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Effect of Teacher-Scaffolding vs. Peer-Negotiation on Improving Iranian Intermediate EFL learners' Vocabulary Knowledge

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Abstract

There is a growing interest among teachers and researchers in understanding how language development occurs through interaction in classrooms and other teaching-leaning settings. This paper aims at comparing the role of environmental language in the shape of peer-interaction with scaffolding by teacher in promoting second language vocabulary knowledge. For this purpose 36 intermediate learners who had passed PET exam were randomly divided in three groups. Group one was taught through teacher-scaffolding, group two was conducted through peer-negotiation, and the third group which was the control group received none of these interventions and participants were working individually on the tasks. The selection of groups for different treatments had been done randomly. All groups sat for a pretest, three- session vocabulary course, immediate posttest and delayed post test. Split-plot Analysis of Variance (SPANOVA) run on the date revealed that peer-negotiation result in more vocabulary learning than teacher- scaffolding which in turn leads to more retention of vocabulary than peer-negotiation.

1. Introduction

Although all L2 acquisition theories acknowledge the role of input in language acquisition, they differ in the importance they attribute to it. While input is comprised of stimuli and feedback for behaviorists and acquisition is controlled by external factors, mentalists see input as only a trigger that sets off internal language processing. On the other hand the social interactionists theories attach the crucial importance to verbal interaction as source of input for language learning. Long's Interaction hypothesis was an extension to Krashen's input hypothesis. Long (1980, 1981, 1983a, cited in [5] Mitchell & myles, 2004) conducted a study of 16 native speaker- native speaker pairs and 16 native speaker- non- native speakers to examine more closely the features of FT, just like Fred's results he found little linguistic difference among the talk produced by groups. But there were important differences between the two sets of conversations when these were analyzed from the point of view of conversational management and language function performed. Conversational tactics such as repetition, confirmation checks, comprehension checks or clarification requests are so common in native speaker- non-native speaker pairs. According to [2] Ellis (2008), overall three functions of foreigner talk can be identified: 1. to promote communication, 2. to signal, implicitly or explicitly, speakers' attitudes toward their interlocutors, and 3. to reach the target language implicitly. Increasingly, studies of foreigner talk have switched their attention from linguistic to interactional modifications. According to Long (1980a, cited in [2] Ellis, 2008) interactional modifications occur even when input modifications do not. Long (1985, cited in [5] Mitchell & Myles, 2004) proposed a more systematic approach to linking features of environmental language and learners' second language development. He argued that Step1: show (a) linguistic/conversational adjustments promote (b) comprehension of input Step 2: show that (b) comprehensible input promotes (c) acquisition.
Step 3: Deduce that (a) linguistic/conversational adjustments promote (c) acquisition.
Most language researchers believe that output is necessary to increase fluency and learners need to practice producing second language utterances if they are to learn to use their inter language. [7] Swain (1995) in her output hypothesis makes a number of claims that go beyond the practice function of output and deals with development and efficiency of inter language. [7] Swain (1995) proposes three further functions for learner output:

- The “noticing / triggering” function, or what might be referred to as the consciousness-raising role
- The hypothesis-testing
- The meta-linguistic function, or what might be referred to as its ‘reflective’

2. Research questions and hypotheses

This study makes an attempt to seek answer for the following questions:

1. Is there a difference between peer-negotiation and teacher-scaffolding in terms of EFL learners' learning vocabulary?
2. Is there a difference between peer-negotiation and teacher-scaffolding in terms of EFL learners' vocabulary retention?

3. Method

The participants of this study were 36 female students who were studying intermediate and advanced levels in Goldis English institute. The reading and writing sections of PET (Preliminary English Test) was administered to 45 students who sat for the test voluntarily. From this pool 43 students could answer more than 70 percent of questions correctly. Because of practical considerations, just 36 out of 43 students were randomly selected for the study. They were divided into three groups randomly. These three groups of participants were labeled as the scaffolding, the peer-negotiation and the control group based on the conditions which were supposed to be provided for them. In order to make sure that there was no statistically significant difference among the three groups of participants, their scores on the proficiency test were put into descriptive analysis. The randomly selected participants were also randomly divided to three groups each included 12 students. Two groups were chosen randomly as experimental groups and one group was considered as a control group. In this way the homogeneity of participants and groups was assured. All groups were agreed to take part in a five-session Free English course. In first session all the groups took a pretest containing questions focusing on words they were supposed to learn in the next three sessions. In the next three sessions, experimental groups and the control group were given several different texts with accompanying tasks. The tests and tasks were exactly the same for all three groups.

In classes for group one (G1) the teacher helped the learners through the tests and exercises step by step. The teacher assisted them with the meaning of the words in the text, provided them with the answers of the exercises, asked them clarification questions, checked the participants comprehension, asked them to write the summary of the texts in one paragraph, conducted effective error correction and provided them with negative feedback. To prevent peer-negotiation, participants used to sit in rows and the seats were separated from each other, and they were asked to work individually. Sessions one, two and three went in this manner for group one and took almost 90 minutes. Participants of second experimental group were divided to four, three-member groups. They used to sit in small circles. Each group was given one paper with tests and accompanying tasks and they were asked to interact and negotiate with each other and later with other groups to get the meaning of the texts and do the following tasks. Each group was given just one dictionary and they were not allowed to use other personal dictionaries. They were not provided with any help from the part of the teacher but they could negotiate with members of their groups and other groups as much as possible and they could even walk in class freely. They were requested to speak in English and were observed The third group was the control group. Individuals sat on desks separated from each other, and each student was given texts and accompanying tasks individually. They were asked to read the task, use their own dictionaries and do the task, they were not provided with any help by the teacher and they were not allowed to interact with their classmates or to check their answers with each other. In last session, which was session five the participants of all three sessions took a test which was equivalent with the pretest of the first session. The participants were asked to come to class one week later, but they were not aware of the exam in that day.

Group / Session	teacher-scaffolding	peer-negotiation	control
Session 1	*Proficiency test*		
Session 2	*Pre-test (vocabulary test)*		
Session 3	Vocabulary test + accompanying tasks + teacher scaffolding	Vocabulary test + accompanying tasks + peer negotiation	Vocabulary test + accompanying tasks
Session 4	Vocabulary test + accompanying tasks + teacher scaffolding	Vocabulary test + accompanying tasks + peer negotiation	Vocabulary test + accompanying tasks
Session 5	Vocabulary test + accompanying tasks + teacher scaffolding	Vocabulary test + accompanying tasks + peer negotiation	Vocabulary test + accompanying tasks
Session 6	*Immediate post-test*		
Session 7	*Delayed post-test*		

Figure 1. The design of the study

To compare the size of vocabulary learning of three groups of participants, the scores obtained for the three groups through pre-test, immediate and delayed posttest were put into a split-plot ANOVA (SPANOVA). Table 2 shows the descriptive statistics for the pretest.

Table1 Descriptive statistics for pretest

Teacher-scaffolding	Peer-negotiation	Control	Total
G1 (n = 12)	G2 (n = 12)	G3 (n = 12)	G4 (n = 36)
M = 1.26	M = 1.91	M = 1.91	M = 1.83
Sd = 1.23	Sd = 1.16	Sd = 1.62	Sd = 1.33

As it is obvious in Table 2 there is no significant difference between the means and standard deviation of these three groups in terms of scores obtained from pretest. Table 3 shows the descriptive statistics for the immediate posttest.

Table2 Descriptive statistics for immediate post-test

Teacher-scaffolding	Peer-negotiation	Control	Total
G1 (n = 12)	G2 (n = 12)	G3 (n = 12)	G4 (n = 36)
M = 6.41	M = 7.91	M = 6.38	M = 6.38
Sd = 0.90	Sd = 1.24	Sd = 1.72	Sd = 1.72

As Table 3 indicates, compared to other two groups, students of group 2 who were working together through peer-negotiation could do better in immediate post test (M = 7.91). Comparison between G1 and G3 clarified that G1 which was designed to represent the effect of teacher-scaffolding has produced better results than G3 or control group. Table four shows the descriptive statistics for delayed posttest.

Table4 Descriptive statistics for delayed post-test

Teacher-scaffolding	Peer-negotiation	Control	Total
G1 (n = 12)	G2 (n = 12)	G3 (n = 12)	G4 (n = 36)
M = 5.66	M = 5.91	M = 3.33	M = 4.97
Sd = 0.98	Sd = 1.44	Sd = 1.15	Sd = 1.66

Table 4 shows that in the second post test, the second group (peer-negotiation) again did better than the other two groups (M2 = 5.91, M1 = 5.66, M3 = 3.33). Comparing the difference in obtained means for G1 in the first and second post test gives us 0.75. Reducing the mean of delayed posttest from

immediate posttest mean yields 2 for G2 and 3.05 for G3. This shows that G1 did better than the other two groups in terms of vocabulary retention. This finding is shown in Table 5.

Table5 Comparison of size of retention of vocabulary among groups

	Teacher-scaffolding	Peer-negotiation	Control
M delayed – M immediate	0.75	2	3.05

A split-plot ANOVA was conducted to see if the differences observed among different groups (teacher-scaffolding, peer-negotiation, and control group) in different times (pretest, immediate posttest, delayed posttest) on L2 vocabulary learning were statistically significant. Table 6 represents the results.

Table6 Split-plot ANOVA results

	Time	Group	Time*Group
Wilkins' Lambda	0.000	0.000	0.000

The split-plot ANOVA run demonstrates that the difference among the three groups concerning vocabulary learning is meaningful. Technically speaking, the Wilkins' Lambda turned out to be 0.000 for Time. This is less than 0.05 (0.000< 0.05) so there was significant difference among pretest, post test 1, and posttest 2. Therefore we can claim that time as a variable exerted influence on L2 vocabulary learning. A Table 6 shows, Wilkins' Lambda for Group is also 0.000 which is less than 0.05 (0.000<0.05) so the significance among three groups is also meaningful. Wilkins' Lambda for Time and Group interaction equals 0.000 which shows that L2 vocabulary learning was affected significantly by Time and Group interaction. The following graph shows the relation between these three groups in three different times. The split-plot ANOVA provides information on difference among groups, but it provides no information as to the location or source of the difference. To determine the precise location of the difference among the three groups, a post-hoc analysis is used. Table 7 shows the result of Pairwise comparison between groups in terms of three different times

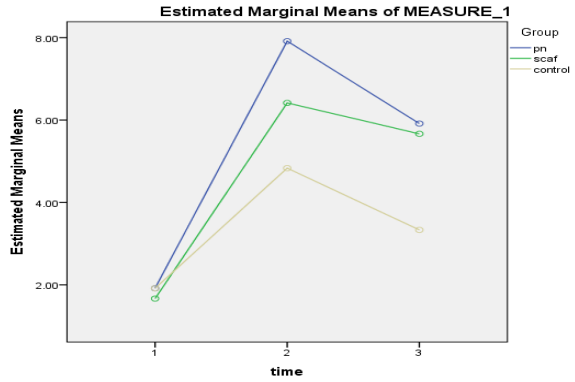

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Table7 *Pairwise comparison between groups in three times*

		Mean difference		
		Time 1	Time 2	Time 3
Group 1	Group 2	- 0.25	- 1.50*	- 0.25
	Group 3	- 0.33	1.59 *	2.30*
Group 2	Group 1	0.25	1.50*	0.25
	Group 3	- 0.08	3.09 *	2.55*
Group3	Group 1	0.33	- 1.59*	- 2.30*
	Group 2	0.08	- 3.09*	- 2.55*

*The mean difference is significant at the 0.05 level

Table 7 shows that there is no significant difference between groups in pretest, but the difference between all three groups in immediate posttest is significant. Based on the results of post-hoc analysis there is no significant difference between performance of Group 1 and Group 2 in delayed posttest. But there is significant difference between Group 1 and 2 in one hand and Group 3 on the other hand in their performance in delayed posttest. In order to compare performance in three different times, another Pairwise was conducted to compare groups' performance in three times.

Table8 *Pairwise comparison between times in three groups*

		Mean difference		
		Group 1	Group 2	Group 3
Time 1	Time 2	- 4.75*	- 6.00*	-2.81*
	Time 3	- 4.00*	- 4.00*	-1.36*
Time 2	Time 1	4.75*	6.00*	2.81*
	Time 3	0.75*	2.00*	1.45*
Time3	Time 1	4.00*	4.00*	1.36*
	Time 2	- 0.75*	- 2.00*	-1.45*

*The mean difference is significant at the 0.05 level

4. Conclusion

The first research question addressed the comparison of effects of two different kinds of classroom negotiation on vocabulary learning in EFL setting. Based on this question, a null hypothesis was formed stating that there was no difference in effectiveness of these two procedures on vocabulary learning. The findings in this study did indicate a statistically significant effect of these two types of negotiation on vocabulary learning as a result of providing ways to communicate, exchange information, do negotiation of meaning and overall language use.

The second question was designed to work out the usefulness of peer-negotiation and teacher-scaffolding on vocabulary retention in comparison with each other. The results of split-plot ANOVA indicated that in spite of higher range of vocabulary learning by peer-negotiation group the group who benefited teacher assistance was more successful in maintaining what they had already acquired. Thus the second null hypothesis was also rejected. This study approves of the role of any form of interaction in improving vocabulary learning in intermediate EFL students. On the other hand it verifies the positive effect of teacher- learner negotiation on vocabulary retention by learners.

5. References

[1] Donato, R. (2004). Aspects of collaboration in pedagogical discourse. *Annual Review of Applied Linguistics,* 24, 284- 302.

[2] Ellis, R. (2008). *The study of second language acquisition.* Oxford: Oxford University Press.

[3] Lantolf, J. P. (2009). Introducing on job analysis. In J. P. Lantolf (ed.), *Sociocultural theory and second language learning* (pp. 1-26). Oxford: Oxford University Press.

[4] Lantolf, J. P., & Thorne, S. L. (2009). *Sociocultural theory and the genesis of second Language development.* Oxford: Oxford University Press.

[5] Mitchell, R., & Myles, F. (2004). *Second language learning theories.* London: Oxford University Press.

[6] Swain, M. (1985). *Communicative competence: some roles of comprehensible input and comprehensible output in its development.* In S. M. Gass & C. G. Madden (Eds.), *Input in second language acquisition* (pp. 235-253). Rowley, MA: Newbury House.

[7] Swain, M. (1995). *Three functions of output in second language learning.* In G. Cook & B. Seidlhofor (Eds.), *Principle and practice in applied linguistics: studies in honor of H.G.Widdowson (125-144).* Oxford: Oxford University Press.