

## **Vocabulary Acquisition and Self-Selected Reading: A Test of the Reading Hypothesis in Singapore**

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### **Introduction**

There is growing evidence supporting the Reading Hypothesis, the hypothesis that we not only "learn to read by reading" but also that reading is the source of our reading ability, our "educated" vocabulary, our ability to handle complex grammatical constructions, our ability to write in an acceptable writing style, and much of our spelling ability.

The Reading Hypothesis is a special case of the more general Comprehension Hypothesis, the hypothesis that we acquire language, aural and written, by understanding messages, not through deliberate study, production, or correction (Krashen 2003). The kind of reading that has been shown to have an especially powerful influence on literacy development is self-selected, also known as free voluntary reading: Free voluntary reading is simply "reading because you want to," with little or no accountability.

Evidence for the Reading Hypothesis comes from several different research methodologies:

- (1) sustained silent reading: comparison of classes in which time is set aside for self-selected pleasure reading. The impact of self-selected reading is compared to traditional instruction (for reviews, see Krashen, 2001, 2004; 2007; Nakanishi, 2014)
- (2) case histories of those who have developed high levels of literacy and give the credit to their reading habit (e.g. Krashen and Mason, 2015)
- (3) correlational studies, which include multivariate studies (Gradman and Hanania, 1991; Stokes, Krashen, and Kartchner, 1998; Constantino, Lee, Cho, and Krashen, 1997; Sullivan and Brown, 2014).

Free voluntary reading (henceforth FVR) has emerged as the winner in studies using each of these methodologies for both first and second language development.

Despite the consistency and large number of supportive studies, more testing of the Reading Hypothesis is called for. The shift in pedagogy from nearly exclusive use of direct instruction in grammar, vocabulary, and text structure to including large amounts of pleasure reading is quite drastic and is still contrary to many teachers' and students' personal theories of how language is acquired.

The study reported here is a correlational study. Correlational studies are most valuable when they are multivariate and when they control for potential confounds. Multiple regression is especially useful in that it allows us to assume that predictor variables are independent of each other.

The value of FVR has been demonstrated in both first and second languages in many different countries. We attempt to expand the research by examining readers in Singapore, where English is the dominant language in schools and is the main language spoken at home in most cases.

## **Procedure**

### **Subjects**

Subjects were 106 students aged 16 from a neighborhood secondary school in Singapore preparing for the Cambridge O Level examinations. All were comfortable using English and had been in English-language schools their entire school career, as is normally the case in Singapore. Seventy-six percent reported that English was the main language spoken at home, 21% a Chinese language and 10% reported speaking "other" languages at home. These results are consistent with overall statistics for language use in Singapore; English is the main language used for general communication (<http://www.straitstimes.com/singapore/english-most-common-home-language-in-singapore-bilingualism-also-up-government-survey>).

### **Measure**

Our dependent variable was scores on a vocabulary test, developed locally but modeled after the Cambridge O Level English examination. The test also included grammar, vocabulary, and writing subcomponents, but we only report results for vocabulary, as the other the other subtests did not have acceptable levels of reliability. (Results for the other subtests were, however, similar to what is presented below for vocabulary.)

The vocabulary test had 130 items and included three kinds of questions: (1) Match a word with its definition. (2) Fill-in-the-blank in a sentence choosing an

appropriate word from a list. (3) Fill-in-the-blank choosing an appropriate word that may or may not be in the appropriate form.

Reliability of the test was .95, using the Kuder Richardson 21 formula.

### **Independent Variables (Predictors)**

We describe each predictor used in the analysis, and present means and standard deviations for each.

**1. Frequency of self-selected reading (FVR):** "How often did you read extracurricular (not given by the teachers) English material (materials you read on your own without being directed by teachers, tutors, or parents) during the last week?"

- 0 = none last week
- 1 = once last week
- 2 = 2-3 times last week
- 3 = 3-5 times last week
- 4 = every day last week

The mean response was 2.1 (about 2 to 3 times a week), with a standard deviation of 1.2: About 2/3 of the subjects said they read between once a week and 3 to 5 times per week: The subjects were clearly readers, and there were no floor or ceiling effects.

**2. Daily English Communication:** How often do you use English in conversation in everyday life?

- 0 = never
- 1 = less than 30% of the time
- 2 = 50% of the time
- 3 = 50%-80% of the time
- 4 = More than 90% of the time.
- 5 = 100% of the time.

The mean response was 2.99 (sd = 1.38), indicating that English was used quite a bit in daily general conversation.

**3. Movies/TV:** Do you prefer to watch English movies/TV serials or Mandarin movies/TV serials?

Rated from 1 to 7, where 1 = English, 7 = Mandarin.

The mean response = 2.76 (sd = 1.5), indicating a preference for English but not an exclusive preference.

4. **Like English.** "How much do you like/dislike studying English as a subject in school"?"

- 1 = strongly dislike
- 2 = dislike
- 3 = slightly dislike
- 4 = neutral
- 5 = slightly like
- 6 = like
- 7 = strongly like

The mean response was 6.31 (sd = .89) indicating that our subjects were very positive about English class.

As shown in Table 5, all other predictors had very low correlations with the amount of FVR reported. Watching movies and TV was negatively correlated with use of English in daily communication and liking English in school. Those who said they liked English class, however, used English more in daily communication.

	English in daily communication	Movies/TV	Like English class
FVR	.01	.104	.075
English in daily communication		-.29	.47
Movies/TV			-.36

Table 5: *Correlations with amount of FVR reported*

## Results

Predictor	Vocabulary
FVR	0.25
English in daily communication	0.23
Movies/TV	0.04
Like English class	0.27

Table 6: *Correlations of predictors with vocabulary test scores*

Our initial hypothesis was that free voluntary reading would be the strongest predictor of English competence. This was only partly confirmed (Table 6).

Free voluntary reading, English in daily communication, and liking English class all correlated significantly, but modestly, with vocabulary test scores. Because of the large sample size, p-values for correlations involving FVR, English in daily communication, and Like English class were significant far beyond the .01 level.

Multiple regression (Table 7), confirmed that FVR was a significant predictor of vocabulary test scores, as was liking English class. (Because of its near-zero correlation with vocabulary test scores, Movies/TV was not included in the analysis.)

All predictors combined accounted for 15.5% of the variability on the scores on the vocabulary test. Comparisons of betas in table 7 shows that FVR and liking English class were stronger predictors than using English in daily communication. The use of multiple regression allows us to conclude that the effect of FVR and liking English class are independent.

predictor	b	beta	T	p
FVR	5.08	0.26	2.86	0.0025
English in daily communication	2.01	0.12	1.19	0.119
Like English class	5.96	0.23	2.25	0.0013

Table 7: *Multiple regression. Predictors of vocabulary test scores*  
 $r^2 = .1556$  adjusted  $r^2 = .131$

## Discussion and conclusion

Our results are consistent the plethora of studies showing that self-selected reading is the primary cause of vocabulary knowledge (Krashen, 1989, 2004).

The weaker results for conversation agree with those of Gradman and Hannania (1991) who reported that conversations in English (extracurricular speaking) was not a significant predictor of TOEFL scores, but "extracurricular reading" was. This result is consistent with studies showing that the vocabulary used in conversation is nowhere near the complexity of vocabulary found in books and other forms of written language (Hayes and Ahrens, 1988).

How do we account for the finding that liking English class was also a predictor of total scores? Liking class did not correlate with how much reading was

reported. It was positively correlated with English conversation, which was a weak predictor of vocabulary scores.

Liking English class could mean liking formal study and conscious learning of vocabulary, but there are limits on the effectiveness of vocabulary study. There are far too many words to be learned one at a time, and definitions are typically incomplete in terms of meaning and grammatical properties. Studies comparing the effectiveness of vocabulary study and learning by reading consistently find that reading is the winner (e.g. Mason and Krashen, 2004).

We need to ask students what it is about English class that they like.

### **Limitations**

High poverty means less access to reading material, and thus less reading and less literacy development. Thus, the effects of reading reported here may have been attenuated because we were unable to fully control for poverty.

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