

Incidental Vocabulary Acquisition from Pleasure Reading



Strong, B. P., & Bourorwick, T. J. (2012). Incidental vocabulary acquisition from pleasure reading *Extensive Reading World Congress Proceedings, 1*, 71-74.

Brian P. STRONG and T. J. BOUTORWICK

Kwansei Gakuin University

strongbp@me.com

tboutorwick@yahoo.com

This study investigated whether pleasure reading of two graded readers over a three-week period contributes to learning unknown words contained in the texts. The 52 participants in this study were divided into two groups. The experimental group consisted of 27 English as foreign language (EFL) learners who read the texts, and the control group consisted of 25 EFL learners who did not read the texts. Three tests were administered to measure three receptive aspects of word knowledge. Statistical analyses revealed no significant gains occurred on the post-tests, but two aspects of word knowledge showed significant increase on the delayed post-tests. Moreover, the results suggest that words that occurred less frequently were learned more than words that occurred more frequently, and that nouns were learned slightly more than verbs.

This study investigated the relationship between pleasure reading and incidental vocabulary acquisition. The term pleasure reading is employed to distinguish it from extensive reading. The term extensive reading implies that readers read pleasurable and easy texts. Since it is extremely difficult to demonstrate that the participants in this study were able to comprehend 98-99% of the vocabulary items contained in the reading materials, but their enjoyment of the texts can be verified, the term *pleasure reading* appears to capture the actual reading conditions.

This study asked the following research questions:

1. Does pleasure reading lead to incidental learning of three receptive aspects of word knowledge: recognition of word-form, recognition of form-meaning and recall of form-meaning?
2. Are the vocabulary gains retained 2.5 weeks after reading?
3. Are words that occurred more frequently more susceptible to incidental learning?
4. Does a word's part of speech contribute to how it is incidentally learning?

Methods

The participants were 52 Japanese second-year university science majors learning English as part of a compulsory program. The participants were separated into two groups, an experimental and a control group.

The experimental group consisted of 5 females and 22 males, and the control group consisted of 6 females and 19 males.

Treatment 1 involved exposure to English as part of EFL learning inside and outside of class over a three-week period. Treatment 2 consisted of reading two graded readers (GRs) over a three-week period. The control group received treatment 1, while the experimental group received treatment 1 and 2. To minimize extraneous variables from creeping in during the experiment, the primary researcher was the English teacher for both groups and took great effort to synchronize teacher talk and lesson content between both groups.

Before the GRs could be selected, it was necessary to measure the vocabulary level of both groups. The JACET vocabulary levels test revealed that the both groups had a vocabulary breadth slightly over the first 3000 most frequent words.

Text Selection and Target Words

The GRs used in this study were *I, Robot* (1400 headwords) and *The Time Machine* (1700 headwords), which when taken together amount to 45,138 tokens. To confirm that the experimental group found these texts pleasurable, they were asked on a survey that was administered at the end of the study if they found the texts enjoyable to read. All the responses were in the affirmative. Therefore, the two graded readers fulfilled the criterion that the texts should be pleasurable.

From a list of potential target words, loan words and phonemically difficult words were eliminated, leaving a list of 138 target words of which 82 were nouns and 56 were verbs. The target words were divided into 5 frequency bands. The first frequency band contained words occurring one time; frequency band 2: 2-4 times; frequency band 3: 5-8 times; frequency band 4: 9-15 times; and, frequency band 5: 16+.

Reading Conditions and Vocabulary Tests

The experimental group read the two GRs during their free time and were given 4.5 hours of in-class sustained silent reading over the three-week period. They reported that they were able to finish reading both GRs within the set time limit.

Three receptive aspects of word knowledge were measured in this study: recognition of word-form, recognition of form-meaning and recall of form-meaning. The format of the recognition of word-form consisted of a document with 52 rows and 10 columns. The target words were randomly placed within this grid according to part of speech and frequency of occurrence, and the remaining spaces were filled with nonsense words. The test takers were instructed to circle the words that were real English words, while no mention was made as to how many target words were placed in the document.

A multiple-choice format was used to measure recognition and recall of form-meaning. Both tests consisted of 5 distractors and an "I don't know" option. The distractors were chosen to be as dissimilar from the target word meaning as possible and were

of various parts of speech. To avoid random guessing, the test takers were instructed to select the 'I don't know' option if they were unsure about the target word meaning.

The test takers were given 35 minutes to complete each test. They completed all the tests well within this time limit. The recognition of word-form test was administered first followed by the recognition of form-meaning test. The recall of form-meaning test was administered two days later at the beginning of class. At the end of class, the experimental group was instructed to read the first GR. Since the participants had been regularly reading GRs up until the first test battery, it was hoped they would make little connection between the tests and the GRs used as part of the study. The immediate post-tests and delayed post-tests were identical to the pre-tests and were administered in the same order with the same duration to sit each test. The delayed post-tests were administered to the experimental group 2.5 weeks after the immediate post-test. The control group did not read any graded readers during the three-week study.

Results

The results of the three tests are presented in Tables 1, 2 and 3. Table 1 shows the results for research questions 1 and 2: Does pleasure reading lead to incidental learning of three receptive aspects of word knowledge, and are these aspects of word knowledge retained 2.5 weeks later?

Table 1. Scores on each Test for Both Groups (Max=138, n=26, 28 for Recall)

Test	Control Group				Experimental Group					
	Pretest		Post-test		Pretest		Post-test		Delayed Post-test	
	M	S.D.	M	S.D.	M	S.D.	M	S.D.	M	S.D.
Form	72.4	19.2	77.0	18.8	71.8	16.1	77.3	17.6	80.3	15.3
Recognition	66.1	8.5	72.2*	7.9	68.6	5.6	70.1	5.9	73.3*	5.3
Recall	117	12.6	120.1	14	101.1	17.8	110.9	14.9	113.1*	14.1

Note: *p < .05

ANCOVA revealed that on the recognition of word-form test, there was no difference in means on the post-test between groups ($F(1, 44) = .037, p = .85$), indicating that treatment 2 had no significant effect on incidental vocabulary acquisition. For the recognition of form-meaning, ANCOVA revealed that the two means were different in the post-test ($F(1, 47) = 28.73, p < .05$), however this difference, as shown in Table 1, is found in the control group, not the experiment group. On the recall of form-meaning test, ANCOVA revealed no significant difference in means on the post-test between the two groups ($F(1, 47) = 1.84, p = .182$).

To answer research question 2, Table 1 shows increases in all three aspects of word knowledge tested, with dependent t-tests showing recognition of form-meaning for the experimental group to be statistically significant ($t(25) = -3.617, p < .05$), as well as recall of form-meaning ($t(27) = -2.277, p < .05$). Table 2 shows the results for the third research question. Note

that the results presented are for the experimental group.

For the recognition of word-form test, a Wilcoxon Signed-rank test showed statistically significant gains in frequency band 1 ($z = -3.663, p < .05$), 2 ($z = -2.02, p < .05$), 4 ($z = -3.225, p < .05$), and 5 ($z = -2.299, p < .05$). No significant gains were found with words occurring 5-8 times. On the recognition of form-meaning test, words that occurred 2-4 times were found to have significant gains from the pre-test to post-test ($z = -2.812, p < .01$). Finally, on the recall of form-meaning test, significant gains were observed in frequency bands 1 ($z = -4.107, p < .001$), 2 ($z = -3.671, p < .001$), 3 ($z = -2.657, p < .01$), 4 ($z = -2.237, p < .05$), 5 ($z = -2.096, p < .05$). Due to space limitations, the delayed post-test results will not be discussed here, but are presented in Table 2. Table 3 presents the results for the fourth research question. Note that these results are for the experimental group.

Table 2. Frequency of Word Occurrence Results for the Experimental Group (n=26, 28 for Recall)

Frequency (words)	Form			Recognition			Recall		
	Pre	Post	Delayed Post-test	Pre	Post	Delayed Post-test	Pre	Post	Delayed Post-test
1 (42)	24.0	28.0*	30.0*	21.1	21.6	23.3*	28.9	32.6*	34.8*
2-4 (27)	16.1	17.3*	19.0*	19.0	20.3*	21.3*	18.1	20.1*	19.4
5-8 (21)	14.2	14.7	15.7*	10.8	10.3	10.7	16.1	17.5*	17.9
9-15 (22)	14.1	15.8*	16.5	9.0	9.0	9.0	16.8	18.0*	18.3
16+ (26)	16.8	18.0*	18.7	8.8	8.8	9.0	21.2	22.7*	22.7

Note: * $p < .05$

Table 3. Part of Speech Results for the Experimental Group (n=26, 28 for Recall)

POS	Recognition			Recall		
	Pre-test	Post-test	Delayed Post	Pre-test	Post-test	Delayed Post
Noun (82)	35.0	36.2	38.4*	62.4	69.0*	71.6*
Verb (56)	33.6	33.9	34.9*	38.7	42.0*	41.6

Note: * $p < .05$

The results show that for the recognition of form-meaning test, there were no statistically significant increases in either nouns or verbs from the pre-test to the post-test. For the recall of form-meaning test, statistically significant gains were found for both

nouns ($t(27) = -5.600, p < .001$) and verbs ($t(27) = -3.450, p < .01$), with more nouns being learned than verbs. Due to space limitations, the delayed post-test results will not be discussed here, but are presented in Table 3.

Conclusion

Although pleasure reading is a way to expose L2 readers to large quantities of (partially known and unknown) words in an effort to facilitate incidental vocabulary learning, the results of this study seem to indicate that this largely failed to occur. The results are atypical when compared to similar studies such as Waring and Takaki (2003), Pigada and Schmitt (2006), and Pellicer-Sanchez and Schmitt (2010). It is probable that the texts contained too many unknown words in which to facilitate contextual inferencing of the target words. The difference between recognition and recall of form-meaning scores was unexpected but could possibly be accounted for by the post-test effect (Perry, 2011: 105). Finally, the delayed post-tests results are perhaps the most surprising, and these beg further investigation.

References

- Asimov, I. (retold by Reilly, T.) (2008). *I, robot* [Macmillan readers: level 4]. Oxford: Macmillan Heinemann ELT.
- Pellicer-Sanchez, A., & Schmitt, N. (2010). Incidental vocabulary acquisition from an authentic novel: Do things fall apart? *Reading in a Foreign Language*, 22(1), 31-55.
- Perry, F. (2011). *Research in Applied Linguistics*. New York: Routledge.
- Pigada, M., & Schmitt, N. (2006). Vocabulary acquisition from extensive reading: A case study. *Reading in a Foreign Language*, 18(1), 1-28.
- Waring, R., & Takaki, M. (2003). At what rate do learners learn and retain new vocabulary from reading a graded reader? *Reading in a Foreign Language*, 15(2), 130-163.
- Wells, H. G. (retold by Maule, D.) (2006). *The time machine* [Penguin readers: level 4]. Harlow: Pearson Education.