

The Comparison between Input and Output Collocation Instruction

Seonmin Park

Northern Arizona University

Abstract

Studies on input and output based vocabulary instruction have shown mixed results. Therefore, this study investigates the effects of output vocabulary instruction on learning collocations defined as “the ways words are combined with each other (Zimmerman, 2008, p.37).” For this study, one research question is addressed as whether output instruction has a significant effect on overall quality of collocation knowledge in comparison with input vocabulary instruction. In order to answer the research question, thirty intermediate students in the Program in Intensive English were selected as participants. Fourteen students learned eight academic collocations selected from Academic Word List (Coxhead, 2000) with input vocabulary instruction whereas sixteen learners acquired the same collocations with output vocabulary instruction. Both groups were asked to take receptive and productive tests before and after the instruction. The scores of the tests were analyzed by t-test and ANCOVA. The results show that the output group gained higher scores on both receptive and productive tests than the input group. Particularly, the output group significantly outperformed the input group on the productive test and the collocation meaning test. The importance of the types of vocabulary instruction is discussed.

Keywords: vocabulary, collocation instruction, input, output

Background

Barcroft (2006) and Shintani (2011) claimed that input vocabulary instruction is better than output vocabulary instruction on second language vocabulary learning while other researchers (Haratmeh, 2012; Keating, 2008; Laufer & Girsai, 2008; Webb & Kagimoto, 2009) have opposite results. The researchers who claimed that output vocabulary instruction is more efficient than input instruction generally link their results with Involvement Load Hypothesis that more involvement load facilitates students' language learning. They believe that output instruction requires a higher involvement load of students, and a task with more involvement load needs more time. However, even though the same position about output vocabulary instruction, they have different findings in amount of time to complete a task and different argument on the analysis of involvement load. In conclusion, more studies should be conducted in order to generalize the findings of each study because each study has different participants' background, target language and measurement. This study will provide one piece of the whole picture for better understanding of vocabulary instruction.

A Research Question

The purpose of this study is to examine the effects of input and output vocabulary instruction on collocation learning of English language learners (ELLs). For this study, one research question is addressed.

1. Does output instruction have a significant effect on overall quality of collocation knowledge in comparison with input vocabulary instruction?

The overall quality of collocation knowledge was divided into receptive and productive knowledge. The receptive vocabulary knowledge was operationalized by three categories including single word meaning in each collocation, collocation recognition and collocation

meaning. In addition, the productive vocabulary knowledge was examined by the participants' productive skills to explain the meaning of collocations and to create sentences including the target collocations.

Methods

Thirty students at the Program in Intensive English (PIE) were divided into an input (n=14) and an output group (n=16). The students in each group were asked to follow the assigned collocation instruction and to take pretest, posttest and delayed test. The tasks and tests used in this study were developed based on previous research on vocabulary (Barcroft, 2006; de la Fuente, 2002; Haratmeh, 2012; Keating, 2008; Laufer & Girsai, 2008; Nation & Webb, 2011; Pellicer-Sánchez & Schmitt, 2012; Shintani, 2011; Webb & Kagimoto, 2009), and they were piloted before being applied to the study.

The students in both input group and output group were asked to answer a questionnaire about personal information such as participants' educational background, L1, vocabulary knowledge in L1, previous experience of learning English and personally preferred vocabulary strategy. Each participant's name changed as a random ID to make the data anonymous. After completing a questionnaire, the pretest was administered to both groups. The pretest includes fifteen yes/no questions of the single words from the eight target collocations, the productive test (the inter-rater reliability: 0.99), the collocation recognition test and the collocation meaning test (Cronbach alpha: 0.85). Each test was separately distributed to prevent the participants from obtaining any information of the target collocations from the tests. The total test administration time was about thirty minutes.

After taking the pretest, the participants of each group were asked to do four tasks. Although the types of the tasks were different based on the characteristic of the group, the

purpose and given time are identical in both groups. Similarly to the tasks implemented by Haratmeh (2012) and Webb & Kagimoto (2009), the tasks in this study gave sentences including target collocations to the input group. On the other hand, the output collocation instruction was operationalized as dictation, filling in gaps and creating sentences including target collocations.

Two days later, the participants were asked to take the posttest which consists of the same tests as the pretest. The given time and the order were also identical to the pretest. After a week, the delayed test was administered in the same way. Scores were analyzed by t-test or ANCOVA depending on the difference of scores in the pretests.

Results

The descriptive statistics for all four tests are described in Table 1. Gains of both groups on the yes/no question posttests were statistically significantly different from the pretests (the input group: $t_{12}=2.56$, $p=.03<.05$, the output group: $t_{15}=5.12$, $p=.00<.05$). However, scores on the delayed tests were not statistically significantly different from the posttests in each group (the input group: $t_{11}=0.82$, $p=.43>.05$, the output group: $t_{14}=1.42$, $p=.18>.05$). In addition, the results of ANCOVA indicated that the difference of the productive posttest scores in two groups were statistically significantly different ($F(1, 27) = 126.57$, $p=.00<.05$). The difference of the delayed test scores in two groups were also statistically significantly different ($F(1, 27) = 73.54$, $p=.00<.05$). Moreover, the gain on the collocation recognition posttest in the output was statistically significantly different from the pretest whereas the gain on the posttest in the input was not (the input group: $t_{11}=2.11$, $p=.06>.05$, the output group: $t_{15}=8.22$, $p=.00<.05$). The results of paired t-test showed that both delayed tests were not statistically significantly different from the posttests in each group (the input group: $t_{12}=0.00$, $p=1.00>.05$, the output group: $t_{14}=0.64$, $p=.53>.05$). On the other hand, the difference of the collocation meaning posttest scores in two

groups were not statistically significantly different ($F(1, 26) = 2.75, p = .11 > .05$). However, the delayed test mean scores in both groups were statistically significantly different ($F(1, 27) = 21.05, p = .00 < .05$). The overall gains in the four different types of the tests were higher in the output group than in the input group.

Table 1 Descriptive statistics for the four vocabulary tests

| | | Pretest | | Posttest | | Delayed test | |
|---|--------|---------|----------------|----------|-----------------|--------------|-----------------|
| | | N | M (SD) | N | M (SD) | N | M (SD) |
| Yes/no questions (scores: 0-15) | Input | 14 | 9.29 (1.33) | 13 | 10.96 (1.55) | 13 | 10.92 (1.75) |
| | Output | 16 | 8.94 (1.06) | 16 | 11.31 (1.40) | 15 | 11.80 (0.41) |
| Productive test (scores: 0-24) | Input | 13 | 6.81 (6.13) | 13 | 10.81 (8.81) | 14 | 9.46 (8.71) |
| | Output | 16 | 1.78 (1.91) | 16 | 22.66 (1.23) | 15 | 20.60 (4.50) |
| Collocation recognition (scores: 0-8) | Input | 13 | 4.69 (2.87) | 13 | 6.34 (1.74) | 14 | 6.07 (1.94) |
| | Output | 16 | 2.88 (2.55) | 16 | 7.44 (1.26) | 15 | 7.20 (1.27) |
| Collocation meaning (scores: 0-8) | Input | 13 | 5.46 (3.02) | 13 | 7.15 (1.21) | 14 | 6.49 (2.43) |
| | Output | 16 | 1.88 (1.67) | 15 | 7.67 (0.62) | 15 | 7.73 (0.07) |

In addition, all effect sizes were large except the posttest of the yes/no questions. Cohen's d of the posttest of the yes/no questions was 0.53 while that of the delayed test was 1.01. In addition, Cohen's d of the posttest of the productive test was 2.99 and that of the delayed test was 2.72. Moreover, Cohen's d of the posttest of the collocation recognition test was 1.47 and that of the delayed test was 1.33. Cohen's d of the posttest of the collocation meaning test was 2.02 and

that of the delayed test was 2.28. We could conclude that the vocabulary instruction influence students' both receptive and productive collocation knowledge.

Relevance to PIE and Second Language Learning

The findings showed that output instruction had a significant effect on overall quality of collocation knowledge in comparison with input vocabulary instruction. This study not only supports Involvement Load Hypothesis but also shows that output instruction was more effective than input instruction for collocation learning even for the same amount of time. Based on this research, PIE could encourage teachers to create more output-based tasks to teach collocations.

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