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Improving Learner Engagement in an Online Learning Community to Increase English Language Skills

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ABSTRACT

Recently, educators in Japan have been working to change the way in which English Education is conducted in Japan while dealing with an increase in “computer illiteracy” among the younger generation. In order to determine if it was possible to improve learners’ abilities in both the fields of English language learning and technological competency, this study had learners create an online learning community where facilitator-led discussions and collaborative problem-solving activities could take place. The research goals were to measure the effect that using the English language to participate in such an online learning community had on EFL Japanese learners’ English language abilities, discover how this community affected the learners’ motivation to learn on their own, and see whether a blended learning style where face-to-face instruction was combined with virtual activities could increase engagement in the community among non-computer oriented learners. The study was conducted with 25 first-year university students at a Japanese national university who spent 12 weeks on a language learning website using English as the medium of conversation to discuss facilitator-posted weekly topics. Every 4 weeks, the facilitator conducted a workshop that covered ways to use various features on the website. Data was collected through a pre-test, a post-test and a questionnaire survey. The test results indicated that by participating in the online community, the English language abilities of the learners had increased. The questionnaire survey revealed that the community helped to raise the motivation levels of over half of the learners and indicated that the workshops were effective in helping increase learner engagement in the weekly discussions. It can be seen that with face-to-face interactions, which helps the learners to familiarize themselves with the technology that is to be used in online discourse, learner engagement increases, which in turn improves their overall language abilities.

Keywords: Second language acquisition, E-learning, technology in education, collaborative learning, blended learning

Introduction

As the year 2020 approaches, Japan is working to overhaul their English education system from one which traditionally has focused on grammar and translation to a more communicative approach. Leading this change is the Ministry of Education, Culture, Sports, Science and Technology (MEXT). Japanese people learn the English language mainly for the dual purpose of communicating their own culture to the world and learning from the cultures of others outside of their country. With the internet allowing people to be almost instantly connected with anyone on the earth, the ability to use the very devices which facilitate these

connections is critical. As such, the use of technology is intrinsically tied together with the learning of English as a second language within Japan. Yet, surveys conducted by the Japanese government show that while 90.9% of Japanese high school students have access to smartphones, less than 31.8% of these same students have access to computers (Cabinet Office, 2016). This indicates that the heavy smartphone usage and a lack of computers in these students' daily environment is contributing to the rise in computer illiteracy, the inability to use the basic functions of a computer, among themselves and their peers. MEXT is working to combat this by introducing more information communications technology (ICT) to the classroom within the next 3 years (MEXT, 2016). As such, there is a need for English education in Japan to also prepare for a change in how instruction will take place in the future.

Purpose of the Study

This study was conducted in order to visualize and bring in a futuristic look at the Japanese EFL classroom that takes place not in the physical world, but a virtual one. The goal was to measure the effect that holding discussions in a virtual environment while using the English language would have on the attitudes of the learners, their engagement levels in the class, any changes to their English language abilities, technological competency, and interest in the English language. The study also considered what adjustments, if any, would be necessary when learners were brought into a learner-centered environment of study as opposed to the traditional teacher-centered classroom.

Research Questions

This study sought to answer three questions:

1. How much can the four skills of language be affected through participation in an online learning community?
2. Does the number of times that the online learning and community website was accessed reveal a difference in the learners' pre- and posttest scores?
3. To what degree does participating in an online learning community encourage learners to study English on their own?

Theoretical Framework

Collaborative Learning

Lev Vygotsky's social constructivist approach to learning is best known for the concept of the Zone of Proximal Development (ZPD). The ZPD refers to what the learner can do when guided or aided by an instructor but cannot do by themselves (Woo & Reeves, 2007; Vygotsky, 1978). In recent times, the theory of the ZPD has been expanded and re-worded to "scaffolding" (Wood, Bruner & Ross, 1976) and also has been used as the basis for the learning style known as collaborative learning.

Collaborative learning is described as learners working together in order to create a solution to a problem or a shared body of knowledge (Roschelle & Teasley, 1995; Dillenbourg & Fischer, 2007). Differing from Vygotsky's ZPD, learners, not the instructor, help one another in carrying out tasks that would be extremely difficult or impossible to individually fulfill. With language learning, collaborative learning occurs spontaneously when the target language is used amongst learners because communication requires the users to collaborate and construct meaning amongst themselves. With regards to collaborative learning online, collectively acquiring knowledge is one of the key elements to producing a successful learning environment (Conrad & Donaldson, 2004, p. 5). However, this does not mean that

the instructor is wholly excluded from the learning process. In online learning, there is a need for instructors or facilitators to provide the necessary elements that will allow learners to discuss and work together (Wickersham & Dooley, 2006).

Community of Inquiry Model

With regards to what must be provided by the instructors in online based learning, the Community of Inquiry model (Garrison et al., 2000) has been put forth as the foremost instructional design model. This model outlines three “presences”, the social, teaching, and cognitive presence that are required for the creation of a successful online community where learners can collaborate and further their collective knowledge (Akyol & Garrison, 2011; Akyol & Garrison, 2014).

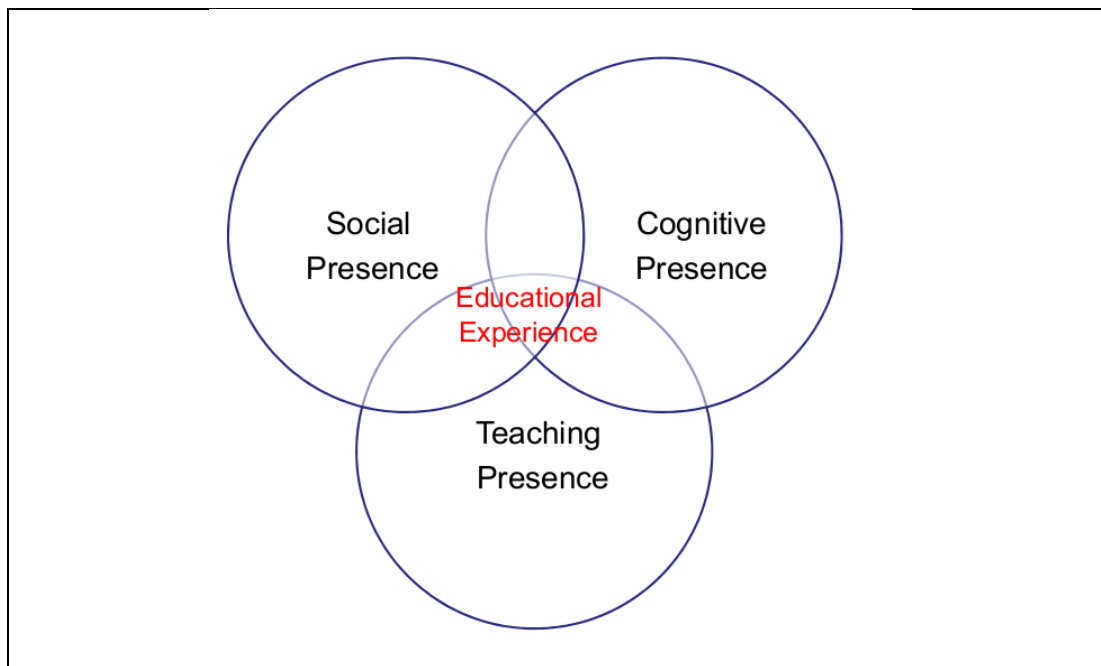


Figure 1. The Community of Inquiry Model. Garrison et al. (2000).

Social presence is defined as learners having the sense that they are dealing with “real people” (Annand, 2011). This is especially important due to the feeling of isolation that many learners may have when first interacting with people through a device, rather than face-to-face. In other words, the social presence makes the “qualitative difference between a collaborative community of inquiry and a simple process of downloading information” (Garrison et al., 2000). With a community of people, there are interactions and communication which in turn helps to increase student engagement (Shea, P., Li, C. S., & Pickett, A., 2006). The teaching presence refers to the actual design of the course, or the “structure” of the learners’ environment as set by instructor (Anderson et al., 2001). Cognitive presence is “the construction of meaning through sustained communication” that appears when the social and teaching presences are maintained (Garrison, et al., 2001).

These three presences combined are what is considered the “educational experience” (Garrison et al., 2000). Using the Community of Inquiry model, facilitators worked to help learners produce these presences within themselves and maintain the discourse necessary to collaboratively create several bodies of knowledge for this study. Due to the difficulty of establishing a social presence with solely online interaction, a blended learning approach was utilized.

Methodology

25 first-year students at a national university participated in the present study. They consisted of 22 Japanese students and 3 foreign exchange students who were taking an Information-Processing Equipment class. With the majority of the participants being English Education majors, the focus of the discussions were on English language learning, studying techniques, and pedagogy.

An online English learning website called Global English (globalenglish.com, 2016) was used for the study. Before the participants began to interact with one another in the online setting, facilitators held a face-to-face session which included pretests and a workshop that was intended to help familiarize the participants with the website. Following this initial session, the participants participated in discussions on the website for 12 weeks. Once every 4 weeks, the facilitator held workshops that introduced new elements of the website to the participants and answered any questions that they may have had. At the end of the study, the participants took a posttest and responded to a questionnaire survey. The pre and posttests covered the four skills of language with grammar, reading, listening and speaking.

The discussions were split into three sections of four weeks each. Each section required participants to use various combinations of the four skills of language. Throughout the study, the content of the discussion began with sharing information and gradually moved towards critical thinking and problem solving as a group. The first section had facilitators posting a discussion topic every week which revolved around how to write essays in English. The learners wrote about their opinions on how to best teach and practice essay writing, read what others had to say about the topic, and responded to any posts that they felt were relevant to their interests.

Following the first section, facilitators held a workshop that introduced a feature on the website where users could record their own voice and post them for others to hear. In the second section, learners discussed topics that were based off of interview questions used in Japan's teacher recruitment exams and brainstormed ways in which to improve the Global English website using only audio recordings to communicate with one another. The final section required participants to discuss ways in which various aspects of teaching English could be reworked for the Japanese classroom. Table 1 shows the weekly schedule of the study together with the targeted language skills and discussion topics for each week.

Table 1

Weekly Schedule of Study. R=Reading, W= Writing, L= Listening, S= Speaking.

Week	Content	Discussion Topic
Week 1	Pretests	
Week 2 ~ 5	R + W	Self – Introductions and Topic Sentences Teaching Writing: Introductory Paragraph Teaching Writing: Body Paragraph Teaching Writing: Conclusion Paragraph
Week 6 ~ 9	L + S	Teacher's Recruitment Exam Prompts Teacher's Recruitment Exam Prompts Thoughts on Global English Edge Improving Global English Edge
Week 10 ~ 13	R + W + L + S	Using Technology to Learn Vocabulary Improving English Listening Skills Thoughts on Classroom Presentations Favorite Thing about English
Week 14	All Posttests & Questionnaire	

Literature Review

Communication Among Learners

Studies have shown that communication and cooperation among learners often determines how much learning occurs in a given environment (Lim, 2004; Sher, 2009; Niemczyk and Savenye, 2010). An environment that allows for increased levels of learning “(a) lets a group of students formulate a shared goal for their learning process, (b) allows the students to use personal motivating problems / interests / experiences as springboards, (c) takes dialogue as the fundamental way of inquiry” (Christiansen & Dirckinck-Holmfeld, 1995, p. 1). However, when these elements are lacking in an educational setting, it has been found that students will no longer attend the class or participate in learning (Traver, Bidjerano & Shea, 2014).

Blended Learning

In online learning, it is often difficult to maintain the type of environment that is necessary in order to stimulate dialogue or sustain communication between the learners. One major reason for this is because in a collaborative learning environment, the learner is required become autonomous in their pursuit of knowledge with a greater emphasis their ability to discuss and work together with their fellow learners. In the virtual classroom, the learner is then required to put forth a greater effort to participate in the online learning courses. Multiple studies have shown that full online learning programs suffer from learner attrition due to learners being unable to bridge the gap between a teacher-centered way of learning and a completely autonomous learning style. Learners who began fully online courses with what was perceived as a high level of autonomy, however, tended to do well (Bawa, 2016; Traver et al., 2014; Yen & Liu, 2009).

Thus, the idea of blended learning arose in order to address this issue with online learning. In a 2012 study on blended course designs, McGee & Reis found that “At its most basic, blended learning combines elements of face-to-face and online modalities regarding content and delivery”. Although a certain level of autonomy is still required of learners in blended learning courses, the amount required is much lower than that of full online learning.

It has also been shown that learners in blended learning courses do just as well as those in face-to-face courses (Crawford, Barker & Seyam, 2014) due to the ability of instructors to help students prepare for full autonomy with face-to-face instruction (deNoyelles, Futch, Howard & Thompson, 2016). For a blended learning course to succeed, it has been stated that it should be learner based rather than instructor-centered, but with the proper framework that allows them to succeed. (McGee & Reis, 2012; Shand, Glasset & Costa, 2016). These elements allow for facilitators to be more flexible with regards to student needs and helps to foster a stronger sense of community compared to both the traditional classroom and full online learning (Cruz-Johnson, 2012; Rovai & Jordan, 2004).

Findings

Pretest and Posttest

Due to the participants of the study being required to be autonomous in their participation in the online learning community, it was possible to divide them into two groups when analysing the results of their pretests and posttests. This was done by measuring the amount of times the more difficult task of recording audio responses and putting them on the website was completed by a given participant. The participants were then split into two groups between those who had over ten audio recordings or responses to audio recordings on the website (auditory) and those who did not (non-auditory).

The results showed that there was not a significant difference ($p < 0.05$) in the change in scores between the two groups from the pretest to posttest for grammar. With regards to

reading, speaking, and listening, the auditory group's scores had an overall greater increase in comparison to the non-auditory group. When looking at the overall scores of each group and comparing the tests taken before and after the study, the skills of reading and speaking had a noticeable increase for both groups. Table 2 shows the means and standard deviations of each section of the pre and posttests according to group.

Table 2

Means and Standard Deviations of Auditory and Non-Auditory Groups by Section

	<u>Mean</u>		<u>SD</u>	
	Auditory	Non-Auditory	Auditory	Non-Auditory
Grammar				
Pretest	217.23	239.77	16.04	16.99
Posttest	216.57	217.89	20.06	22.59
Listening				
Pretest	146.71	180.33	54.48	22.53
Posttest	182.00	145.78	30.22	22.59
Reading				
Pretest	126.43	151.00	42.61	37.32
Posttest	171.15	171.78	37.90	22.59
Speaking				
Pretest	169.64	183.33	24.85	10.83
Posttest	205.36	183.33	12.20	16.54

Questionnaire Responses

The questionnaire surveys filled out by the participants revealed that there was an increase in studying more English compared to the amount of studying that was being done prior to participating in the study. More than half of the participants expressed a greater interest and appreciation towards English due to participating in the online learning community. For the ones who stated that they did not have an increase in studying, interest or appreciation of English, the majority indicated that they did not have any change in their interest or appreciation levels while all but one commented that there was no change in their level of studying English due to a lack of comfort using ICT devices. Responses included statements such as, "After posting to the community and reading the comments, my eyes became tired. I did not feel like studying more" and "Because I do not like studying using computers". One student felt quite strongly concerning using ICT devices for studying purposes: "Although the amount of English that I contacted increased through the website, because I do not like studying using computers, I felt that it negatively impacted my enjoyment of English."

With regards to the participants' perceptions concerning their own English language skills, the majority reported an elevated sense of confidence in their reading and writing skills but not their speaking and listening skills. Yet, when asked about which of the four skills of language they felt had improved the most, well over half responded that their listening and speaking skills had improved. Finally, with regards to levels of comfort in using the website itself, the participants affirmed that instructions for accessing the website were clear.

Discussion

Technological Problems

During the study there was a technological problem where it became impossible to playback any recorded audio after it was posted on the website. This resulted in a drop in activity among the participants. The facilitators attempted to resolve the problem but

ultimately were forced to change the program that was used for recording and uploading the audio that would be used for discussions. This was in fact what led to a group that persisted in re-learning how to use audio messages to comment on the discussion topic and a group that either reverted to only using written comments or not participating in discussions.

Four Skills of Language

Out of the four skills of language, grammar, with regards to writing was the only one not affected in a meaningful manner among the participants. This is possibly because while the facilitators gave feedback aimed at promoting and maintaining discussions, there was no direct feedback which the participants could use as learning experiences concerning their own writing or speaking. There were, however, models of grammatically correct English with the three exchange students who also participated in the community. Another explanation can be found with the mean scores for the pretest ($M=239.77$) and posttest ($M=217.23$) which was close to the maximum possible score of 250. The implication is that the participants' grammar abilities were originally close to the upper limit and may have played a significant role in the lack of perceived growth. In contrast, the reading scores for both groups improved significantly. In the weekly discussions there were large amounts of written comments which the participants would have to read while formulating their own discussion points or giving responses to previous posts by their fellow participants. The responses to the questionnaire showed that the students felt they were exposed to a greater amount of English than they normally would encounter in their daily lives.

The sharp split in speaking between the two groups with a greater increase in the auditory group is thought to have stemmed from their continuing to listen to fellow community members' audio recordings and recording their own audio comments. Not only this, but with regards to listening, the auditory group would have had to listen to their own voices during the act of speaking, thus improving their listening abilities. The lack of significant improvement in listening ability for the non-auditory group compared to the auditory group can be linked to the technological failure where everyone spent some time recording audio comments before the problems occurred but then were unable to listen to most of the comments that had been put on the website.

The technological problems also affected the participants' response when asked which of the four skills of language they thought had improved the least. The inability to listen to the audio caused many to feel that their listening abilities had not improved at the end of the study. However, the results of the tests showed slight to moderate improvement in not only listening but also speaking across both groups. This may be because for Japanese EFL learners, reading and writing are skills that they greatly focus on in order to prepare for entrance exams to universities while listening and speaking are often neglected. Due to this imbalanced approach to learning English, the participants may have been using their listening and speaking skills more often than previously, despite the opportunities to use their listening skills were severely limited.

Technology in Education

The questionnaire responses highlighted the frustrations of the participants with regards to the problems that the website had with the audio recordings. This is always a possibility whenever new technology is introduced to the classroom. All but two of the participants who said that it was difficult for them to use the website pointed to the website problems as their reason for their response. Yet, there were no changes in attitudes towards studying English using ICT devices. While nearly half of the participants gave up on trying to work with the audio recordings after the troubles on the website, the questionnaire showed

that a number of participants who had trouble participating in the community discussions due to a low level of computer literacy at the beginning of the study had made multiple attempts to record and put their comments on the website for discussion. This higher level of participation was attributed to the positive experiences that they had during the first section of the study, giving them the motivation to make the attempt to actively engage in their own learning process during the second section. According to Vygotsky's Zone of Proximal Development theory, it can be said that in this instance, the scaffolding from the instructors in the first section had helped the learners to grow to a point where their ability to participate in the community using ICT devices was no longer within their zone of proximal development.

The discussions among the participants showed a marked change throughout the study. In the beginning, there were those who did not post often and nearly all were focused on only speaking their own thoughts but not commenting on others' discussion points. Through the workshops though, the facilitators were able to not only establish the format in which the discussions would take place but also allowed the participants to interact with one another outside of the virtual environment. The participants themselves were able to readily participate in the community discussions following several workshops. This type of blended environment helped to establish Community of Inquiry model's social and teaching presence and eventually led to the formation of the cognitive presence in the online community. The content of the discussions also changed from simple discussion topic responses in the first section of the study to critiquing other participants' comments and considering ways in which to reach a consensus with one another in the final section.

Limitations

Although the technological issues which occurred during the study allowed the participants to be separated into groups for an comparison on how the four skills of language were affected by the community between those who did and did not contribute to discussions using audio recordings, there was also a large impact on the students' replies in the questionnaire and their overall attitudes during the study itself. While it had become possible to see the difference in results based on the test results, it is possible that the final responses on the questionnaire were altered due to the problems. The manner in which the participants participated in the community also changed. For some, the problems motivated them to try and overcome a barrier that previously had not been there, thus allowing them to work harder and grow more in their mastery of the English language. For others, however the problems led to a decrease in motivation and in turn, less positive results.

Another limitation was the amount of time allotted for the study. There was a period of time between when the issue with the website was discovered and when the facilitator was able to set up an alternative method of audio recording. The final section of the study showed that participants were beginning to re-adapt to the changes in the system, but especially for those who not as comfortable using computers it was a slow process that was still not resolved by the time the study came to an end.

Recommendations

This study showed what could be considered the first stage of forming an online learning community and using problem-solving and critical-thinking oriented discussions in tandem with the learners' second language in order to effectively aid their second language acquisition. In the participants' comments at the end of the study, several stated that they would have liked to see topics concerning other cultures and information about English-speaking countries. For the future studies, it may be worthwhile to modify the discussion

topics to fit the interests of the learners or give deeper background knowledge to what they are studying.

Other comments at the end of the study from participants was a request for more direct feedback concerning the quality of their discussions and the grammatical correctness of their posts. Oftentimes the foreign exchange students would post their own opinions on topics but would not write responses to the other participants' comments. It may be that both feedback from both the facilitators and the native speakers that participate in the community will help raise the grammar abilities of the learners.

Of course, it is paramount that the facilitators and instructors rigorously test their technology before putting it to use in order to avoid the types of errors that occurred on the website in this study. This too is an important piece in creating an environment where discourse can take place. So-called "stress tests" may have to be conducted before certain programs or websites can be used for forming communities, especially when involving large amounts of data like audio recordings.

Conclusion

The results of the study showed that an increase in language skills can be seen when learners use English as the primary form of communication while participating in an online learning community. Facilitators must work to help those with less ability in using ICT devices until they are able to freely use the tools that allow them access the community in order to smoothly bring them to a stage of being fully engaged in the discussions. Having the learners work with content that is of interest to them and working with them to help lead them to the point where they can create and produce their own discussions also helps motivate the learners to take an active role in their learning process. The community also draws them in and has them work in roles, where at times they may be the teacher but at other times they are the student, further engaging them in communicating with their fellow learners. It is this type of engagement that helps the learner raise their language abilities.

Once learners become engaged in a group such as an online learning community, it becomes easier to become self-motivated and maintain their learning. This could be seen during the study where several students who found initial difficulty in learning through ICT devices persisting in contributing to the discussions even when faced with major technological issues. Providing learners with a solid base of support is necessary in order for them to become engaged in a learning community and, should there be disengagement, for re-engagement. This is included in the challenges that Japanese instructors would face today when attempting to bring this type of technology to their students while giving them ample opportunity to encounter English in an EFL environment. By learning to work together and communicate with one another, learners can not only raise their English language abilities but also gain many valuable skills such as negotiating meaning and encountering new ways of thinking which would allow them to become valuable members of the increasingly interconnected global community.

Acknowledgement

This work was supported by JSPS KAKENHI (A) Grant Number 26244031 (PI: Hirokazu Yokokawa) and also by JSPS KAKENHI Grant Number 16H00099.

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