Effects of ER on L2 Reading in a Coordinated Curriculum[1]

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Abstract

The purpose of the current study is to investigate the relationship between in-class strategy training, extensive reading and measurements of reading proficiency. The study was designed to examine the effect of extensive reading on L2 reading proficiency through a statistical analysis of standardized test scores and ER total words of 104 Japanese beginners in four classes within a coordinated curriculum. Research findings showed that there is an increase in reading scores ranging from 3.9 to 15.7 points in the four classes indicating that, in conjunction with other reading activities (e.g., in-class strategy training), reading over 100,000 words a semester helped the Japanese students to develop their L2 reading ability.

Keywords; Extensive Reading (ER), L2 reading proficiency, coordinated curriculum, and Japanese EFL contexts

1. INTRODUCTION

There have been a number of studies over recent years that investigate the effectiveness of Extensive Reading (hereafter ER) in developing learners' reading skills in English. Indeed, ER has become a widespread and well-established practice among many language teachers in Japan and other Asian countries where English is taught as a foreign language (EFL). Yet, ER often tends to be implemented by individual teachers and there is little research on ER within the context of an institution's coordinated curriculum. The current study investigates the

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effects on L2 reading proficiency from in-class instruction and an ER program as shown in pre- and post-test reading scores within a coordinated curriculum.

2. EXTENSIVE READING IN THE JAPNESE EFL CLASSROOM

ER is predicated on the theory that in order for language acquisition to occur, learners need massive amounts of comprehensible input. The learner's focus is on the meaning rather than the form of the language and that through repeated exposure to language in a meaningful context, readers will - over time - acquire the lexical and structural elements of the language (e.g., Day & Bamford, 1998; Grabe, 2009; Nation, 1997).

How much time and how input is required is the subject of debate among scholars. In its *Annotated Bibliography of Works on Extensive Reading in a Second Language*, The Extensive Reading Foundation's web page lists numerous articles related to ER in the language classroom. Table 1 shows several articles on the effectiveness of ER measured in the Japanese EFL context that are most relevant to this paper.

Table 1. *Studies on the Effectiveness of ER in several Japanese EFL contexts*

Study	Size (N)	Context	Target of Study*	Coordinated Curriculum?
Hayashi (1999)	100	U	C (TOEFL)	No
Yamashita (2008)	38	U	GE & ER	No
Nishizawa et al (2010)	37	T	GE (TOEIC) & ER	No, only ER
Beglar et al (2012)	97	U	R	No
Robb & Kano (2013)	2,700+	U	C	Quasi, only ER

Note. *U = University, T = Technical College, C = Reading Comprehension, GE = General English, R = Reading Rate

Hayashi (1999) reported on the effectiveness of ER on Japanese university students' English proficiency as measured by four sections of the TOEFL. After a 10-month period of ER, students improved scores in the reading comprehension section of the test but the researcher did not account for any independent study done by students, so it is difficult to say

that ER was the direct cause in the participants' improvement. In addition, a lack of a control group makes it difficult to argue the applicability of this study to other contexts.

Yamashita (2008) studied the effects of ER on differing aspects of L2 ability. By pre- and post-tests and extensive reading tests developed from the Edinburgh Project on Extensive Reading (EPER), the author shows that participants' general reading ability was improved. However, participants' linguistic ability at the micro-level (e.g., vocabulary, spelling and grammar) showed no significant gains. Yamashita speculates the cause for this is that gains for reading comprehension comes more quickly and that controlled studies on ER over longer periods should help identify the threshold of how much learners need to read in order to acquire linguistic ability.

It is rare that researchers have the opportunity to do extended studies on the effects of ER, such as Nishizawa, Yoshioka and Fukada (2010). They describe a four-year program of ER at a technical college. A strong correlation was found between the amount participants read and higher TOEIC scores. They concluded that it is essential that readers reach a minimum threshold of 300,000 words in order to wean themselves from translating into Japanese, a very common practice among Japanese learners of English, but which inhibits direct comprehension of English and hinders fluency.

The issue of reading fluency (i.e., the rate at which learners read) was the focus of Beglar, Hunt and Kite's (2012) empirical study. They found that the students who engaged in pleasure reading outperformed peers who had solely received instruction in Intensive Reading (IR). They also found that within the pleasure reading groups, the students who read more increased their reading rates.

To the best knowledge of the authors, there has been only one study of wide-scale ER within a required curriculum. Robb and Kano (2013) investigated the effect of introducing ER across the curriculum by comparing in-house test results between two cohorts. While the first cohort experienced no ER, the second cohort was required to read a minimum of five graded readers. Students' reading was tracked using the Moodle Reader program. Results from the post-test showed that the ER cohort outperformed the other in reading and listening.

Finally, the authors emphasize the importance of measuring time on task, i.e. to distinguish between *replacement* ER, where ER replaces another learning activity and *additive* ER, which means that the reader spends additional time working with the target language, usually outside of the classroom.

As pointed out by the researchers themselves, one severe limitation to making broader claims for the effectiveness of ER is that it is extremely rare and exceedingly difficult to conduct controlled experiments in most teaching contexts. Furthermore, it is nearly impossible to control the variable of external interference because students may study English independently or they may have other classes in English. Finally, true believers of ER avoid controlled studies for ethical reasons (i.e., they are reluctant to withhold ER from a group of students for fear of not offering equal treatment to their students). In short, it is difficult for researchers to definitively attribute gains in L2 reading ability *per se* to ER. Consequently, many of the articles on ER are a mixed bag. They usually have very different research designs, are small-scale, lack a control group, and do not account for time on task or outside interference. Thus, although most studies show promising results, it remains exceedingly difficult to assess ER efficacy in such differing contexts when there is a paucity of research on ER within coordinated curricula.

The goal of the current study is to investigate the efficacy of ER in Japanese EFL classrooms. Specifically, the following question will be addressed: what is the potential effect of ER on L2 reading proficiency among beginner-level Japanese EFL students?

3. METHODOLOGY

The current study was designed to investigate tendencies of Japanese EFL students under a coordinated curriculum and the relationship between ER and L2 reading ability. This is a semester-long study to examine the improvement of L2 proficiency, especially reading skills, by comparing the pre- and post-test scores.

3.1. Participants

Participants in the current study were 104 first-year engineering (80 male and 24 female) students who were streamed into beginner-level classes in the 2013 fall semester. The participants were all Japanese students and had studied English since they were in the seventh grade under the Japanese educational system.

3.2. Data Collection Procedures

Data collected in the current study comes from standardized test scores and score reports on ER total word counts.

Standardized test scores were collected twice: at the end of the first semester and the second semester. This test was administered as an achievement test under the coordinated curriculum. It was one of the course requirements weighing 30% out of the final grade.

During the fall semester, the participants were assigned to read a target of 120,000 words of ER books outside the classroom. This ER project is a course requirement weighing 20% of the final grade. This ER project was based on a recursive process in which participants read an ER book, log on to the Moodle, and take a Moodle Reader Quiz online. When they pass the quiz (by scoring 60% or higher on the quiz), the total words of the book were automatically tallied to each participant's personal account. When a participant failed a quiz, the words were not added to the account; in this case, the participant was seen as not having satisfactorily understood the book even though he or she may have actually finished reading the book. The computer program does not allow the participants to take the same test more than once. Although the quizzes for most books were provided via the program, participants who read an ER book with no quiz were asked to write and submit a book report as a substitution for the quiz. On the last day of the semester, the ER score reports were downloaded from the Moodle.

3.3. Data Analysis

The investigation of ER and improvement of L2 reading ability involved the statistical analysis of standardized test scores. The first stage of data analysis involved the investigation

of the development of English skills by comparing vocabulary, grammar, reading, listening, and total scores between the pre- and post-tests. In addition, the participants' ER total words were analyzed with descriptive statistics. The second stage of data analysis entailed the examination of the impacts of ER on L2 reading abilities in four classes. Standardized test scores between the pre- and post-tests were compared depending on the classes. The data on ER total words were also calculated with the descriptive statistics according to the classes.

4. RESULTS

This section presents the results of the pre- and post-test scores and ER total words in order to understand the relationship between ER and L2 reading proficiency development in a coordinated curriculum.

Table 2. *Comparison in Pre- and Post-tests Scores of the Participants*

	Pre-test		Post-test			
	M	*SD*	*M*	*SD*	*t*(103)	*p*
Total (300 pts)	173.8	18.95	190.8	26.06	-6.80	< .001
Vocabulary (50 pts)	29.7	5.25	33.7	7.08	-5.56	< .001
Grammar (50 pts)	26.5	4.21	30.5	6.70	-5.30	< .001
Reading (100 pts)	57.4	9.86	67.4	14.07	-7.33	< .001
Listening (100 pts)	60.2	11.3	59.2	9.45	0.67	.502

As can be seen in Table 2, there was a significant difference in total, vocabulary, grammar, and reading scores between the pre- and post-tests. An increase of total scores in the post-test is due to the improvement of vocabulary, grammar, and reading scores. Most notably, there was a significant increase (10.0 points) in the reading scores on the post-test. On the other hand, the listening scores in the post-test were one point lower than the pre-test. However,

there was no significant difference in listening scores between the pre- and post-tests.

Table 3. *Average, Standard Deviation, Maximum, and Minimum of ER Total Words (N=104)*

Average	107,085
SD	35,037
Maximum	211,374
Minimum	11,313
Number of Students who read over 100,000 words	75

Table 3 presents the results of ER scores among the participants. The average of total words the participants read was 107,085 words. The minimum of total words was 11,313 and the maximum was 211,374. This means that there was a wide range of the ER total words that the participants read: some students read many ER books; others read fewer. This is reflected in the standard deviation (SD: 35,037). Table 3 also shows that approximately 70% of the participants reached 100,000 words.

Table 4. *Comparison in Standardized Test Scores in Four Classes*

Class / **Test Scores**	**A1 (N=24)**		**A2 (N=28)**		**B1 (N=23)**		**B2 (N=30)**	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Total (300 pts)	155.9	188.8	184.8	198.9	155.2	163.9	191.0	204.6
Vocabulary (50 pts)	27.0	33.0	32.1	36.2	25.3	27.3	32.7	36.6
Grammar (50 pts)	26.0	30.0	27.5	32.5	23.6	25.6	28.1	32.6
Reading (100 pts)	49.8	65.5	61.1	70.6	50.2	54.1	65.0	75.7
Listening (100 pts)	53.1	60.4	64.1	59.6	56.1	56.9	65.3	59.7

Table 4 shows the results of the standardized test scores in four classes under the

coordinated curriculum. A1 and B1 are the lowest-level classes and A2 and B2 are the second-lowest classes as determined by the streaming of standardized tests held in July. As can be seen in Table 4, the average of the total scores in the post-test was higher than the pre-test in all classes. The improvement of total scores in the post-test comes primarily from gains in reading scores. The difference in reading scores between the pre- and post-tests in four classes is 15.7 points in A1, 9.5 points in A2, 3.9 points in B1, and 10.7 points in B2, respectively. This indicates that in spite of a difference in their rates of improvement among the four classes, reading scores increased.

In relation to other scores, there is a slight increase in vocabulary and grammar scores between the pre- and post-tests in the four classes. Vocabulary scores increase by 6.0 points in A1, 4.1 points in A2, 2.0 points in B1, and 3.9 points in B2 during a semester. In addition, grammar scores gain by 4.0 points in A1, 5.0 points in A2, 2.0 points in B1, and 4.5 points in B2. This suggests that a series of reading activities, including an ER program both in and out of class, does little to help the participants improve their vocabulary and grammar scores.

Table 5. *ER Total Words in Four Classes*

	A1 (N=24)	**A2 (N=28)**	**B1 (N=22)**	**B2 (N=30)**
Median	100,493	120,881	101,351	122,183
Average	77,591	122,919	94,676	123,267
Maximum	116,758	211,374	119,216	156,310
Minimum	12,601	65,395	15,410	68,296
# of Students who read over 100,000 words	13	21	18	23

Table 5 presents the results of ER total words in the four classes. The median of total words the participants read is over 100,000 in all classes. In addition, the average of total words they read in the semester ranges from 77,591 to 123,267 words among the four classes.

The data indicates that most of the participants read over 100,000 words, but approximately 20% of the participants in each class read less than 100,00 words.

5. DISCUSSION

The current study has investigated the effects of ER on L2 learning, especially L2 reading proficiency. The results of the statistical analysis show that there is a significant difference in grammar, vocabulary, and reading scores between the pre- and post-tests. Though statistically significant, vocabulary and grammar scores improved relatively little. On the other hand, reading scores increased by 10.0 points. From this viewpoint, ER can be considered a possible factor in helping this group of Japanese EFL students to improve their reading skills, but not so much in terms of their development of vocabulary and grammar skills. This could be attributed to the kinds of books they read. In general, beginner-level students are inclined to choose and read easier and simpler books (e.g., *Oxford Reading Tree*, *Foundations Reading Library*, *Penguin Easystarts*, *Oxford Dominoes Quick Starter* and *Starters*). In most cases, these books contain sentences of extremely simple grammatical construction and use only words of the highest frequency. In addition, L2 learners pay less attention to linguistic and structural items in ER than they do in intensive reading (IE); instead, they focus more on the understanding the content of a book. So, it may not be as helpful for Japanese students, especially beginners, to learn new vocabulary and grammatical items in ER. In order to acquire lexical and grammatical knowledge in the target language, Japanese students may need to study them more explicitly.

The results of analyzing standardized test scores and ER total words in four classes show that there is an increase in reading scores ranging from 3.9 to 15.7 points. In addition, the median of ER total words in four classes is over 100,000 words. This suggests that, along with other reading activities (e.g., in-class strategy training), reading 100,000 words over the course of a semester can help the participants to develop their L2 reading proficiency. This finding provides some empirical support to Yamashita (2008)’s claim that ER helps L2

learners to develop their reading comprehension skills more than lexical knowledge.

From a different angle, the current study illustrates how a coordinated curriculum works at an institution. The pedagogical philosophy of running a coordinated curriculum in English language teaching (ELT) is to ensure the quality of L2 learning in which students in a given class can develop their L2 literacy equally to those in other classes. Our findings show that, though the rate of improvement varied, the standardized test scores increased among Japanese students in the lowest four classes under the coordinated curriculum. The difference in the rate of improvement in the reading test scores may be attributed to the percentage of male and female students in each class. For instance, in the class that made the greatest improvement in reading scores (15.7 points), females accounted for 38% of the class, also the highest percentage of female students all classes. On the other hand, in the class which made the smallest improvement (3.9 points) only 5% were female students.

The current study has been conducted with limited data and in a limited research framework. It employed the standardized test scores in the pre- and post-tests as a primary tool for measuring L2 literacy development. It is, however, quite difficult to measure all aspects of L2 reading skills in the standardized test. In this light, it is necessary to carefully look at different aspects of reading proficiency, such as reading speed or reading comprehension in order to understand the effect of ER on reading proficiency. Measuring L2 learners' word per minutes (WPM) would allow for a better understanding of the relationship between the impacts of ER on the development of L2 reading proficiency. Further research needs to be conducted to identify the value of ER as a way to develop L2 reading abilities in terms of ER total words and a time frame, specifically:

- How many words do Japanese college students need to read to improve their reading skills in English?
- How much time should Japanese college students devote to ER in order to improve their L2 reading proficiency?
- Will Japanese college students who read more perform better on the reading section of a standardized test?

6. CONCLUSION

In a short-term, relatively intensive curriculum such as the one in this study, we must shed more light on the interplay between ER and explicit language teaching, such as form-focused instruction of linguistic features. As Yamashita (2008) argues, L1 reading ability transfers to L2 reading ability once learners achieve a certain threshold of competency in the L2. Thus, especially for the lower-level learners in this study, the combination of explicit instruction in reading strategies *in conjunction with* ER more likely explains the significant gains, rather than the practice of ER *per se*.

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