

Volume 9 - Issue 6 - 2021

Sustaining Language Learning through Social Interaction at a Japanese National University

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Abstract

The careful use of online learning can achieve a variety of goals in sustainable education, such as providing access for students, particularly in times of crisis, as well as providing them with opportunities to study interdependently. Also, it gives them the opportunity to develop thinking skills and awareness to become active in working towards sustainable societies, ones where the actions of the current society do not damage the abilities of future generations to address their own needs. In this small-scale study at a Japanese national university, the switch from classroom-based teaching to online study in language education is considered in relation to flipped learning. This involved videoconferencing software and the organization of "study buddy" groups, supported by materials on a learning management system. The effect of the change has been investigated using a mixed-methods approach with survey data from students and data from two classroom observations by external observers. The data has been analyzed and framed in relation to sustainable education goals, produced by Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT), such as cooperation, interdependence, sense of responsibility, and international awareness. The author of this study found that the flipped learning approach was successful in building an online community and social interaction that provided the framework for achieving education for sustainability. In conclusion, the author considers how hybrid courses involving both classrooms and online technology may be the future for English language courses in Japanese universities.

Keywords: English language education, flipped learning, sustainable education, online learning, study-buddy

In a period of globalization and climate change, educators must increasingly adapt to disruptions due to emergencies relating to natural events. In Japan, which is susceptible to typhoons, earthquakes and tsunami, as well as outbreaks of disease, having the capacity to maintain courses and classes effectively during difficult times is becoming increasingly important. This is particularly relevant to language teaching and learning, where social interaction is given high priority, usually requiring students to study while being in physical proximity with each other so that they can communicate. Furthermore, there is an increasing need to focus on sustainable education to develop citizens who can contribute to slowing or reversing severe problems emerging due to unsustainable human activity. In this article, consideration is given to how online learning can contribute to sustainable education in the field of language learning.

With the COVID-19 crisis in 2020, most Japanese national universities effectively transformed classroom-based education into online education. This, in effect, created a physical barrier between teacher and student as well as between the students themselves. For teachers, the challenge was how to utilize software, and develop online skills and ways of teaching that delivered language courses effectively. At the author's university, the available avenues of delivery were the university's learning management system Blackboard Learn R9.1 (Bb9) and videoconferencing software, such as Microsoft Teams and Zoom.

The author of this paper specializes in the teaching of productive skills (speaking and writing) in English for first-year students who are required to take a set of English courses as part of their general education. A flipped learning approach was used that involved self-study using Bb9 combined with an online class. During 2020, two different videoconferencing software packages were used. The first was Microsoft Teams, which was combined with out-of-class "study buddy" groups, where students were placed in small teams and collaborated outside of class time to promote learner autonomy, cooperation, and partnership – goals of sustainable education. The second software package was Zoom, which at that time had an advantage over Teams because of its breakout room function that allowed "study buddy" interaction to take place in online class time.

The aim of this paper is to describe how videoconferencing tools, "study buddy" groups and a learning management system were used in online English language courses for productive skills and to evaluate the new way of delivering classes in relation to sustainable education. The use of the technologies described in the study is not only relevant for infection control due to the COVID-19 pandemic, but it also contributes more broadly to sustainable education goals.

Theoretical Background

Japanese Government Promotion of Sustainable Education

The courses described in this study took place in a Japanese context, and a major source of influence is the Ministry of Education, Culture, Sports, Science and Technology (MEXT). The Ministry has emphasized sustainable education, one that promotes a society in which the actions of the current generation do not damage the abilities of future generations to address their own needs. In a world where there are severe problems such as climate change, resource depletion, and a biodiversity crisis, the goal of sustainable education is to develop problem-solving skills in order to realize and tackle the problems in the environment. As MEXT (2016, p. 4) suggests: "Think globally, act locally."

For MEXT (2016), all learners need to acquire the knowledge and skills required to promote

sustainable development such as "promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and culture's contribution to sustainable development" (2016, p. 5). Another aim is to ensure "inclusive and equitable quality education and promote lifelong learning opportunities for all" (MEXT, 2016, p. 5).

MEXT (2016) has also emphasized the need for teachers and students to work on issues concerned with building a sustainable society, involving themes such as diversity, interdependence, limitation, fairness, cooperation, responsibility. Cooperation, responsibility and interdependence were significant aims of the online course discussed in this article. In addition, students need to acquire competences necessary to solve problems in order to build a sustainable society. These competences include the ability to think critically, plan for the future, think in multidimensional and integrative ways, communicate, cooperate with others, respect relations and connections, and participate proactively.

The Relevance of Sustainable Education to Language Courses

When considering sustainable education, MEXT (2013) stresses that it is important to promote "proactive learning, interactive learning, and in-depth learning". This implies not only the exploratory learning process, such as appropriate implementation of problem-solving learning, enriching opportunities for proactive learner-centered learning with experiences and activities, but a thorough examination about which part of the learning process is most efficient and how to implement it. In other words, the aim should be to organize cooperative learning by integrating group activities and supporting students so that they can discuss and work together on various topics in order to undertake activities or give presentations.

The online teaching delivery methods discussed in this article aim to contribute to these particular goals of sustainable education. For instance, they create more equal opportunities for education since students from a variety of backgrounds can access classes and materials online regardless of their location. Further, online learning management systems provide flexible access to content regardless of time; therefore, they are more cost-effective for universities to distribute course content, avoiding the cost and waste of distribution through paper. Online methods involving both learning management systems and videoconferencing can extend the learning experiences for students who cannot attend traditional face-to-face classes by giving them multiple study opportunities. In addition, the methods applied in online education are generally much lower in carbon intensity, requiring less commuting, since students can take courses from the comfort of their home, which is an additional benefit in terms of sustainability.

Previous research (Exter et al., 2009; McInnerney & Roberts, 2004; Tanabe, 2015) suggests that online teaching has the potential to improve the quality of learning experience by involving a varied community of learners. McGuire & Castle (2010) have stated that another benefit of the online method in terms of sustainable education goals is the nature of asynchronous discourse, where there is a time lag between responses, allowing responders time to think, examples being the posting of audio recordings (speaking) and blog entries (writing) on a learning management system. In these cases, other students can listen, read, and comment. Asynchronous discourse often involves deep learning, which involves self-reflection and self-awareness, more so than synchronous discourse, which is more strongly associated with a traditional classroom setting. Also, students who employ deep learning may identify a greater satisfaction in self-learning (Warburton, 2003). For these reasons, online teaching can be an effective tool in achieving sustainable education.

Teaching English through a Communicative Approach

Sustainable education has a strong link to language learning and teaching, particularly in relation to international communication and learning through discourse and interaction. The communicative approach, otherwise known as communicative language teaching (CLT) highlights the importance of situation and context in understanding language that communicates meaning. As Nunan (2004, p.7) states, it is about "language that can be thought of as a tool for communication". Williams and Burden (1997) have researched Vygotsky's social constructivism, which stresses social interaction for learning, as a psychological underpinning to the approach. In the case of communicative language teaching, both teacher-student interaction and student-student interaction are considered very important. The courses described in this article were strongly influenced by Vygotsksy's psychology, particularly in relation to social interaction.

Communicative language teaching (CLT) focuses on meaningful communication in the target language. Based on Littlewood's (1981) explanation, this approach places emphasis on interaction in the classroom between peers and between teacher and learners while combining functional and structural features of language. CLT makes language learning authentic and helps learners to use language both productively and receptively in order to achieve communicative ability.

Larsen-Freeman (1986) claims that CLT relates to authentic, communicative events; therefore, the right circumstances are in place for communicative exchange. Also, the students get immediate response from their peers or teacher on whether or not their communication was successful. Moreover, small group work provides more opportunities for practicing communication and offers learners the chance to share their ideas and opinions. This way of communicative interaction enhances cooperation and negotiation of meaning among learners (Larsen-Freeman, 1986). Jacobs and Hall (2002, p. 53) mention a number of benefits with CLT such as "increased student talk, more varied talk, a more relaxed atmosphere, greater motivation, more negotiation of meaning, and increased amounts of comprehensible input".

Building a sense of community (SoC) is considered highly important in classes to minimize student isolation (McMillan & Chavis, 1986). Also, communicative interaction, cooperation, negotiation of meaning among learners, and the need for learning through social interaction are relevant for the English Communication classes. With a switch to online learning, it was important to think through how these could be incorporated in the new learning environment. If students were to build their language through interaction, videoconferencing sessions using Teams and Zoom seemed to be the best option for the course.

The Flipped Approach

The term "flipped learning" is used by Bergmann and Sams (2012) to describe a new model of instruction. It is "a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter" (Network, 2014, p. 1). Enokida et al. (2018) state that one advantage of a flipped classroom is flexibility since it allows instructors to spend more time on covering the materials, answer students' questions and have group discussions. In flipped learning, students acquire knowledge prior to class, then use that knowledge in group activities that foster their productive and creative skills during class time (Enokida et al. 2018). The course discussed in this study followed the flipped approach. Students were asked to work on a learning management system, complete assignments, and

watch videos to help them prepare for an online class that involved discussions.

Method

Courses Involved in the Study

The focus of this study is on two courses taught to first-year students, one on developing speaking skills and one on writing skills. For the speaking skills course, self-study materials were placed on a learning management system (Bb9), students were organized into "study buddy" groups that arranged their own communication outside of class, and each week students attended an online Teams class as a whole group. The average class size consisted of 25 students. For the writing skills course, self-study materials were placed on Bb9, and each week students attended an online Zoom class, and "study buddy" communication took place during classes through the use of Zoom's breakout room function. Zoom's breakout room feature allows the teacher to split the participants into small groups. The teacher can then join these groups and monitor students' interaction, as Selwood explains (2021).

Participants

The participants were first-year Japanese university students enrolled in the productive skills courses. They were not at university to study English as a specialism, but were members of faculties such as Education, Engineering, Science and Law; their English communication courses were mandatory for them to graduate. The questionnaires were administered online to 280 students and 223 students responded and took part in the study.

Research Questions

The study seeks to answer the following research questions:

- 1. What do the students think about videoconferencing software used in online learning?
- 2. How do students perceive learning with online "study buddies"?
- 3. How effective was the online teaching delivery in developing students' skills and attitudes related to the goals of sustainable education?

Data Collection and Analysis

In this small-scale case study, data were collected through questionnaires and teacher reflection notes. Questionnaires were administered twice: in the eighth and sixteenth weeks of teaching (mid-course and end-of-course). The survey contained items on a four-point Likert scale to avoid neutral responses and also included open-ended items to complement quantitative data. The questionnaires and students' responses were in English. The qualitative data in the article are quoted directly, including students' grammatical mistakes. Triangulation was used to "increase the internal validity of the study by combining both insider, and outsider aspects of phenomena" (Duff, 2008, p. 143); the two sets of survey results were triangulated with the notes of two teachers who observed a class. In addition, the author has reflected on her experiences of the classes.

Teacher-researcher bias was a potential risk; however, classroom observations helped to reduce this. Moreover, with interpretative research, the aim is to "create an open and honest narrative that will resonate well with readers" (Cresswell, 2003, p. 196). The researcher was teaching the participants; however, it should not be viewed as a danger to validity; Nunan and Bailey (2009) state that the strength of a case study lies in subjectivity, which allows the researcher to elaborate on the investigated phenomenon in depth precisely due to this familiarity. Thus, establishing an emic approach, in other words insider perspective, helps to gain a deeper

understanding of the researched phenomenon (Dörnyei, 2007).

For Likert-scale items, data were tabulated quantitatively, using descriptive statistics. For openended questionnaire items, data were analyzed qualitatively, looking for repeated patterns and also finding emergent themes, which were identified with codes emerging from the dataset (Mackey & Gass, 2005). Labels were assigned to data, guided by the research questions.

Findings and Discussion

RQ1: What Do the Students Think about the Videoconferencing Software used in Online Learning?

Students' responses indicated that the Zoom videoconferencing tool was more favored than Teams (See: Figure 1 & Table 1) and students found it more suitable for the courses. This preference was explained by qualitative responses that referred to Zoom's interactive features, its online stability, and the lack of need to create an account to join the session, which was also found by Selwood (2021).

Figure 1Students' Videoconferencing Tool Preference for the Speaking Course

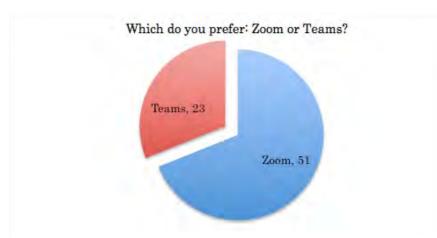


Table 1 *Average Feedback Scores for Teams and Zoom Sessions: Speaking and Writing Courses*

4 (++) 3(+) 2(-) 1() (4= Very good, 3= Good, 2= Not so good, 1= Not good)	Mean	SD.
Teams session rating in Term 1 (Speaking)	3.0	0.7
(N=74)		
Zoom session rating in Term 2 (Speaking)	3.5	0.5
(N=74)		
Zoom session rating in Term 2 (Writing)	3.5	0.9
(N=149)		

The qualitative results also revealed that the majority of students perceived the online videoconferencing positively and benefitted from several advantages of this online delivery method. As one comment from a student illustrates, the breakout room function of Zoom was ideal for discussions and it was useful for social networking and building a sense of community with others: "I like the discussions in the discussion room because I made friends with other students."

Another advantage was lexical development with an online platform for learning vocabulary (Quizlet Live), which was shared on Zoom during the online class. Students formed teams and worked together in breakout rooms to participate in a vocabulary-building game. Learning vocabulary online while collaborating with their group members and competing with their peers seemed to be effective for students and they found this type of learning enjoyable, as the following comments illustrate:

"Online word learning is easier than learning words using a vocabulary book."

"There are a lot of functions that help me, and I was able to learn new words while having fun."

Students also favored the use of the chat function (communicating through written messages) in videoconferencing to share their answers in parallel with speaking to peers; less confident students could participate actively so that "everyone has a chance to answer". In this way, all students were involved in the discussions. In connection with the online speaking course, students had positive comments about the content and topics. They particularly liked to learn about other countries and cultures in English. Some students also enjoyed summarizing and presenting the stories from the materials and giving presentations online. These activities were aimed at developing students' acceptance of cultural diversity, intercultural awareness, and developing a positive attitude towards other cultures, which significantly relates to the goals of sustainable education as the following comment from a learner illustrates: "I can know about various countries, so I enjoyed it like traveling world."

Some students reflected on the convenient nature of online learning because they could take the course from the comfort of their home and this way of learning is more flexible compared a traditional classroom setting: "I can study anywhere, anytime." However, one student suggested that face-to-face learning supported by a learning management system would be more suitable for English communication. This is in relation to the flipped approach in which a learning management system with backup materials online can support students' learning, as the student's feedback demonstrates: "Basically, I think that online learning is good for students. Online system bring us new ways to learn which we could not access ever before, but I think the best way would be face to face classes and the online system supports that."

RQ2: How Do Students Perceive Learning with Online "Study Buddies"?

According to the students, the online study buddies were found to be helpful in various ways. For instance, during the writing course, students could receive more ideas from each other through peer collaboration than writing by themselves. Online study buddies were also useful for revision and enhancing student motivation, based on the feedback:

"I think it is better to learn with my Online Study Buddies because I can confirm whether my answer is good or not and teach with each other."

Another student expressed the same idea:

"Because we can help each other's writing, I think it is better to learn with my Online Buddies."

These comments refer to cooperation and support, which are necessary skills outlined in the goals for sustainable education by MEXT (2016). Students need to cooperate and work on

problems together for a sustainable future.

Online study buddies proved to be useful for building a sense of community and valuing connections as well as social networking. According to MEXT (2016), education for sustainability focuses on partnerships to build networks and relationships, and improve communication between people; therefore, online study buddies were ideal, illustrated by the following feedback from a student: "We can communicate and make friends with each other." Other students also emphasized support and the importance of being in an online community: "...because we can help each other. I think it is better to learn with my Online Buddies." Another learner pointed out the benefit in terms of motivation: "...because we can work hard and encourage each other and cooperating with each other."

Creating online study buddies encouraged students to self-regulate their learning. They had to gather weekly and find time to study together. Peers were responsible for their own and their study buddies' learning. This is a case of interdependence, a sustainable education goal: "It is better to learn with buddies because I can work hard with buddies." Education for sustainability encourages individuals and groups to reflect upon personal experiences, worldviews, and various interpretations as well as ways of engaging with the world (MEXT, 2016). Online study buddies contributed to these critical thinking skills through an interactive learning aspect: "I think it is better to learn with our Online Buddies because we can get more ideas from them."

In addition, the majority of students found that online study buddies were not only useful but enjoyable as well. They expressed their preference towards learning in an online community instead of learning on their own, for instance in a self-study class. One of the comments illustrates this point: "I think it is better to learn with my Online Study Buddies because we can study happily."

According to students, there were some negative aspects of online study buddies, related to the size of the group and time management. Feedback from some students revealed that it was easier to work together in pairs and they found it difficult to study together in groups of four with their online study buddies. Also, some students found it challenging to coordinate the time to meet with their peers because they belonged to various departments and had different schedules. It would have been more suitable to ask students to form their own study buddy groups and choose peers on their own. These drawbacks were expressed in the following comments: "It is difficult to find time with the buddies so it is better without." Another student stated: "I think it would be better to have a study buddy group of about two people."

RQ3: How Effective was the Online Teaching Delivery in Developing Students' Skills and Attitudes Related to the Goals of Sustainable Education?

Students' responses suggest that live vocabulary learning on Zoom was ideal for enhancing cooperation among students and drawing on interdependence as well as creating a sense of responsibility among the group members. Online study buddies contributed to minimizing students' isolation by creating a sense of community among them. Support and cooperation were also themes reported by students, thus achieving an important goal of sustainable education within the online learning environment. This line of thought is expressed by the following feedback from a student: "Because we can work hard and encourage each other and cooperating with each other."

Through interactive learning, students could share ideas and broaden their understanding,

which encourages them to be responsible thinkers for a sustainable future: "I think discussing with my class members was good. I could learn different ideas." Another student agreed with this point: "What I liked about this course is that we can know many ideas and views of other students." The same idea about student interaction was also expressed in a classroom observation note: "Students were placed in breakout rooms four times during the session, allowing them the chance to interact with each other and broaden their understanding with both controlled tasks and freer tasks."

In addition, online learning helped students to strengthen their cognitive and social presence to foster the skills necessary for building international partnerships in the future. Based on the community of inquiry (CoI) model (Garrison, Anderson, & Archer, 2000), cognitive presence, social presence, and teacher presence are the three important elements of effective online learning. Cognitive presence refers to a community of learners who are able to construct meaning through sustained communication. It develops when students cooperate in order to explore, construct, and confirm their understanding of the content (Garrison & Arbaugh, 2007). This is reflected in some of the comments by students: "...because I've deepened my understanding by checking my buddy's answers." As another student explained: "I think it is better to learn with our Online Buddies because we can get more ideas from them."

Social presence is "the ability of participants in a community of inquiry to project themselves socially and emotionally as "real" people through the medium of communication being used" (Garrison et al., 2000, p. 94), reflected by the following student comment: "I liked to talk with everyone and listen to their opinion. By writing and looking at essays and discussion, I could know everyone's thinking or favorite things." Interactions between learners contribute to the socio-emotional connections that create social presence.

Further, teaching presence consists of planning and facilitating the discourse. Also, it can greatly impact students' cognitive and social performance as well as shape the community of learners (Garrison & Arbaugh, 2007). The following excerpt from a classroom observation note illustrates this point, related to online interactive learning: "I was also impressed by the way you responded to the students with questions and/or comments which would expand the topic or deepen their understanding of the topic."

Another classroom observation notes highlighted teaching presence that fostered students' intercultural awareness when learning English. The observer stressed the importance of a positive and warm teacher attitude, good classroom management, and an interest in encouraging thought about different cultures as well as language learning.

Conclusion and Implications

In our globalized world, sustainable development goals are stressed to build a better future and achieve sustainability. To do this, we need to work on global issues while cooperating with each other and tackle the problems we are facing in the world. The results of this study show that various benefits and outcomes of online teaching delivery can be linked with sustainability. These relate to both sustainable education in times of emergency and the broad themes of sustainable education promoted by MEXT. The 2020 COVID-19 pandemic acted as a driver for innovation, with teachers having to quickly make decisions on how to deliver courses and classes while being unable to operate in traditional classroom settings. The solution to the problem was flipped learning. This involved the use of videoconferencing software as a means of providing the traditional social interaction of the classroom in combination with a learning

management system that allowed both self-study and the sharing of written and audio work.

In relation to sustaining education in times of emergency, by organizing students into out-ofclass study-buddy groups and through creating small-group work in videoconferencing sessions, it was possible for students to interact. By doing so they developed connections and friendships through working on focused tasks such as discussions and vocabulary-development games. In some ways, videoconferencing gave students more avenues for communication than a traditional classroom. For example, students could communicate with the teacher through a chat function. In a period of globalization and climate change, in which there are both the increasing risk of pandemics and of extreme weather events, the results of the questionnaires indicate that education can be sustained effectively through videoconferencing and learning management systems.

In the broader context of sustainable education, three aims of the course were cooperation, responsibility, and interdependence. The results of the data analysis show that "study buddy" groups, working within the structured environment of a course, helped to address these aims. From a Vygotskyan perspective, they provided many opportunities for peer learning, with students working together to check answers or learn content from each other, which motivated them to study. This was particularly evident in writing classes, in which students were expected to write for each other. They were able to gain an understanding of how others think as well as their interests, and this could be deepened by the teacher's contributions in more collective discussions. The integration of asynchronous writing tasks on a learning management system also helped to foster a sense of responsibility and interdependence. In contrast to a more traditional approach in which students submit work to a teacher for marking and correction, students knew that they would read and comment on each other's writing. Therefore, it was important to meet deadlines in order to contribute to class activity. Consequently, students were involved in both synchronous discourse in planning to write, and asynchronous discourse in which they shaped and deepened their ideas through writing for others. This form of deep learning is promoted by MEXT to achieve the goals of sustainable education. The interweaving of videoconferencing with a learning management system created the environment for both types of discourse.

In terms of cultural awareness, one student noted that the speaking course was like traveling around the world. While this may relate more to course content, which involved units based on fictional students traveling in a variety of countries, it can also be explained partly by discussions in conjunction with the use of presentation software and links to video. The advantage of using videoconferencing was putting presentations on screen. Although Japanese universities have very good technology in classrooms, setting up presentations is often more complex, involving lowering screens, closing blinds, and dimming lights. There was much greater immediacy to presenting online. This could be supplemented by the careful selection of video links to YouTube on the learning management system that provided footage of settings used in the presentations and online content.

Regarding implications for the future, a number of possibilities emerge. These relate to the range of courses universities may offer and the use of technologies for sustainable education. The current situation of the COVID-19 pandemic has accultured many teachers and students to the use of technologies for online learning. This acculturation is likely to be used in several ways in the future: as a resource in times of emergency or disruption; for courses involving students in different locations; and for new hybrid models.

In the COVID-19 pandemic, videoconferencing software was used as a substitute for the classroom environment. The data indicate that online courses can be delivered successfully through good teacher management of students in conjunction with videoconferencing software and learning management systems. For courses that are primarily taught in classrooms this offers a resource for disruptions due to weather events or more individual problems. Rescheduled classes can be taught online, especially where this involves a weekend, freeing students and teachers from the necessity of travelling to a classroom.

Although the main form of classroom delivery for the future will be classroom-based, some courses may be offered online through videoconferencing and learning management systems, particularly where international students are involved. From the perspective of global citizenship and appreciation of cultural diversity, English language courses benefit from the participation of students from differing backgrounds. Due to travel restrictions, some students have been unable to travel from their home countries, but have been able to participate in classes online. Videoconferencing technologies and learning management systems now offer a much greater opportunity for international student exchange. Because students from various countries can participate in joint projects, discussions, and problem solving, intercultural discussion will contribute to the government's idea of "Think globally, act locally" (MEXT, 2016, p. 4), and improve the quality of learning.

With the return to classrooms, an important question is how technology will be combined with social interaction in the future. The most likely result is a model in which some of the innovations that emerged in the time of the pandemic become integrated into classroom-based courses. In this article the focus has been primarily on social interaction through videoconferencing, but this has been supported by carefully constructed materials on a learning management system, which is complementary software for either classroom-based learning or learning through videoconferencing. Particularly in Japan, where ownership of smartphones is very extensive, students all have Internet access in the classroom through these devices.

Another possibility is a hybrid model which combines on-site learning with videoconferencing to create an inclusive intercultural classroom. In terms of sustainability, it can be extended beyond a course to a whole study-abroad program, and so offers the possibility for a university to broaden its connections with other institutions of tertiary education across the world. Although, there might be challenges such as the time difference between the local students and international students, they can have access to and take part in education more easily. Such internationally joint hybrid classes can create more intercultural classrooms which contribute to international cooperation in our globalized world.

Finally, this article has had a focus on the importance of social interaction in the learning process, particularly through peer interaction, and the development of communication skills in English through writing and speaking. What has emerged from the data is that current technologies can be used to augment such learning, creating an environment where skills are developed through tasks and interaction that is focused on meaningful exchange, and so aid in achieving the aims of sustainable education.

Acknowledgements

I would like to thank Walter Davies for proofreading this article. I am deeply grateful for his valuable feedback on the draft.

References

- Bergmann J., & Sams, A. (2012). Flip your classroom: Reach every student in every class every day. Washington, DC: International Society for Technology in Education.
- Cresswell, J. W. (2003). Research design: Qualitative, quantitative and mixed methods approaches (2nd edition). London: Sage.
- Dörnyei, Z. (2007). Research methods in applied linguistics. Oxford: Oxford University Press.
- Duff, P. A. (2008). Case study research in applied linguistics. New York, NY: Taylor & Francis Group.
- Enokida, K., Fraser, S., Davies, W., & Tatsukawa, K. (2018). Teaching and evaluating a medical English flipped learning course. *Hiroshima Studies in Language and Language Education 21*, 13–31. http://doi.org/10.15027/45298
- Exter, M. E., Korkmaz, N., Harlin, N. M., & Bichelmeyer, B. (2009). Sense of community within a fully online program: Perspectives of graduate students. *The Quarterly Review of Distance Education*, 10(2), 177–194.
- Garrison, D. R., & Arbaugh, J. B. (2007). Researching the community of inquiry framework: Review, issues and future directions. *The Internet and Higher Education*, 10(3), 157–172. http://dx.doi.org/10.1016/j.iheduc.2007.04.001
- Garrison, R. D., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2), 87–105. http://dx.doi.org/10.1016/S1096-7516(00)00016-6
- Jacobs, G. M., & Hall, S. (2002). Implementing cooperative learning. In J. C. Richards & W. A. Renandya (Eds.), *Methodology in language teaching: An anthology of current practice* (pp. 52–58). Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511667190.009
- Larsen-Freeman, D. (1986). *Techniques and principles in language teaching*. Oxford: Oxford University Press.
- Littlewood, W. (1981). *Communicative language teaching*. Cambridge: Cambridge University Press.
- Mackey, A., & Gass, S. M. (2005). Second language research: Methodology and design. Mahwah, NJ: Lawrence Erlbaum Associates.
- McInnerney, J. M., & Roberts, T. (2004). Online learning: Social interaction and the creation of a sense of community. *Educational Technology and Society*, 7(3), 73–81.
- McGuire, C. J., & Castle, S. (2010). An analysis of student self-assessment of online, blended, and face-to-face learning environments: Implications for sustainable education delivery. *American Journal of Education*, *3*(3), 36–40. http://dx.doi.org/10.5539/ies.v3n3p36
- McMillan, D. W., & Chavis, D. (1986). A sense of community: A definition and theory. *Journal of Community Psychology*, 14(1), 6–23. https://doi.org/10.1002/1520-6629(198601)14:1<6::AID-JCOP2290140103>3.0.CO;2-I

- Ministry of Education, Culture, Sports, Science and Technology (MEXT). (2016). *A guide to promoting ESD (Education for Sustainable Development)*. Japan National Commission for UNESCO. https://www.mext.go.jp/component/english/__icsFiles/afieldfile/2016/11/21/1379653 __01__1.pdf
- Ministry of Education, Culture, Sports, Science and Technology (MEXT). (2013). *ESD: Education for sustainable development*. Accessed from https://www.mext.go.jp/en/unesco/title04/detail04/sdetail04/1375695.htm
- Network, F. L. (2014). The four pillars of F-L-I-P. Retrieved from https://flippedlearning.org/wp-content/uploads/2016/07/FLIP_handout_FNL_Web.pdf
- Nunan, D. (2004). *Task-based language teaching*. Cambridge: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511667336
- Nunan, D., & Bailey, K. M. (2009). Exploring second language classroom research: A comprehensive guide. Boston: Heinle Cengage Learning.
- Selwood, J. (2021). Using zoom and m-learning methods for a productive skills course. In M. Morita & K. Enokida (Eds.), *Language education under the coronavirus pandemic:*Online courses developed by Hiroshima University's Institute for Foreign Language Research and Education (pp. 200–225). Keisuisha Publishing.
- Tanabe, J. (2015). Bridging learners in Hungary and Japan: A case study of an online EFL communication project. In M. Lehmann, R. Lugossy & J. Horvath (Eds.), *UPRT 2015: Empirical studies in English applied linguistics* (pp. 53–73). Pecs: Lingua Franca Csoport.
- Warburton, K. (2003). Deep learning and education for sustainability. *International Journal of Sustainability in Higher Education*, 4(1), 44–56. http://dx.doi.org/10.1108/14676370310455332
- Williams, M., & Burden, R. (1997). *Psychology for language teachers: A social constructivist approach*. Cambridge: Cambridge University Press.

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