

【原著】

## High School Students' Perceptions of International Communication via Web Conference Systems

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### Abstract

*The international partnership among students becomes an integral educational practice in the 21st-century classroom. Although global learning and interactions present many ways to engage students with cultural related topics for collaborative work, setbacks like lack of collaborative skills and language barriers are inevitable. This study found out that a detailed learning framework could aid students' learning when they were less skilled and/or less experienced in collaborative learning styles. It also suggested that minimal linguistic in-classroom help from instructors did not greatly affect the learning outcomes even though there was an encouragement to use online translators and visual contents. Besides, students still valued the learning activities designed for them despite their different learning expectations.*

### Introduction

According to the Sustainable Development Goals Report 2019 (United Nations, 2019), the world is not on track to end poverty by 2030. Fifty-five percent (55%) of the world's population have no access to social protection, 821 million were undernourished in 2017, under-5 deaths dropped from 9.8 million in 2000 to 5.4 million in 2017, and 1 out of 5 children between 6 and 17 years are not attending school. Undersecretary-General Liu Zhenmin of the United Nations pointed out that the challenges highlighted in this report are global problems that require global solutions. No country or individual can resolve them in isolation. Thus, some of the sustainable development goals of the United Nations or SDGs like promotion of well-being and healthy lifestyle, poverty, safety, quality education, improvement in social communication, and how technology like the use of smartphones affect SDGs in the improvement of the quality of life and therefore they became appropriate topics for students' collaborative learning.

In a collaborative learning environment, knowledge is shared or transmitted among learners as they work towards common learning goals, for example, a shared understanding of the subject at hand or a solution to a problem. Learners are not passive receptacles but are active in their process of knowledge acquisition as they participate in discussions, search for information, and

exchange opinions with their peers. Knowledge is co-created and shared among peers, not owned by one particular learner after obtaining it from the course materials or instructor (Brindley, Walti & Blaschke, 2009). They often collaborate out of enthusiasm or because they are given tasks. Collaboration is an important activity in the classroom because it encourages both social skills and thinking skills and mirrors how learners often need to work in an academic setting and certainly once they leave it (Beatty, 2010). Similarly, collaborative efforts produce greater learning opportunities for students (Whitney & Smallbone, 2011). After all, research studies as mentioned by Le, Janssen & Wubbels (2018) posit that there are several problems students are facing when subjected to collaboration in a group such as lack of collaborative skills as the most common. Some of these challenges fall into monitoring students' on-task behavior, managing group-work time, providing relevant materials, assigning individual roles, and establishing teamwork beliefs and behaviors (Le, Janssen & Wubbels, 2018). In resolution to these challenges, the creation of an organized instructional plan and step by step teacher intervention will assist students in learning and improve collaborative skills. Further, computers facilitate social learning in the classroom that preludes broader international communication or collaboration through email, chatlines, and social networking environments (Crook, as cited in Beatty, 2010). Using available technology to create the most lifelike and natural meeting experience possible is the best solution for developing positive and sustained team collaborations (Hurst, 2020). Web conferencing software can provide real-time, internet-based collaboration and generally include tools such as instant messaging (text chat), VoIP (voice over IP) audio conferencing, video conferencing, shared whiteboard, and shared application or desktop also most web conferencing software packages combining a number of these tools (Reushle & Loch, 2008).

### International Classroom Partnership

Global learning is inherently cumulative and multifaceted, academic and applied, and therefore difficult to cover through a single experience or discipline, however, effective global learning happens if students are exposed to diverse voices and sources of knowledge and let them be engaged to these voices directly and repeatedly allowing mutual learning to grow and develop over time (Buck, 2018). Another factor to identify in establishing an international classroom partnership is students' learning styles and expectations. Learning style preferences of students should be taken into consideration while taking the account of the selection of teaching methods, setting learning objectives to achieve better learning results (Alaoutinen, Heikkinen & Porras, 2012).

Kumi-Yeboah (2018) also explains that language barriers and communication issues affect interactions and often create challenges to facilitate intercultural interaction in online learning environments. Challenges would be lessened when teachers provide guidance such as translation and direct interpretation whenever conversation takes place in the classroom. However, this strategy would create total dependence on a teacher's help and may become a barrier to the natural flow of conversation. Consequently, the use of electronic dictionaries and online translators may allow teachers to minimize language support and increase students' opportunities to develop their language skills.

This study investigates whether learning outcomes would suffer if linguistic in-classroom

assistance from the instructors was lessened, and even when the use of online translators and visual contents was also encouraged by their instructors. It also explored how a detailed learning framework could assist students' acquired knowledge regardless of the fact they were less skilled and/or less experienced in collaborative learning styles. Also, this study reports what learning activities were most valued by the students despite their different learning expectations.

## Methodology

### Participants

The participants in this study were 29 third-year (aged 17 to 18 years old, all females) high-school students of Bunkyo High School Attached to Hiroshima Bunkyo University in Hiroshima, Japan (BHS) and 30 grade 10 junior high school students (aged 15 to 16 years old, in a science class from Mandaue City Comprehensive National High School in Mandaue City Cebu, Philippines (MCCNHS).

Japanese language is the mother tongue of all BHS students. Most of them assumed to be in the A1-A2 level of English. BHS students learned English in school with less opportunity to practice their conversational skills. Their computer literacy levels were assumed to be beginners: able to create basic documents with Microsoft Word and presentations with Microsoft PowerPoint, most of them could open Microsoft Edge to look for information with keywords. At the start of this project, they learned how to save their files to the cloud server and to share them with colleagues. Their experience level of use of computer devices is described in this study. They participated in this project as an elective subject of their school (BHS) without any previous knowledge but only knew the subject was held and led by instructors of Hiroshima Bunkyo University (HBU) from October 2019, to January 2020.

English language is the medium of instruction in the Philippines, but the respondents in the Philippines speak both Cebuano and Filipino and use English as their second language. They were chosen by their English language teacher as participants because of their English language levels and their ability to communicate in English. MCCNHS students' English language levels of ability were somewhere between A2-B1 on The Common European Framework of Reference for Languages (CEFR). MCCNHS students also participated in this project solely as an audience so the focus of their involvement during class virtual exchange did not require them to use computers.

### Research design

This study was founded by two instructors, one was a researcher of instructional design and information literacy and an English language lecturer, of Hiroshima Bunkyo University (HBU), who later agreed to work together with a group of teachers from MCCNHS.

At the beginning of the project, they decided to have collaborative sessions via web conference systems and secured the settings and the network, using RICOH Unified Communication Systems. With an account of the systems, provided by HBU, MCCNHS teachers used a personal computer to access the virtual meeting room where BHS students virtually shared their presentations. In the ICT-Based Education Laboratory of HBU, each BHS student was provided with a PC to work on their tasks in collaboration with their peers, after that they

presented their results to MCCNHS students at the virtual meeting room using a UCS terminal, a big monitor, a web camera, and a speaker-microphone.



**Chart 1.** An actual virtual presentation of students using RICOH UCS

\*The students in this image gave the researchers permission to use photos taken in the classroom for research paper.

Originally, the project was designed for both BHS and MCCNHS students to virtually meet twice and work collaboratively, in addition to one introductory session for BHS students to meet a teacher from MCCNHS. On the contrary, securing the connection and settings took time longer than anticipated. So, the plan was modified to one presentation from BHS students and a Q&A session in 90 minutes. MCCNHS students' feedback was written and sent in PDF format to HBU instructors later.

The progression of the project as shown in Table 1.

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**Table 1.** Course outline for BHS students

Session	Date	Title	Activities
1	10/1/2019	Orientation	Instructors introduced themselves, and then explained about the aims and purposes, schedule, devices available for each student with a short lesson about how to use them. The first session included a short typing test on PC.
2	10/8/2019	PowerPoint training 1	Basic Microsoft PowerPoint training. The students prepared a PowerPoint presentation (in Japanese) to introduce themselves. They were also introduced to internet translators and helpful databases.
3	10/15/2019	PowerPoint training 2	The students translated their presentation into English and then delivered the introduction in English in front of their classmates.
4	10/29/2019	Research training 1: Annual report	Each group received a task to research a particular year's "Information and communications in Japan: White paper", and then, make a presentation (in Japanese) to share the knowledge about the development and current situations of ICT in Japan.
5	11/5/2019	Choose a topic of SDGs	Each group chose a topic from a list of SDGs' goals and learned about the topic, using databases and internet resources. They agreed to have a few questions to ask grown-ups to enhance their discussion.
6	11/12/2019	Learn about the topic and discussion	The students organized their findings on a whiteboard and had a group discussion of the topic.
7	11/19/2019	Presentation preparation 1	The students made plans for a presentation, shared their tasks, and started to make PowerPoint slides and a script (in Japanese).
8	11/26/2019	Presentation preparation 2	The students continued working on PowerPoint slides and the script for the presentation.
9	12/3/2019	Presentation preparation 3	The students gathered their work to make a complete presentation and script.
10	12/10/2019	Presentation preparation 4	They started the translation of their presentation into English.
11	12/17/2019	Presentation preparation 5	They finalized the translation and practiced the presentation in groups.
12	1/14/2020	Presentation rehearsal	They presented their presentation in English to the 4 <sup>th</sup> year HBU students via the web conference systems, received their feedback, and improved their presentation.
13	1/21/2020	Final presentation	The students met MCCNHS students via Web Conference systems, They delivered their presentations, and then, they had a question and answer session with MCCNHS students.
14	1/28/2020	End of the Class	The students received feedback from MCCNHS students, evaluated their presentation, shared experiences in groups, and then wrote a final report and submitted the survey.

\*Each session lasted for 90 minutes.

### Data collection

In the final session, BHS students answered a survey in Japanese and wrote a report about their learning outcomes from the project, while MCCNHS students wrote feedback for each presentation, and answered the same survey in English. The survey, report, and feedback were in paper format. All students were informed in the first paragraph of the survey that the survey

was anonymous, not required to complete, and answering and returning the survey implied their voluntary consent for the researchers to use their answers to meet the research objectives.

Due to the limitation of time, only 14 BHS students and 20 MCCNHS students completed the survey, and 10 BHS and 7 MCCNHS students partially completed, thus, each survey question has a different size of data set to analyze in this study.

Some questions were on a five-point Likert scale. For questions such as asking the level of interest in the topic, the scale ranged from (1) very uninterested to (5) very interested. The last part of the survey was designed to investigate their feelings about the project and the activities before/during/after the project.

The summary of questions and responses to the survey in Table 2 was analyzed in this study, which was followed by some qualitative examinations of their feedback and reports.

## Findings and Analysis

Almost all students participating in the project had access to smartphones: 100% (BHS); 96% (MCCNHS). All students of MCCNHS and 62% of BHS students had experiences in video chatting on smartphones/computers before involving this project.

When students were asked about their interest in the topic, ICT use in the current society and future, all MCCNHS students stated their interest while 57% said they were interested (Q2.10 of Table 2).

On the perception about the style of learning in communicating with other students, 58% of BHS students said they liked it (Q2.11 of Table 2).

When they were asked to participate in this project, all students of MCCNHS and 75% of BHS students felt it interesting (Q3.1 of Table 2). The respondents were satisfied with the project and it successfully met with students' expectations (Q3.3 of Table 2).

Even though only BHS students had an opportunity to present their research and opinions, MCCNHS students valued the presentations more than BHS students. On the other hand, BHS students liked the question and answer session after the presentation more whereas MCCNHS students explained in the survey that they appreciated the presentations because they received new information, in comparison to BHS students expressing their pleasure in the question and answer session. After all, it was enjoyable and enabled them to laugh together. (Q3.5 of Table 2)

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**Table 2.** Survey questions and responses

Question	School	Very uninterested 全く興味がない	Uninterested どちらかという と興味がない	Neither どちらとも 言えない	Interested どちらかという と興味がある	Very interested とても興味が ある	n
Are you interested in the topic of ICT use in the current society and the future?	MCCNHS	0%	0%	0%	70%	30%	27
現在、あるいは将来の社会におけるICTの活用というテーマに興味がありますか？	BHS	5%	14%	24%	43%	14%	21
Question	School	Dislike very much とても嫌いだ	Dislike どちらかという と嫌いだ	Neither どちらとも 言えない	Like どちらかという と好きだ	Like very much とても好きだ	n
Do you like the style of learning in communication with other students?	MCCNHS	0%	0%	0%	52%	48%	27
他の生徒とコミュニケーションしながら学習することが好きですか？	BHS	0%	5%	38%	29%	29%	21
Question	School	Very uninterested 全く興味がない	Uninterested どちらかという と興味がない	Neither どちらとも 言えない	Interested どちらかという と興味がある	Very interested とても興味が ある	n
When you were asked to participate in the project, how did you feel?	MCCNHS	0%	0%	0%	37%	63%	27
遠隔授業システムを通してフィリピンの高校生に意見を発表すると聞いたとき、どう思いましたか？	BHS	0%	10%	15%	45%	30%	20
Question	School	Highly unsatisfied 全く満足できな かった、全く面 白くなかった	Unsatisfied どちらかという と満足できな かった、面白くな かった	Neither どちらとも 言えない	Satisfied どちらかという と満足した、面 白かった	Very satisfied とても満足し た、とても面 白かった	n
What is your level of satisfaction for the collaborative learning project via web conference systems?	MCCNHS	0%	0%	0%	59%	41%	27
遠隔授業をしてみて、どのくらい満足しましたか？	BHS	0%	0%	0%	35%	65%	20
Question	School	Introduction 自己紹介	Presentations 発表	Question and answer 質疑応答	Feedback フィードバック	Other その他	n
Which part of the collaborative learning project via web conference systems did you like most?	MCCNHS	7%	48%	37%	7%	0%	27
遠隔授業のうち、どの部分が一番好きでしたか？	BHS	9%	18%	73%	0%	0%	22

Most students both in MCCNHS and BHS stated that they had a level of difficulty in using English for spoken presentations and spoken interaction. For BHS students, their primary concerns were their ability to effectively use English language skills in communication. 19 BHS students wrote their hardest challenges and concerns were related to the use of English for spoken presentations and 6 BHS students wrote their difficulties in speaking and listening skills, likewise, 12 students described their challenges in translating/writing for presentation slides/scripts.

With regards to describing the difficulties in understanding the topics presented by BHS students, most MCCNHS students thought the cause of these difficulties to happen was not only the lack of BHS students' English communication skills but also due to the mic/speaker systems used and poor internet connection. Nevertheless, BHS students mentioned in the survey that

their focus was on pronunciation and punctuation. This speculated the authors on how BHS students exerted more effort on enhancing their speaking presentation skills although there is no data to prove this.

## Discussions

Although all BHS students have access to smartphones and computers/tablets, their interest in the topic of ICT use in the society was not as strong as MCCNHS students. BHS students might feel too familiar with ICT tools to strongly feel its possible impact on their daily lives, but this study has no data to support the speculation.

Secondly, the data suggested possible differences between BHS and MCCNHS students' preferences in learning styles. Through the discussions among instructors involved in this study, there could be significant differences in preferred teaching styles between Japan and the Philippines. If students' learning expectations would come from their former experiences in learning styles, MCCNHS students might easily find learning opportunities in this project in comparison to BHS students who may rather appreciate this project quite differently like a new activity in class and everyone just wanted to enjoy the experiences.

Finally, the language barriers were present and strongly felt by both parties, however, the web conference systems proved to seamlessly incorporate various operational functions, such as sharing presentation slides and face-to-face interactions. In addition to that, the timely jumping-in assistance from instructors had shown a continuous flow of students' virtual communication. To top of that, the final activity gave everyone the feeling of a less-formal atmosphere, which helped students comfortably communicate with each other. As several students wrote, "we shared moments of deep thinking, encouragement, recognition of interests and understanding, and then, laughs."

## Conclusion

This study suggested that international collaborative learning is possible by using a variety of ICT tools to assist students' concerns in language acquisition and learning expectations. Therefore, one of the authors' recommendations for further study is the focus on the exploration of cultures to develop their critical thinking skills to broaden students' understanding of the current world and their future.

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