

The Influence of First Language Reading on Second Language Reading and Second Language Acquisition.

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For university-level students of English as a Foreign Language in Korea, those who reported reading more in their first language also read more in their second language, supporting the hypothesis that the reading habit transfers across languages. Consistent with previous research, those who read more in their second language displayed more second language competence. These results suggest that first language reading habits have an indirect effect on second language competence.

1. Introduction

Do those who read more for pleasure in their first language also read more and have more proficiency in a foreign language? This question is of interest. It is known that more free voluntary reading results in more language development (e.g. Krashen, 1993). If the reading habit transfers, first language reading may have an effect on foreign language competence.

This study thus examines reading habits in L1 and L2. We attempt to see if those who read more in their first language also read more in

their second language, to determine whether:

Free Reading in L1 → Free Reading in L2

We then attempt to confirm that more reading in the L2 means more second language competence:

Free Reading in L2 → L2 development

If this is true, we can conclude that those who read more in the first language read more in the second language and thus develop more second language competence:

Free Reading in L1 → Free Reading in L2 → L2 development

This relationship between free reading in the first language read and second language development is indirect; it is mediated through free reading in the second language. It is also possible that reading frequency in the first language has a direct effect on second language reading ability, that is:

Free Reading in L1 → L2 competence

Such a relationship would reflect transfer of the reading process itself, such as phonemic awareness, specific sound-letter correspondences, and syntactic processing strategies.

We also expect to confirm that more reading in the L1 means more first language competence:

Free Reading in L1 → L1 competence

2. Method

Participants

Participants initially consisted of 530 undergraduates who were enrolled in the undergraduate level English course offered at the Pusan National University of Education in Southern Korea. These students represented a diversity of majors, including math education, physical education, music education, educational psychology, English education, and computer education. Of the 420 participants whose surveys were used in the final analysis, 84 (20%) were males and 336 (80%) were females.

Criterion Measures

The criterion measures were a Korean vocabulary test and an English vocabulary test. The Korean vocabulary test asked the students to convert Korean words written in Chinese characters into the Korean alphabet. This measure is considered to be a valid test of Korean literacy development: Most Korean vocabulary requires the use of Chinese characters and such tests are regularly used at the university level. The English vocabulary test was a checklist-with-foils asking students to indicate which English words they recognized, informing them that not all the words on the list were real English words (Appendix A).

Instruments for Free Reading in Korean.

Of the eight items in the self-reported free reading in Korean survey

(Appendix B), five items were from Lee and Krashen (1996). Three additional items, "Do you enjoy reading bestsellers or popular novels?", "How much do you spend per month on books other than school related books?" and "I enjoy reading books as a leisure activity" were also included. Students responded to the items along a four-point response scale, i.e. 1= Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree, or along an intensity scale: 1 = Rarely, 2 = Only Occasionally, 3 = Frequently, 4 = All the Time, or the level of agreement: 1 = No, 2 = Not Really, 3 = Sometimes, 4 = Yes. The total score was the sum of the values of each item.

Another scale for measuring free reading in Korean is the Korean magazine recognition test (MRT). The MRT is a checklist-with-foils that uses magazines currently in circulation in Korea. The list includes publications from a variety of fields including current issues, sports, music, fashion and entertainment, all written in Korean. Of the 40 items in the test, 28 were authentic Korean magazines and 12 were authentic-appearing foils (see Appendix C for the scoring key). Performance on various versions of the MRT have been shown to be related to the amount of free reading done (Stanovich & West, 1989; Kim and Krashen, 1998),

Instruments for Free Reading in English.

Six items were used to measure students' self-reported free reading in English. The items measured the amount of free reading done outside the classroom, frequency of visiting bookstores, number of English books at home, etc. (Appendix D). An identical scale was used in a study by Kim and Krashen (1998) with Korean high school students. As in the self-reported free reading questionnaire in Korean, students responded to the items along a four-point response scale: 1= Strongly

Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree, or along an intensity scale: 1 = Rarely, 2 = Only Occasionally, 3 = Frequently, 4 = All the Time. The total score was the sum of the values of each items.

The "Free Reading" factor included questions on access to reading material. A number of studies have shown that access to reading material and amount of reading done are related; those with more access read more (Krashen, 2001; McQuillan, 1998).

An English magazine recognition test (MRT) (Appendix E) was used to provide additional information on the level of free reading in English. The English MRT is also a checklist-with-foils that contains titles of English magazines and newspapers that are currently in circulation mixed with authentic-appearing titles that were are not real magazines or newspapers. Of the 40 items in the test, 26 were authentic English magazines or newspapers and 14 were foils.

Results

Table one presents mean scores on the measures used and coefficient alpha reliabilities.

Table 1

SUMMARY STATISTICS AND COEFFICIENT ALPHA RELIABILITIES

Measure	minimum score	maximum score	mean	sd	reliability
Korean Vocabulary	0	30	9.33	6.13	0.9
English Vocabulary	0	50	31.54	2.26	0.82
Free reading in Korean	8	32	19.52	4.28	0.76
Free reading in English	6	24	9.13	2.64	0.73
Magazine Recognition: Korean	0	40	22.74	1.44	0.79
Magazine Recognition: English	0	40	22.28	1.4	0.79
Total n = 420					
reliability=coefficient alpha					

To test the hypotheses stated above, structural equation modeling was used. Structural equation modeling is a technique that allows for the estimation of contributions of various variables simultaneously. It also allows for direct and indirect estimation of latent variables (i.e., constructs underlying the sets of variables identified earlier) without the distorting presence of measurement error (Bentler & Wu, 1995; Bryne, 1994).

The SPSS 7.5 (1997) and Bentler's structural equation modeling (EQS) version 5.5a (1997) statistical package were used to analyze the data. EQS for Windows 5.5a was used for the structural equation modeling (to test causal relationships of the hypothesized model). EQS was chosen because it helped correct measurement errors, and it also allowed an examination of both the direct and indirect relationships among observed and latent variables (Byrne, 1994).

In order to test the unidimensionality of the measurement model, each

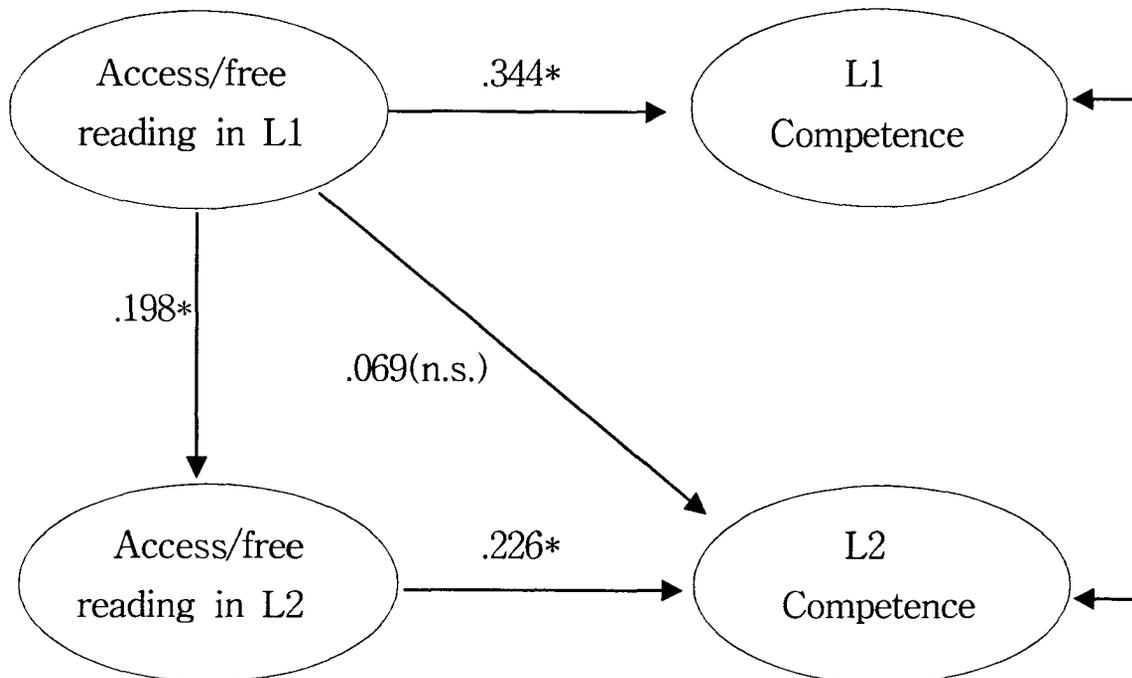
scale was divided into either split-halves or split thirds in order to render each factor at least three indicators. This is consistent with Anderson and Gerbing's (1988) suggestion to have a minimum of three indicators per latent variable. In this study, the structural model was comprised of four latent variables (or factors), 14 indicators, and associated error terms. Models were identified by setting factor variances to unity.

Although a nonsignificant chi-square is a desired result for not rejecting the model, it is suggested within the structural equation modeling community that the chi-square fit statistic is overly strict and overly sensitive for models with numerous variables and subjects (Bentler, 1980; Bentler & Bonnet, 1980; Newcomb, 1990). Therefore, this study uses alternate criteria suggested by Newcomb (1994). The following criteria were established to examine model fit: (1) the three fit indices from the EQS application, i.e., the Normed Fix Index (NFI), Non-normed Fit Index (NNFI), and the Comparative Fit Index (CFI) are greater than .90; (2) the chi-square/degrees-of-freedom ratio is less than 3.0 (Carmines & McIver, 1981); and (3) the Root Mean Square Error of Approximation (RMSEA) is less than .05 (Brown & Cudeck, 1993; Rigdon, 1996).

Based on the heuristics delineated above, the hypothesized model fit quite well for the sample (chi-square = 141.741, $p < .001$, NFI = .921, NNFI = .930, CFI = .947 and chi-square/df = 2.83). However, the Root Mean Square Error of Approximation (RMSEA) was .066, with a 90% confidence interval of $.053 \leq r \leq .079$, unable to meet the criterion set above.

The individual paths of the hypothesized model (see Figure 1) are discussed next in relation to the hypothesized model.

Figure 1
RESULTS OF THE HYPOTHESIZED MODEL



Note: * = statistically significant, n.s. = not statistically significant

As expected, there was a positive and significant ($\beta = .344$, $t = 4.610$, $p < .05$) relationship between free reading in Korean and Korean language competence, and a positive and significant ($\beta = .226$, $t = 3.582$, $p < .05$) relationship between free reading in English and English language competence.

In addition, there was a positive and significant ($\beta = .198$, $t = 3.484$, $p < .05$) relationship between free reading in Korean and free reading in English, confirming that the reading habit transfers across languages.

There was no evidence for a significant direct relationship between free reading in Korean and English language competence ($\beta = .069$, $t = 1.159$, $p > .05$), but there was a significant indirect effect, through a

significant direct effect from free reading in Korean to free reading in English ($\beta = .198$, $t = 3.484$, $p < .05$) and a significant direct effect from free reading in English to English language competence ($\beta = .226$, $t = 3.582$, $p < .05$).

3. Discussion

Our results confirm that the reading habit transfers and that the effect for these students is indirect, mediated through the influence of amount of free reading in the first language on the amount of free reading done in the second language, and the influence of free reading in the second language on second language proficiency. It is, of course, quite possible that a direct relationship between first language free reading and second language competence might be found when the languages involved have similar writing systems.

English competence is thus influenced directly by reading in English, and also indirectly by reading in the first language. Competence here, however, was defined as performance on a vocabulary test. It would be of interest to confirm our results with a wide variety of measures.

It must be pointed out that the subjects in our study were middle class and lived in a print-rich environment. They thus had ample opportunities to develop a reading habit in Korean. Their access to print in English was somewhat more limited, but nevertheless reasonable. We would not expect the reading habit to transfer in situations in which access to print in either language is low. Foreign language programs in the US, for example, typically provide limited access to books for genuine pleasure reading.

It is reasonable to hypothesize that for transfer to occur in the indirect way shown here, access to reading material must be plentiful. When this is the case, encouraging reading in the first language can have payoffs for second language development.

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Appendix A.*English Vocabulary Test (English Version)*

Put 'X' next to words you recognize as English words. Keep in mind that not all the words listed below are real words.

weary		untamed	
dismissal		loyalment	
successment		possess	
flane		amosity	
handle		invaluable	
conversal		bluck	
combine		heal	
magnify		forcement	
risent		strangity	
instrucness		influence	
rejected		deformness	
strap		artificial	
inscarce		sloping	
miggle		mudge	
collar		bundle	
infect		proposal	
forgivity		crope	
arousion		forsake	
lodge		inject	
expume		flapping	
infactory		burdle	
recipe		whistle	
asainful		turmoil	
forecast		article	
conscious		repeat	

Appendix B

Self-reported Free Reading in Korean Survey (English Version)

1. Do you enjoy reading (not including school related reading) as a hobby?
 - 1) No
 - 2) Not really
 - 3) Sometimes
 - 4) Yes
2. Do you enjoy popular novels or best sellers?
 - 1) No
 - 2) Not really
 - 3) Sometimes
 - 4) Yes
3. How much do you spend on books other than school related material every month?
 - 1) 0 - 5,000 won
 - 2) 5,000 - 10,000 won
 - 3) 10,000 - 15,000 won
 - 4) More than 15,000 won
4. I enjoy reading for leisure.
 - 1) Strongly disagree
 - 2) Disagree
 - 3) Agree
 - 4) Strongly Agree
5. I visit the bookstore
 - 1) Rarely
 - 2) Only Occasionally
 - 3) Often
 - 4) Frequently

6. I read magazines

- 1) Rarely
- 2) Only Occasionally
- 3) Often
- 4) Frequently

7. I read newspapers

- 1) Rarely
- 2) Only Occasionally
- 3) Often
- 4) Frequently

8. How many books to you read a year (not including school related books)?

- 1) 0 - 5
- 2) 6 - 10
- 3) 11 - 20
- 4) More than 20

Appendix C

Korean Magazine Recognition Test: Scoring Key

Correct Items

- | | |
|-------------------|--------------------------------|
| 1. Vogue | 19. National Geographic |
| 2. Seventeen | 20. People |
| 3. Esquire | 21. U.S. News and World Report |
| 4. Forbes | 22. Vanity Fair |
| 6. New Yorker | 24. Science |
| 7. The Economist | 26. Christian Science Monitor |
| 9. Cosmopolitan | 27. Los Angeles Times |
| 10. Rolling Stone | 29. Wall Street Journal |
| 11. GQ | 31. Byte |

- | | |
|---------------------|------------------------|
| 13. Fortune | 32. Time |
| 14. Discover | 35. Life |
| 16. Town & Country | 37. Washington Post |
| 18. Foreign Affairs | 39. Sports Illustrated |

Foils

- | | |
|------------------|--------------------------|
| 5. Exercise | 28. PC International |
| 8. Vision | 30. Entertainment Review |
| 12. Money Market | 33. Fashion Island |
| 15. MTV | 34. Medicine Journal |
| 17. Milestone | 36. Music Media |
| 23. Adventure | 38. Invention |
| 25. World Travel | 40. Hollywood Weekly |

Appendix D

Self-reported Free Reading in English Survey (English Version)

1. How often do you read English novels just for fun?
 - 1) Rarely
 - 2) Only Occasionally
 - 3) Often
 - 4) Frequently
2. How often do you read English magazines just for fun?
 - 1) Rarely
 - 2) Only Occasionally
 - 3) Often
 - 4) Frequently
3. How often do you purchase English books at bookstores?
 - 1) Rarely
 - 2) Only Occasionally

3) Often

4) Frequently

4. I enjoy reading English books.

1) Strongly Disagree

2) Disagree

3) Agree

4) Strongly Agree

5. My family reads English magazines/newspapers.

1) Rarely

2) Only Occasionally

3) Often

4) Frequently

6. How many English books other than school-related material do you have in your home?

1) 0 - 5

2) 6 - 15

3) 16 - 30

4) more than 30

Appendix E

English Magazine Recognition Test (English Version)

Put 'X' next to titles that are known as English magazines/newspapers. One thing you should be aware of is that not all the titles listed below are real magazines/newspapers. Keep in mind to check only those you recognize as magazines/newspapers.

Smithsonian		U.S. News and World Report	
Seventeen		Vanity Fair	
Esquire		Adventure	
Forbes		Science	
Exercise		World Travel	
New Yorker		Christian Science Monitor	
The Economist		Los Angeles Times	
Vision		PC International	
Cosmopolitan		Wall Street Journal	
Rolling Stone		Entertainment Review	
GQ		Byte	
Money Market		Time	
Fortune		Fashion Island	
Discover		Medicine Journal	
MTV		Life	
Town & Country		Music Media	
Milestone		Washington Post	
Foreign Affairs		Invention	
National Geographic		Sports Illustrated	
People		Hollywood Weekly	