Original Paper

Student Online Peer Review in a Japanese EFL Setting: Writing Activities that Incorporate Interprofessional Education into Language Learning

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Abstract

This study investigates the possibility of introducing writing activities that incorporate interprofessional education into language learning in a Japanese English as a foreign language setting. The study focuses on first-year university students majoring in health and medical welfare. It aims to enhance students' interests in different medical or health professions and promote learner autonomy in learning English in a computer-mediated learning environment. It was conducted in conjunction with an English course offered to first-year university students. The students were required to write a self-introduction, including among others their academic major and future profession, and submit it online. The peer reviewing was then conducted online among students from the same department and those from different departments. Upon finishing the activities, the participants were asked to complete an online questionnaire. The results of the questionnaire showed that 70% of the students regarded the activities as good opportunities to interact with students from other departments, while 65% answered that they learned about other medical or healthcare professionals. Concerning language learning, about 60% of the students believed that they learned English expressions to explain their future professions. Although some comments suggested both advantages and disadvantages of online learning, the findings may have provided some implications for alternate forms of collaborative learning in relation to interprofessional education.

1. Introduction

1.1 The current trend of interprofessional education

As medical care has become more sophisticated and patients' demands for it have diversified, medical and other healthcare professionals have been required to collaborate more than ever to meet such needs[1]. Accordingly, interprofessional education (IPE) in undergraduate education has been required in response to these demands[2]. IPE is defined by the Center for the Advancement of Interprofessional Education (CAIPE) as "occasions when members or students of two or more professions learn with, from and about

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each other to improve collaboration and the quality of care and services"[3]. The World Health Organization reiterated IPE as a necessary step in preparing a collaborative and practice-ready healthcare workforce[4]. Moreover, the Model Core Curriculum for Medical Education in Japan cites the importance of advancing the understanding of team care and acquiring the ability to work with other medical professionals[5].

As a result of this trend, several universities have tried to incorporate IPE in their curriculum where they explored programs through interuniversity collaboration or developed a four-year systematic IPE program in which students from different disciplines begin learning basic communication skills and engage in group discussions on particular clinical cases[6,7]. In previous studies, Nagasaki et al. pointed out that there are few opportunities for students to learn about other medical professions before they start working as medical professionals themselves[8]. Tamura et al. investigated the importance of early exposure to clinical practices, and discussed IPE's influence on first-year students' learning abilities[9]. Furthermore, Shibazaki et al. stated that the number of students who theoretically understood "interprofessional collaboration" has increased due to their early reception of IPE at university, and that such outcomes will enable them to become prepared and grow as medical professionals[10].

From these studies, the author concluded that it would be necessary to explore various interdisciplinary educational contents related to IPE in first-year education. In 2019, the author conducted a study of introductory education in the forms of speech activities, which demonstrated that students from different departments had deepened their understanding of each other's future professions to some degree[11]. The study was supposed to continue in 2020 and 2021 with different groups of students. However, due to the impact of the COVID-19 pandemic and the transition to emergency remote education, the activities were reorganized into online peer-reviews, which is the background of this research. Although this state of affairs was not planned, it provided an opportunity to implement IPE in a new online context.

1.2 The educational potential of peer review

In this study, the author follows the recent definition of "peer review" as "a dialogic process whereby students share knowledge and understanding with the intention of informing ongoing learning," which was formulated by Zhu and Carless[12]. Among previous studies, Tsui and Ng's research on the effectiveness of peer review argued that peer comments would not only contribute to learners' awareness of their strengths and weaknesses in writing but also encourage collaborative learning and enhance a sense of audience awareness in them[13]. However, other research suggested that learners preferred teacher comments to peer comments in terms of the feedback quality because teachers were more knowledgeable than their peers[14]. Nevertheless, the survey conducted by Nicol et al. showed that the majority of the students had learned from both providing and receiving feedback among themselves[15]. They also learned how to read other students' essays critically, as well as reflected on their own work objectively, which eventually helped them improve their work. Other studies revealed that students could improve the quality of their writing better when they received comments from multiple peers rather than from just a single expert[16].

In terms of the computer-mediated learning environment, Warschauer suggested that online communication could generally offer a non-threatening environment for less-proficient learners, which would promote a more equal participation among students[17]. Other studies have compared peer reviewing between synchronous face-to-face mode and asynchronous computer-mediated mode. They showed that the number of comments on peer reviews was higher in asynchronous communication than in synchronous communication because it gave learners time to reflect on their ideas and give their feedback at their own pace[18].

As per the overview, it seems that both IPE and language learning through online peer review have an enormous potential in education. Conducting peer review activities online can not only be less threatening to students, but it is also expected to promote self-awareness and collaborative learning. However, very little research has been done on these fields. Therefore, this study investigates the possibility of introducing writing activities, including peer review, that incorporate interprofessional education into language learning

in a Japanese English as a foreign language (EFL) setting. It aims to enhance students' interests in different medical or health professions and promote learner autonomy in learning English.

The research focuses on the following two points:

(1) The possibility of educational benefits obtained from interactive learning among students with different specializations in light of IPE; and

(2) The possibility of educational effects on language learning through online collaborative learning in the form of peer review.

The ultimate goal of this study is to provide suggestions on an effective language activity that could promote both IPE and language learning.

2. Methods

2.1 Participants

The participants in the study were 391 first-year university students at a medical welfare university in Japan, (237 from five classes in 2020; 154 from three classes in 2021) taking the compulsory subject "Basic English I." The researcher was the instructor of all the participating classes. Each class consisted of students from several medical and healthcare departments (Table 1). For example, students from the Departments of Social Work, Clinical Psychology, Medical Welfare for Children and Nursing were mixed in the same class. Nevertheless, not all departments were put together in one class due to curriculum organization constraints. Additionally, the students were assigned to designated classes based on the results of a placement test[†1], performed at the beginning of the spring semester. Based on the placement test results, their English proficiency was estimated to be at a pre-intermediate level, which is equivalent to third to pre-second grade in the EIKEN practical English proficiency scale, and A1.1 to A2.2 in the CEFR-J scale[†2]. In terms of class size, the largest had 62 students while the smallest had 28. The data of the students from the Faculty of Health and Welfare Services Administration was not obtained in 2021 because the researcher was no longer teaching them. In both years, only those students who signed the informed consent form were included in this study.

2.2 Procedures

2.2.1 Teaching procedures

The study was conducted in the spring semester between mid-July and early August in 2020, and

Table 1   Details of the participating classes

	Year	Class				
Number of students	2020	Class A	Class B	Class C	Class D	Class E
		59	28	27	61	62
	2021	Class F	–	–	Class G	Class H
		50	–	–	52	52
Details of departments		・Social work ・Clinical psychology ・Medical welfare for children ・Nursing	・Health and welfare services management ・Health informatics ・Medical secretarial arts ・Design for medical and health care		・Physical therapy ・Occupational therapy ・Speech-language pathology and audiology ・Orthoptics ・Medical technology ・Radiological technology ・Medical engineering ・Clinical nutrition ・Health and sports science	

between early July and mid-July in 2021. Three out of 15 lessons of "Basic English" were spent on the activities, which were provided asynchronously via video on demand as requested by the university. The participants expected to spend a total of 270 minutes (or four and half hours) on the activities. The writing activities were provided as part of regular class activities. Regarding the other lessons, the students learned basic medical terminology and expressions from the course textbook[†3].

(1) First lesson: Writing a draft

　　At the beginning of the first lesson, the instructor (researcher) explained the overview of the writing activity and required the students to write a short self-introduction essay, which contains the following elements: (1) a self-introduction, including their hobby, family, and hometown; and (2) their academic major and future profession. It was assumed that some students already experienced writing self-introduction essays in school. However, the researcher decided that element (1) should be included because it would help the students understand each other better and feel more closely connected in a remote-learning environment. Students were also encouraged to include some photographs or illustrations to make their essays more visually attractive. A sample draft in a PDF document was provided for them as scaffolding during the draft writing activity to give them a rough idea of the final essay. The students were also allowed to refer to the course textbook, contents of other lectures, books and magazines, and the Internet, to obtain further information about their academic major and future profession.

(2) Second lesson: Sharing the draft

　　By the second lesson, all the students' drafts were submitted and stored in the instructor's network drive, and then shared with the students through web links created by the instructor. In the second lesson, the students were encouraged to give comments or feedback to other students from the same department, using the comment function in Microsoft Word (Figure 1). They were encouraged to post at least two comments on each member's essay from within their own groups in English whenever possible. However, Japanese was allowed to be used when making a comment on something more complicated or delicate, such as error correction. In addition, when they received some questions from the group members, they were required to reply. The students were divided into small groups of about five and completed this task asynchronously by the third lesson. Some of the students' comments in this draft sharing activity were analyzed qualitatively, but not quantitatively, due to time constraints.
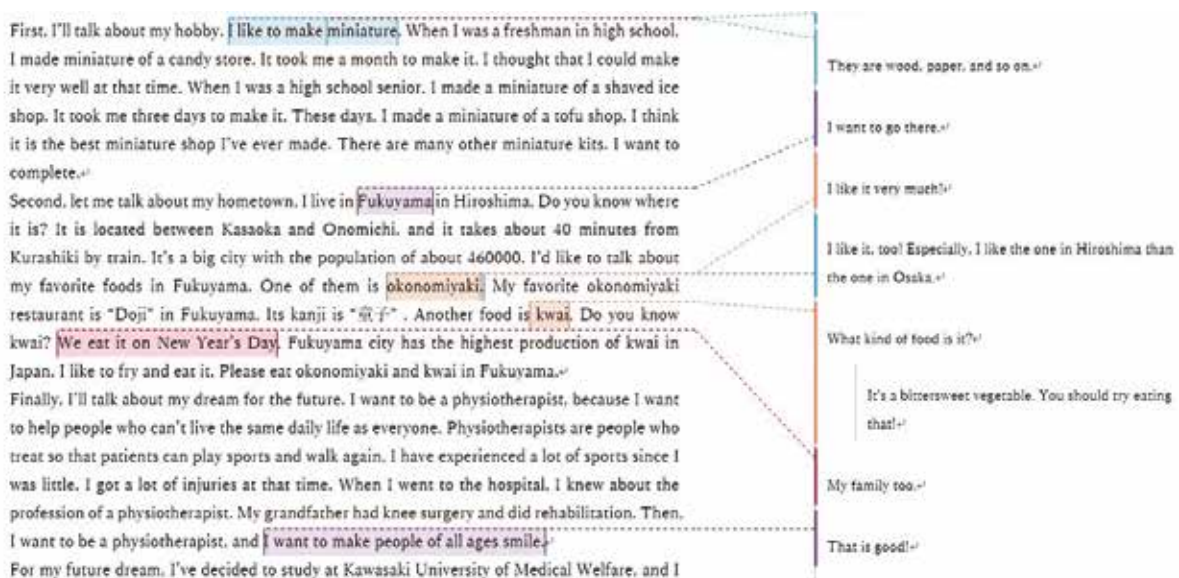

Figure 1　Students' comments using the comment function in Microsoft Word

(3) Third lesson: Sharing the final essay

By the third lesson, students completed an online submission of their final essays (Figure 2), which were then shared online within groups of about seven, including the students from different departments in the third lesson. The instructor pre-determined the groups so that students from all departments were evenly mixed in each and created the list of web links as in the second lesson. After the students read the other members' essays, they were required to post their comments on their group channel in Microsoft Teams. The instructor allowed the students to use Japanese in order to reduce their burden at the final stage and because they were required to comment on seven essays.

Their final essays were evaluated according to two major dimensions, namely: (1) content, including clarity, accuracy; and (2) format, including the use of visual materials and overall layout. However, it is beyond the scope of this paper to discuss the validity of the evaluation criteria for their writing performances, as that was not its major purpose. Therefore, the evaluation rubric used by the instructor is not included in this paper.

Figure 2   Students' final essays

2.2.2 Post-questionnaire

After the writing activities, the participants completed an online anonymous questionnaire to provide feedback, which consists of 11 questions and an open-ended comment section at the bottom of the sheet (Appendix). The questionnaire aimed to investigate the students' perceptions of IPE, and their attitudes toward language learning. In preparing the questionnaire, the author referred to two scales, namely, the Readiness of Interprofessional Learning Scale (RIPLS) and the Common European Framework of Reference for languages (CEFR)-J scale. However, the exact items were not used in the questionnaire. The RIPLS was developed to determine the students' readiness for interprofessional learning[19]. Meanwhile, the CEFR-J is the adapted version of the CEFR and is moderated exclusively for English language teaching-learning in Japanese contexts[20]. The data obtained from the questionnaire were then discussed from both qualitative and quantitative viewpoints.

3. Results

3.1 Students' feedback comments in peer review

Some of the peer feedback comments in the draft writing activity are provided below. Some were written in English; others were in Japanese; and some others were bilingual. All the excerpts from the students' drafts and comments that were written in English are presented without amendments. The comments originally written in Japanese have been translated into English by the researcher with careful attention to retain their original meaning.

To categorize the content of the following example comments, the content analysis categories in the study of Cheng et al. were partially used[21]. Amongst all the comments, overall, the affective comments were most commonly observed. The following examples show peer comments on their course subjects or future professions.

There were also some constructive comments, most of which pointed out simple grammatical errors as in the examples of Students 4 and 5. Some, however, were related to word usage as in the example of Student 6 (Table 3). Almost all of the constructive comments were written in Japanese, and most of the students who had received comments from their peers revised their originals afterward. Interestingly, Student 5 not only corrected the grammatical error that had been pointed out, but also revised a different part of the essay.

Table 2   Examples of affective comments

Student	Excerpt from the original	Peer comment
1	Anatomic physiology is especially difficult to learn, but it will be necessary knowledge in the future, so I will study a lot from now on.	That's right. Let's do our best!
2	Speech therapist is called ST. ST's job is to help people with disability in voice function, language function, hearing function. ST need to work with physical therapist and occupational therapist…	I think your description of ST is easy to understand and I like it.
3	I want to help health care workers.	I think it is a great idea. Especially in the present era, I think that those who have such ideas are valuable.

Table 3   Examples of constructive comments and subsequent revisions

Student	Excerpt from the original	Peer comment	Amended
4	I am aiming to be a Medical Technologist. I want to be a **Cytology**.	I think the word "Cytologist" might be appropriate here.	I am aiming to be a Medical Technologist. I want to be a **Cytologist**.
5	I'd like to work as **a childcare workers** at my local nursery school in the future.	You don't need the plural "s" in the word "workers," I think.	I'd like to work as **a childminder** at the nursery school where I graduated in the future.
6	I would like to be polite to variety of people, and I'm **willing** to acquire communication skills and observation skills.	In this context, I think it's better to use "ready" instead of "willing," because "willing" can be used in the sense that if asked to do something, there is no reason not to do it. Please pardon me if I'm wrong.	I would like to be polite to variety of people, and I'm **ready** to acquire communication skills and observation skills.

There were a few confirmative comments on the meaning of certain words or terms (Table 4). The peer comment to Student 7 was intended to confirm the Japanese translation of the term "phonetics," whereas the comment to Student 8 was a question about the term "dolphin therapy."

Table 4   Examples of confirmative comments and responses

Student	Excerpt from the original	Peer comment	Response
7	I will try to take **phonetics** and psychology next year.	What does "phonetics" mean in Japanese?	It's "onseigaku."
8	It's Japan Dolphin Center. Here you can interact with dolphins and conduct research. This also offer **dolphin therapy** mainly for children with autism.	I heard dolphin therapy for the first time. What do you do there?	It is to improve the illness by intervening animals in patients with mental illness.

3.2 Results of the post-questionnaire

3.2.1 Students' overall impressions of the writing activities

A total of 386 valid responses were obtained (234 in 2020, and 152 in 2021) from 391 participants. The results of Table 5 suggest that overall, the students were positive about the writing activities; 272 (70%) answered "good chance to interact with students from different departments," followed by "enjoyable" (169; 44%), "good chance to learn about other medical or healthcare professions" (162; 42%). However, some students took the activities negatively, feeling "nervous" (44; 11%), and "painful" (7; 0.02%). The researcher distributed a similar questionnaire for face-to-face speech activities in 2019[11]. The results of these surveys showed almost the same tendency, although the percentage of "enjoyable" and "good chance to interact with students from different departments" was slightly higher (49% and 75% respectively). It is also worth noting that the percentage of "nervous" (38%) was much higher in the previous survey than in the current.

Table 5   Students' overall impressions of the writing activities

Year	2019	2020
Q4. How did you find the writing activities with students from different departments? (Click all that apply.)	(N=237)	(N=386)
Enjoyable	115 (49%)	169 (44%)
Good chance to interact with students from different departments	177 (75%)	272 (70%)
Good chance to learn about other medical or healthcare professionals	80 (34%)	162 (44%)
Nervous	89 (38%)	44 (11%)
Painful	4 (0.02%)	7 (0.02%)

Next, on the students' possible learning outcomes from the writing activities, 252 students (65%) answered "differences between other professions and my own," "English expressions to explain my future profession" (243; 63%), "significance of learning with students from different departments" (170; 44%), and "significance of working with others" (105; 27%), as shown in Table 6. Compared to the survey in 2019[11], it is worth noting that the percentage of "English expressions to explain my future profession" and "Differences between other professions and my own" in the current study was significantly higher than the previous (34% and 51% respectively).

Table 6 Possible learning outcomes from the activities

Year	2019	2020
Q6. What do you think you learned from the writing activities? (Click all that apply.)	(N=386)	(N=237)
English expressions to explain my future profession	81 (34%)	243 (63%)
Differences between other professions and my own	122 (51%)	252 (65%)
Significance of learning with students from different departments	92 (39%)	170 (44%)
Significance of working with others	55 (23%)	105 (27%)

3.2.2 Students' open-ended comments on the writing activities

Some of the students' comments from the open-ended section of the questionnaire are provided below. These comments were originally written in Japanese; therefore, they have been translated into English by the researcher.

(1) Comments related to IPE

Some open-ended answers corroborated the results in both Tables 5 and 6 from the perspective of IPE.

● *"Due to the coronavirus, I haven't had a lot of chances to talk with people from other departments, even those from the same department since I entered the university, so it was nice to be able to interact with various people this way and understand their thoughts."*

● *"I thought that reading essays by people from other departments would give me a better understanding of other professions and help me in the future."*

Moreover, one student reflected on oneself, including one's future dream, and felt one's self-growth through the activities, as follows:

● *"I think I was able to reconsider my future dream, hometown, and self through this activity. It was my first time to introduce myself in detail to a group of people who knew nothing about me at all, so I got stuck while writing my draft and it took me a while to finish it. However, I'm sure that I have grown in terms of my ability to look at myself objectively and write English sentences that are easy for others to understand."*

Nevertheless, another student mentioned the difficulty of both explaining one's future profession and understanding different healthcare professions, as follows:

● *"It was really difficult for me to explain my future job in a manner that is easy to understand. Moreover, when reading essays written by people from the same department, they were relatively easy to understand because I had a common understanding of the profession. Even if I didn't understand a certain word, I managed to guess its meaning by its context. However, it took me a while to understand the essays written by people from other departments because I have hardly any knowledge about other professions. I often had to look up unfamiliar words in a dictionary."*

(2) Comments related to language learning

On language learning, there were some positive answers about peer review activities, as follows:

● *"It was a great opportunity to have people from the same department read my draft and give me some advice. It was a valuable learning experience for me to realize that even if we want to explain the same thing, there are different ways to express it."*

● *"I was so happy that the other group members both from the same and different departments commented on my English writing, and that I was able to get my message across."*

However, one student confessed to the anxiety of one's poor English competence, as follows:

● *"When commenting on other members' essays, I didn't have enough confidence in pointing out grammatical errors because I wasn't sure if I was right."*

(3) Comments related to online learning

Some students commented on the advantages of online learning, as follows:

- *"Although we didn't make a speech in front of everyone this time, I think we were able to exchange our opinions even online. I might have felt more nervous and embarrassed if it had been a face-to-face interaction, but because it was online, I didn't have to worry about that."*
- *"Since it was an online writing activity, I was able to review the advice and comments that remained in the document several times, so I was able to take time and think about how I should change them, based on other people's comments."*

Conversely, some students preferred face-to-face interaction, as shown in the following comments:

- *"I think I understood a little bit about what other people in my group were like, but I felt disappointed that I couldn't actually talk to them face-to-face and tell them what I thought (in person)."*
- *"Since we were not communicating face-to-face but only through text message, I had to be careful about how I should express my opinion so that the other members would not misunderstand me. I tried to write my comments as politely as possible and not to say everything that I thought."*

4. Discussion

4.1 Possible educational benefits from the perspective of IPE

4.1.1 Good opportunity to interact with other students

Despite the sudden change from speech activities to online writing activities, there seemed to be some positive educational effects of fostering the students' readiness for IPE. First, based on the results in Table 5 and some of the open-ended comments, it can be interpreted that the writing activities in the current study offered a good chance for the majority of students (70%) to interact with others from the same department. Especially under the circumstances of remote learning, one of the free comments in the questionnaire suggests that the students were looking for an opportunity to get acquainted with other students in general all the more because of the lack of opportunity for socialization. This isolated situation could have increased their interest in others even more despite the fact that they had to learn some new computer skills. However, it should also be noted that this type of asynchronous online interaction may be less enjoyable and less interactive than synchronous face-to-face interaction based on the comparison with the results of the speech activities in the previous study. Nevertheless, this type of online interaction would induce less anxiety among students.

4.1.2 Good opportunity to learn about the differences among medical professions

Concerning the students' possible learning outcomes from the writing activities shown in Table 6, the answer "differences between other professions and my own" was chosen by two-thirds of the students (65%). This implies that online peer review activities could provide students with meaningful opportunities to learn both about different professions and their own profession to some degree. One student mentioned that this learning experience would help them in the future. However, a different comment suggests that the writing activity can also be relatively challenging for first-year students who have yet to receive much learning on their own specializations. In such a situation, it would be even more difficult to explain their own professions in English. To deepen their English learning, it would be necessary to expose students to multiple learning opportunities in other subjects in the first year at the tertiary level. Nevertheless, as one student stated, the opportunity to explain their own majors and future dreams to others may encourage them to set a clear goal for their future more than before. It could be interpreted that students would look at themselves objectively, differentiate themselves from others, and consider how to communicate their ideas to others in an intelligible manner. This process of establishing one's own identity, understanding diversity, and cultivating an attitude of communicating to others is a fundamental concept of IPE[10].

4.2 Possible educational benefits from the perspective of language learning

4.2.1 Benefits and drawbacks of peer review activities

Second, from the perspective of language learning, about 60% of the students believed that they could

learn English expressions to explain their future profession through writing activities. It could be said that a writing assignment on one's major and future occupation was effective for students to learn new vocabulary and expressions in English to some extent. However, it is also possible that peer review activities have deepened their learning. The examples in the revisions shown in Table 3 have proved that some students corrected their own grammatical errors or changed some words after checking the peer comments. This implies that the comments allowed the students to reflect on their own essays objectively[15]. Similarly, some of the comments in the open-ended section indicated that peer comments from students of the same department allowed them to learn different ways of describing their own major and future profession. Furthermore, the affirmative comments of praise and interest in the content, which were often observed in the peer comments, seem to have contributed to building up confidence and a sense of achievement among the students. One of the open-ended comments suggested that some students felt happy that their English sentences were comprehended by others. Although it is true that others had difficulty explaining their own major or future profession in an easy-to-understand manner, it is safe to say that the peer review activities have allowed them to raise a sense of audience awareness[13].

However, from the perspective of language learning, peer review activities did not always work as well as expected. Truly, it appears that some students developed the ability to read other essays critically. However, it was also observed that a lot of students have avoided making critical comments such as error correction. In fact, one student wrote in the open-ended comment section, "I am not confident in my ability to point out grammatical errors in other people's essays." As the peer comments in Table 3 suggest, students avoided making assertions about their own thoughts, and instead used hedging phrases such as "might," "I think," and "Please pardon me, if I'm wrong." This could be seen as a sign of consideration for other people, but also a lack of confidence. Regarding this Japanese mentality of avoiding critical opinions, a study by Guardado and Shi found that Japanese students with limited English abilities tended to have little confidence in peer commenting, giving only positive feedback and not clearly providing negative ones[22]. Hence, to improve each other's essays through peer review, it will be necessary for students to understand the purpose of peer review more clearly, provide some training in advance, and try to create a relaxing atmosphere in which students can easily make critical comments to each other.

4.2.2 Advantages and disadvantages of asynchronous online learning

Asynchronous online learning was another major factor on why the majority of students answered that they were able to learn English expressions to explain their future professions and differences between other professions and their own. As previously mentioned, the percentage of the answer "English expressions to explain my future profession" was nearly twice as high as that in the face-to-face speech activities in 2019. It is highly possible that the online asynchronous activity gave students sufficient time to review their essays carefully, provide their feedback at their own pace, and facilitate their autonomous learning, which was indicated in the previous study[18]. Being able to take the time to read other students' essays could also have helped deepen their understanding of the differences between other professions and their own. Furthermore, another student's comment suggests that the online peer review activities were less pressured than face-to-face speaking activities for some students, which supports Warschauer's study[17]. However, some students regretted not being able to experience the peer review and speech activity in a face-to-face situation. Other students said that they dared not say everything they wanted because they were concerned about the reactions of others without being able to see their facial expressions. This suggests that there are certain limitations in asynchronous interactive activities.

5. Conclusion

This study investigated the possibility of implementing online peer review writing activities that incorporate IPE. To sum up, it can be concluded that the activities allowed students to interact with others, not just those from different departments but from the same department. This enabled them to gain some

understanding of other healthcare fields and professions from the perspective of IPE. Furthermore, the peer review activity among students in the same department using the comment function in Microsoft Word encouraged them to review their own essays, recognize their own strengths and weaknesses, enhance their sense of audience awareness, and deepen their understanding of their own major and future profession. These findings suggest that this type of online writing activity can promote student autonomous learning, and that asynchronous online interactions might be less stressful and more favorable for some students. However, it can also be said that due to lack of in-person interaction, asynchronous online interactions may not be so appealing as synchronous face-to-face interactions for other students. These possible findings might provide further implications about various ways to introduce IPE in first-year education and connect IPE with language learning effectively.

This study has some limitations. First, it mainly focused on the teaching procedures of the writing activities in terms of the students' overall impressions of IPE and learning English. We have not yet conducted a quantitative analysis of the content of student peer comments by categorizing their specific types. Therefore, further content analysis of the peer review is needed to examine how students are deepening their understanding of each other's specialized fields and future professions. Furthermore, there was no systematic training for peer reviewing in this study. Therefore, some form of prior training would be necessary in future studies to encourage students to make higher quality comments. In the future, it may be possible to combine online peer review activities in the draft writing stage and the final face-to-face speech activities. We intend to further improve the quality of language activities related to IPE, utilizing the advantages of both online and face-to-face activities.

Notes

† 1) The placement test, introduced by the university, is not one of the common vendor tests that include TOEIC or TOEFL, but is a completely custom-made test for students at the university. It consists of 35 questions to check their basic grammar knowledge and reading comprehension. The questions cover the level of third to second grade in the EIKEN, with an average score of 40.7 points in 2020, and 40.1 in 2021.

† 2) The correspondence between the EIKEN and the CEFR scale is based on the proficiency correspondence table created by the Ministry of Education, Culture, Sports, Science and Technology[23].

† 3) The title of the course textbook used in "Basic English I" is "Vital Signs 2: Reading and Writing" published by Nan'un-do (2014). It is designed for healthcare professionals to learn essential English.

Ethical considerations

The Ethics Committee of the Kawasaki University of Medical Welfare approved the protocol (18-115).

Acknowledgements

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Appendix: Student survey questionnaire (In Japanese, translated by the author of this article.)

Q1. Did you work hard on the writing activities?

(1) Strongly agree   (2) Agree a little   (3) Neither agree nor disagree   (4) Disagree a little   (5) Strongly disagree

Q2. How many hours did you spend on preparation for the writing activities outside the classroom?

(1) Hardly any   (2) 1 to 2 hours   (3) 2 to 3 hours   (4) 3 to 4 hours   (5) More than 4 hours

Q3. What materials did you use as your reference? (Check all that apply.)

(1) Vocabulary learned in English class   (2) Contents learned in specialized subjects   (3) Textbooks

(4) Books and magazines   (5) The Internet

Q4. How did you find the writing activities with students from different departments? (Check all that apply.)

(1) Enjoyable   (2) It was a good chance to interact with students from different departments   (3) It was a good chance to learn about other medical and healthcare professions   (4) Nervous   (5) Painful

Q5. Did you learn anything from working with students from different departments?

(1) Strongly agree   (2) Agree a little   (3) Neither agree nor disagree   (4) Disagree a little   (5) Strongly disagree

Q6. What do you think you learned from the writing activities? (Check all that apply.)

(1) English expressions to describe my future profession   (2) Differences between other professions and mine   (3) Significance of learning with students from different departments   (4) Significance of working with others

Q7. Do you think you were able to explain your future profession to other students well?

(1) Strongly agree   (2)Agree a little   (3) Neither agree nor disagree   (4) Disagree a little   (5) Strongly disagree

Q8. What did you pay attention to when writing a draft? (Check all that apply.)

(1) Using easy words and expressions   (2) Avoiding long sentences   (3) Using conjunctions effectively

(4) Stating the gist of the essay clearly   (5) Giving specific examples

Q9. What did you pay attention to when adding visual materials? (Check all that apply.)

(1) Relevance to content   (2) Layout of materials   (3) Size of materials   (4) Number of materials   (5) Other

Q10. Would you like to have more opportunities to learn together with students from different departments in order to understand each other's academic major and profession?

(1) Strongly agree   (2) Agree a little   (3) Neither agree nor disagree   (4) Disagree a little   (5) Strongly disagree

Q11. Are you looking forward to working on poster presentations with students from different departments in the fall semester?

(1) Strongly agree   (2) Agree a little   (3) Neither agree nor disagree   (4) Disagree a little   (5) Strongly disagree

Please write below if you have any further comments or reflections on the writing activities which you could not write above.