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Introduction

A greater number of universities in Japan have been adopting English-Medium Instruction (EMI) as a curriculum development because of the recent globalization movement. As the Ministry of Education, Culture, Sports, Science and Technology (MEXT) initiated a project "Global 30," which aims to increase efforts to advance globalization in selected universities for fostering international human resources (Burgess, Gibson, Klaphake, & Selzer, 2010), the number of universities to develop their curriculum has increased in recent years. The School of Education's Department of English Language and Literature at Waseda University started to introduce EMI for about 40 content courses. Moreover, from 2016, two preparatory courses in English for academic purposes (EAP) were conducted so that freshmen can transfer to EMI courses smoothly (Harada, in press). Through such a curriculum development movement, affective aspects such as anxiety of students should not be ignored because transferring to the new curriculum can make students anxious. Some previous studies examined current situation and potential issues in EMI courses in Japan in terms of motivation (Kojima, 2016). However, few studies investigates English use anxiety in EMI courses, and therefore basic and exploratory research on English speaking anxiety in EMI courses is significant and required for the purpose of supporting the curriculum development at our department. First of all, we review the definition of terminology related to this research theme. Two main terms are mainly EMI and second language use anxiety.

English-Medium Instruction

First, EMI is defined as not a language instruction course but a course where contents are taught using English as a medium of instruction (Hellekjaer, 2010). The two main aims of EMI conducted in higher education is to internationalize the nation and to offer an effective language learning opportunity, and EMI was originally conducted in Anglophone countries and gradually spread widely in Europe and then across the world (Suzuki, 2013). The integration of both content and language learning was considered as an effective way of learning a target language and Brinton, Snow and Wesche (1989) mentioned that the benefits of teaching subject matters using a target language have been reported in the area of Content-Based Instruction (CBI) studies in North America. Currently, in Japan, the MEXT has started to bring in the approach of teaching subject matters and contents using English in order to globalize their country and cultivate human recourses who can play an important role in the globalized world (Suzuki, 2013). While positive effects of EMI were reported, some difficulties and challenges were also reported. Kojima (2016) investigated the current situation and the issues of EMI preparatory courses in a university in Japan in terms of student's motivation, and she reported that the students understood less than 50% of the contents in the preparatory courses and that many students had thought they wanted to drop out the courses because they were too difficult to understand. Furthermore, she conducted an additional interview with some participants, and one of them referred to anxiety about EMI resulting from lack of English speaking ability. In addition to the level of the comprehension in EMI courses, affective aspects such as anxiety about EMI and English speaking can be regarded as a key issue in EMI courses from her study.

Foreign Language Anxiety

Foreign language anxiety is referred to as anxiety impeding the acquisition of oral communication ability, and it consists of communication apprehension, test anxiety and the fear of negative evaluation by teachers and peers (Horwitz, Horwitz, & Cope, 1986). MacIntyre and Gardner (1994) defined language anxiety as "the feeling of tension and apprehension specifically associated with

second language contexts, including speaking, listening, and learning" (p.294). Like this, foreign language anxiety has various categories, including communication anxiety and fear of evaluation from other people. Suzuki (2013) invented an English speaking anxiety scale appropriate for EMI in Japan on the basis of the Foreign Language Classroom Anxiety Scale (FLCAS) invented by Horwitz, Horwitz, and Cope (1986) and established five subcategories of the anxiety scale; speaking confidence, fear of negative evaluation from students, fear of negative evaluation from a teacher, communication anxiety with students, and communication anxiety with a teacher. She investigated the level of foreign language speaking anxiety among Japanese students at the beginning of their undergraduate EMI course and the change of the anxiety level during one semester using the anxiety scale. Results showed that Japanese freshmen felt foreign language speaking anxiety at the beginning of the semester, but the level could be dynamic because some students could reduce it, and others remained to have strong anxiety. In addition, analysis of subcategories of the scale showed that they lacked in English speaking confidence, they suffered from the fear of negative evaluation from students rather than the fear of negative evaluation from a teacher, and they had communication anxiety with a teacher at the beginning of the semester. Recently, previous research shows that language anxiety has an effect on performance or self-perception, using some anxiety scales (Awan, Azher, Anwar, & Naz, 2010; MacIntyre, Noles, & Clément, 1997). However, there is little research to examine anxiety in EMI courses in EFL settings. Therefore, we investigate what kind of anxiety students strongly feel in EMI in a Japanese university situation.

Research Questions

To explore learner's English speaking anxiety in EMI courses in the Japanese situation, this research addresses the following questions:

- 1. Which category of second language speaking anxiety do students strongly feel in an EMI course?
- 2. What relationship can be found between categories of L2 language speaking anxiety in the EMI course?
- 3. Which category of L2 language speaking anxiety can have a large effect on self-evaluation of group discussion task?

Method

Participants

We recruited undergraduate students as participants registered in an undergraduate EMI course in the Department of English Language and Literature at Waseda University. Although 21 students enrolled in the EMI course, 15 students (3 sophomores, 9 juniors, 3 seniors; 7 males and 8 females) completed the questionnaire because some of them were absent from the class due to their internship and job hunting. As a background information of participant's overseas experience, two participants had lived in a foreign country where English was daily used for about 5-6 years, and the other participants had no overseas experience or for less than 3 months.

Target EMI Course

The target EMI course was an undergraduate elective course on Content and Language Integrated Learning (CLIL) for one semester. The EMI course consisted of 15 weeks, and each lesson had 90 minutes. Students had five main academic tasks in the EMI course: (1) reading assignments before the class, (2) answering a quiz, (3) a brief lecture from an instructor, (4) student's presentations and (5) group discussions during students' presentations and the instructor's lectures. Before each class, they were required to read 15 pages on average from two course textbook on CLIL written in English. At the beginning of each class, they answered a brief quiz in around 15 minutes consisting of key term definitions and an open-ended question related to the coverage of reading assignments. The lecture from the instructor was around 30 minutes long, and was composed of the review of the previous week and contents from the reading assignment of the week including several discussion questions. Each lesson had two student's presentations on the basis of the textbook contents and the students were given around 20 minutes respectively to make their presentation and required more than one discussion question related to the topic. Discussion questions within both an instructor's lecture and student's presentations were required to do firstly in small groups, which had around 5 students in each, and then some groups were selected at random to summarize their group opinion to the whole classroom. As a noteworthy point of the EMI course, the instructor

did not point out students' speaking errors in students' presentations and summarizing their group discussion because the EMI course was not languagedriven, focusing on the language itself, but content-driven, putting more emphasis on content learning. Therefore, the instructor paraphrased students' speech more easily to understand rather than refer to their mispronunciation and ungrammatical speech, and gave them positive feedback on their opinion. As another remarkable feature of the EMI course, the first class was a course information and conducted in Japanese so that students could understand the outline of the EMI course including class objectives and assignments and so that the instructor could establish rapport with students. In the first class, the instructor asked them to make their name card to put on the desk because they and also the instructor can remember their names with the card to establish good relationships among them and make discussion smoothly using students' names.

Materials

Two types of questionnaires were performed in this study; the first one investigated students' language background including information of age of starting to learn English and the presence or absence of overseas experience. The second one investigated the contents in the EMI course. Four parts of the second questionnaire were completed; self-evaluation of the course content (part A), expectation of the course (part B), future prospects (part C) and English speaking anxiety in the classroom (part D). This study utilized two of the parts; self-evaluation of group discussion task items 16-38 in part A and English speaking anxiety in the classroom, items 50-79 in part D (see Appendix) because this research focused on self-evaluation of group discussion tasks and English speaking anxiety in the EMI course, and other parts will be used in another research.

Part A included the course evaluation and self-evaluation of group discussion in the EMI course. The part of self-rating of group discussion was invented on the basis of the *American Council of Teaching of Foreign Languages (ACTFL) Proficiency Guidelines* (ACTFL, 2012). The guidelines are based on the theory of communicative competence and can be compatible with the EMI course. On the other hand, in part D, an existing second language anxiety scale for EMI courses was adapted in order to measure the degree of learners' anxiety in the EMI course. Part D was derived from Suzuki's (2013) questionnaire that was originally based on the Foreign Language Classroom Anxiety Scale (FLCAS; Horwitz, Horwitz, & Cope, 1986) and applied to the EMI context in Japan.

Data Collection

Students' background information questionnaire was initially performed in the course and collected in Week7, and the second questionnaire, including parts A to D, was handed out in Week 8. Because of the limitation of time in the EMI course, students were asked to complete the questionnaire at home and to submit it by the last class session, Week 15. Therefore, the period of collecting data varied across participants.

Data Analysis

Checking reliability. The collected data were analyzed with IBM SPSS statistics 24 and Microsoft Excel 2016. First, the data were transferred to an Excel spreadsheet, and categorized into each section in order to make it easier to analyze. Second, we verified the reliability of the section of self-evaluation of group discussion, question items 16-38 and each subcomponent of the second language use anxiety parts, question items 50-79. While the part for self-evaluation of group discussion indicated a high Cronbach alpha coefficient, a = .95, one subcomponent of Suzuki's anxiety scale, communication anxiety with a teacher for items 54, 59, 64, 74 and 79, showed a relatively low coefficient, a = .65. Therefore, we removed item 74, which had a detrimental effect on internal consistency, and consequently the subcomponent resulted in a = .72. The other subcomponents showed a relatively high coefficient; speaking confidence, a = .90; fear of negative evaluation from students, a = .851; fear of negative evaluation from a teacher, a = .81; communication anxiety with students, a = .74.

Analysis of questionnaire items. The mean score for each subcomponent of the anxiety scale was computed from the collected data in order to investigate what category of second language use anxiety the participants felt strongly in the EMI course. The median was 3.5 because this questionnaire adopted 6-point

Likert scale, and the mean score within 3.5 ± 1 was considered as neutral toward anxiety about each item. The mean score from 4.5 to 6 was considered as being anxious about the item (point 6 referring to the highest anxiety) and the score from 2.5 to 1 as not being anxious about it (point 1 referring to the lowest anxiety). In this anxiety scale, as items 53, 55, 56, 57, 59, 60, 61, 62, 65, 67, 68, 69, 70, 74, 75, 76, 78 were reversal, the scores of those items were reversed.

Correlation analysis. In order to clarify which category of L2 use anxiety can have a major effect on other categories and group discussion task in the EMI course, correlation analysis was conducted with SPSS, investigating the relationship among the total scores of five anxiety categories and selfevaluation of group discussion. Spearman's rank order correlations were performed due to three main reasons. First, this research had a limited number of participants (n = 15). Second, although as a result of Shapiro-Wilk test the null hypothesis was not rejected because each *p*-value of all variables is higher than .05. However some variables of the data, especially the category of fear of negative evaluation from students, were not normally distributed when viewing the data graphically, following Larson-Hall's (2010) suggestion that "visually looking for normality" can be helpful and Wilcox's (2003) idea that numerical tests of normality are not always powerful (cited from Larson-Hall, 2010). Third, when viewing the box-and-whisker plot of self-evaluation of the group discussion scores, one outlier was detected. According to Hirai (2012), nonparametric statistics are less likely to be influenced by an outlier and she introduces non-parametric statistics as one of the ways to deal with an outlier. When interpreting the correlation coefficient, we adopted the criteria in Takeuchi and Mizumoto (2014), referring to \pm .70-1.0 as strong correlation, \pm .40-.70 as moderate correlation, \pm .20-.40 as weak correlation, and \pm .00-.20 as no correlation.

Results

Initially, we obtained descriptive statistics from the collected data in order to examine what types of L2 speaking anxiety the participants had in the EMI course, and subsequently performed Spearman's rank order correlations among the total scores of five categories of L2 speaking anxiety and self-evaluation

of group discussion tasks in EMI.

The descriptive statistics of English speaking anxiety in the classroom were categorized by five subcomponents, speaking confidence, fear of negative evaluation from students, fear of negative evaluation from teachers communication anxiety with students and communication anxiety with teachers, (Table 1). As the results of descriptive statistics show, using the criteria that was established in the section of the data analysis above, the participants were found to feel anxious about speaking English without any preparation because of their limited English ability (item 50; M = 4.67, SD = 1.18, Range = 2-6) in the category of speaking confidence. However, for the other items within the median \pm 1, no items showed that the participants did not feel anxious in the EMI course. In order to identify the items with relatively anxious and less anxious levels, the ones with three highest and lowest mean scores, including item 50, were each investigated: higher scores on (1) anxiety about speaking English without any preparation because of their English ability (item 50; M =4.67, SD = 1.18, Range = 2-6) in the category of speaking confidence, (2) concern about evaluation of speaking English from other students (item 51; M =4.27, SD = 1.58, Range = 1-6) in the category of fear of negative evaluation from students, (3) anxiety about whether what they say in English are understood (item 63; M = 4.27, SD = 0.80, Range = 2.5) in the category of communication anxiety with students. On the other hand, the lowest scores include (1) concern about what teacher thinks of their spoken English (item 77; M = 2.80, SD = 1.15, Range = 1-5), (2) nervousness of teacher noticing their speaking mistakes (item 52; M = 2.93, SD = 1.33, Range = 1-6), (3) anxiety about impression of their spoken English to the teacher (item 72; M = 2.93, SD = 1.15, Range = 1.5) with the same mean score as (2), and surprisingly all of the lowest items were in the category of fear of negative evaluation from teachers. In addition, from the viewpoint of the mean total score, each category was sorted in the descending order of the scores as follows: Spacing Confidence > Communication Anxiety with Teachers > Fear of Negative evaluation from Students > Communication Anxiety with Students > Fear of Negative Evaluation from Teachers.

Table 1

Descriptive Statistics of English Speaking Anxiety in the Classroom (Questionnaire Part D)

		2		
Speaking Confidence (SC)	N	М	SD	Range
Q 50. I become anxious because of my English ability when I have to speak English without preparation.	15	4.67	1.18	2-6
Q 55. I think I can feel sure of my English when teacher asks me a question.	15	4.00	1.00	2-5
Q 60. I think I have enough English speaking ability to participate.	15	3.40	1.40	1-5
Q 65. I think I can talk with other students confidently using English.	15	3.87	0.99	2-5
Q 70. I think I can talk with teacher confidently using English.	15	3.87	1.19	2-5
Q 75. I think I can say my opinion without any fear about my English.	15	4.13	1.13	2-6
Total score	15	3.99	5.64	11-31
Fear of Negative Evaluation from Students (FNES)	Ν	М	SD	Range
Q 51. I care about how other students think of my English when I speak it.	15	4.27	1.58	1-6
Q 56. I don't get anxious about how other students perceive my spoken English.	15	3.87	1.46	2-6
Q 61. I think other students give me a good evaluation of my spoken English.	15	4.07	1.10	2-5
Q 66. I get anxious about what impression I give to other students by speaking English.	15	3.53	1.25	1-5
Q 71. I get nervous when I feel like other students would notice mistakes in my spoken English.	15	3.33	1.05	1-5
Q 76. I don't care about other students' evaluation toward my spoken English.	15	3.60	1.35	1-6
Total score	15	3.78	5.96	11-29
Fear of Negative Evaluation from Teachers (FNET)	Ν	М	SD	Range
Q 52. I get nervous when I feel like the teacher would notice mistakes in my spoken English.	15	2.93	1.33	1-6
Q 57. I think the teacher gives me a good evaluation of my spoken English.	15	4.07	1.16	3-6
Q 62. I don't get anxious about how the teacher perceives my spoken English.	15	3.53	1.30	1-6
Q 67. I don't care about the teacher' evaluation toward my spoken English.	15	3.33	1.29	1-5
Q 72. I get anxious about what impression I give to the teacher by speaking English.	15	2.93	1.10	1-5
Q 77. I care about what the teacher thinks of my English when I speak it.	15	2.80	1.15	1-5
Total score	15	3.27	5.26	11-28

Communication Anxiety with Students (CAS)	Ν	М	SD	Range
Q 53. I try actively to talk with other students in English.	15	3.53	1.06	1-5
Q 58. I hesitate to participate in a group discussion using English.	15	3.07	0.96	2-5
Q 63. I get anxious whether other students have understood what I said in English.	15	4.27	0.80	2-5
Q 68. I can talk with other students in a group discussion using English.	15	3.53	1.25	1-5
Q 73. I get nervous when I discuss with other students in English.	15	3.13	1.36	1-5
Q 78. I don't get nervous when I say my thought to other students in English.	15	3.33	1.18	1-5
Total score	15	3.48	4.42	14-28
Communication Anxiety with Teachers (CAT)	Ν	М	SD	Range
Q 54. I get anxious whether the teacher has understood what I said in English.	15	3.93	1.22	1-6
Q 59. I don't get nervous in answering the teacher's question using English.	15	4.20	1.26	3-6
Q 64. I get nervous when the teacher asks me to comment on something using English.	15	4.20	1.15	1-6
Q 69. I can ask a question to the teacher using		2.52	1.41	1-5
English.	15	3.53	1.41	15
	15 15	3.53 3.40	1.35	1-5
English. Q 79. I hesitate to answer teacher's questions using				

Subsequently, we performed correlation analysis in order to examine the relationship between the categories of the speaking anxiety scale and between each of the categories and self-evaluation of group discussion (research question 2) and answer the third research question: which category of English speaking anxiety is likely to exert a huge impact on self-evaluation of group discussion task in the EMI course. The result of Spearman's rank-order correlations is summarized in Table 2.

Table 2

Correlations Among Each Subcategory of Anxiety Scale and Self-evaluation of Group Discussion

	SC	FNES	FNET	CAS	CAT	SEGD
Speaking Confidence (SC)	-					
Fear of Negative Evaluation from Students (FNES)	.544*	_				
Fear of Negative Evaluation from Teachers (FNET)	.579*	.589*	_			
Communication Anxiety with Students (CAS)	.685**	.854**	.586*	_		
Communication Anxiety with Teachers (CAT)	.667**	.695**	.375	.682**	_	
Self-Evaluation of Group Discussion (SEGD)	847**	770**	669**	845**	722**	-
** n < 01 * n < 05						

** p <.01, * p <.05

Spearman's rank order correlations show that each category of English speaking anxiety scale had moderate positive correlations, except for a significantly strong correlation of fear of negative evaluation from students with communication anxiety with students (r = .854, p < .001) and a weak, though not significant, correlation of fear of negative evaluation from teachers with communication anxiety with teachers (r = .375, p = .169). As for the relationship between English speaking anxiety and self-rating of group discussion (SEGD), a strong negative correlation was found between all of categories of English speaking anxiety except for the relationship of fear of negative evaluation from teachers with SEGD (r = -.669, p = .006). Especially, the correlation coefficient between speaking confidence and SEGD (r = -.847, p < .001) and between communication anxiety with students and SEGD (r = -.845, p < .000) was over -.80.

Discussion

The first research question investigated which category of L2 speaking anxiety students had or not in the EMI course. Initially, the findings in the descriptive statistics showed that they felt most strong anxiety toward the category of speaking confidence, and particularly students were worried about their own English speaking ability and speaking English without any preparation in the EMI course according to item 50. This may have resulted from their limited speaking ability and the students'

inexperience with EMI. As this EMI course included a greater amount of group or class discussion time on the academic contents than the conventional courses, the EMI students were required to speak English in a spontaneous way during the academic tasks. However, because their speaking ability was not sufficient for spontaneous oral activities, some of the students were concerned about speaking English without enough time to prepare for arranging their opinion. This result is consistent with the previous study by Öztürk and Gürbüz (2014), which reported that the requirement of spontaneous speech without any preparation would make students more anxious. Effects of the requirement of spontaneous speech were found in other category such as communication anxiety with a teacher. When comparing total scores between five categories, the total score of communication anxiety with a teacher was the second highest and especially the mean scores of item 59 and 64 in the category was relatively high (M = 4.20). It is assumed to be due to the fact that both items require spontaneous speech without any preparation to answer or comment on teachers' question. In that sense, requirement of the spontaneous speech was one of the key issues for students in EMI. Moreover, with regards to inexperience with EMI, because EAP preparatory courses started to open in 2016 in the School of Education's Department of English Language and Literature at Waseda University, participants had not taken the preparatory courses, which may have resulted in lacking of speaking confidence.

The two items with the second highest score of anxiety (item 51 and 63) were for the categories of fear of negative evaluation from students and communication anxiety with students. Both items can be interpreted as anxiety about other students' perceptions and about comprehension of their oral English. It could be explained that the EMI students had great concern about evaluation from other students because EFL learners could suffer from the fear of negative evaluation and worry about reactions of other students and the fear could be the main source to provoke speaking anxiety (Aydin, 2008; Öztürk and Gürbüz, 2014). Furthermore, two participants were returnee students who had lived in English-speaking country for more than five years, and the grade of participants varied because the EMI course was an elective course where sophomore, junior and senior students can take. Such a variety of students' background may have led to fear of negative evaluation from peers and communication anxiety with peers.

While the three items with the highest score were derived from each different

category (speaking confidence, fear of negative evaluation from students and communication anxiety with students), the remaining three lowest scores were from the same category, fear of negative evaluation from teachers. This result may imply that the EMI students did not care about negative evaluation from a teacher. It is deemed that because the EMI course was not language-driven but content-driven instruction and therefore the instructor did not point out student's speaking errors in the classroom, which made the students less anxious about the negative evaluation from the teacher. In addition, the first class of the EMI course was conducted in Japanese for students to understand well general information of the EMI course and become familiar with the instructor, and also the instructor always provided students with positive feedback on their opinion and voluntary comments in the classroom. Such a course management and teaching strategy may create rapport with students and reduce the fear of negative evaluation from teachers. The results of descriptive statistics were quite similar to those of Suzuki's (2013) research. Thus, our research findings can provide a significant insight into types of anxiety in EMI courses in Japan.

In order to address the second research question of what relationship can be found between each category of English speaking anxiety in the EMI course, we focused on the correlation coefficients between each category. Although the result showed that all the categories of English speaking anxiety had a positive correlation with each other, there was no statistical significance only between the negative evaluation from a teacher and communication anxiety with a teacher. It is worthwhile to note that the correlation between the fear of negative evaluation from students and communication anxiety with students was greatly strong (r = .854). From the viewpoint of peer pressure in the classroom, the fear of negative evaluation from students could be one of the factors that can interfere with communication with students. In other words, peer pressure can have a negative influence on a group discussion task because group discussion can work well only after good communication with peers. As Öztürk and Gürbüz (2014) mentioned that the fear of negative evaluation from other students can be one of the central sources of speaking anxiety and other peers' reactions to speaking performance of a student play an important role in English as a foreign language speaking anxiety, the peer pressure should be taken into account as a one big problem in the EMI course in EFL settings.

The third research question addressed which category of L2 language speaking anxiety can have a large effect on self-evaluation of group discussion task. With reference to Table 3, we found that the score of self-evaluation of group discussion task and those of all the categories of English speaking anxiety were negatively correlated. Moreover, four correlation coefficients out of five could be regarded as strongly correlated with self-evaluation of group discussion. Indeed, previous research showed that self-rating of L2 speaking and anxiety revealed negative correlation in the situation where a target language was used as a second language (Kitano, 2001; MacIntyre, Noles, & Clément, 1997); however, such high correlation coefficients were not obtained in their study. It could be interpreted that anxiety in the academic EMI course in EFL settings, especially the category of speaking confidence, the fear of negative evaluation from students, communication anxiety with students and communication anxiety with a teacher, can have a major negative influence on speaking tasks in EMI because they were not used to speaking English in EFL situation and therefore they remarkably suffered from lack of English speaking confidence, communication anxiety and peer pressure when speaking English, which may have resulted in lower self-evaluation of their group discussion.

Pedagogical Implication

As one of the pedagogical implications on the basis of the research findings, because students will feel anxiety when they are required to speak English without any preparation, it can be helpful to provide students with some preparation time to arrange their ideas before doing speaking tasks, which can reduce students' speaking anxiety. In addition, the rearrangement of the task order can reduce their anxiety. In EMI courses, some academic tasks require the students to discuss abstract and complicated questions without enough preparation and it will provoke anxiety. However, if the task order is arranged appropriately so that previous tasks can lead to preparation for the following speaking tasks, students can obtain rehearsal time to construct their ideas on an academic topic. According to our class observation of the EMI course, the instructor paid much more attention to the task order because reading assignments before class and a quiz played a priming role in preparing for the following discussion tasks. Whereas the rapport between a teacher and they can reduce the fear of negative evaluation from teachers, it is necessary to create rapport among students so that they can reduce peer pressure and communicate smoothly with each other in discussion tasks. In order to deal with peer pressure in an EMI course, a variety of course strategies and further research on peer pressure will be required.

Conclusion

It may be concluded that students in the EMI course felt strong anxiety especially about their speaking confidence, the fear of negative evaluation from students, and communication anxiety with students while they felt less anxious about the negative evaluation from teachers depending on the way of instruction, course management and teaching strategies. In addition, each category of English speaking anxiety was positively correlated; if the degree of a certain category of English speaking anxiety rises, so does the degree of the other categories of anxiety in the EMI course. In particular, peer pressure could not be ignored in the EMI course because the fear of negative evaluation from peers can be remarkably associated with communication anxiety with peers. Lastly, it was clarified that four categories of English speaking anxiety, speaking confidence, the fear of negative evaluation from students, communication anxiety with students and communication anxiety with a teacher were strongly and negatively correlated with self-perception of group discussion task in the EMI course in EFL settings. Therefore, it can be concluded that English speaking anxiety may negatively affect an English discussion task in the EMI course.

While this study may offer several pedagogical implications for EMI course development in EFL settings, some methodological limitation should be taken into account when interpreting the research findings. First, the number of participants in this study was quite small. Furthermore, the findings in only one EMI course cannot explain the whole picture of anxiety in other EMI courses in EFL settings. Second, the correlational analysis can only show potential relationships between two variables and cannot refer to actual causation. Finally, whereas this study investigated the relationship between speaking anxiety and self-evaluation of group discussion, the findings cannot refer to the relationship between speaking anxiety and students' actual speaking performance in discussion tasks because self-evaluation of their speech is more likely to be different from their actual speech performance. Thus, further research is required to perform in order to clarify the features of anxiety in EMI course and to contribute to development of EMI courses in Japan.

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Appendix

Questionnaire part A (item 16-38)

Tasks	Questionnaire items
Group	Q 16. I can adequately answer to the questions from other students.
Discussion	Q 17. I can express my opinion on the given questions or topics.
	Q 18. I can make an argument with clear reasons or evidence.
	Q 19. I can make my argument easy to understand by giving some examples.
	Q 20. When I can't understand what others say, I can ask them a question.
	Q 21. I can grasp whether or not my opinion is successfully understood.
	Q 22. I can adequately communicate my experiences and simple facts in English.
	Q 23. I can adequately talk about familiar topics related to my daily life.
	Q 24. I can adequately communicate the abstract matters (e.g., hypothesis).
	Q 25. I can connect several sentences along with my opinion.
	Q 26. I can coherently tell my story even if it is long.
	Q 27. I can speak with an appropriate word order.
	Q 28. I can use complex grammars such as relative pronouns if necessary.
	Q 29. I don't make grammatical errors which hinder communication.
	Q 30. I don't usually stop speaking due to the vocabulary problems.
	Q 31. I can use a variety of vocabulary to express my opinion.
	Q 32. I can use appropriate vocabulary according to my intention.
	Q 33. I can speak in intelligible pronunciation.
	Q 34. I can effectively use intonation to express myself.
	Q 35. I can response to my peers by non-verbal responses such as nodding.
	Q 36. I can paraphrase peer's utterances to understand what the peer says.
	Q 37. I can naturally maintain a conversation with one or more peers.
	Q 38. I can maintain my talk without unnatural pauses.