

RESEARCH PAPER

The effect of online exchanges via Skype on EFL learners' achievements

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Abstract

This study examined whether direct communication with people from other countries using Skype or Line would affect students' English test scores in listening and reading as well as the development of their curiosity concerning foreign cultures by comparing the data of an experimental group with that of a control group. The former group conducted online exchanges with foreign students, while the latter group did not. As many Japanese companies engaged in international business require high scores in the TOEIC test, which is one of the multiple-choice English tests of listening and reading often used to show each person's English proficiency, universities in Japan are making efforts to improve their students' scores in such an English test. Preparation classes for English tests have been offered. However, students have been likely to lose interest in learning English in the circumstances of this learning style. Results of the study indicated that although the aim of exchange activities is to foster students' curiosity concerning intercultural matters, students experiencing online exchange with skype significantly raised their scores in TOEIC tests in listening and reading after a programme of synchronous exchanges with foreign students, compared with ones who did not experience such online exchanges.

Keywords: Language teaching methodology, Skype, online exchanges, listening and reading.

1. Introduction

A government's education policies strongly affect its nation's education goals. The Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) initiated its Project for Promotion of Global Human Resource Development in 2012. This is a funding project that

aims to overcome the Japanese younger generation's 'inward tendency' and to foster human resources who can positively meet the challenges and succeed in the global field, as the basis for improving Japan's global competitiveness and enhancing the ties between nations. Efforts to promote the internalization of university education in Japan will be given strong, priority support (The Ministry of Education, Culture, Sports, Science & Technology in Japan, 2012).

The 'inward tendency' of Japanese young people refers to the fact that many tend to show interest in matters only inside Japan, and they hope to domestically study and work. There

are several reasons for this tendency, including, for example, that they may be satisfied with their present life in a convenient, safe environment.

MEXT reported in December 2010 that the number of Japanese going overseas to study fell in each of the four years 2004–2008, dropping from 82,945 in 2004 to 66,833 at the end of this period (The Japan Times online 2011). In response, MEXT started to encourage many universities in Japan to send their students to foreign universities using the abovementioned funding. The recent interest in preparing Japanese university students to study abroad or work in intercultural contexts has caused a demand for foreign language educators to create effective intercultural and foreign language development programmes (Miyafusa & Fritz, 2016). Therefore, students must first acquire linguistic competence and intercultural communicative competence (hereafter, ICC) to achieve this purpose (Furumura, 2010). Chi and Suthers (2015: 108) defined ICC as ‘the ability to develop meaningful intercultural relations with host and other nationals’. The definition of intercultural communicative competence described by Byram (1997) includes the following five components; Attitudes, Knowledge, Skills of interpreting and relating, Skills of discovery and interaction, Critical cultural awareness. It would be difficult to develop all components at the same time for a short period, but we believe that ‘curiosity about other cultures’, which is one of the elements of ‘Attitude’ in ICC, needs to be developed at the first stage of higher education if the MEXT’s aim is to be achieved. If Japanese students start to study abroad in the second or third year of university, educators need to encourage them to change their ‘inward’ attitude by developing their curiosity for international matters, and at the same time improve their linguistic competence when they are in the first year of university.

Educational achievement of each university is evaluated by MEXT in part according to the number of students studying abroad and according to the development of student English test scores for a certain period, such as TOEIC, the Test of English for International Communication developed by the Educational Testing Service (ETS) in the U.S. Many universities in Japan have used the listening and reading section of the TOEIC test to show their students’ development of English language skills. The project aims to foster human resources that can positively meet challenges and succeed in the global field. It may appear as a challenge to show evidence of the effectiveness of this type of education. However, English educators are especially expected to increase students’ curiosity with regard to cultures and people outside Japan, and to improve scores in English tests such as TOEIC in English education.

Two English language educators met at the international conference on CALL in 2013, and then started to collaborate to teach English to university students in Taiwan and Japan using online exchanges. In the first year, a forum site was used, but this resulted in some students not receiving replies from partner students and becoming disappointed. In the spring semester in 2015, fortunately, classes in the two countries were overlapped for about 45 minutes. Thus, we decided to use Skype for students to synchronously communicate in pairs, i.e., a Taiwanese student matched with a Japanese student. In cases of transmission failures, Line was also used to avoid failures in communication of pairs. A Japanese educator, one of two English language educators engaged in the project, had another class of Japanese students who were unable to have international partners to talk with via skype during the period of their class, where the same contents and activities instructed with the same textbook were taught as the class using skype to communicate with Taiwanese students.

The difference between these two classes of Japanese students was whether they communicated with Taiwanese students in class via Skype or not. Based on a comparison of curiosity development concerning foreign cultures, and English test scores between students in the two classes, the effect of this online communication will be examined.

2. The effects of computer-mediated communication on Linguistic and Intercultural competence

O'Dowd (2016, p.291) states that online learning involves engaging learners in interaction and collaboration with classes in distant locations through online communication technologies. Wikis, as emerging Web 2.0 tools, have been used in language learning (Li, 2012). "A wiki was developed approximately in 1995 as a part of Web 2.0 – the read/write web (p.17)", so it has been used to develop students' skills of reading and writing. Dizon and Thanyawatpokin (2018) also argued that the Web 2.0 tools were found to have equally positive and significant effects on writing fluency and syntactic complexity, while neither CMC method had any effect on lexical richness. In language education, Computer-Mediated Communication (CMC) and telecollaboration using tools such as Wikis have many possibilities for students' development of four skills of a target language and intercultural communicative competence through communication with people by using the target language.

There are two types of CMC, synchronous and asynchronous. Skype and video-conference systems are the former type, which have been used to develop students' speaking skills and pronunciation of their target language (Correa, 2015; Alastuey, 2010; Lee, 2007). Hsu (2015) used text-based synchronous CMC to explore the effect of planning conditions on L2 writing. Godwin-Jones (2013) argued that Video-based language exchanges using Skype or similar teleconferencing tools provide facial expressions resembling face-to face conversations, but some problems may arise from insufficient language skills or lack of knowledge of the other culture. He concluded in the study that "if culture is treated experientially (particularly through direct contact with representatives of another culture) this can have a powerful motivating effect, as students see the practical benefits of increased linguistic and intercultural competence" (p. 9).

Wilden (2007) used two types of CMC, the voice chat and the online forum, for secondary school teachers as part of their in-service teacher training. Objectives of the project included promoting their professional and personal development of their intercultural competence. Wu (2018) studied an intercultural asynchronous computer mediated communication activity between Chinese participants and their American peers and concluded that the success of asynchronous CMC can be attributed to the participants' ability to make sense and make use of discursive practices to negotiate positions and achieve positioning alignment. Thus, CMC can be useful for intercultural studies.

As for asynchronous CMC, Young and West (2018) reviewed 22 peer-reviewed journal articles studying the use of asynchronous multimedia-based oral communication in language learning, and then presented this kind of communication promoted language gains in terms of fluency, accuracy and pronunciation in speaking a target language.

Andresen (2009) also reviewed literature to find out about the components of a successful asynchronous discussion, assessment of it, and the limitations of asynchronous teaching, which is that "learners felt disconnected from the discussions and were left wondering if

the experience was actually real” (p. 254). Kol and Schcolnik (2008) reported on student writing in asynchronous text-stimulated forum discussions. Their study, however, showed deep student involvement with the content and with their peers according to their qualitative analysis of students’ transcripts.

O’Dowd (2016, p.299) stressed the effectiveness of telecollaborative learning on language and culture skills.

One of the most interesting developments in recent years in the field of telecollaborative learning has been the growth of cross-disciplinary telecollaborative initiatives which engage students not only in “pure” foreign language practice, but also in collaborative projects based on different subject areas. This gives students the opportunity to develop language and culture skills while working on subject content, and it also provides them with different cultural perspectives on the particular subject area.

In summary, CMC in both synchronous and asynchronous types has had positive and significant effects on L2 development. Some studies researched skills of writing, reading and syntactic complexity in language education (Dizon and Thanyawatpokin, 2018; Li, 2012; Hsu, 2015) as well as the development of speaking skills and pronunciation of target languages (Correa, 2015; Alastuey, 2010; Lee, 2007). In addition, other studies focused on intercultural competence improvement using CMC such as Skype, teleconferencing tools, or online forums (Godwin-Jones, 2013; Wilden, 2007; Wu, 2018). However, while studies such as those mentioned above have delved into linguistic and intercultural competence, few have focused on the differences in English test scores between 2 groups, one of which used CMC, and another which did not use CMC in order to show students’ development in listening and reading skills in the English language.

If some evidence can show that online interaction with others in language learning can be effective to improve students’ scores in listening and reading skills in language tests as well as intercultural competence, more educators might be encouraged to use online interactions to connect their students with others outside classrooms.

3. The present study

As MEXT and many Japanese companies engaged in international business require high TOEIC test scores, universities in Japan are making efforts to improve their students’ scores. Preparation classes for English tests such as the TOEIC test have been offered. However, students have been likely to lose interest in learning English in the circumstances of this learning style. This tendency may contradict the purpose of developing student curiosity concerning other countries and cultures where English is used as a lingua franca.

This study focuses on Japanese students’ activities using Skype or Line. It was assumed that direct communication with people from other countries would influence the development of their curiosity concerning foreign cultures as well as their English test scores. These hypotheses were examined by comparing the data of an experimental group with that of a control group; the former group had online exchanges with foreign students, but the latter group did not.

Our research questions are as follows:

1. Which group of students, the experimental or control, improved their TOEIC test scores of listening and reading skills after online exchanges with Taiwanese students had occurred?
2. Which group of students, the experimental or control, increased their curiosity concerning foreign countries, cultures, and people more after online exchanges with Taiwanese students had occurred?

3. Methodology

4.1. Participants

Participants were students from three classes: classes A and B of Japanese students, and class C of Taiwanese students. Japanese students from class A communicated with Taiwanese students from class C via Skype or Line, while other Japanese students from class B did not communicate with Taiwanese students. In this study, the development of curiosity concerning international matters and scores of an English test, i.e., TOEIC, were compared between students from classes A and B.

There were 45 first-year students in class A, including 18 females and 27 males, consisting of 41 Japanese, 2 Korean, and 2 Chinese students. In this study, 41 Japanese students from class A were in the experimental group. Class B had 46 students, including 18 females and 28 males; one student was from the second year, but the remaining 45 students were from the first year. All students from both classes belonged to the faculty of Economics at the Japanese University.

The total number of Taiwanese students was 45, including 6 females and 39 males, consisting of 42 first-year students, a second-year student, and 2 fourth-year students. They belonged to the departments of harbor and river engineering, mechanical engineering, electrical engineering, and computer science. All students were engineering majors.

Both classes A and B were in the English Communication I course, which is a compulsory English class for first-year students. This course was held in two time slots, each of which was conducted by half of first-year students in the faculty of Economics. Each time slot had three classes, divided according to placement test scores on mini TOEIC; therefore, the total number of classes in English Communication I was six. Of the three classes, classes A and B were at the lowest level for each time slot. Their TOEIC scores are reviewed in the discussion section. Average score from the sample TOEIC test that Taiwanese students in class C attempted at the beginning of the course was 603; these students were at the intermediate level.

4.2. Course design

Students in classes A and B pursued the same course of study with the exception of class A's communication with Taiwanese students via Skype or Line. They were taught English using the same textbook, which explains other countries' cultural aspects, such as how to name babies, how to greet others, prized possessions, and food and drinks. Some textbook topics were used as discussion topics with Taiwanese students. The

textbook also presented activities such as listening to English conversations between native English speakers and people of various countries using English as a foreign language. Because each speaker's English pronunciation is influenced by his/her native language, Japanese students were able to become familiar with various types of English pronunciations. Some activities enabled students to express their opinions about a topic in a unit by practicing it in pairs and groups. Thus, students from class A learned some useful expressions about each topic before communicating about it with their Taiwanese partners. They also wrote about what they would talk about with their partners a week before their communication via skype.

Students from class A wrote about what they had learned while they talked with their Taiwanese partners and how they felt about it in compositions of more than 40 words in English after class as homework. Students from class B also wrote what they had learned in each unit and how they felt about it in written compositions of more than 40 words in English after studying each unit as homework. In addition, students from both classes, A and B, did the same homework of reading and listening using an e-learning system every week. Lessons in both classes consisted of speaking, listening, reading, and writing exercises. The sole difference in the content of lessons between class A and class B was the activity of online exchanges with Taiwanese partners.

Class C was a group of non-English majors taking an intermediate-level freshman English course at a national university in Taiwan. This course was organized around cross-cultural topics that developed all four linguistic skills: listening, reading, speaking, and writing. Teaching materials were selected from web-based resources and were designed by an instructor to enhance students' communication skills. This intercultural exchange project was included in the curriculum to provide students with opportunities to use English for authentic communication. In addition to regular class meetings, students were assigned online research tasks to enrich their knowledge of given topics. After familiarizing themselves with the topics, students communicated with their Japanese peers via Skype to talk about each topic during the first hour of their class meetings. This was the first time students were able to communicate with their global peers to express themselves; it impressed them and motivated them to communicate in English.

Students from classes A and C had six sessions of talking about six topics over the course of the spring semester, when the academic calendars used by universities in Taiwan and Japan overlapped. The university in Taiwan started and finished one and a half months earlier than the university in Japan. Only class A overlapped with class C in Taiwan; class B did not have an equivalent class in Taiwan to communicate with.

Classes A and C had a session of about 30 min to talk about a topic during each class. The topics were as follows:

1. Introduce yourself with an explanation regarding why your parents gave you the name you have, and then, talk about your favorite songs.
2. In your culture, how do you greet one another in face-to-face communication, e.g., bow, hug, or kiss; is it different according to the situation and relationship between people?
3. Talk about your favorite movies.

4. What types of drinks, sweets, snacks, and local food do you like? When do you drink or eat them, e.g., every morning, at a party, before going to bed, or some other time?
5. What days are special to you, e.g., your birthday, New Year holidays, Christmas, or other days? What do you do on these occasions?
6. Talk about your future job and your dream after graduation from your university.

The first five topics, 1–5, were selected from the textbook that Japanese students were studying, and the last topic, 6, was selected by the two educators to allow students to share values about work in their future. A purpose of communication via Skype or Line was to stimulate student curiosity concerning different cultures, particularly the customs and opinions of similar young people in a different country. They used Skype to synchronously speak with each other. This study focuses on the development of student curiosity and TOEIC test scores as a consequence of students exchanging their opinions via Skype or LINE.

4.3. Procedure

Test scores from mini TOEIC, which students from classes A and B attempted immediately before the course at the beginning of April 2015, were compared by the independent samples t-test. Next, TOEIC test scores obtained by the same students in the latter part of the course, the beginning of July in the same year, were evaluated by the same t-test to address research question 1.

Students evaluated their curiosity concerning foreign countries, cultures, and people before and after the course using a five-point rating scale, ranging from 1 (not interested at all) to 5 (highly interested). Changes in the curiosity of students in each class were examined by the paired samples t-test to determine whether their curiosity changed before and after the course. Then, the differences of points in their rating after the course between the two classes were compared by the independent samples t-test to determine the class of students, class A or B, which increased curiosity more through the course, addressing research question 2.

5. Results

5.1 Research question 1: Which group of students, the experimental or control, improved their TOEIC test scores after online exchanges with Taiwanese students had occurred?

The total number of students in class A was 45, which included 2 Chinese and 2 Korean students. Because this study focuses on the development of Japanese students, these foreign students' data was excluded. In addition, because 2 Japanese students did not attempt the TOEIC test, the total number of subjects in class A for research question 1 was 39. In addition, the total number of students in class B was 46; however, 1 student did not attempt the TOEIC test. Therefore, the total number of subjects in class B for research question 1 was 45.

Means for the mini TOEIC test scores, which the students in the two classes attempted before the course, are shown in Table 1. In the results of the independent samples t-test, there was no significant difference between the levels of the two groups in English

proficiency (classes A and B) ($t(82) = .907, p = .367, d = 0.20$). In other words, in the levels attained on the mini TOEIC test, there was no difference between students from the two classes.

About three months after attempting the mini TOEIC test, students from both classes attempted the TOEIC test at the latter part of the course. The results of the independent samples t-test shown in Table 2 reveal that the scores of the experimental group (class A) ($M = 420.51, SD = 79.30$) were significantly higher than those of the control group (class B) ($M = 384.22, SD = 81.44, t(82) = 2.062, p = .042, d = 0.45$).

Table 1. Mini TOEIC test scores in the two classes (full mark: 50).

Experimental group (class A)		Control group (class B)		<i>t</i>	<i>p</i>
<i>N</i>	<i>M</i> (SD)	<i>N</i>	<i>M</i> (SD)		
39	39.90 (5.55)	45	38.87 (4.86)	.907	.367

Table 2. TOEIC test scores in the two classes (full mark: 990).

Experimental group (class A)		Control group (class B)		<i>t</i>	<i>p</i>
<i>N</i>	<i>M</i> (SD)	<i>N</i>	<i>M</i> (SD)		
39	420.51 (79.30)	45	384.22 (81.44)	2.062	.042*

$P^* < .05$

5.2. *Research question 2: Which group of students, the experimental or control, increased their curiosity concerning foreign countries, cultures, and people after online exchanges with Taiwanese students had occurred?*

Students from classes A and B answered the following questions after their completing the course.

1. How much were you interested in foreign countries, their cultures, and their people before the course? Please evaluate it with a five-point rating scale, ranging from 1 (not interested at all) to 5 (highly interested).
2. Please explain the reason for your answer to Q1 in English.
3. How much are you interested in foreign countries, their cultures, and their people after the course? Please evaluate it with a five-point rating scale, ranging from 1 (not interested at all) to 5 (highly interested).
4. Please explain the reason for your answer to Q3 in English.

A within-subject design was adopted to examine how subjects' curiosity changed through the course using a five-point rating scale, ranging from 1 (not interested at all) to 5 (highly interested). A paired samples t-test was used to analyse changes. In class A, 40 Japanese students out of 45 answered this question because four students were excluded and one

Japanese student was absent from the last class. In class B, 45 students out of 46 answered because one student was absent.

The results of a paired samples t-test shown in table 3 on the measures of student curiosity in class A, the experimental group, reveal a significant difference in the students' curiosity in foreign countries, their cultures and people ($t(39) = -8.708, p = .000, d = .81$), between before the course ($M = 3.23, SD = 1.19$) and after the course ($M = 4.65, SD = .53$) (see table 3). Cohen's $d = .81$ is considered a large effect size in this result.

Table 3. Change in curiosity before and after in the experimental group (class A).

Curiosity before the course		Curiosity after the course	<i>t</i>	<i>p</i>
<i>N</i>	<i>M</i> (SD)	<i>M</i> (SD)		
40	3.23 (1.19)	4.65 (.53)	-8.708	.000**

P** < .01

In the control group (class B), students' curiosity after the course ($M = 4.62, SD = .58$) was significantly higher than that before the course ($M = 3.20, SD = 1.32, t(44) = -7.309, p = .000, d = .74$) (see the table 4). Cohen's $d = .74$ is considered a large effect size in this result.

Table 4. Change in curiosity before and after in the control group (class B).

Curiosity before the course		Curiosity after the course	<i>t</i>	<i>p</i>
<i>N</i>	<i>M</i> (SD)	<i>M</i> (SD)		
45	3.20 (1.32)	4.62 (.58)	-7.309	.000**

P** < .01

The abovementioned results of classes A and B revealed that the course in both classes achieved the aim of raising students' curiosity concerning international matters, irrespective of whether the course included communication with Taiwanese students or not.

Next, the change in student curiosity before and after the course for the experimental group (class A) was compared with the change for the control group (class B) using the independent samples t-test. The means of the rating points of students from class A were $M = 1.43$ and $SD = 1.03$, and those from class B were $M = 1.42$ and $SD = 1.31$. The calculation of the t-test showed that there was no significant difference in student curiosity change before and after the course for the two classes, A and B, ($t(83) = .011, p = .991, d = .01$).

Table 5. Comparison of changed curiosity between the two classes.

Experimental group (class A)		Control group (class B)		<i>t</i>	<i>p</i>
<i>N</i>	<i>M</i> (SD)	<i>N</i>	<i>M</i> (SD)		
40	1.43 (1.03)	45	1.42 (1.31)	.011	.991

With this result, educators may be encouraged to increase students' curiosity even if the collaborative or online exchange of opinions with foreign students does not occur. It may sometimes be difficult for some educators to find a partner to communicate with outside the country. Our study found that using only a textbook could strongly influence students' curiosity, which will motivate them to study more.

6. Discussion

6.1. Effect of online exchanges on scores of multiple-choice English tests of listening and reading

Although students in the experimental group obtained significantly higher scores than those in the control group in this study, the real purpose of this course, including online exchanges with foreign students, is not to improve student test scores in tests such as TOEIC but to develop students' ICC, which includes many skills. As people are facing a rapidly globalizing world, the young generation is often instructed by adults such as teachers, parents, and others around them that they need to acquire many skills; using English, discussion, critical thinking, collaborative working, intercultural competences, and the like.

Japanese young people tend to think that they will not communicate or work with foreign people, especially in rural areas of Japan. Recently, however, even small companies producing Japanese sake or Japanese food have begun to export their products to survive in an internationally competitive world. Business situations require negotiation skills and the development of good relations among people involved. In a monolingual country such as Japan, there are few opportunities to communicate with people with different ethnic backgrounds except at sightseeing spots. Therefore, it is difficult for people to naturally develop skills related to ICC in everyday life. As Byram (2008: 157) states, 'people need certain competences in order to be able to act sensibly in and across political entities, at whatever level'. Japanese young people especially need to acquire (at least some of) the competences included in ICC, the evaluation of which is not commonly established in language education.

Even if educators successfully pursue language education, their effectiveness to persuade the officials of MEXT might fail because of less reliable evidence to convince many people of their successful achievement. However, e.g., increases in scores of English tests or in the number of students studying abroad would be very persuasive for them in evaluating the effectiveness of education. Thus, the significant difference in test scores

between the experimental and control groups was emphasized in this study, although the real aim of online exchanges was to develop students' ICC.

Many language teachers may have been under pressure to show evidence to prove their practice in teaching, as Kramersch (2015: 458) argued:

The proliferation of other competences from semiotic competence (van Lier, 2004) to symbolic competence (Kramersch and Whiteside 2008) to intercultural competence (Byram, 1997) to performative competence (Canagarajah, 2014), offered by researchers as a way of preparing language learners for a decentered, global economy, is bewildering for the practitioner who is at the same time under increased pressure to measure and evaluate success through multiple choice tests so as to justify his/her own existence.

The sole difference between the content of lessons for the experimental group and those for the control group was the activity of online exchanges. Because the English level of their Taiwanese partners in the experimental group was higher than that of Japanese students, most wrote in their journals that they were surprised to find that Taiwanese students spoke English very well. Therefore, it could be assumed that for Japanese students, this experience may have motivated them to study harder than students in the control group, who did not experience direct communication with foreign students.

The results from this study would suggest that one of the ways to make students aware of their own real situations is by comparing themselves with others, and then take actions for their development. Many students in the experimental group wrote in their journals that they were not confident in speaking English, and thus, they wanted to develop their skills. Six students, still a small number, out of 41 wrote that they improved their skill in speaking English through the course. Here are the thoughts of one of the students about his experience in the course:

I was interested in communication with Taiwanese student in the class of English Communication. I did my best to communicate my idea in English. I was not good at communicating by English, so I have been not able to communicate with Taiwanese student at the first time. But I carry on with communication at the second time, third time.... I was able to understand hobby, favourite songs and dream of my partner. I experience pleasure of communication. So, I am interested in other culture (Student No.32).

He wrote that he made significant effort to understand his partner and to make his partner understand his ideas by communicating in English. This shows that he began to develop ICC as well as English skills.

6.2. Effect of online exchanges on students' curiosity concerning other countries, their cultures, and their people

Students in the experimental and control groups significantly increased their curiosity concerning other countries, cultures, and people, and there was no significant difference between the degrees of changing curiosity between the two groups before and after the course. In classes A and B, the same textbook was used, which featured young people of various ethnicities speaking of their cultures. Students listened to them speaking English

as a lingua franca with different pronunciations, influenced by their native languages. The pronunciations of their English speaking may have made students imagine countries those speakers were from. As explained in the results of this study, many students increased their curiosity concerning these intercultural matters also by talking about their own culture, which is Japanese culture, in English after practicing the expressions in each unit. In class B, students spoke with their Japanese classmates, while in class A, they spoke or wrote about their ideas related to topics in the textbook with Taiwanese students as well as with their Japanese classmates.

This difference in whom they communicated with did not affect the development of curiosity in both classes. Actually, students in class B had more time to study content in the textbook compared with class A as 30 minutes were spent in communication with Taiwanese students for six class sessions during the semester. This result shows that topics and activities present in the textbook may be sufficiently intriguing to raise student curiosity concerning international matters. Therefore, selecting a textbook or creating content for a class is important in motivating students.

7. Limitation and future directions

It is rare that the class time in the experimental group in Japan overlapped with their partners' class time in Taiwan. This piece of good fortune gave our students very good opportunities for direct communication with each other. Taiwan and Japan have only a one-hour time difference; thus, this exchange worked. Three years ago before this course was conducted, a professor in Canada invited Japanese students to participate in a discussion on a video conference system. However, we were unable to do it because the times of the two classes did not overlap. When Canadian students were having class early in the morning, Japanese students were spending time at home late in the evening.

Many language educators may know about the potential benefit from synchronously connecting their students with foreign students; however, it is difficult to find time to establish such a connection. It could be suggested that students should talk with foreign partners outside their classroom as homework. In fact, students in our study did this to complete the task of talking on a topic in a case where their partner was absent from the class on the day. In this case, educators cannot see or hear their students talking and cannot know how long they continued to talk with their partners. However, when students communicate with their partners asynchronously in or outside the classroom, educators can see their texts messages on line, therefore this way tends to be used easily for educators. In any case, a system to determine suitable partners for exchange may support educators who are still unfamiliar with this type of exchange programme.

In this study, only about 40 students were examined. The number of subjects should be extended to generalize the results of the effect of online exchanges on English as a foreign language achievement.

8. Conclusion

Many researchers have reported the effects of using social networking sites for language learning. In particular, telecollaborative activities have been disseminated among language educators. "These social networking features can maximize students' opportunities for knowledge construction and collaborative language learning" (Liu et al,

2015: 142). Many studies in this area have focused on the development of pronunciation, speaking, and writing in language learning. Few studies have revealed that online exchanges of students' messages and opinions in intercultural situations can influence scores of multiple-choice language tests. The present study has shown evidence that although the aim of online exchange activities is to foster students' curiosity concerning intercultural matters, students experiencing exchange opportunities significantly raised their scores in multiple-choice English tests of listening and reading after experiencing synchronous exchanges with foreign students, compared with others who did not experience such exchanges. The reason for this phenomenon may be that the real communication activities that students were involved in motivated them to study harder than before and that student awareness of the necessity of learning during activities may have led to the effective development of student linguistic competence. Further research to identify the reason for this phenomenon should be pursued in the future.

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