

Implementing 21st-century Skills in Teaching EFL

Hiroyuki Obari

Abstract:

This study aims to explore the integration of 21st-century skills into teaching EFL with ICT. This study suggests that integrating flipped learning with 21st-century skills may be a practical approach to improving the learners' language proficiency. The investigation began in April 2017 and ended in January 2018, targeting 22 third-year Japanese undergraduates. Results of the study revealed that the training program had assisted the students in improving their English proficiency from the mean score of 667 (SD: 151) CEFR B1 level to 767 (SD: 83) CEFR B2 level and acquiring the 21st-century skills through collaboration with ICT and mobile technologies during the ten months. Additionally, pre-and post-questionnaires administered to the students at the beginning and the end of the training period to help evaluate the effectiveness of the program. 90% of students who participated in this study felt that flipped, and active learning activities enabled them to improve their English proficiency skills and acquire the 21-century skills.

Keywords: Constructivism, 21st-century skills, Flipped learning, TOEIC

1. Introduction

Recent innovations in technology have accelerated and expanded social media us, brought about the advent of social media, such as Facebook, Twitter, LinkedIn, and Instagram can be experienced efficiently and smoothly using hand-held devices. This growth in mobile social media has enabled us to increase the number of ideal learning opportunities considerably through experiential learning activities with the help of such technologies. According to the concept of constructivism, people construct their understanding and knowledge

of the world and worldviews through experiencing environments beyond their most immediate lives and reflecting on those experiences (McCarty, Sato, & Obari, 2016). Social media can be used to enhance the construction of the broader view.

In this paper, I introduce a case study carried out in 2017 to help determine the effectiveness of a blended and flipped learning program that incorporated ICT/mobile technologies with 21st century skills in learning to improve the intercultural competence and English proficiency of a group of native Japanese undergraduate students studying at Aoyama Gakuin University (AGU), a private university in Tokyo. This study suggests that integrating flipped learning with 21st-century skills may be a practical approach to improving the learners' language proficiency.

2. Social Constructivism

According to the concept of social constructionism, people create new knowledge and learn the most effectively through social interaction and the exchange of information for mutual benefit. Constructionism also holds that learning can happen most effectively when people are active in forming tangible objects in the real world. In this sense, constructionism relates to experiential learning and builds upon the ideas of Jean Piaget (Burr, 1995, 2003). A constructivist approach to flipped learning encourages students to activate their brains to create new knowledge and to reflect more deeply and consistently on their learning activities.

Mobile technologies have succeeded in transforming learning methodologies (Vine, Sherimon, & Krishnan, 2011). One such methodology that has been adopted successfully in recent years is blended learning (BL). BL combines traditional face-to-face classroom methods with computer-mediated activities, resulting in a more integrated approach for both instructors and learners. BL can increase the options that a teacher has for more excellent quality and quantity of interaction in a learning environment. Mobile devices and social media are a key to the next generation of his new wave of educational instruction. Digital content is also transformation and expanding as mobile technologies, and social media continue to gain more dedicated users (Wilson & Smilanich, 2005).

Flipped learning (FL) is also gaining in popularity within L2 learning circles

more than ever before through the utilization of a variety of mobile technologies. In the traditional classroom instruction modal, the teacher was typically the central focus of a lesson and the primary disseminator of information during the class period. “Flipping” the classroom is both a pedagogical approach and a theoretical framework rooted in the constructivist and problem-based theories of learning. FL involves reversing the traditional structure of the school, such that in-class time is dedicated to interactive activities and homework is assigned to would-be in-class lecture materials (Webb, Doman, & Pusey, 2014).

3. 21st century skills

In 2008, author and Harvard Graduate School of Education researcher Tony Wagner identified what he termed the “7 Survival Skills” needed for the modern workplace (Wagner, 2008).

- Critical thinking and problem solving
- Collaboration
- Agility and adaptability
- Initiative and entrepreneurialism
- Effective oral and written communication
- Accessing and analyzing information
- Curiosity and imagination

Dr. Wagner wrote his ideas about 21–century skills on his website as follows;

Dr. Wagner has conducted significant research documenting the state of education in the United States. He demonstrates unequivocally that our school system remains firmly grounded in 19th and 20th-century paradigms of knowledge, and provides educators, parents, and communities with a new paradigm aligned to the world of the 21st century. The “7 Survival Skills for the 21st Century” which Dr. Wagner has identified are a cornerstone of the PBL21 model of curriculum. Einstein said we must first “formulate the problem.” Dr. Wagner maintains that “the ‘problem’ is, simply, that the future of our economy, the strength of our democracy, and perhaps even the health of the planet’s ecosystems depend on educating future generations in ways very different from how many of us were schooled” and he chal-

lenges us to “discover new ways of thinking about education and best practices in schools that are preparing all students for learning, work, and citizenship in the 21st century.”

Nowadays in addition to the 7C skills mentioned above, I will add one more skill called “Coexistence with AI” which could come up with 8C skills for the 21st-century education. In my class 2018, these 8C skills are integrated into learning EFL and intercultural communication with mobile technologies.

4. Interaction with CCC (Campus Crusade for Christ) members from the U.S.A.

We invite 8 or 9 CCC students from the U.S.A. to interact with our students several times. They discuss the following questions;

- (1) What is your worldview?
- (2) What kind of religion do you practice?
- (3) What is your definition of success and happiness?
- (4) Evolution vs. Creation
- (5) Who created the universe?
- (6) Who created the heaven and earth?
- (7) Differences in rituals
- (8) Concept of time
- (9) Life after death
- (10) Cause and Effect
- (11) Other issues related to the worldviews

My AGU seminar students also prepare the presentation to take part in the AGU and NUS joint seminar in September. So, when CCC students visit our class, they always assess our students’ performances and modify the Power-Point slides (see Figure 1). This way AGU students could well prepare for the language exchange between AGU and NUS with more confidence when we visit Singapore every September.



Figure 1: CCC members interact with AGU students

5. Pedagogy of Flipped learning and 21st century skills in learning EFL

As stated, our goal was to ascertain the effectiveness of BL / FL activities using mobile devices to improve our student's English proficiency, including their writing, oral communication, presentation skills, as well as 21st-century skills in learning to become internationally-minded people.

The study was conducted over one year during two academic semesters (April 2017 to January 2018). A total of 22 undergraduates participated in the study, all of whom were native speakers of Japanese studying at Aoyama Gakuin University (AGU) in Tokyo. The AGU students took the TOEIC test as a pretest in April 2017 and again as a posttest in January 2018. The TOEIC test provides reliable and widely-used data, and it was used to measure results as a measurement to determine if the students' scores would improve as a result of their exposure to the BL / FL activities with learning 21st-century skills in learning and thereby help ascertain the effectiveness of the overall program. The participants of this study also joined the joint seminar conducted in Singapore in September 2017 for eight days.

Research questions targeted in the study included the following:

- (1) Was the AGU and NUS joint seminar effective in nourishing the cultural attitudes and international understanding of AGU and NUS students?
- (2) Did AGU students improve English proficiency and 21st century skills in learning after their exposure to the seminar course?

The students were asked to complete the following tasks:

(1) view the online TED Talk of Rick Warren’s “Purpose-Filled Life” using their iPads or smartphones, they were asked to write a 300–word summary, create PowerPoint presentations of their summaries, and discuss their summaries with a group of native English speakers from the U.S.; (2) study worldviews after viewing the online lectures (Dr. Yee & Harre, 2001) delivered by several Oxford University professors that focused on ontological and epistemological issues, and they were asked to deliver numerous PPT presentations and create digital stories with their iPads; (3) watch several lectures delivered by Dr. Wai Meng Chan of the NUS with their mobile devices to learn the definition of culture; (4) produce and present movies on world religions; (5) use online ATR CALL Brix for learning TOEIC; (6) spend a week participating in a joint AGU / NUS seminar in Singapore; (7) engage in learning the theory of 21st century skills and give PowerPoint presentations of those contents with their smartphones and iPads; (8) we invite 8 CCC (Campus Crusade for Christ) students from the U.S.A. several times to let them assess AGU students’ presentation and discussion about the worldviews and (9) engage in additional interactions and discussions throughout the duration of the course.

At the end of the academic year, a course questionnaire was administered to the students after their exposure to the BL / FL activities incorporating m-learning, to ascertain their impressions of the program.

According to the pretest and post-test TOEFL results of our students during the 2012 academic year, almost all showed little or no improvement, which was one of the primary motivations for us to carry out the present study using a BL / FL program incorporating 21st century skills in learning with m-learning technologies over the past several years. The current study focused exclusively on the learning program and the data results that were accumulated, organized, and analyzed, respectively, during the 2017 academic year.

6. Assessment of the Blended and Flipped Learning Activities

a. TOEIC Results in 2017.

The 2017 study (n=22) indicated that AGU students’ pre- to post-training TOEIC scores increased from a mean of 667 (SD: 151) CFER B1 to 767 (SD:

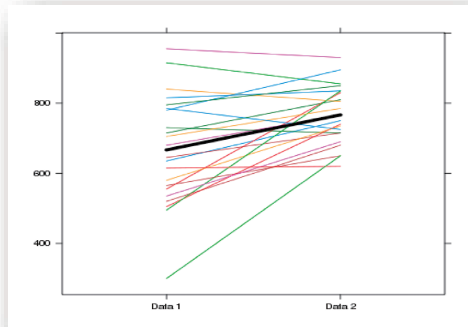


Figure 2: Improvement of individual score in 2017

83) CEFR B2.

Most of the students in 2017 improved their TOEIC scores from pre-test to post-test as indicated (see Figure 2).

The pre- / post-test results 2017 were analyzed using a t-test, indicating that the difference between pretest and posttest scores of both classes were statistically significant at a 1% level. It indicates that students improved their overall English proficiency.

b. Questionnaire

A post-course survey was administered to students after their exposure to the BL / FL program in 2017 at the end of the seminar. Here are the patterns of responses to several of the survey questions:

- (1) “Was the program useful in improving your English proficiency?”, 88% of students felt that the online lectures were beneficial;
- (2) “Was SNS (Facebook, Line, and Twitter) useful in learning English?”, 92% of students felt it was useful in learning English.
- (3) “Was this program useful in learning 21st-century skills?”, 90% of students felt it was useful.

Besides, according to the survey questions related to worldviews, all 22 participants of this study responded that they had become more open-minded and flexible in trying to comprehend certain ambiguities in cross-cultural society and communication in the world.

7. Conclusions

An assessment of pre- and post-training TOEIC scores revealed that the various types of online materials and lessons with CCC members included in this study had an empirically significant positive effect on the AGU students' English skills. Additionally, the students' listening and oral communication skills improved because of integrating the BL / FL activities that focused on a social constructivist approach to learning.

The post-course questionnaire revealed the students were satisfied with the variety of online course materials and programs and were motivated by the BL / FL environment incorporating 21st-century skills-learning. The students' English oral summary improved after their exposure to interaction with CCC member and online materials. Taken as a whole, these results indicate that SNS and BL / FL program using mobile technologies could be effectively integrated into our language learning curriculum at AGU and played a positive role in improving our students' overall language proficiency and expanding their worldviews.

Research questions targeted in the study included the following:

- (1) Was the AGU and NUS joint seminar effective in nourishing the cultural attitudes and international understanding of AGU and NUS students? Yes, it was effective.
- (2) Did AGU students improve English proficiency and 21st-century skills in learning after their exposure to the seminar course? Yes, they did. The mean score improved from 667 (SD: 151) CFER B1 to 767 (SD: 83) CEFR B2.

Additionally, our observations of the BL / FL lesson activities revealed that the students were enthusiastic to use a variety of emerging new technologies. Though difficult to measure empirically, by all appearances, helped students to

enhance their English skills. One could conclude that this positive effect was caused, in part, by students being able to access a multitude of learning materials from their mobile devices.

As for the joint AGU-NUS seminar trip to Singapore in 2017, it indicated that a short-term language exchange programme of 1-week duration could achieve a positive impact on students' intercultural competence (Chan, Chiba, and Obari, 2018).

Finally, the post-course questionnaire asking students about their worldviews revealed their perspective and understanding of the world had increased and enabled them to feel more confident in speaking English and in becoming more flexible and global-minded.

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