

## Reading Research: A Confirmation of Nakanishi (2014) Using Studies of Child EFL

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### Abstract

A recent meta-analysis (Nakanishi, 2014) showed that in-school self-selected reading consistently improves second language acquirers' proficiency for junior high school age and older students of English. We report here on studies using younger students and reach similar conclusions: Both in-class free reading and read-alouds have consistently positive effects on second language proficiency.

**Keywords:** extensive reading, read-alouds, sustained silent reading, vocabulary, comprehension hypothesis

### Introduction

On the basis of a meta-analysis of extensive reading research done with second language acquirers, recently published in the TESOL Quarterly, Nakanishi, (2014) concludes that "the available research to date suggests that extensive reading improves students' reading proficiency" (p.1). Nakanishi reported an overall mean effect size of  $d = .46$  for 22 studies that used a comparison group on measures on reading comprehension (16 studies,  $d = .63$ ), vocabulary (9 studies,  $d = .18$ ), and reading speed (9 studies,  $d = .98$ ). Nakanishi's analysis was based on studies with subjects junior high school age or older. This paper supplements Nakanishi's report with studies done with younger students using both sustained silent reading and read-alouds. As both read-alouds and sustained silent reading have the same theoretical basis, the comprehension hypothesis (Krashen, 2003), it makes sense to consider them together. The results are remarkably similar to those presented by Nakanishi. The first section ("The Busan studies") reviews studies in Korea. The second section reviews other studies, mentioned by Nakanishi, but effect sizes were not calculated.

### The Busan Studies: Procedure

Table 1 presents descriptive data for studies of book reading and read-aloud programs in Busan, Korea.

**Table 1: Description of Studies**

Study	Grade	N (Exp/Co)	D (Mon)	RA	SSR	RT&Act. /per week	ReadingMaterials
Cho, K.& Seo, S. (2001)	5	120 (79/41)	5	Yes	No	40 m. 2/wk	Children's Storybooks
Cho, K.& Choi, S. (2003)	3	64 (32/32)	6	Yes	No	40 m. 2/wk	Children's Storybooks
Cho, K.& Kim, Hey J. (2004)	6	140 (70/70)	4	No	Yes	40 m.	Internet storybooks
Cho, K.& Kim, Hee J. (2005)	6	70 (35/35)	3	Yes	Yes	25-30 m.	Children's Newspapers
Cho, K.& Choi, D. (2008)	6	56 (28/28)	5	Yes	Yes	10-15 m. 2/wk RA /40 m. SSR	Children's Storybooks
Park, J.& Cho, K. (2015)	3	68 (34/34)	4	Yes	No	15 m. 3/wk	Children's Storybooks

Note: N=Number of subjects; Mon=Month; D= Duration; RA=Read-Aloud (to children); SSR= Sustained Silent Reading; RT & Act.= Reading Time & Activity.

### **Participants**

Subjects were students in grades three to six in public elementary schools in Korea from six different school areas.

### **Duration of the Studies**

The duration of reading programs was from 12 to 24 weeks. Time set aside for recreational reading and/or story telling ranged from 15 to 40 minutes per session.

### **Treatment**

English instruction in Korea begins in grade three, and is held twice a week for 40 minutes. It is typically textbook driven, with no time set aside for recreational reading. Time was, however, set aside for children in the experimental groups for hearing stories read to them by the teacher or for sustained silent reading of self-selected books, or for both.

**Read-Alouds.** During the read-aloud sessions, the teacher discussed the cover of the book and the title before reading the book to the children, and discussed the illustrations while reading the book. Students were allowed to follow along in the book together with the teacher if they wanted to. Sometimes children spontaneously read aloud when stories were easy to follow and sentences were repeated. After the sessions, students participated in follow-up activities related to what they heard or read. Typical activities included word games, jigsaw reading (constructing sentences with words cut from a sentence in the story and then reading the sentence), choral/shared reading, role-play, and bookmaking.

**Sustained Silent Reading.** During SSR time, teachers read silently while the students read. Also, during SSR time, students were allowed to share books they were interested in with peers. There was no accountability after reading, and no book reports. After SSR, students were only asked to record the titles of books they read. Occasionally, as was done after read-aloud sessions, students were encouraged to use words or content from the reading in word games or book making activities.

### **Measures**

#### **Reading**

The measurement of reading comprehension consisted of vocabulary, sentence and paragraph reading comprehension tests. Alternate forms were used for pre- and post-testing.

**Vocabulary.** The reading vocabulary comprehension tests included items such as the following: Students were asked to match a written word with a given picture, select the character that corresponds with a given word, select a written word that differs from others in meaning, select a pair of words with opposite meanings, choose a word in Korean corresponding to the words presented in English, translate English words into Korean, supply Korean equivalents for English words and choose a right word to complete a sentence.

**Sentence comprehension.** The sentence comprehension tests included the following tasks: Students were asked to fill in a missing word in a sentence (e.g., "Mother is cooking in the (roof, kitchen, sofa, church.)"), match sentences with pictures, complete a sentence corresponding to a picture, choose the right translation of an English sentence from Korean, select an appropriate English translation of a presented Korean sentence, translate short sentences into Korean, and construct a sentence from words presented (e.g., "her, visiting, Anna, is, grandmother").

**Paragraph reading.** In the paragraph comprehension tests, students were asked to construct a paragraph from mixed sentences and to read short paragraphs and answer comprehension questions.

#### **Reliability**

Reliability was calculated using the Cronbach alpha and test-retest reliability (Pearson r). In some cases, reliability was calculated on tests combining several subtests. Table 2 presents the results of reliability calculations in each study.

**Table 2: Results (Reliability)**

	Vocabulary	Sentence C. & Paragraph	Vocabulary, Sentence C. & Paragraph	Vocabulary & Sentence C.
Cho, K.& Seo, S. (2001)	r= .95			
Cho, K.& Choi, S.(2003)	r = .71			
Cho, K.& Kim,Hey J.(2004)	α=.86	α=.89		
Cho, K& Kim,Hee J.(2005)			α=.84	
Cho. K.& Choi,D.(2008)			r =.93	
Park, J.&Cho, K.(2015)				α=.91

Note: Sentence C. = Sentence Comprehension; r = Pearson r; α = Cronbach alpha.

**Effect Sizes**

Effect sizes were calculated in all Busan studies using the method described in Morris (2008), which takes pretest scores into consideration: Effect size = the difference between the experimental and comparison gains divided by the pooled pre-test standard deviation.

**The Busan Studies: Results**

Table 3 presents the results for read-aloud and SSR studies separately, arranged according to the measure used.

**Table 3: Results (Effect Sizes)**

	Vocabulary	R.C.	Combined
<b>Read-Aloud</b>			
Cho, K. & Seo, S. (2001)	0.31		
Cho, K. & Choi, S. (2003)	0.57		
Park, J.&Cho, K. (2015)	0.38	1.14	
<b>SSR only</b>			
Cho, K.& Kim, Hey J.(2004)	0.32	0.46	
<b>Read-Aloud &amp; SSR</b>			
Cho, K.& Kim, Hee J.(2005)		1.31	
Cho, K.& Choi,D. (2008)			0.52

Note: R.C.= Reading Comprehension; Combined=Vocabulary and R.C.

For the four vocabulary measures, the mean effect size was .40 (sd = .14). Weighting for sample size produced nearly identical results (d = .44). For the three reading comprehension tests, the mean effect size was .97 (sd = .45). Weighting for sample size reduced the mean effect size to .78. The mean for the four results from the three read-aloud studies, regardless of measure, was .65 (sd = .35), and for both SSR studies (four results) the mean was .63 (sd = .45).For all eight measures combined, the mean was .65 (sd = .37). These resultswere reasonably close to Nakanishi's overall results(d = .46). In an early meta-analysis of in-school self-selected reading studies involving high school and college age students of English as a second language (Krashen, 2007), the mean effect size reported for tests of reading comprehension was .87 (9 studies), and for cloze tests d = .46 (13 studies), again reasonably close to those reported for the Busan studies.Because no study in the Busan sample had a duration of more than six months, no analysis was done comparing different lengths of treatment.

**Other SSR Studies with Children Acquiring EFL**

Elley and Mangubhai (1983) reported no difference between EFL students in two programs that included self-selected reading: a "silent reading" program and a "shared book experience" program. Both groups experienced a "book flood," with access to a large number of books for recreational reading.

Shared book experience is described as including reading and discussion of a high-interest story from a "big book" version along with discussion and follow-up activities with an emphasis on "reading for meaning and enjoyment" (Elley, 1991, p. 393). Silent reading is similar to sustained silent reading, with no accountability, and with some read-alouds included. These groups combined outperformed a traditionally taught comparison group when tested after two years in the program (see table 4). All groups met for 30 minutes per day.

**Table 4: Effect Sizes Calculated from Elley and Mangubhai (1983)**

	Vocabulary	R.C.	Structure
Grade 5		1.10	0.70
Grade 6	0.73	0.66	0.66

Note: Effect sizes calculated from F-ratios, based on residual gain scores (actual gain – predicted gain, based on pretest scores); Grade 5 group: started in grade 4; Grade 6 group: started in grade 5.

Elley (1991) compared the "REAP" program to traditional EFL instruction in Singapore. The REAP (Reading and English Acquisition Program) has three elements: language experience, a book flood of high-interest storybooks, and the shared book approach (See above). The REAP "group of 512" (256 experimental and 256 comparison subjects) did the program for three years (ages 6,7, & 8). The REAP "group of 700" (350 in each group) did the program for one year. Table 5 presents the effect sizes from measures most similar to those used in the other studies reviewed here. Effect sizes are based on post-test results only, and were calculated from t-test results. Elley informs us that the experimental and comparison children were of "similar age and ability" (p. 390).

**Table 5: Effect Sizes Calculated from Elley (1991)**

Sample Size	Duration	Vocabulary	R.C.	Grammar
512	3 years	0.33	0.32	0.33
700	1 year	0.39	0.22	0.24

Note: Effect sizes based on post-tests only; 512 participated in program for 3 years; 700 participated in program for 1 year.

The range of effect sizes in Elley and Mangubhai is .66 to 1.01, and in Elley (1991) from .22 to .39. Again, all results are positive. In Elley and Mangubhai (1983), the mean for reading comprehension of grades 5 and 6 was .88. The effect size for grade 6 vocabulary was .73. In Elley (1991), the mean effect size of vocabulary for both grades was .36 and for reading comprehension was .27.

### Discussion

Table 6 presents mean results for vocabulary and reading for the studies discussed here.

**Table 6: Results for all Studies Discussed**

	Vocabulary	R.C.
	Effect size (N)	Effect size (N)
Nakanishi (2014)	0.18 (9)	0.68 (15)
Krashen (2007)		0.87 (9)
Busan studies (see Table 1)	0.40 (4)	0.97 (3)
Elley & Mangubhai (1983)	0.73 (1)	0.88 (2)
Elley (1991)	0.36 (2)	0.27 (2)

Note. N = Number of studies; Note that Nakanishi and Krashen include some of the same studies. Busan studies include one read-aloud study. For SSR studies,  $d = .97$  (3 studies) for reading comprehension and  $d = .32$  (one study) for vocabulary.

The data presented here confirm Nakanishi's report, and extend the results to younger subjects. There is some variation in the results, but the obvious result is the consistent positive findings: There are very few negative results in any of the reports. The results are also consistent with findings for English as a first language, as well as other studies showing "the power of reading" (Krashen, 1989, 2004). These very positive results should encourage the use of read-alouds, sustained silent reading or "extensive reading" programs in ESL and in EFL classes, as well in second and foreign language classes in general. More use of sustained silent reading will also help us determine the factors responsible for the modest differences among studies.

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