

## **Incidental Vocabulary Acquisition in French as a Foreign Language**

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*Third semester college students of French in one intact class saw the first five scenes of *Trois hommes et un couffin* and read the next five scenes in class. They were then surprised with a vocabulary test that contained highly colloquial words that were in the text. Subjects performed significantly better than control subjects who were enrolled in another 3rd-semester French class as well as controls enrolled in a more advanced class, confirming that incidental vocabulary acquisition is possible in a foreign language situation. A conservative estimate of their rate of vocabulary acquisition was about .075 words per minute, which included the film and the reading. Rate of incidental vocabulary acquisition may have been underestimated, however, because the text was difficult, only 30 words were tested, and only eight of the 30 words appeared in the film.*

A number of studies in first language acquisition have shown that students can acquire vocabulary through reading (for a review, see Krashen, 1993). In these studies, subjects were given a text to read that contained words unfamiliar to them. Subjects were not told to try to learn the new words, but were simply asked to read for meaning. After reading the text, subjects were surprised with a test on the new words. These studies have shown that readers make small but significant gains in vocabulary knowledge from even one exposure to a new word, gains that, given enough reading, appear to be large enough to account for adult vocabulary size (Nagy et al, 1985).

A small number of studies have been done showing that second language acquirers can also acquire vocabulary through reading (Pitts, White, & Krashen, 1989; Schouten-van Parreren, 1989; Day, Omura, & Hiramatsu, 1991). The purpose of the present study is to attempt to confirm that second language acquirers can acquire vocabulary incidentally and to get an estimate of how efficient this process is.

## Procedure

Subjects were 42 undergraduate students enrolled in French courses at the University of Southern California. Three intact classes were used: two intermediate French classes (one experimental and one control) and one advanced class (control).

The experimental class ( $n=15$ ), students in their third semester of French, saw the first five scenes of the film *Trois hommes et un couffin* (without subtitles). The next day they were asked to read the script of the next five scenes in class, approximately 15 typed pages of text. Since the text was considered to be challenging for students, the film was shown in order to provide some background knowledge. Subjects were given 40 minutes in class to do the reading. They were not told that they would be tested on vocabulary, nor were they told to pay special attention to new vocabulary. Instead, they were told they would be given a reading comprehension test based on the passage. Immediately after completing the reading, subjects took a vocabulary test (described below), but not the promised comprehension test.

The two control groups took the same vocabulary test, but did not see the film or read the passage. One control group ( $n=13$ ) was another 3rd-semester class, while a second control group ( $n=9$ ) was enrolled in a class in French pronunciation and conversation, which has 4th-semester French as a prerequisite. The second control group consisted of students who were more advanced than the experimental group and was included to confirm that the words on the test were unfamiliar to 3rd-semester students.

The vocabulary test (see appendix) contained 30 items from the reading that appeared between one and six times in the text. Words were selected from the reading by one of us (B.D.), a native speaker and instructor of French with extensive experience in teaching intermediate students. An attempt was made to select words that were extremely colloquial, and unlikely to be known by 3rd-semester students. A multiple-choice format was used, with all distractors in English. Each item had three possible answers as well as a fourth "I don't know" option, with correct answers randomly placed in first, second or third position. The reliability of the test was .956 (Kuder-Richardson formula 21).

We thus used a post-test-only design, without true randomization of subjects. This design is considered to be "pre-experimental" (Campbell & Stanley, 1966, refer to it as a "static-group comparison"). Its most obvious weakness is that subjects in the experimental and comparison groups might be quite different in their initial knowledge of the target vocabulary. This design, however, was our only option, since true randomization was impossible, and pre-testing might have cued the experimental group to focus on vocabulary acquisition.

There are, however, good reasons to presume that despite the use of this design, our results are valid. As noted above, nearly all the words tested were extremely colloquial and were probably not familiar to intermediate students of French (e.g. *dingue*, *pôte*, *bosses*); the second control group, consisting of more advanced students of French, was included to confirm that this was in fact the case. Also, as we will see below, the differences in test scores between the experimental and comparison groups were quite dramatic, which makes it unlikely that these differences were due to initial differences in vocabulary knowledge.

### Results

As indicated in *Table 1*, the experimental group mean was clearly higher than either of the comparison group means. In addition, the performance of the comparison groups was much more variable, as indicated by the very different standard deviations in *Table 1*.

**Table 1**

*Performance of Students who Read Trois hommes et un coiffin and Comparison Students on Test of Vocabulary*

	<i>n</i>	<i>mean</i>	<i>s.d.</i>
experimental	15	14.73	1.73
3rd-semester controls	13	8.08	5.24
advanced controls	9	8.93	5.71

perfect score = 30

Differences between the experimental and the two comparison groups were confirmed by planned comparisons, simultaneous *t* tests comparing the experimental group and each control group, with a Bonferroni correction for lack of independence. Because we performed a total of three *t* tests, a significance level of .016 was required for significance for individual tests (.05/3) (Pedhazur, 1982). Because the experimental hypotheses were directional, one-tailed *t* tests were performed.

For the experimental group and the 3rd-semester controls,  $t = 4.04$ ,  $p = .0003$ ;  $df = 14$ . For the experimental group and the advanced controls,  $t = 3.66$ ,  $p = .0012$ ,  $df = 14$ . (Because of the obvious difference in standard deviations of the experimental and control groups, a two-sample *t* was used, a version of the *t* test that does not assume equal standard deviations (Ryan, Joiner, & Ryan, 1985).

An interesting result was that the advanced controls performed similarly to the 3rd-semester controls, which confirmed that the target words were generally unknown to intermediate level students of French ( $t = .40$ , n.s.,  $df = 24$ ).<sup>1</sup>

### Discussion

The experimental group clearly outperformed both control groups, confirming that vocabulary can be acquired incidentally by foreign language students.

A conservative interpretation of our results is that subjects gained an average of nearly six words after reading for 40 minutes and watching a film for 40 minutes (subtracting the experimental group score from the score of the highest-scoring comparison), or about .075 wpm, a little less than five words per hour.

These results, however, probably underestimate the value of comprehensible input in increasing foreign language vocabulary. Students found the text quite difficult; in fact, 30 percent of the experimental subjects did not finish reading the assigned passage in the allotted 40 minutes. An easier text might have resulted in even greater vocabulary acquisition. In addition, only 30 words from the reading were tested. It is quite possible that subjects acquired other words that were not tested. Finally, this estimate includes the time spent viewing the film, and most (22/30) of the target words did not appear in the film. Including only 40 minutes of reading would give an estimate of .15 wpm, quite close to the figure of .25 wpm calculated for rate of vocabulary acquisition for children reading in their first language (Nagy et al, 1985).<sup>2</sup>

This study did not attempt to demonstrate the superiority of vocabulary acquisition by reading, but it did confirm the results of previous studies showing that second language acquirers can acquire vocabulary incidentally. More careful studies, including the use of delayed testing, will help us determine just how efficient reading is. Even if it turns out to be the case that reading is not as efficient as direct vocabulary instruction, reading might still be preferable. Reading is far more pleasant than direct vocabulary instruction, and gives students many other benefits as well.

### Notes

1. Two additional analyses were carried out, with similar results. In one analysis, we gave subjects credit for partial knowledge. For each test item, one distractor shared at least some semantic features with the correct answer. In the following example, a student who chose the distractor "annoyed" would receive partial credit (0.5):

renfrogné frowning  
exhausted  
annoyed  
I don't know

When tests were rescored allowing for partial credit, the experimental group still outscored both control groups (experimental group versus 3rd-semester controls,  $t=3.99$ ,  $p=.008$ ;  $df=14$ ; experimental group versus advanced controls,  $t=3.85$ ,  $p=.0009$ ,  $df=14$ ).

We also reanalyzed the data, correcting for guessing, using the formula:  $adjusted\ score = rights - (wrongs/number\ of\ choices - 1)$ , assuming three choices (not counting "I don't know"). Once again, the differences between the experimental group and comparisons were significant (experimentals versus 3rd-semester controls,  $t=4.84$ ,  $p=.0001$ ,  $df=15$ ; experimental versus advanced controls,  $t=3.50$ ,  $p=.0015$ ,  $df=16$ ).

2. The rate of vocabulary acquisition estimated by Nagy et al was based on a scoring system that gave partial credit. Allowing partial credit (see *note 1*) raises our estimate of vocabulary acquired from reading from .15 wpm to .175 wpm.

**Appendix**

*Vocabulary Test*

1. douanier      a) police dog  
                    b) customs officer  
                    c) cleaning lady  
                    d) don't know
2. en slip        a) standing  
                    b) in briefs  
                    c) naked  
                    d) don't know
3. refrignée    a) frowning  
                    b) exhausted  
                    c) annoyed  
                    d) don't know
4. moutard      a) baby  
                    b) cyclist  
                    c) child  
                    d) don't know
5. enjoué        a) happy  
                    b) down  
                    c) noisy  
                    d) don't know
6. dingue        a) unfriendly  
                    b) funny  
                    c) crazy  
                    d) don't know
7. fouiller      a) find  
                    b) search  
                    c) steal  
                    d) don't know
8. glousser     a) yawn  
                    b) giggle  
                    c) chuckle  
                    d) don't know
9. biberon      a) toy  
                    b) feeding bottle  
                    c) sucker  
                    d) don't know

10. bordel      a) dirty  
                  b) pretty  
                  c) messy  
                  d) don't know
11. chiottes    a) closets  
                  b) toilets  
                  c) stairs  
                  d) don't know
12. saccager    a) replace  
                  b) smash  
                  c) ransack  
                  d) don't know
13. nana        a) mother  
                  b) girl (colloq.)  
                  c) baby  
                  d) don't know
14. hargneux   a) surly  
                  b) calmly  
                  c) irascibly  
                  d) don't know
15. crevé        a) tired  
                  b) scrounged  
                  c) excited  
                  d) don't know
16. came        a) medicine  
                  b) milk  
                  c) drug  
                  d) don't know
17. couffin     a) package  
                  b) cradle  
                  c) basket  
                  d) don't know
18. couche     a) pillow  
                  b) diaper  
                  c) blanket  
                  d) don't know
19. accablé    a) crushed  
                  b) confident  
                  c) numb  
                  d) don't know

20. pôte      a) jug  
                  b) buddy  
                  c) boy  
                  d) don't know
21. brique     a) broth  
                  b) 1 million francs  
                  c) drawings  
                  d) don't know
22. engueuler a) comfort  
                  b) yell at  
                  c) talk  
                  d) don't know
23. taule      a) mole  
                  b) cage  
                  c) jail  
                  d) don't know
24. abasourdi a) astonished  
                  b) worried  
                  c) stunned  
                  d) don't know
25. planouer   a) stuff  
                  b) hide  
                  c) throw  
                  d) don't know
26. boulet     a) job  
                  b) office  
                  c) country  
                  d) don't know
27. bosser     a) work  
                  b) stay  
                  c) toil  
                  d) don't know
28. rot         a) burp  
                  b) scream  
                  c) toil  
                  d) don't know



29. braille a) speak  
b) squall  
c) sleep  
d) don't know
30. abruti a) dumb  
b) fat  
c) gullible  
d) don't know

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