

Autonomous English Learning and English Reading Skills Improvements

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1. Introduction

One of the fundamental issues in the theory of Second Language Acquisition (SLA) is how input plays a role in the process of L2 acquisition. Many researchers have investigated the role of input and have proposed that the quality and quantity of language inputs affect L2 acquisition. Krashen (1985) proposed Input Hypothesis, which suggested that L2 acquisition is facilitated when an adequate level of input is given to L2 learners. This adequate level of input for L2 learners is called 'comprehensible input,' and Krashen (1985) claimed that it leads L2 learners to a successful L2 acquisition. However, other studies have revealed that comprehensible input alone cannot lead to successful acquisition of a second language. For example, Long (1996) pointed out that L2 learners sometimes utilize negotiation of meaning with interlocutors in discourse in order to understand what the interlocutors intend. This sort of interaction also plays an important role in acquiring a second language.

Another important issue to consider in SLA research is how teachers can more effectively provide L2 learners with input in the classroom. If input plays an important role in L2 acquisition, language teachers have to provide a well organized curriculum that guarantees learners to receive an adequate quality and quantity of input. A language learning curriculum that focuses only on reading will provide learners with written input, and subsequently will not enhance learners' listening and speaking skills. On the other hand, if an instructor makes learners speak in a foreign language without teaching its grammar, it prevents the learners from studying prescriptive grammar and will not enhance the ability to make use of a grammar. Thus, it is important to examine what kind of curriculum provides the most effective learning experience.

The present study examines an English learning curriculum for adult native speakers of Japanese learning English at college. The study examines the effectiveness of self-paced and autonomous English learning by Computer Assisted Language Learning (CALL) by looking at the correlation between TOEIC scores and CALL learning. Statistical analysis reveals that achievement in a self-paced and autonomous English learning environment significantly correlates with scores of the TOEIC reading section. Thus, it can be concluded that using CALL materials in a self-paced and autonomous program would have beneficial effects for

the improvement of English reading skills.

In the following sections, important considerations in utilizing CALL will be discussed. Section 3 introduces the characteristics and the contents of the self-paced CALL system in this study. In section 4, I will examine the statistical results of the correlation between self-paced English learning and TOEIC scores will be discussed, as well as what other factors may have contributed to the improvement of the students' TOEIC scores. The final section consists of the conclusion and future research questions.

2. CALL in English learning curriculums

In recent years, more and more universities in Japan have adopted Computer Assisted Language Learning (CALL) in their English learning curriculums. However, they continue to explore how CALL could help to enhance students' English proficiency, and face various difficulties to make the most of the CALL. Takeuchi *et al.* (2008) points out that we should not expect too much from the technology, i. e., CALL, per se when we discuss the effectiveness of CALL. He indicates that what is important to consider in discussing the effectiveness of CALL is how to utilize CALL and to examine the conditions in which CALL is used. According to Takeuchi *et al.* (2008: 5), the following two conditions should be considered for utilizing CALL more effectively: 1) a high level of affordance, and 2) transparency. Takeuchi *et al.* (2008) defines 'a high level of affordance' as the CALL systems that are designed to provide the maximum usefulness for users. Ideal CALL systems should provide teachers and students with ease of use. Thus, if teachers and students feel inconvenienced by using CALL, it would likely prevent them from having a meaningful and effective learning experience. 'Transparency' in (2) means how unconsciously CALL users access to the system. Takeuchi *et al.* (2008) insists that CALL should not be considered not as a special tool for language learning curriculums but as a natural and central teaching tool in English lessons.

One of the advantages of utilizing CALL in language education is that it provides learners with self-paced and autonomous learning opportunities. This differentiates CALL from other long-established learning materials such as texts, pens, chalk, blackboard, or audio tapes. Machida *et al.* (2001) claim that learners in CALL classrooms pay attention not only to instructors but also to various functions of the computer. This would broaden new possibilities of learning languages. According to Machida *et al.* (2001: 40), the additional aspects of language learning can be summarized in three points: (1) learners in CALL classrooms own learning materials which they can control by themselves, (2) learners find learning resources in computers, (3) learners are provided with learning tactics in which they can learn languages autonomously and actively. While learners can benefit from owning the learning materials or resources and from being given opportunities to study autonomously, learners are simultaneously required to manage their study on their own. Instructors are also expected: 1) to provide a learning environment where learners can study easily, 2)

to reduce anxieties of learners, and 3) to motivate and facilitate learners to study autonomously and actively.

In order to make CALL an effective teaching and learning tool, Takeuchi *et al.* (2008) also examines important factors from the perspectives of CALL administrators, instructors, learners, and curricula. According to Takeuchi *et al.* (2008: 9), two important considerations for CALL administrators to explore include setting goal for using CALL. In order to accomplish the aims, the administrators have to carefully select teaching materials, make efforts to facilitate mutual understanding among CALL instructors, and reduce instructors' burdens of carrying out the maintenance of the facilities and of operating the systems. As for CALL instructors, they are continuously required to open their CALL classes to other instructors, to reflect on their own classes, and to try to improve classes. Learners also should learn the basic skills for using computers, i. e., computer literacy. In addition to the computer literacy, forming an attitude to study actively and autonomously in CALL classes is an indispensable factor for the success of CALL study. Regarding the organization of CALL curriculums, Takeuchi *et al.* (2008: 13) discusses that incorporating CALL into regular language classes is important to have the most positive effects in language learning. By incorporating autonomous learning via CALL into regular language classes, learners' motivation would potentially increase.

Machida *et al.* (2001) report what college first year students studying English by CALL expect to improve the most in studying English by CALL. In Machida *et al.* (2001), The CALL was designed to improve primarily the English listening skills. The learning material consisted of six lesson menus: understanding outlines in English, understanding the details in English, useful expressions, English dictation, completing English dialogues, and English composition (cf. Machida *et al.*, 2001:162). Machida *et al.* (2001) conducted three questionnaires to the students at the beginning, in the middle, and at the near end of the CALL course. The results of the questionnaires revealed that the students expected to improve the reading and writing skills at the beginning of the course. However, in the final questionnaire the students responded that CALL was most effective in improving their listening skills, followed by English writing skills, English communication, computer literacy, English grammar, cross-cultural understanding, and English reading. These results indicate that the learning materials in CALL that were designed to improve English listening skills fulfilled their purpose as expected.

Machida *et al.* (2001: 169) further investigated the students' attitudes toward CALL at the beginning, in the middle, and at the end of the course. At the beginning of the course, 75% of the students thought studying English with CALL would be fun. However, only 57% of the students felt it was fun at the end of the course. Machida *et al.* (2001) concluded that CALL would motivate the students to study English at first, but because the students could not use the CALL system appropriately, the students were less motivated to study English with CALL.

In the following section, the utilization of CALL in the English learning curricula at

Kyushu Lutheran College and its effects on students' English proficiency will be discussed.

3. The Current Study

The current study first introduces how CALL is incorporated into the English learning curricula for the Career English major at Kyushu Lutheran College. Then, secondly the details of the CALL curricula and materials used in the classes will be discussed. In section 3.3, whether there is any correlation between the TOEIC IP scores and the scores of the CALL materials that the students studied through a year will be explained.

3.1. The Curricula

The CALL classes were originally incorporated into the English learning curricula for the entire freshman and the sophomore students of the Career English major at Kyushu Lutheran College. All the Career English major students studied English using the CALL system in 2007. However, the learning material used in CALL classes turned out to be too difficult for lower level freshman students. Thus, CALL has been utilized only for the upper level freshman students since 2008. Regarding the sophomore classes, all the students study English with CALL at least once per week.

The English courses for freshman and sophomore students of the Career English major were divided into two major subjects: 'Reading & Writing' which were taught by Japanese English teachers and 'English Communication' which were taught by native English speaking instructors. The English classes taught by the Japanese English instructors focused not only on improving English reading and writing skills, but also on autonomous learning with CALL. The classes met two times per week in the first and in the second year, and the same Japanese English teachers taught the classes throughout the year. The number of students in each class was approximately 25 to 30. In order to place the freshman students in the appropriate levels of the English classes, TOEIC IP was used as the placement test in 2007. However, administering TOEIC IP during the freshman orientation was difficult because of limited time. Thus, CASEC (Computerized Assessment System for English Communication) has been used as a placement test since 2008.

All the freshman and sophomore students of the Career English major also took English classes taught by native English speaking instructors. The English classes taught by native English speaking instructors focused on the improvement of oral communication skills, how to use vocabulary to improve oral conversation skill, and basic grammar. Three different levels of the communication English classes were created, based on the scores of CASEC and an interview conducted by the native English speaking teachers. The students who had high English proficiency were encouraged to join the freshman and sophomore advanced classes. The number of the students in the advanced class was limited from ten to fifteen. Those who wished to join the advanced class had to complete a short English interview conducted

by two native English speaking teachers. Each student's English listening and speaking skills were evaluated by the native English speaking teachers. A few students, who got high scores in the placement test but did not initially take an interview, are also encouraged to interview for the advanced class.

3.2. The CALL Materials

Same CALL materials have been used for the upper-level freshman students since 2007. In selecting CALL materials, one of the conditions taken into consideration was that it should be easy for CALL administrators and instructors to carry out the maintenance. Thus, it was decided that the contents of the CALL materials would be made accessible through the Internet. Subsequently, 'New Practical English' of 'reallyenglish' was chosen for the CALL material¹.

One of the characteristics of New Practical English is to use a diagnostic test to analyze students' English proficiency, and based on the test results, the system automatically prepares the next appropriate lesson for each student. Students initially take the diagnostic tests to analyze their English proficiency and are encouraged to complete the prescribed lessons. The entire course of instruction consists of 70 grammar lessons, 115 listening lessons, and 115 reading lessons. Thus, the total number of lessons is 300. Out of the 300 lessons, 10 lessons are automatically selected as a unit, and then depending on a student's performance in the prior ten lessons, the next 10 lessons are selected and prepared by the system.²

The course, 'Reading & Writing,' in which New Practical English was used, met two times per week. However, the students use online New Practical English once per week. Other reading and writing materials such as newspapers and websites are used in the opposite period. Vocabulary tests were also conducted at the beginning of each class. Thus, the students spent about 60-70 minutes for using New Practical English in the regular class per week. On average, each lesson of New Practical English takes 30-45 minutes, so the students completed at least two or three lessons during one class session. Since the learning materials of New Practical English are provided through the Internet, the students could access to the materials at home and at computers on campus. Students were also encouraged to study New Practical English in their free time.

During the CALL activities, the students could access various questions of English grammar, English listening comprehension and English reading items and solve them at their individual paces. However, the Japanese English instructor monitored each student's progress of learning, which was represented by the scores of the lesson tests, how many lessons remained to the final goal, and a current state of learning. The instructor checked each student's condition, and gave each of them praise or caution.

3.3. TOEIC IP scores and CALL materials scores

At the time of this study, all the freshman and sophomore students of the Career English major at Kyushu Lutheran College were required to take TOEIC IP at the end of the first

and the second semester, and the two TOEIC scores were adopted as a part of the grades for Reading & Writing. Out of the 53 students of the Career English Major, 24 students were enrolled in the upper Reading & Writing class. Table 1 shows the results of the two TOEIC IP tests of the 2008 freshman students in the upper Reading & Writing class³:

Table 1. TOEIC IP results of the 2008 freshman students in the upper Reading & Writing

	Total Score		Listening Score		Reading Score	
	1 st TOEIC	2 nd TOEIC	1 st TOEIC	2 nd TOEIC	1 st TOEIC	2 nd TOEIC
	August 2008	January 2009	August 2008	January 2009	August 2008	January 2009
Mean	389.58	412.83	226.46	253.91	163.13	158.91
Std. Deviation	78.70	111.89	45.60	61.03	43.21	55.43
Minimum	220	195	145	115	75	80
Maximum	600	695	330	395	285	300
N	24	23	24	23	24	23

The average total score increased from 389.58 to 412.83. However, a statistically significant improvement was not found in the total score, $t=-1.77$, $p=0.09$. The average score in the listening section also increased from 226.46 to 253.91, and the increase of the score was statistically significant, $t=-2.65$, $p=0.02$. On the contrary, the average score in the reading section decreased from 163.13 to 158.91, even if the decline was not statistically significant, $t=0.58$, $p=0.57$. The standard deviations in all sections became larger.

These results are consistent with the research of Kumamoto University General English Education Research Group (2006)¹. They analyzed 102 Japanese university students' average scores of TOEIC IP conducted in their first and in the second year, and reported that their total scores improved from 445.64 to 455.00. The improvement of the total scores was not statistically significant, $t=1.383$, $p=0.170$. However, the average scores in the listening section improved from 248.92 to 260.58, and the improvement was statistically significant, $t=2.688$, $p=0.0084$. However, the average scores in the reading section declined slightly from 196.72 to 194.41, although the decline was statistically insignificant, $t=0.539$, $p=0.591$.

In 2009, 26 out of 51 freshman students of the Career English major were enrolled in the upper level Reading & Writing class. Table 2 shows the descriptive statistics of the two TOEIC IP tests of the 2009 freshman students in the upper Reading & Writing class:

Table 2. TOEIC IP results of the 2009 freshman students in the upper Reading & Writing

	Total Score		Listening Score		Reading Score	
	1 st TOEIC	2 nd TOEIC	1 st TOEIC	2 nd TOEIC	1 st TOEIC	2 nd TOEIC
	August 2009	January 2010	August 2009	January 2010	August 2009	January 2010
Mean	364.00	357.88	225.00	228.85	139.00	129.04
Std. Deviation	62.75	87.50	53.15	56.02	28.80	41.40
Minimum	255	245	135	140	75	80
Maximum	525	575	375	340	195	245
N ⁵	25	26	25	26	25	26

On the whole, the TOEIC scores of the 2009 students were lower than those of the 2008 students. The average total score decreased from 364.00 to 357.88, although the decline was statistically insignificant, $t=0.21$, $p=0.84$. The average score in the listening section increased slightly from 225.00 to 228.85, however, the increase was not significant, $t=-0.77$, $p=0.45$. On the contrary, the average score in the reading section substantially decreased from 139.00 to 129.04, even though the decline was not statistically significant, $t=0.87$, $p=0.39$. The standard deviations in all sections increased. The average score in the reading section declined in the second TOEIC IP, which was consistent with the results of the 2008 students and Kumamoto University General English Education Research Group (2006). These results indicate how difficult it is for Japanese college students to maintain and improve the reading skills during the college years, as discussed in other researches, e.g., Nakayama and Yoshimura (2006, 2010).

The 2008 and 2009 freshman students in the upper level Reading & Writing classes studied the learning materials of New Practical English throughout the year in classes or in their free time at their own paces. Table 3 shows the results of the numbers of the completed lessons and the average scores of the grammar, reading and listening sections of New Practical English:

Table 3. Results of the lessons of New Practical English in 2008 and 2009

	2008 freshman students (N=24)	2009 freshman students (N=26)
Average number of completed lessons	271	294
Average score of grammar section	68.3%	59.7%
Average score of reading section	60.6%	55.0%
Average score of listening section	65.5%	60.3%

Students in both 2008 and 2009 completed nearly 300 lessons within a year. The average scores in the three sections were better for the 2008 students than those of the 2009 students. The average scores of the reading sections of both 2008 and 2009 students were lower than

the other two sections. The results corresponded with the previous finding that the average score of the TOEIC reading score did not improve for the Japanese college students.

In order to examine if there is any relationship between the year-end second TOEIC scores and the scores of New Practical English lessons, a statistical analysis was performed. Regarding the 2008 students, there is a correlation between their scores of the TOEIC listening section and the scores of the New Practical English listening section, $r=.449$, $P=0.031$. A statistically significant correlations were also found between the TOEIC reading section scores and the scores of the New Practical English reading section, $r=.466$, $P=0.025$, and between the TOEIC reading section scores and the scores of the New Practical English grammar section $r=.493$, $P=0.017$. Contrary to the 2008 students, no significant correlation was found between the scores of the TOEIC listening section and the New Practical English listening section, $r=.234$, $P=0.250$ for the 2009 students. However, a strong correlation was found between the TOEIC reading section scores and the New Practical English reading section, $r=.564$, $P=0.003$. A correlation was also observed between the TOEIC reading section scores and the New Practical English grammar section $r=.416$, $P=0.035$.

The significant correlation between the TOEIC reading section scores and the scores of the New Practical English reading section implies that achieving a high score in the reading section of New Practical English may result in achieving a higher score in the TOEIC reading section. The fact that there is a statistically significant correlation between the New Practical English grammar section and the TOEIC reading section scores also indicates the possibility that achieving a high score in the grammar section of New Practical English may result in achieving a higher score in the TOEIC reading section. Thus, those who tried to achieve high scores in the reading section and in the grammar section of New Practical English could potentially achieve higher scores in the reading section of TOEIC IP in 2008 and in 2009. This implies that studying autonomously with the CALL materials through a year had a positive effect on the improvement of students' English reading skills, partially in English grammar.

4. Conclusion

The present study investigated how the self-paced and autonomous learning by CALL materials would affect the English proficiency of Japanese college students. First, some important factors proposed in Takeuchi *et al.* (2008) that discuss what should be considered in order to make CALL an effective teaching and learning tool were examined. This was followed by a detailed description of how CALL was incorporated into the English learning curricula of the Career English major at Kyushu Lutheran College during 2008 and 2009 school years. Then, the materials that have been used for CALL and how the students access to these were introduced and discussed. The results of TOEIC IP conducted in 2008 and 2009 were reported, followed by a statistical analysis of the results of TOEIC IP, which revealed

that it was difficult for the students to improve the reading skills in their college freshman year. This result is consistent with other research, which reported that Japanese college students have difficulties in improving their English reading skills in college English education (Kumamoto University General English Education Research Group 2006, Nakayama and Yoshimura 2006). A statistically significant correlation was observed between the TOEIC reading section scores and the scores of the reading section of the CALL materials. There was also a significant correlation between the TOEIC reading section scores and the scores of the grammar section of the CALL materials. These statistically significant correlations between TOEIC scores and CALL material scores show that studying English autonomously by using CALL and striving to achieve high scores could have the beneficial results for the improvement of English skills, especially in reading. Further research will be necessary to investigate students' attitude toward the CALL materials and attitudes have a positive or negative effect on the subsequent TOEIC scores.

Note:

1. <http://www.reallyenglish.com/japan/>
2. The charge for using New Practical English for a year is 6,300 yen per student.
3. One student could not take the second TOEIC IP due to illness. So, the total number of students for the second TOEIC IP was 23.
4. Kumamoto University General English Education Research Group (2006) further examined the scores that were classified by levels of English proficiency, low (TOEIC 300 - 390), mid (400 - 495), and high levels (more than 500). Then the scores were analyzed by the levels.
5. One student could not take the first TOEIC IP due to illness. So, the total number of students for the first TOEIC IP was 25.

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