

The Impact of ICT-based Education on Students' Learning Performance

Kyeong-Ouk Jeong

Abstract—This study aims to explore the effectiveness of ICT-based English language learning in developing EFL university students' learning behaviors and learning performance. In the field of EFL education, a lot of studies have attempted to promote the effectiveness and performance of English lexical learning because lexical knowledge is one of the vital components in enhancing communicative competence of EFL learners. For this study, classroom tasks were set up by integrating the concept of smart learning for student-directed lexical learning in English. As the result of the study, ICT-based English language learning activities could help students better engaged in their own learning process. The specific features of the ICT integration also stimulated learners' learning motivation. It suggested that ICT-based education could be a more effective medium for student-directed learning environment in EFL learning than the traditional text-based learning materials in that new technological strategy could elicit students' motivation and lead to better performance in their learning.

Research Keywords—ICT-based Learning, Smart Learning, EFL, Lexical Knowledge, Student-directed Learning.

1 INTRODUCTION

In the field of EFL education, word knowledge has been regarded to one of the vital components in enhancing communicative competence of EFL learners [1]. For English language learners, vocabulary learning is sometime considered as a very perplexing and difficult process. Therefore, English language learners have always attempted to find out which vocabulary learning technique would be more effective. They have always searched for the best method [2]. A lot of educators and researchers have also tried to find ways to promote the effectiveness and performance of English language learners' lexical learning. In many schools and universities around the globe, the total of class time is not sufficient enough for the educators to focus on improving their EFL learners' lexical knowledge during the class sessions. Teachers should often make smart choices about how to utilize that limited class time to promote their students' English language learning. Because of time constraint in the language classrooms, educators have kept seeking

effective ways for their students to be able to enlarge the vocabulary size outside of the classroom. ICT-based classroom learning materials and activities can help extend learner opportunities in more engaging and meaningful ways beyond the language classrooms [3]. The integration of ICT such as mobile technologies has much potential to provide EFL learners with sufficient chances to be exposed to the target language learning materials as much as possible due to convenient and flexible features of ICT-based learning format. The efficient exposure to EFL vocabulary learning materials using digital devices can also enhance the vocabulary learning process, make the activation and recognition automatic, and lead to greater retention rate of vocabulary learning.

The present study aims to examine the effectiveness of ICT-based classroom learning activities for EFL university students as well as the students' perspectives of their experience of ICT-based English language learning.

2 RELATED WORK

EFL learners sometimes regard vocabulary learning as a tedious and boring work, especially for those who grew up to be digital natives. Thus, many educators have tried to integrate innovative techniques

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to help their students learn vocabulary in the more motivating and entertaining ways. Online games can be used to facilitate EFL students' vocabulary learning [4]. Today, thanks to the advance in new technology, powerful digital devices can make self-directed learning available and provide EFL learners with tremendous opportunities for educational use anytime and anyplace [5]. Digital devices are ideal for individualized and customized informal language learning outside of the English language classrooms. Learners can determine what kinds of applications with English learning materials to select and how to use them for their self-study.

Autonomous learning with learner motivation becomes more tangible and long-lasting when learning can relate learners' lives to the outside of the academic environment. EFL educators should seek out innovative methods that can provide framework for learners to combine formal and informal learning in order to encourage and support the learner motivation and autonomy [6]. The utilization of corpus linguistics, digital dictionary, and online quizzes was reported as an attractive strategy for English language learners to familiarize with the innovative educational technology in order to learn new vocabulary more effectively [7].

Recently, the use of the Internet has become an appealing method and thus web-based vocabulary learning has resulted in the change of the curriculum design and classroom implementation for vocabulary learning and teaching practice. Deliberate learning of vocabulary, using web-based vocabulary lists with interactive word exercises, is considered to build suitable vocabulary learning conditions for EFL learners to develop their lexical knowledge [8]. Research also shows that children are taught words from context better than from dictionary definitions and a few exemplary sentences. Therefore, it is very important to support EFL learners' vocabulary learning in everyday life with ubiquitous ICT technologies [9]. Several studies have reported the effect of implementing educational technology to vocabulary learning in order to provide English language learners with genuine, active, engaging, and multi-sensory language learning context [10] [11] [12]. Especially applying various ubiquitous educational technology and utilizing authentic video clips could act as critical factors for successful vocabulary learning for EFL students [10].

3 METHODOLOGY

The participants of this study were 27 EFL university students in the central part of Korea and they

took a general English course as a requisite course for their school curriculum. Because of the time constraints to deal with the course contents, the instructor designed the ICT-integrated course syllabus so that students could study some academic vocabulary using their digital devices at home.

The vocabulary lists were provided by the instructor every week and the participants of this study were encouraged to utilize the mobile-based application for their self-study at home to improve their English vocabulary. Every two weeks, English vocabulary tests were taken to monitor students' progress in their self-directed English vocabulary learning. At the beginning of the semester, pre-questionnaire survey was conducted for needs analysis of the participants in their English study. At the end of the semester, post-questionnaire survey was administered to examine the impact of ICT-based English learning activities on students' learning performance as well as the students' perspectives about their English language learning experience of ICT-based English language learning materials and activities.

4 RESULT AND DISCUSSION

The result of this study revealed that the participants were highly motivated to improve their vocabulary in order to upgrade their English proficiency level. The students in this study believed that the lexical knowledge was one of the most imperative abilities for improving their English proficiency level. Figure 1 shows students' response about the course goals.

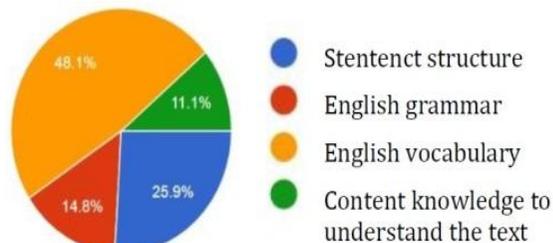


Fig. 1. Needs analysis for students' perception about the course goals

According to the pre-survey data shown in Figure 1, 48.1% of the participants wanted to improve their vocabulary knowledge to improve their English proficiency level, followed by knowledge of English sentence structure, grammar, and contents. According to the result of the post-survey data of this study, ICT-based English vocabulary learning

activities could help EFL university students to acquire new words with more effective and entertaining ways.

Among the participants, two thirds of the students responded that with the use of various technological setting, they could be better engaged in their English learning process. The students in this study generally preferred ICT-based English learning with the use of entertaining and flexible mobile format to conventional text-based vocabulary learning. Some of the students responded in the open-ended questionnaire item as follows:

- ✓ The ubiquitous manner of studying English words was really convenient and enjoyable. I am going to study more words with this method during summer vacation by myself.
- ✓ The most interesting and rewarding part of using digital technology in my English study was that I could actively involve in my learning, not just passively receive knowledge from the instructor.

5 CONCLUSIONS

The aim of this study was to examine the effectiveness of ICT-based English language learning in promoting EFL university students' learning behaviors and learning performance, along with the students' perspectives about their learning experience of ICT-based English language learning. This study revealed that specific features of the ICT integration such as flexibility, accessibility, and interactivity stimulated students' learning motivation and autonomy. This study also suggested that ICT-based education could be a more effective medium for self-directed learning milieu in EFL learning than the traditional text-based learning activities in that new and innovative technology-based instructional tactics could trigger students' motivation and finally lead to better performance in their English language learning.

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