



# The Impact of Extensive Reading on EFL Primary School Students' Vocabulary Acquisition and Reading Comprehension

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This study explores how participating in an eight-week extensive reading (ER) programme helped young EFL learners incidentally acquire vocabulary and develop general reading comprehension ability. Twenty-nine primary school participants were tested with 150 vocabulary items selected from 16 low level graded readers that they read during winter vacation. They started with a lower average vocabulary score compared to their control group counterparts on the pre-test, but after participating in the reading programme, they significantly exceeded them on the immediate post-test, and retained more vocabulary on the delayed post-test. To measure reading comprehension, a selection of passages from an Australian test for young learners was used. The ER group showed slightly improved results on the post-test while the control group's score decreased. However, the difference was not significant. These results indicate that ER considerably contributed to the EFL learners' vocabulary learning while it had little effect on their reading comprehension.

When children read books, they have chances to meet unknown vocabulary repeatedly in different story contexts. Since vocabulary knowledge accumulates through multiple encounters, reading is advocated as an effective method of acquiring new words. In particular, reading is critical in second language (L2) learning since it provides a significant amount of input in terms of the number of running words, which is not possible through formal classroom learning where intensive reading of individual texts is mostly used. For example, level one books in the Oxford Bookworms Library series, which are graded readers simplified with easier

vocabulary and structure for L2 learners, have more than 5,000 running words in each book. Therefore, the idea of promoting incidental vocabulary acquisition through extensive reading has led a myriad of studies in the field of L2 vocabulary acquisition (Cho & Krashen, 1994; Coady, 1997; Elley, 1980; Elley & Mangubhai, 1983; Horst, 2005; Kweon & Kim, 2008; Webb, 2016; Webb and Chang, 2015). However, there have been very few studies involving large numbers of children in an L2 context to see the effects of ER on their vocabulary and reading proficiency. Notable examples include Elley (1980) and Elley and Mangubhai (1983). The present study will introduce an ER programme which involved monolingual primary school students in Korea and reveal how effective it was on their vocabulary learning and reading comprehension development.

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### **Previous Research on the Effect of Extensive Reading on Primary School L2 Learners**

Some pioneering attempts and efforts were made in the 1980s to incorporate an English extensive reading programme into primary school curricula. One of the earliest extensive reading programmes involving story books and primary school students can be found in Elley's (1980) study comparing the Fiafia programme, which used 12 storybooks and three supplementary stories for each book, and the Tate Oral and Tate Reading programme, which used the traditional structuralist and audiolingual approach in Niue. The Fiafia students showed significantly superior results in reading comprehension, word recognition, and sentence repetition tests (Elley, 1980; Elley, 1991). In particular, their performance on the word recognition test was twice as high as that of the control group.

A few years later, Elley and Mangubhai's (1983) Book Flood Programme was implemented in Fiji with Class 4 and 5 students. They separated these students into the Shared Book Experience and the Sustained Silent Reading groups while a control group continued the traditional Tate Oral syllabus which had been widely used in the South Pacific region. After eight months, the three groups produced different outcomes. Together, the Class 4 Book Flood groups showed twice as high reading comprehension as the control group, and they also performed better on a word recognition test. Among Class 5 students in Elley and Mangubhai's (1983) one-year follow-up study, the two Book Flood groups showed better results on all the tests, especially on the word knowledge test, and the residual gain scores were, in order from highest to lowest, the Silent Reading group, the Shared Book Experience group, and the control group.

There were similar movements in East Asian region in the second half of 1980s. Ng and Sullivan (2001) introduced the Reading and English Acquisition Program (REAP) which started in 1985 in Singapore with 92 Year 1 classes in 30 primary schools. It continued for 3 years using a Shared Book Reading approach, and the teachers carefully guided their students using enlarged books in the class. Using a large volume of high interest storybooks, an adjusted language experience approach was employed as well. The students engaged in meaningful learning of target language through post-reading activities involving reading, listening, speaking, and writing. The students, selected from 10 REAP and 10 non-REAP schools, were tested on phonics knowledge, vocabulary, oral language measures, reading and listening comprehension, and reading accuracy. The REAP students consistently showed better performance than their non-REAP counterparts; in particular, they excelled in reading and oral retelling tests. These positive outcomes made the REAP become part of the English language syllabus in Singaporean primary schools in 1992.

The REAP programme also served as a role model for an extensive reading programme named the Brunei Reading and Language Acquisition Project (RELA) in Brunei Darussalam (Ng, 2001). The RELA project started in 1989 with the first-year students in 20 pilot primary schools and extended to the second- and third-year students in the following two years. It started with a shared book reading method and provided evidence that these young students had benefited from reading extensively by showing greater improvement compared to their non-RELA counterparts on most tests including word knowledge, storytelling, the composition of words and sentences, and reading comprehension. Their progress was more evident in reading comprehension and composition tests. Based on

the success of the RELA with lower grade students, it was extended to upper grade primary school students between 1992 and 1998 with the introduction of the sustained silent reading.

In the late 1980s, Tudor and Hafiz (1989) conducted an ER programme with young participants in the United Kingdom. The participants were Pakistani-origin English as a Second Language (ESL) students and their ages ranged from 10 to 11 years, which were considered upper primary school grades, even though it was not specified what type of school they were attending. The sixteen students chose the books they wanted to read among 105 graded readers for three months in a tension-free environment and engaged in silent reading for about one hour per day. The test results indicated that their reading and writing skills considerably improved while their vocabulary level remained relatively unaffected.

More recently, Juan and Cheng (2008) studied the effects of ER on primary English underachievers in Taiwan. Three fourth-grade participants read different numbers of books during 30 half-hour ER programme sessions. After a few sessions, the researchers found that the participants were struggling due to a lack of vocabulary, so they introduced much easier books and assigned a peer reading partner for each participant who helped them with more accurate pronunciation and meaning of the content. Provided with reading guidance and books that were more appropriate to their English proficiency, the remedial participants started to read more books per session and read them more accurately. Juan and Cheng state that ER has positive impacts on EFL primary underachievers' word knowledge and reading comprehension.

These six studies indicate that primary school students in the process of L2 learning can greatly benefit from their participation in extensive reading regardless of their age and the reading approach. All the ER groups from these studies showed increased reading ability and vocabulary learning to a great extent. The only exception was found in Tudor and Hafiz's (1989) study, in which the ESL students' vocabulary knowledge remained at the same level. One possible cause can be the relatively short length of their ER programme. Compared to the other ER programmes which lasted between one full semester and three years, Tudor and Hafiz's participants engaged in the ER for 12 weeks. In addition, they could freely select the books they read (following the sustained silent reading approach) and could even change the book in the middle of the reading. With this type of reading approach, it is very difficult to test the words that the readers have actually met during their reading.

Studies in the field of ER on the development of young and beginning level L2 learners' vocabulary and reading comprehension have not been great in number, and it is even rarer to find studies dealing with the impact of ER on children's vocabulary and reading comprehension in an EFL context. By providing empirical evidence, the present study hopes to contribute to the process of EFL children's language learning development through ER.

## **Research Design**

The extensive reading programme for this study was carried out in two public libraries which are located in Seoul and Anyang, Korea. In this country, Grade 3 students in primary school start to learn English as a school subject. Although English is often considered as one of the core subjects,

students rarely speak English outside their English classrooms. The ER programme was implemented as part of the libraries' winter programmes for eight weeks due to the limitations of the class venue and availability of the participants' free time out of their school schedules. High interest books at the participants' levels were preselected by the researcher and the vocabulary test items were selected from those books so that the participants could meet the target words multiple times in different contexts throughout their reading.

### *Research Questions*

1. What effect does extensive reading have on children's incidental vocabulary acquisition in an EFL context?
2. Can extensive reading contribute to young EFL learners' reading comprehension?

### *Participants*

Twenty-nine primary school students, aged between nine and eleven, were recruited through online and offline advertisements of the two libraries to participate in the reading programme. At the time of the advertisement, the sample pages of the books they would read were posted online, and it was clarified that the ER programme was for those who could roughly understand the contents of the sample pages. The initial number of participants registered for the programme was 71, but some of them dropped out before or during the programme, and some of them had a significantly low or high level of vocabulary knowledge compared to the majority of the participants. Therefore, even though they had participated in the entire ER programme, their data had to be excluded from the comparison. The 29 participants whose pre-test vocabulary scores were between

50 and 110 out of 150 points were selected as the experimental group. In addition to the ER group, the participants for a control group (CG), who had similar English proficiency level and who were in the same age range were recruited. The CG participants did not receive any reading treatment. A few of them whose vocabulary pre-test scores were out of the target range had to be excluded as well, and the final number for the CG was 22. For the ER group, there were 14 male and 15 female participants and their average age was 10.38 years at the start of the programme. In the control group, there were 7 male and 15 female participants with the average age 10.55 years.

Including private lessons and home schooling with their parents, the average English learning experience was about 32 months for the ER group and about 34 months for the CG.

### *The Extensive Reading Programme*

The present ER programme was designed for 11 weeks including actual reading classes for eight weeks and three additional weeks to keep hold of the ER participants until the delayed post-test. The participants were divided into three different classes, and every participant in each class received an identical book so that they could be involved in the shared book reading. The researcher was the sole teacher for these three classes.

Participants came to reading classes twice a week for a 60-minute class. At the beginning of each class, a new book was distributed to each student, and following their teacher's reading the first page, they took turns reading aloud one or two paragraphs per student. The page was also shown on the classroom screen, and at the end of each page, a couple of reading comprehension questions were asked to check the students'

understanding. The shared book reading continued for about 40 – 45 minutes, and the students engaged in an after-reading activity such as drawing a main character or having a conversation with their peer students while pretending to be one of the characters in the story. The class reading mostly covered the first two chapters of a book, and the students kept their book to continue their own silent reading at home.

Upon completing the book at home, they were asked to answer 10 reading comprehension questions online (<http://engtest.c1.biz/>). An ID and password were given on the first day of the programme, and they were encouraged to answer all the questions. This idea was based on Robb’s “MReader” (n.d.) and aimed to check readers’ understanding and reading progress. In addition, the participants were requested to complete a reading log for each book. There were five items to be checked: “Was the book interesting?”, “Did you understand the story well?”, “Was the vocabulary easy?”, “Did you finish reading the book?” and “Did you answer all the questions online?” Next to each item, five stars were given so that the participants could rate their answers by simply colouring them. When they came for the next class, they submitted their reading log along with the book and received a new book for the day. This process was repeated for each of the 16 graded readers.

**Reading Materials**

Sixteen graded readers from the Oxford Bookworms Library series level one and two were preselected by the researcher following a pre-screening pilot test with six other EFL students, who were also Korean, in the same age group and at the similar proficiency level. Table 1 shows the titles of these books with their levels. The number of words in the right column indicates the

actual running words, which includes all the words the participants read in each book. When they are combined, the total number is around 98,000 words.

*Table 1. Graded Readers Used for the Extensive Reading Programme*

Book Titles	Level	# of Words
Aladdin and the Enchanted Lamp	1	5315
A Little Princess	1	5930
Christmas in Prague	1	4719
Les Miserables	1	7370
One-Way Ticket	1	5605
Pocahontas	1	5372
The Adventures of Tom Sawyer	1	5915
The Elephant Man	1	5625
The Lottery Winner	1	5722
The Phantom of the Opera	1	6372
The Piano Man	1	6610
The Wizard of Oz	1	5539
Alice’s Adventures in Wonderland	2	6478
Dracula	2	7914
Robinson Crusoe	2	6835
The Jungle Book	2	6622

**Test Instruments: Vocabulary Knowledge Test**

The participants took the vocabulary knowledge test three times: a pre-test, an immediate post-test, and a delayed post-test three weeks later. To select the target vocabulary, all 16 graded readers were typed and saved as a file and using AntWordProfiler (Anthony, 2014), the words were analysed according to the British National Corpus and the Corpus of Contemporary American

English (BNC-COCA). According to the analysis, around 90 percent of the running words belong to the first most common 1,000 words, and about 2.4 percent of the words belong to the second most common 1,000 words. In other words, over 92 percent of the vocabulary used in the 16 books are from the first 2,000 most frequently used words in English. The target words for the present study were chosen among the content words as follows: 50 words were from the first 1,000 list (List One), 50 words were from the second 1,000 list (List Two), and 50 words were selected from the rest of the lists (List Three). The purpose was to combine easy and difficult vocabulary for the participants while considering the word occurrences in the books. If all the 150 target words had been chosen from List Three, it would have given too much test stress to the young learners. When selecting the 50 words from List One, words that were too easy such as "man" or "do" and loan words in the Korean language such as "Dracula" or "bag" were excluded. The total occurrence numbers of these 50 words in the 16 books were between 20 and 100 times. The List Two words were in the occurrence range of 10 and 100, and it was between 4 and 54 for the List Three words.

The participants' vocabulary knowledge was assessed by means of a "YES-NO" type test format (adopted from Horst's (2005) study) with the addition of a "NOT SURE" option to discourage over-estimation and to prevent the participants from ticking unknown words. When the participants selected the "YES" option, they were asked to provide the meaning of the word in their native language. When they provided a wrong translation, no point was given. By using this simple test format, the vocabulary knowledge test could be conducted within 20 minutes. The same 150 target words were used for the three vocabulary

tests, but the word orders were changed each time so as not to give the idea that they were being tested with the same items.

### ***Test Instruments: Reading Comprehension Test***

The reading comprehension test was to measure the participants' improvement of general reading skills through ER, and the questions were extracted from the International Competitions and Assessments for Schools (ICAS) English test. Out of the efforts to find a suitable reading test for primary students that was unfamiliar to any of the Korean participants, ICAS was chosen. Out of 11 different levels, Level A, which is the second lowest level, was used. The ICAS test is conducted in more than 20 countries every year including Australia, New Zealand and Hong Kong. Level A is for Year 4 students whose ages are around 8 years old. For the reading test in the present study, six passages with 40 questions were included and the test time was 50 minutes. The test was conducted twice: as a pre-test and a post-test. Similar to the vocabulary test, the same passages and questions were used for both tests, but in different orders.

## **Results and Analysis**

### ***Vocabulary Knowledge Test Results***

Figure 1 shows how the ER group and the control group performed on the three vocabulary knowledge tests. On the pre-test, the 29 ER group participants' mean vocabulary score, 74.59 points (SD = 18.78), was lower than that of the control group, 82.73 points (SD = 17). This meant that the control group knew about eight more words than the ER group before the reading programme started. However, an independent samples t-test revealed that there was no statistically significant difference between the two

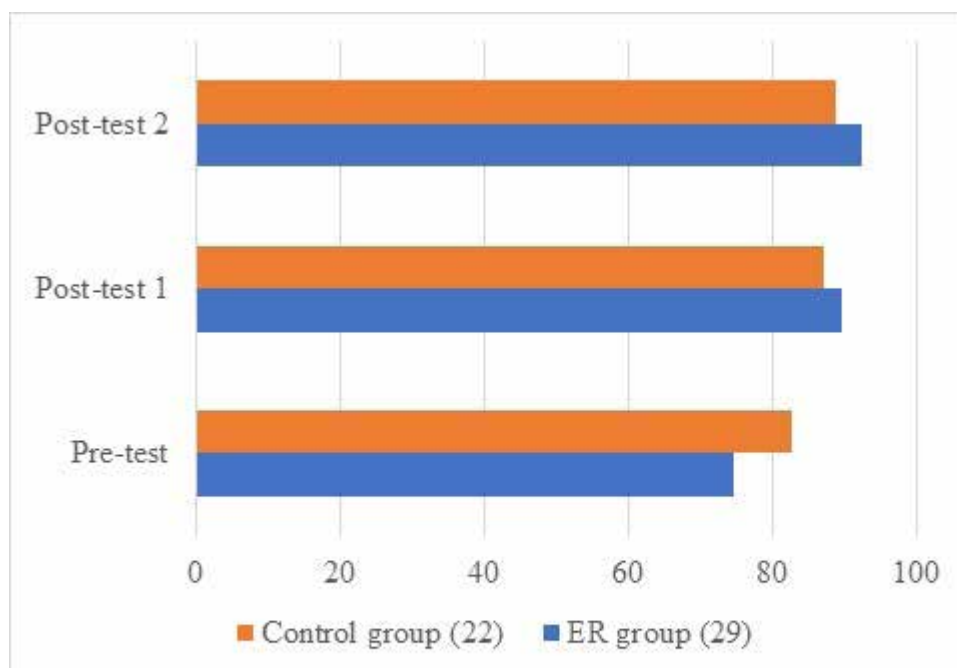


Figure 1. Vocabulary Knowledge Test results

groups’ vocabulary knowledge levels,  $t(49) = -.160, p = .12$ .

*Post-test 1* in Figure 1 refers to the immediate post-test which was conducted right after the end of the eight-week reading programme. On this test, both the ER group and the control group performed better than on the pre-test. However, the ER group exceeded their counterparts with 89.52 points (SD=17.88) versus 87.18 points (SD=16.89). This means that the ER group recorded an approximately 20 percent improvement rate while the control group’s improvement rate stayed at about 5 percent.

*Post-test 2* refers to the delayed post-test conducted three weeks later. While the control group slightly improved to 88.86

points (SD=15.43) out of 150 points, the ER treatment group retained more words with a mean score of 92.52 points (SD=18.70). From the pre-test, the ER group’s vocabulary knowledge increased about 24 percent while the control group showed a 7 percent increase.

An ANOVA test was conducted to see whether extensive reading significantly affected the ER group’s vocabulary knowledge. Out of the multivariate test results, a Wilk’s Lambda test was selected, Wilks’ Lambda = .19,  $F(2, 27) = 58.66, p < .01, \eta^2 = .81$ . When the effect size is larger than .14, it is generally considered as a large effect; therefore, the partial eta squared value, .81, indicates that there was a strong reading treatment effect.

Table 2. Pairwise Comparisons of the Three Vocabulary Test Scores for the ER Group

(I) Time	(J) Time	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
1	2	-14.931*	1.539	.000	-18.851	-11.011
	3	-17.931*	1.626	.000	-22.071	-13.791
2	1	14.931*	1.539	.000	11.011	18.851
	3	-3.000*	.769	.002	-4.958	-1.042
3	1	17.931*	1.626	.000	13.791	22.071
	2	3.000*	.769	.002	1.042	4.958

\* $p < .05$

Table 2 shows the follow-up pairwise comparisons of the three vocabulary knowledge test scores. Time 1 refers to the pre-test, Time 2 refers to the immediate post-test, and Time 3 refers to the delayed post-test. Each pairwise difference was significant at the  $p < .05$  level. From Time 1 to Time 3, there is a significant increase in scores; therefore, it can be said that the ER group's participation in the reading programme contributed considerably to their vocabulary knowledge improvement.

### Reading Comprehension Test Results

Figure 2 indicates the reading comprehension test results for the ER group and the control group. As in the vocabulary pre-test, the control group's reading comprehension test mean was slightly higher than that of the ER group with 14 (SD=4.69) versus 12.48 (SD=5.09) out of 40 points. On the post-test, the ER group's mean score slightly increased to 13.34 points (SD=5.04) while the control group's mean score decreased to 13.91 points (SD=5.28).

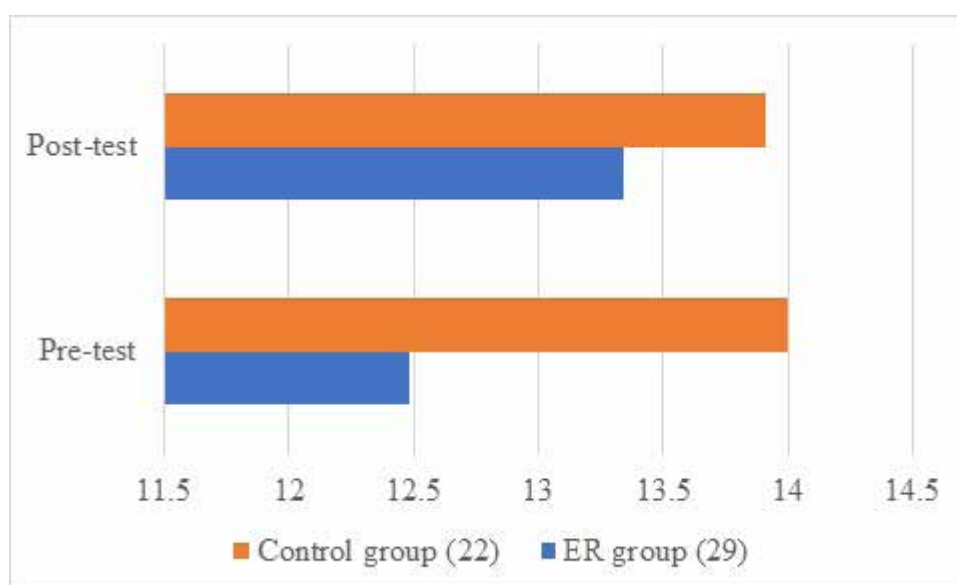


Figure 2. Reading comprehension test results



A paired samples t-test was conducted to see whether the participation of the reading treatment affected the ER group's reading test scores,  $t(28) = -1.194, p = .243$ . This indicates that there was no statistically significant difference between their pre-and post-test results; therefore, it is safe to mention that participation in ER had little effect on the participants' reading comprehension development.

## Conclusion

The answer to the first research question "What effect does extensive reading have on young learners' incidental vocabulary acquisition in an EFL context?" is that participating in the eight-week ER programme showed over a three-times higher growth rate in vocabulary knowledge. Without intentional vocabulary learning, the ER group participants incidentally acquired approximately 18 new words out of the 150 target vocabulary items. Therefore, they have clearly provided the evidence that novice level EFL learners can naturally pick up new words while enjoying pleasurable reading.

For the second research question "Can extensive reading contribute to EFL learners' reading comprehension?", the present study did not provide a positive answer. Although the ER participants showed a sign of increase in their reading comprehension skills, the difference between their pre-and post-reading test results was not significant. There can be two possible causes. First, it could be due to the difficult level of the ICAS test. Even though the second lowest level was used, the test is still too difficult for these novice learners. Second, due to the short period of the ER programme, the participants might not have had sufficient time to improve their reading comprehension ability. If they had participated in a

year-long ER programme such as the REAP or the RELA, the results could have been quite different.

## References

- Anthony, L. (2014). AntWordProfiler (Version 1.4.1) [Computer Software]. Tokyo, Japan: Waseda University. Retrieved from <http://www.laurenceanthony.net/software>
- Cho, K., & Krashen, S. D. (1994). Acquisition of vocabulary from the Sweet Valley Kids series: adult ESL acquisition. *Journal of Reading, 37*(8), 662-667.
- Coady, J. (1997). L2 vocabulary acquisition through extensive reading. In J. Coady & T. Huckin. (Ed.). *Second language vocabulary acquisition*. Cambridge: Cambridge University Press.
- Elley, W. B. (1991). Acquiring literacy in a second language: The effect of book-based programs. *Language Learning, 41*(3), 375 - 411.
- Elley, W. B. (1980). A comparison of 'content-interest' and 'structuralist' reading programmes in Niue primary schools. *New Zealand Journal of Educational Studies, 15*(1), 39-53.
- Elley, W. B. & Mangubhai, F. (1983). The impact of reading on second language learning. *Reading Research Quarterly, 19*, 53-67.
- Horst, M. (2005). Learning L2 vocabulary through extensive reading: A measurement study. *The Canadian Modern Language Review, 61*(3), 355-382.
- Juan, L. & Cheng, C. (2008). Using extensive reading to improve the learning performance and attitude of elementary

- school remedial students. *English Teaching & Learning*, 32(4), 41-83.
- Kweon, S. & Kim, H. (2008). Beyond raw frequency: Incidental vocabulary acquisition in extensive reading. *Reading in a Foreign Language*, 20(2), 191-215.
- Ng, S. M. (2001). The Brunei Reading and Language Acquisition Project. *International Journal of Educational Research*, 35, 169 – 179.
- Ng, S. M. & Sullivan, C. (2001). The Singapore Reading and English Acquisition Program. *International Journal of Educational Research*, 35, 157 – 167.
- Robb, T. (n.d.). *MReader*. Retrieved from <http://mreader.org/mreaderadmin/s/html/about.html>
- Tudor, I. & Hafiz, F. (1989). Extensive reading as a means of input to L2 learning. *Journal of Research in Reading*, 12(2), 164-178.
- Webb, S. (2016). Learning vocabulary through meaning-focused input: Replication of Elley (1989) and Liu & Nation (1985). *Language Teaching*, 49(1), 129 – 140.
- Webb, S. & Chang, A. C. S. (2015). Second language vocabulary learning through extensive reading with audio support: how do frequency and distribution of occurrence affect learning? *Language Teaching Research*, 19(6), 667 – 686.