content delivery could be in L1.

Regarding learning materials, most lecturers (70%) in the survey either agreed or strongly agreed with Statement 8 (M=2.17) that translation was not needed

when using the current English textbooks. However, 75.6% of the lecturers either strongly agreed or agreed with Statement 9 "Need two versions of handouts and modules, one for each language". In other words, there were contradictory responses which might reflect the concerns of lecturers about their students' limited English proficiency. It is also important to note that the SD values of Statements 8 and 9 (between .67 and .74) were the second-highest amongst the lecturers' responses, indicating disparity in lecturers perception of this issue.

Statistical results on the lecturers' views on the assessment of EMI students learning disclosed that most lecturers (51.2%, M=2.5) either agreed or strongly agreed with Statement 19 in which they used English when assessing their students. It is also worth noting that the SD value (.75) was somewhat high amongst the responses of all items of the survey, thus another diversity of lecturers' perceptions. Furthermore, the allocation of assessment weight to each aspect, which is in stark contrast to the common way, was specifically examined in the item stating that 40% total academic grade of an EMI course should be from students' attendance and participation in the classroom (Statement 18). The findings show that most lecturers (63.4 %, M=2.22) agreed with this grading of students' learning, which suggests the need for further investigation in this context.

Concerning the suitability of certain EMI courses in Statement 1 "EMI practice is suitable for the courses I teach", the mean score of 1.93 and the majority of respondents who either strongly agreed or agreed with this statement have indicated an overwhelming support for this statement. It is important to note that only 7.3 % of the lecturers participating in the survey taught non-core courses (see Table 4); this does mean that a small percentage of the lecturers from the core courses disagreed with this statement. This finding suggests that some lecturers viewed that their disciplines of knowledge are not associated with EMI practice, suggesting the need for further research specifically on seeking association between field of study and EMI practice.

Regarding Statement 4 about gradual introduction of EMI at the university, 97.6% of the lecturers either strongly agreed or agreed (M=1.54), suggesting that the lecturers were aware of the limited preparation to implement EMI at the university. This suggestion can be further elaborated in the following section.

Statement 11 through 17 highlighted the lecturers' perceptions of the necessary support for EMI. The average mean score (M) for these statements was 1.73%, indicating agreement with the issues that would be explained below.

There is a correlation among four types of supports for EMI course (Table 7 in Appendix 2). There were significant relationships between these four supports, namely collaboration between English and content

lecturers (Statements 11), the formation of parallel EMI classes (Statement 12; $r = .34$), adoption of content-based English course (Statement 15; $r = .53$), and the increased number of English courses in an EMI program (Statement 16, $r = .47$) (all ps (2-tailed) $>.01$ except between Statements 11 and 12 where p (2-tailed) $>.05$).

As shown in Table 5, this particular issue was especially realized in the forms of a bridging course program (Statement 13) and English proficiency requirement for EMI students (Statement 14). Even all lecturers agreed to include a preparatory program in EMI (Statement 13). Meanwhile, 90 % of the respondents agreed that EMI course should be offered in parallel to the English course (Statement 12) and there should be facilitated collaborative projects between the two lecturers (Statement 11). Also, 95.1 % of the lecturers either strongly agreed or agreed with the need to adopt a content-based English course (Statement 16). The figure shows with M = 1.59 on Statement 16.

However, one issue was encapsulated in the responses to Statement 17, where approximately 70% of the respondents agreed that "The number of English course hours should be increased in order to support EMI practice." (M = 2.10), but the SD value (.77) indicate a larger spread of responses, which implied that the university's current curriculum setting may be responsible for the low feasibility of supports for EMI course.

4.3 Demographic information and views on EMI

The correlations between the demographic variables and the mean values were measured for three issues: 1) Terms used to refer to EMI (TE), 2) Language use in EMI (LU), and 3) Supports for implementing EMI (SU). Kendall tau was used to compute the correlation, and the results are presented in Table 8 in Appendix 3.

Table 8 shows that overall, there were insignificant correlations between almost all aspects of participants demographics and their views on several key issues in EMI practice. The findings showed no significant correlation between the lecturers' teaching experience and educational background and their perspectives on EMI practice, but there was an association between lecturers' perceptions of language use in EMI and support necessary for the implementation of EMI ($r = .39$; $r = .32, ps$ (2-tailed) $= .05$).

5. Discussion

5.1 Terms and approach to EMI

Lecturers' perception of the terminology used as a reference to EMI can be interpreted in several ways. First, lecturers associated the term EMI with the perceived goals of EMI and its practical issues in the classrooms. While the term Bilingual Classes is with

using both L1 and English in EMI program, the term International Classes (or International Class Program or ICP) indicates the internationalisation of higher education process. This particular finding is similar to that of Wachter & Maiworm (2014) that ETPs (equivalent to ICP in this study) were designed to facilitate student mobility. Also, there was a significant relationship between lecturers' perspectives of language use in EMI and the terminology to refer to EMI. This finding suggests that some lecturers may have learned more about the global practice of EMI and the current process of internalization of higher education.

In addition, using both terms of Bilingual Classes and International Classes may reflect the absence of a specific EMI policy. University administrators seem to simplify the adoption of EMI courses in their institutions. This limitation mirrors the challenges reported by stakeholders when practicing EMI (Aizawa & Rose, 2019) where a gap existed between the policy makers and the practice of university stakeholders. Unlike Indonesia, some European countries, Japan, and China implemented regulations made by the top policymakers of EMI program in higher education settings (Bradford, 2018; Wachter & Maiworm, 2014). With specific EMI regulations, essential supports like adopting English for Specific Purposes (EAP) in EMI classrooms (Galloway & Ruegg, 2020) is possible to identify and practice. Hence, it is vital for all stakeholders to have clear and shared understandings about EMI prior to implementation. Therefore, there needs to be consensus between the terminology and definition (Macaro, 2018) to provide practical guidelines.

In terms of approaches to EMI, the choice of language use had some implications. First, multi languages were used to deliver contents in EMI classrooms by nurturing code-switching between L1 and L2. Similarly, Floris (2014) reported that code-switching could be one strategy to support student learning in EMI classes, especially when they had limited English proficiency. When planned effectively, code-switching may have multiple functions, such as enrich students' learning experience (Lin in Liu et al., 2020) by explaining the lesson's key concept, checking student comprehension of specific topics, and even creating positive rapport with them (Fang & Liu, 2020). Therefore, systematic ways of using L1 and L2 in EMI classrooms (Lin, 2015) are the key issues to further investigate in the future.

The statistical results that more participants agreed to use full English when conducting learning assessment indicated several insights. First, the lecturers perceived that EMI practice can prepare students to master the knowledge delivered in English. Simultaneously, this perception may also reflect that most courses in Pontianak State Polytechnic were relevant for EMI. This suggestion may indicate that resources for Science and Technology are mostly

available in English. While many lecturers agreed with their courses' relevance to EMI, some disagreed to use full English for learning assessment. This finding may reflect either student's limited English capacity, or lecturers' lack of skills to conduct the assessment in English.

Furthermore, a distinctive feature of grading system in vocational higher education in Indonesia is 40% on student's engagement in the classroom, and 60% on practical-oriented teaching and learning, mostly workshops. Lecturers perceived that classroom engagement could promote English communication but they also had limited understanding on practising different genre in English for workshops and classrooms context. However, until recently, there has been paucity of studies examining assessment types in various EMI settings, particularly in Indonesian vocational higher education contexts. This aspect is another topic worthy of future research.

5.2 EMI Implications: English and Content Specialists' Collaboration

EMI lecturers in Pontianak State Polytechnic had positive perception of bridging courses for EMI students, which are uncommon in most Indonesian higher education. This perception brought some implications. First, bridging course as a preparatory program suggests that students need to demonstrate a certain English level before commencing the EMI course. Also, adopting the bridging courses into EMI programs needs to consider the total costs incurred and time spent for EMI. Second, the bridging courses can facilitate content-based English language learning to prepare students for EMI courses. These implications could be beneficial (Macaro et al., 2016) in two aspects: students can better prepared before studying in EMI and collaborative project between EMI content and English course lecturers could be initiated. However, lecturers' agreement with this collaboration should be interpreted as the exclusion of language support and the full role of language lecturers. This particular finding is in accordance with Aguilar (2017) and Block & Moncada-Comas (2019) who reported the absence of EMI teachers to provide language support for EMI students. Therefore, the present findings may explain why there have been poor strategies in language used implemented by some EMI lecturers in the class (Simbolon, 2017). This drawback may partly hinder students from successful learning in an EMI program. While collaboration between English and EMI content lecturers are recommended, the practice is reported to have challenges (Galloway et al., 2017) including understanding of implementing such collaboration.

In addition to potential incurred high cost and longer time, the bridging programs for EMI may cause socio-economic problems, like clustering of universities into prestigious versus non-prestigious (Shimamuchi, 2018) and even resistance (Islam, 2013).

The significant relationships among four types of support for EMI, namely the collaboration between content and English lecturers, the adoption of content-based English courses, and parallel classes of EMI implied the need for increasing the hours of English course, and hence specific design for EMI programs. It highlights the novelty of the present study that content-based English learning approach is one key approach to adopt in ELT courses. Therefore, it is necessary to review the current curriculum, especially in vocational higher education where EMI needs to support students in future job settings.

6. Conclusions

The reported study aimed to examine lecturers' perceptions of the implementation of EMI in vocational higher education using a questionnaire to gather data. Some key findings include evidence of the internationalization of higher education and a gap in understanding the pedagogical implications of EMI among lecturers, particularly in language use and student learning assessment. The findings support the global issue that university stakeholders have limited understanding of EMI and its implications in the curriculum of vocational higher education. Additionally, the adoption of content-based English courses in EMI settings is the novelty of this research. This study has some limitations. The respondents in this study were from one public vocational university, so it is important to investigate whether these findings are reproducible in other Indonesian vocational universities (private or state universities) in other parts of Indonesia. Future research on content-based English teaching and collaboration between English and EMI content lecturers is necessary to capture specific features of Indonesian vocational higher education.

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Appendix

Appendix 1

Table 6. Correlations: Practical Issues In The EMI Classroom (N=41)

			S** 5	S 6	S 7
	S2	Correlation Coefficient	.337*	.215	.320*
		Sig. (2-tailed)	.026	.145	.030
Kendall's tau_b		N	41	41	41
	S3	Correlation Coefficient	.293	.207	.216
		Sig. (2-tailed)	.050	.157	.140
		N	41	41	41

*. Correlation is significant at the 0.05 level (2-tailed)

** Statement

Appendix 2

Table 7. Correlations: Support For EMI Implementation (N=41) (N=41)

			S 11	S 12	S 15	S 16
	S 11	Correlation Coefficient	1.000	.341*	.527**	.467**
		Sig. (2-tailed)	.	.025	.001	.002
		N	41	41	41	41
Kendall's tau	S 12	Correlation Coefficient	.341*	1.000	.235	.530**
		Sig. (2-tailed)	.000	.	.119	.000
		N	41	41	41	41
	S 15	Correlation Coefficient	.527**	.235	1.000	.384**
		Sig. (2-tailed)	.000	.119	.	.008
		N	41	41	41	41
	S 16	Correlation Coefficient	.467**	.530**	.384**	1.000
		Sig. (2-tailed)	.002	.000	.008	.
		N	41	41	41	41

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Appendix 3
Table 8. Correlations Between Demographics And Perceptions Of EMI (N=41)

	EB[a]	EX[b]	TE[c]	LU[d]	SU[e]
EB	1.000				
Sig.	-				
N	41				
EX	-.311[*]	1.000			
Sig.	.896	-			
N	41	41			
TE	-.193	.036	1.000		
Sig.	.198	.810	-		
N	41	41	41		
LU	-.124	.019	.391[*]	1.000	
Sig.	.363	.888	.002	-	
N	41	41	41	41	
SU	-.061	-.129	.204/	.321[*]	1.000
Sig.	.655	.344	.115/	.006	-
N	41	41	41	41	41

[a] EB, Education Background, [b]EX, EMI teaching experience, [c]TE, term used to refer EMI, [d]LU, Language use in EMI, [e]SU, support for implementing EMI
* correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed)