Effects of a New COIL Project Combining Synchronous Discussions and Asynchronous Video-Based-Exchanges

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Abstract

Collaborative Online International Learning (COIL) has been widely conducted in various ways around the world to improve target language (L2) skills and gain intercultural awareness (Carlisle & Sáenz, 2023). Synchronous interactions, such as real-time discussions, require participants to immediately understand their partners' messages and respond promptly. For this reason, synchronous exchanges have often been limited to groups of learners with high L2 proficiency (Hackett et al., 2023). In this study, a new COIL project that combined synchronous discussions and asynchronous video-based exchanges was originally designed to allow learners at lower proficiency levels to participate. This project was conducted to improve L2 skills and deepen cross-cultural understanding between five Japanese university students learning English and eight American university students learning Japanese. In the synchronous exchange, participants gained background knowledge by extensively reading a number of essays on Japanese culture, and then held videoconferences to discuss the essays' content in real time. In the asynchronous exchange aiming to improve English proficiency, Japanese students produced videos explaining Japanese culture in English. American students watched them and made comment videos in English. Japanese students watched them and responded in subsequent comment videos in English. The opinion exchange using English comment videos continued in this manner. Conversely, in the asynchronous exchange to improve Japanese proficiency, American students produced explanatory videos on American culture in Japanese, followed by opinion exchanges using Japanese comment videos. After three months of continuous implementation of this project, questionnaires consisting of five-point Likert scale and open-ended short-answer questions were administered to assess participants' awareness and examine outcomes of the project. Statistically and qualitatively analyzed results of the questionnaires showed that learners with low L2 proficiency found real-time discussion hard to follow because of the difficulty in understanding partners' intentions immediately. The low-proficiency learners preferred video-based exchanges that could be viewed repeatedly. This COIL project was found to be effective, including low-proficiency participants, in accelerating motivation to learn L2, improving L2 skills and deepening cross-cultural understanding. Thus, it was clarified that the combination of synchronous and asynchronous COIL projects was effective for learners with proficiency at various levels.

Keywords: COIL Synchronous Exchange, Asynchronous Exchange, Discussion, Vide Exchange

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Introduction

Collaborative Online International Learning (COIL) has been widely conducted in various ways around the world to help learners improve target language (L2) skills and gain intercultural awareness (Carlisle & Sáenz,2023). Synchronous types such as real-time discussions require participants to have immediate aural comprehension and prompt oral production skills. Consequently, higher proficiency learners can follow this type of COIL project but those with lower proficiency cannot. Asynchronous types including exchanges of emails, videos, interactive webs and so forth guarantee learners to have opportunities to review the message repeatedly and plenty of time to prepare oral production. As a result of this, even lower proficiency learners can follow this type of COIL project. COIL projects with only synchronous interactions can be enjoyable for higher proficiency learners, but they can be too difficult for lower proficiency learners. COIL projects with only asynchronous interactions may be suitable for lower proficiency learners but might be less enjoyable for higher proficiency learners as they have to wait for their partners' responses or reactions for a while.

The authors hypothesize that COIL projects combining synchronous discussions and asynchronous exchanges would be effective for classes consisting of participants at various proficiency levels, which we call Combination COIL Hypothesis. A combination of asynchronous and synchronous exchanges can potentially benefit learners of a wide range of proficiency levels. While the inclusion of asynchronous exchanges makes the communicative tasks more manageable for lower proficiency learners, the inclusion of synchronous exchanges allows higher proficiency learners to enjoy spontaneous interaction with their partners.

To examine effects of COIL projects that combined synchronous and asynchronous interactions on participants at various proficiency levels and confirm the Combination COIL Hypothesis, an experiment was conducted.

Method

Participants

Five university students learning English at Soka University in Tokyo, JAPAN, participated in this project. Eight university students learning Japanese at Emory University in Atlanta, USA, joined this project as COIL partners. Three Soka University students were at C1, two were at B1 levels in terms of the Common European Framework of Reference for Languages (CEFR) which is an international standard for describing language ability on a six-point scale, from A1 for beginners, up to C2 advanced learners in the form of "can do list" (See Table 1). Soka University and Emory University have been carrying out this e-tandem project for four years since 2019. The details were reported in Mazzotta & Yamauchi (2020 & 2021).

Tools and Materials

Tools used in this experiment were a cloud application for video-based interactions (Voice Thread), and a video conferencing tool (Zoom) for real-time discussions. Prior to discussions, reading materials about Japanese culture in English were provided to students so that they could deepen their background knowledge on cultural topics in preparation for the real-time

discussions. In order to examine students' reflection on the exchange activities, questionnaires were administered.

Level	CEFR	IELTS (9.0)	TOEFL iBT (120)
Basic user	A1	N/A	N/A
	A2	N/A	N/A
Independent user	B1	0-4	0-31
		4.5	32-34
		5	35-45
	B2	5.5	46-59
		6	60-78
		6.5	79-93
Proficient user	C1	7	94-101
		7.5	102-109
		8	110-120
	C2	8.5	N/A
		9	N/A

Table 1: Comparison between CEFR, IELTS and TOEFL
Adapted from IELTS Expert, 2022

Asynchronous Interaction Procedure

In asynchronous interactions, all students produced and exchanged their self-introduction videos to get to know each other before the project started. In the second phase, Japanese students produced videos explaining Japanese culture such as *Senpai-Kouhai* (the relationship between veterans and new commers), *Keigo* (Japanese usage to express politeness) and so on in English. American students watched them and made comment videos in English. Japanese students watched them and responded in subsequent comment videos in English. The opinion exchange using English comment videos continued in this manner. Conversely, in the asynchronous exchange to improve Japanese proficiency, American students produced explanatory videos on American culture in Japanese, followed by opinion exchange using Japanese comment videos. American students watched them and made comment videos in English. Japanese students watched them and responded in subsequent comment videos in English. The opinion exchange using English comment videos continued in this manner. Five sets of video-based exchanges were conducted with different topics on each exchange.

Synchronous Interaction Procedure

In synchronous interactions, on the other hand, all participants were required to extensively read a number of assigned essays on Japanese culture such as *Omotenashi, Nemawashi* and

so forth, and gain plenty of background knowledge in advance so that they could proceed with deeper and fruitful discussions at the real-time Zoom meeting in the following step.

Students were divided into six small groups and each group held a 30-to-60 minute videoconference using Zoom. They discussed the essays' content and exchanged their ideas on selected topics in real time.

Four Points in the Questionnaires

After three months of continuous implementation of this project, questionnaires consisting of five-point Likert scale and open-ended short-answer questions were administered to assess participants' awareness and examine outcomes of the project. The questionnaires focused on four points: enjoyment the participants had, difficulties the participants encountered, usefulness in improving target languages and deepening insights into different cultures, and the participants' intention to re-participate in the same type of project (see Appendix). The concept of cultural intelligence scale (CQS) was classified into four dimensions: metacognitive, cognitive, motivational and behavioral (Ang et al., 2007; Hackett et al., 2023). The four points in the questionnaire in the present study correspond to the CQS dimensions (see Table 2).

Four points in this study	Four dimensions in CQA
Enjoyment	Motivational
Difficulties	Metacognitive
Usefulness	Cognitive
Re-participation	Behavioral

Table 2: Correspondence between the four points in the questionnaires and four aspects in the cultural intelligence scale

Results

The questionnaire results among Japanese students (# = 5) showed that they viewed this project which incorporated a combination of synchronous and asynchronous exchange positively. The percentages of students' reactions toward enjoyment, usefulness and re-participation of this project were over 80 (see Figure 1).

Among Japanese students, a reaction difference between high proficiency students (# = 3) and low proficiency students (# = 2) was found only in the question on difficulties they had during the project (see Figure 2). In the questionnaire administered just after this project, questions on the difficulties that participants had during the project were given to only Japanese students. The reason for this is that students were required to read a number of essays written in English before the real-time discussion and so they had to devote themselves to extensive and rapid reading activities before the Zoom discussion. While the essays were easy to read for American students, Japanese students were expected to have some difficulties in extensive reading caused by unknown words and phrases.
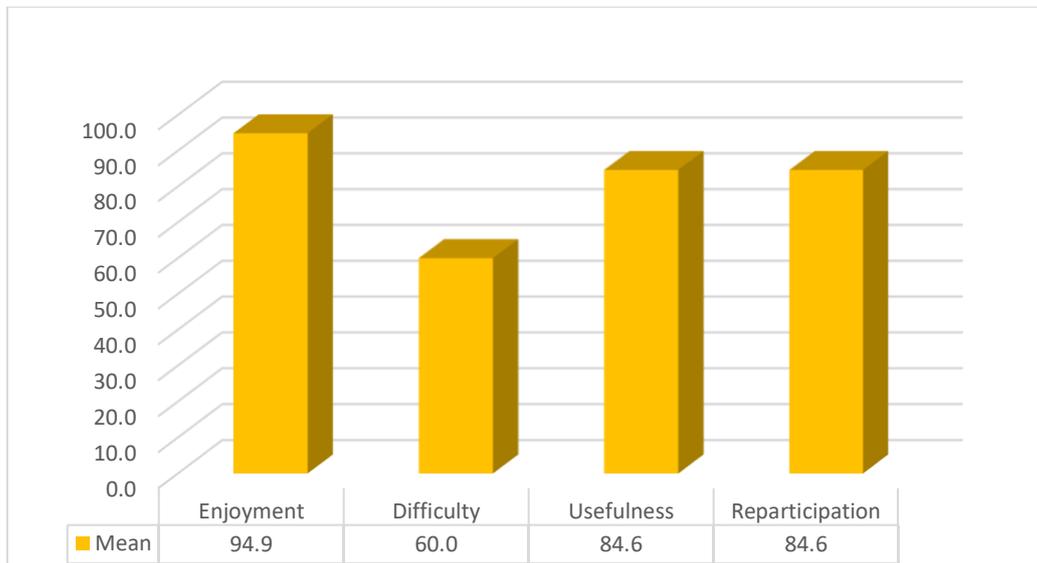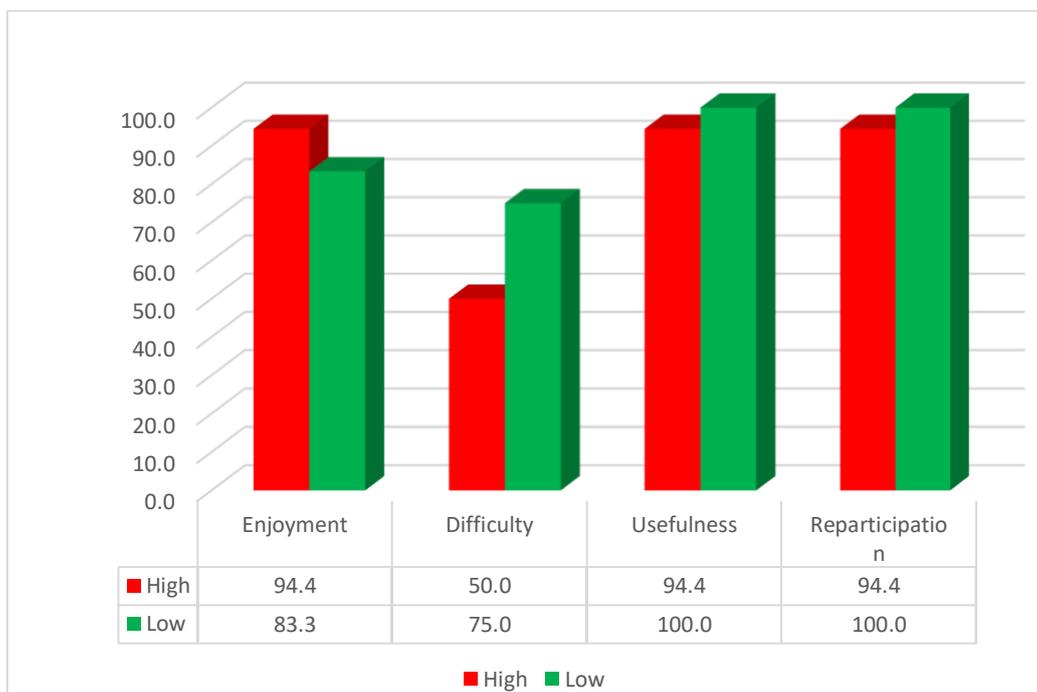
Figure 1: Overall tendencies in the four points

	Enjoyment	Difficulty	Usefulness	Reparticipation
Mean	94.9	60.0	84.6	84.6

Figure 2: Reaction differences between JP participants at high and low proficiency levels

	Enjoyment	Difficulty	Usefulness	Reparticipation
High	94.4	50.0	94.4	94.4
Low	83.3	75.0	100.0	100.0

Regarding the question "Which was more difficult, video-based interaction or real-time discussion?", over 66 percent of high proficiency Japanese participants felt almost no difficulty in both types of exchanges. Around 33 percent of them felt real-time discussion was more difficult (see Figure 3).
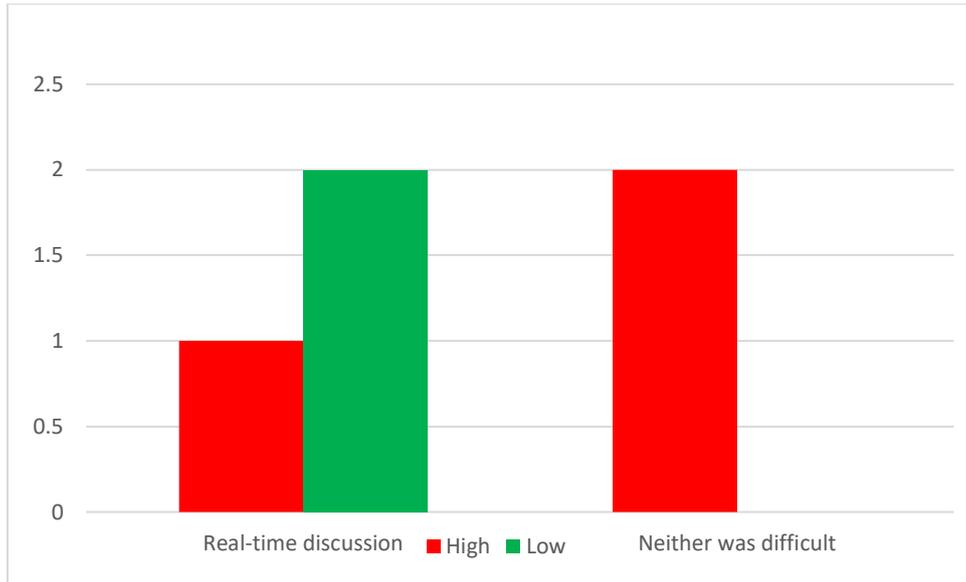
Figure 3: Difficulties the JP participants between high and low proficiency levels

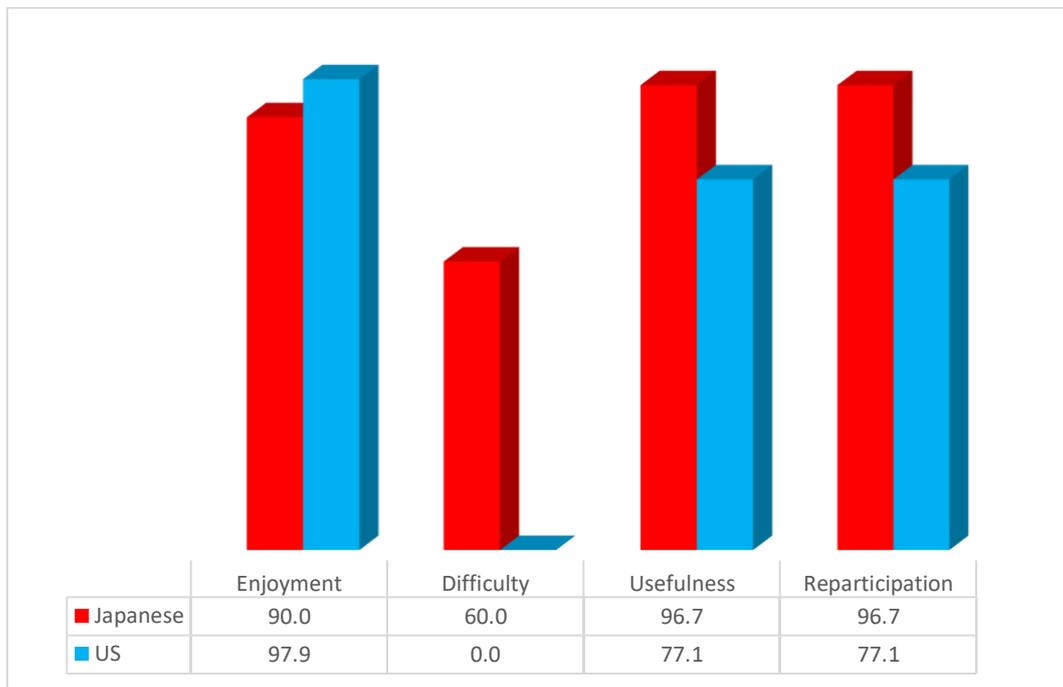|	Enjoyment	Difficulty	Usefulness	Reparticipation
Japanese	90.0	60.0	96.7	96.7
US	97.9	0.0	77.1	77.1

Figure 4: Reaction differences between JP and US students

Differences between Japanese and American students were observed in their reactions toward usefulness and re-participation (see Figure 4, Figure 5 & Figure 6). The differences were found to be statistically significant by Mann-Whitney U test (p=0.007) which examines if statistical differences exist in ordinal data (see Table 3). This result can be interpreted that reading in the target language is useful for the learners. Since all the readings were in English, Japanese students found the project to be more useful for their learning (of English) and thus were more willing to re-participate than American students. There was no significant difference in enjoyment between Japanese and American students (see Figure 7).

	W	df	p	Rank-Biserial Correlation	SE Rank-Biserial Correlation	95% CI for Rank-Biserial Correlation	
						Lower	Upper
Enjoyment	14.000		0.275	-0.300	0.329	-0.753	0.345
Difficulty	NaN[a]						
Usefulness	38.000		0.007	0.900	0.329	0.666	0.973
Reparticipation	37.500		0.007	0.875	0.329	0.594	0.966

Note. For the Mann-Whitney test, the effect size is given by the rank biserial correlation.
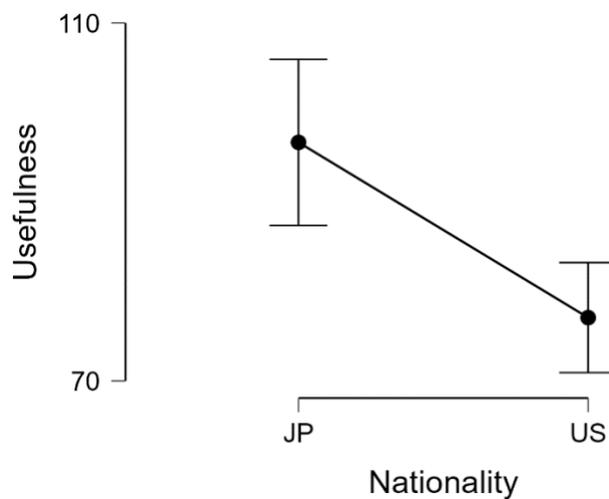
Table 3: Results of the Mann-Whitney U test

Figure 5: Reaction difference in usefulness between JP and US participants
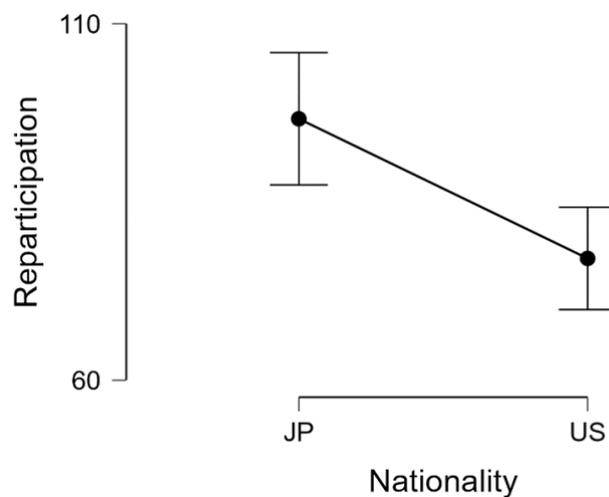

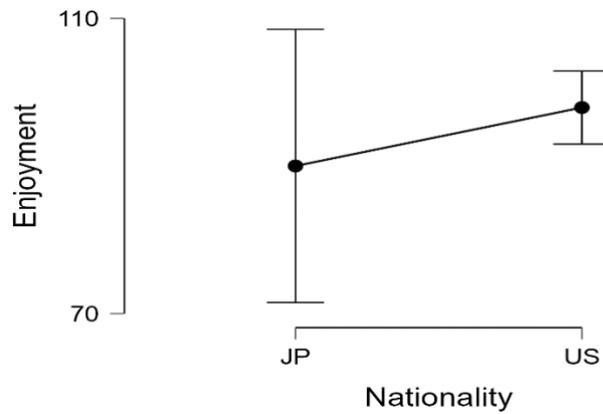Figure 6: Reaction difference in reparticipation between JP and US participants

Figure 7: Reaction difference in enjoyment between JP and US participants

Discussion

Almost all participants enjoyed themselves in this project. These results strongly suggest that the COIL project of the present study was successful and effective not only for high proficiency language learners but also for lower proficiency language learners. In addition, all lower proficiency learners felt that real-time discussion was more difficult as shown in Figure 3. Students reported that reasons for this were that it was very difficult for them to understand partners' intentions immediately and make their comments promptly. Lower proficiency learners preferred asynchronous video-based exchanges because they could view the videos over and over again until they understood their partners' messages. The overall percentage of Japanese students' reactions toward difficulties was 60. The percentages of difficulties of high proficiency students was 50, and low proficiency students, 75 as shown in Figure 2. This reveals that low proficiency learners felt more difficulties than high proficiency learners in conducting this project.

Conclusion

This COIL project combining synchronous and asynchronous activities was found to be effective, for both low-proficiency and high-proficiency language learners, in increasing motivation to learn L2, and improving L2 skills. Thus, the Combination COIL Hypothesis proposed in this study was confirmed and the combination of asynchronous and synchronous exchanges turned out to be one of the most effective ways to conduct COIL activities aiming for language learning when participants are at various proficiency levels.

Appendix

Questions focusing on the four points in the questionnaire of the present study:

1. After reading an essay on cross-cultural understanding, we conducted an interview related to the content of the essay. Did you enjoy this combined activity of reading and interviewing?

2. Was it difficult to do the activity which combined the reading and interview?

3. Do you think this combined reading/interview activity will help you develop your target language skills and deepen cross-cultural understanding?

4. Would you like to try this activity again in the future if you have the chance?

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