

The Effect of Gesture on Pre-school EFL Learners' Vocabulary Learning and Word Retention in an EFL Teaching Context

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Abstract

This study intended to investigate the role of the gestures, used as a second language teaching technique, on vocabulary development in pre-school English as foreign language (EFL) learners at elementary level. The present study investigated the technique of teaching/learning second language vocabulary through gestures accompanied by traditional ways of teaching vocabulary at a private English institute in Talesh, Iran. In the study, two intact classes were selected: one fifteen-student class ($N = 15$) and another fourteen-student class ($N = 14$). One of these two classes was randomly selected as a treatment group and another one as a control group. Students in the treatment group were provided with vocabulary instruction through gestures along with other traditional techniques for six weeks while the control group followed only a traditional vocabulary instruction. Pretests and posttests of vocabulary were administered and *t*-tests were used to compare means of test scores within groups and between posttest of the groups. Results indicated that while the two groups were homogeneous in terms of their vocabulary knowledge before the treatment phase, the treatment group outperformed the control group in the posttest. That is, vocabulary instruction through gestural techniques is a significantly effective approach to improve EFL learners' vocabulary knowledge.

Key words: gesture, EFL, vocabulary, pre-school student

INTRODUCTION

During the very active decades of the mid-twentieth century, vocabulary teaching was not a top priority for researchers or curriculum designers in the context of language teaching and learning. Teaching vocabulary was of little importance in foreign language learning and it was left to be learned by learners themselves. In fact, vocabulary was ignored and downgraded. However, grammatical and phonological structures were given more emphasis because they were considered the first point in the learning process. However, over the past few decades, more emphasis was placed on vocabulary teaching and learning which in turn led to development of Lexical Approach in 1994 by Lewis. As a result of the growing interest in vocabulary teaching by researchers, various

techniques and strategies were suggested for learning and teaching the forms of a target language. Researchers started testing and evaluating these techniques in order to reach the best results in the process of language learning and as a result a growing body of literature now addresses lexical acquisition. Nowadays, it is observed that “vocabulary is an essential element of every second/ foreign language teaching and learning program” (Csomay & Petrović, 2012, p. 305). It is observed that, in vocabulary instruction, traditional teaching techniques do not bring about great competence of vocabulary so complements are necessary; of these complements is teaching vocabulary through non-verbal behaviors particularly through gestures.

It is argued that nonverbal communication performs a leading role in second language communicative competence (Gregersen, 2007) and the “nonverbal behavior of L2 teachers is a fundamental aspect of teacher-learner interaction” (Taleghani-Nikazm, 2008, p. 230). Moreover, nonverbal modes of communication are more shared and universal in the form-meaning relationship than those relationships available in speech (Philips, 1985). They are as subtle and subconscious in a native speaker as verbal language (Brown, 2000).

LITERATURE REVIEW

It is stated that “early gesture use might be an early index of global communicative skill” (Rowe & Goldin-Meadow, 2009, p. 1). Moreover, most of the people in the past used to communicate using gestures. In effect, people in the past could understand each other in different continents by gestures. However, it is argued that there are some differences in terms of quality between the gestures that L2 learners produce when they speak the target language and the gestures that they produce when they speak their native language. There are also differences between the gestures produced by native speakers of different languages. Among such differences is that “gestures accompanying L2 learners’ utterances in the target language tend to be over-explicit” (Morett, Gibbs & Whinney, 2012, p. 773).

Since “gestures reflect linguistic conceptualization, two languages with different event construals should display different gesture patterns” (Gullberg, 2008, p.284). Speakers with the same language and culture are remarkably consistent in when and how they gesture. However, L2 learners’ gesture may differ from the gesture of native speakers in nuanced ways (Gullberg, 2008; Morett, Gibbs & Whinney, 2012). Gesture had been of interest to Kendon (1983), who believes that gestures have a good relationship with speech and when a speaker speaks about conditions, gestures may appear with low speed, but with meaningful purposes. Kendon once distinguished gestures of different kinds along a continuum.

To Gullberg (2008), gestures like sounds, are described based on their formal properties. These properties include “configuration of the articulators (hands, arms, etc.), the place of articulation (gesture space), and the form of the movement” (p. 277). He argues that there are three phases in a gesture’s structure: (1) preparation phase where the hands move towards a specific part of space, (2) the stroke phase where the

limb reaches its maximum, and (3) the retraction phase where the hands move back to their resting position. These phases are separated by holds (i.e. immobility) in space before falling into the next phase. Therefore, a gesture is made of "a preparation, a pre-stroke hold, a stroke, a post-stroke hold, and a retraction" (Gullberg, 2008, p. 277).

METHOD

This study used a quantitative method in addition to participants' reflection (qualitative method) to understand the potential of instruction of English words through gestures on the improvement of learners' vocabulary knowledge in a Persian EFL context. In the first part, the quantitative stage, data was collected from 29 pre-school EFL learners, in two intact classes (one fifteen-student and another fourteen-student), studying at Zaban-e-No Language Institute in Talesh, Iran. They were tested twice on vocabulary knowledge; once at the beginning of the study and another, 6 weeks later, immediately after the study. In the second part of the study, qualitative stage, all participants in the treatment group and their parents were interviewed briefly and individually. In brief, semi-structured interviews, specific questions and their sequence were determined in advance. Participants spoke in Persian.

Interviewing, as one of the best ways for collecting data, was used to elicit the participants' attitude, opinions, and evaluations of the technique used. Emphasizing the importance of interviews and mentioning ways of conducting them, Mackey and Gass (2005) stated that "interviews can allow researchers to investigate phenomena that are not directly observable. Also, because interviews are interactive, researchers can elicit additional data" (p. 173).

A pilot study for 6 weeks (one institute semester) was carried out, in an attempt to determine the amount of time needed to learn how to teach words through gestures, and to identify any problems with the research design. Because the pilot participants, 12 male and female pre-school EFL learners, were very similar to the main study participants, it was felt that they would provide insights into some aspect of the study's design. In fact, some changes were made as a result of the pilot study. First, the pilot study showed that participants needed to be informed that there would be a posttest after a specific amount of time. Second, it indicated that the teacher needed more practice for teaching words through gestural techniques: teachers had to learn how to make appropriate gestures. Third, there was a tendency in part of students to work in groups. The vocabulary test was also piloted. The quality of the test was improved as a result of the piloting: a few items were deleted and some other items were changed.

Participants

Twenty-nine pre-school EFL learners participated in this study. All participants were studying English at Zaban-e-No Institute in Talesh, Iran, and were native speakers of Persian. In fact, two intact classes (one 14-student class and one 15-student class) were selected. One of these two classes was randomly selected as a treatment group and another one as a control group. Participants' ages were 4 to 6 with a mean of 5 and they

were of both genders. However, gender was not considered as a moderator variable in this study. English was the medium of instruction in these classes. They had already studied English for 1 to 2 years with a mean of 1.5 years. The main reason for choosing these learners was that they had a greater chance to further improve their vocabulary knowledge through gestural techniques.

Procedure

This study was conducted for six weeks. As such, there was six-week interval between pretest and posttest. The classes were held three times a week for 6 weeks and each session was 75 minutes. The course book that they were studying then was Pockets 2. Therefore, for training, words were chosen from their course book Pockets 2 by Mario Herrera and Barbara Hojel and related flash cards.

Considering the nature of the book and the purpose of the present study, in this study it had been tried to focus mainly on classroom languages. That is, those vocabulary items which are usually used in the classroom addressed to young EFL learners regardless of their level and a specific course book. As a case in point, words such as WALK, SLEEP, SMELL, READ, CALL, SIT, DOWN, STAND UP, DRAW, DRIVE, WEAR, CRY, PEEL, POUR, LAUGH, and TOOTHACHE were taken from the book or flash cards for making their gesture. Figures 1 and 2 show some of the gestures used as materials.



Figure 1. A gesture of sleeping



Figure 2. A gesture of crying

Vocabulary test

In the present study, the aim, regarding the testing section, was to assess the learners' receptive knowledge of vocabulary. In order to test receptive knowledge, 2 types of questions are taken: 1. Multiple choices, 2. Matching. According to Hughes (2003) the best technique for testing recognition ability is multiple choice one because distracters are easy to make, there is no harmful backwash effect and guessing the meaning of vocabulary is something that is recommended. Scoring is perfectly reliable, rapid and economical, too. Therefore, the present study used the multiple-choice type. The test included 20 multiple-choice items with four choices. There was no penalty for guessing. Students were given a score out possible 20. An example of vocabulary test is presented here:

Choose the best choice based on the picture given.



a. laugh

b. cry

c. walk

d. run

Answer: cry

It is worth mentioning that since not all the learners were able to read the questions by themselves, the teacher read both the questions and choices out loud to them twice.

The advantage of this kind of tests is that the way the vocabulary items are tested is similar to the way they were taught to the pre-school children in the classroom.

DATA COLLECTION AND ANALYSIS

In this study, the learners in the treatment group were provided with regular vocabulary learning with gestures. They were asked to guess the meaning of each vocabulary through gestures that the teachers used to make. In control group, however, vocabulary teaching was taught without using gestures. In fact, in this study, we investigate how the gesture use can help with improving vocabulary retention.

Students in the treatment group were provided with regular teaching of lexical items mainly action verbs through gestures, which they came across during their lessons. For instance, in order to say *Hello*, the teacher nodded his head for several times with a good smile, or when saying *Good morning*, he closed his eyes, and then opened his hands and eyes. Using gestures motivated the learners to be quiet and concentrate on what the teacher was doing. In this way, they could understand the message well and could be familiar with this kind of communication.

At some points, in order to find the best gesture of a verb, students were asked first to make some gestures for a specific word. Students were required to find out which gesture expressed a word well. Students were allowed to work in pairs/groups to make the most appropriate gesture of new vocabulary. In this way, the gesture was not the one imposed on them, but the one that was emerged through negotiation. After checking the students' gestures, the teacher might have presented another gesture. At this stage, students compared the gestures and gained knowledge of how to gesture the word. However, when there was a disagreement among learners as well as between teachers and learners, they were encouraged to follow the teacher's decision. Having done the exercise, students were able to find out the most appropriate gesture, which applied to the lexical items. The teacher easily gave feedback by presenting commentaries in the class.

The students could be either working with gestures in groups or individually developing appropriate learning strategies. It was, therefore, feasible for each student to

contribute cooperatively to the task in the successful acquisition of the targeted language vocabulary instead of purely being taught by the teacher. In control group, students were given the same lexical items. However, vocabulary was taught traditionally and without gestural techniques. In both groups, the same number of vocabulary items (about 5) was presented during each session.

In the present study, two intact classes were used. One of the advantages of the intact class is that it enhances the face validity of classroom research. For example, if the purpose of a study is to investigate the effect of a certain instructional method, an intact class is, ecologically, the best setting for the study (Mackey & Gass, 2005). Mackey and Gass (2005) also state that "one way of dealing with nonrandomization of individuals is to use a semi-randomization procedure by arbitrarily assigning classes to one treatment or another" (p. 143). Consequently, two intact classes were selected and one of them was assigned to treatment (fifteen students) and another to control group (fourteen students). Before the administration of the pretests, students and their parents in both groups read the Persian equivalent the consent form that explained the purpose of the study and they agreed to participate. To the both classes, pretests were given which consisted of 20 multiple-choice items. Participants were required to answer the tests in 30 minutes individually. After 6 weeks, the posttest (the parallel form of the same test) was given to the students. For the posttest, too, the students were given a time limit of 30 minutes to answer the questions.

In this study, there was one dependent variable (pre-school EFL learners' vocabulary knowledge) and one independent variable (teaching English vocabulary through gestural techniques in a six-week time period). To compare means of each test within the groups and between groups, *t* tests were used. There are four assumptions for a *t* test: (a) independence of groups, (b) independence of observations, (c) normality of the distributions, and (d) equal variances (Brown, 1992, pp. 644-645). The first two assumptions were met as both groups and observations were independent. Brown (1988) states that the third assumption requires the distribution of scores for each group to be approximately normal. In this study, when the scores were examined the distribution was described as normal. In term of last assumption, he states that this one also refers to "homogeneity of variances" (p. 166) that is, "the squared values of standard deviations (SD) should be about the same" (p. 166). These two assumptions were shown to be met in the present study. However, according to him because the sample sizes are almost equal this assumption has little effect little on the results. We can conclude that all of these assumptions for the use of this statistical test were met.

At the end of the study, the treatment group was interviewed. In fact, participants in the treatment group were questioned about their feelings and insights about the teaching vocabulary through gestural techniques during the class sessions.

RESULT AND DISCUSSION

To compare means of each test within each group (both control and treatment groups) a paired t test was used to analyze the data collected. The goal of a paired t test is to compare means of test scores within groups. An independent-samples t test was also used to compare the mean of the post-test scores of control group with the mean of post-test scores of treatment group (between groups). In this study, the dependent variable was the vocabulary test scores while the independent variable was teaching English vocabulary through gestures. There was, however, a secondary independent variable (in control group) which was teaching verbs through a traditional instruction.

Descriptive analysis of the data

Control Group

Table 1. Descriptive statistics of vocabulary test (control group)

	N	Range	Sum	Mean	SD	Varianc e	Skewness	Kurtosis
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error
pre.con	14	4	172	12.29	.266	.994	.989	-.670
post.con	14	4	180	12.86	.329	1.231	1.516	.024

Statistics for vocabulary test score are presented in Table 1. In control group, the means on the posttest did not change so much (from 12.29 to 12.86). The standard deviation (SD) also remained almost stable (0.994 and 1.231). The range did not change at all. Similar small-sized improvements in the sum were also found. The two distributions had neither significant skewness nor kurtosis problems.

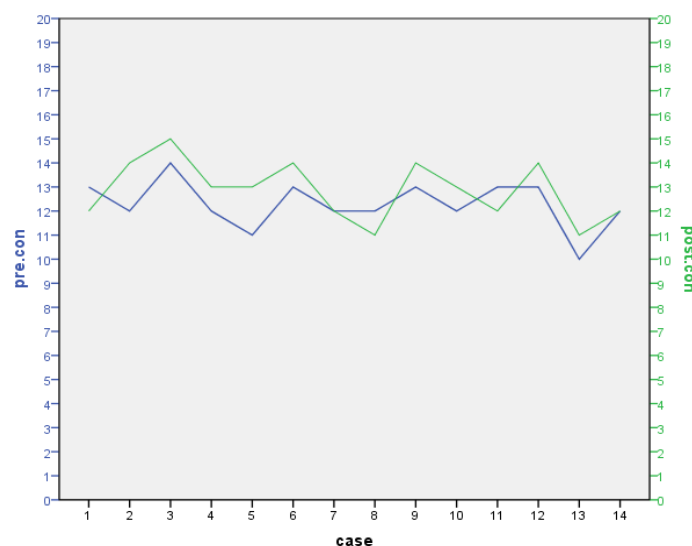


Figure 3. The comparison of differences of each student's sores on pretest and posttest of vocabulary test (control group)

Figure 3 displays the comparison of differences of each student's sores on pretest and posttest of vocabulary test in the control group. The scores on the posttest of the vocabulary exhibit the same histogram as those of the pretest, and those of the posttest

are slightly better than the pretest. Except students number 8 and 11, all students were able to boost their scores. However, their increase was not significant.

Treatment group

Table 2. Descriptive statistics of vocabulary test (treatment group)

	N	Range	Sum	Mean	Std. Deviation	Varian ce	Skewness	Kurtosis
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
pre.tre	15	4	176	11.73	.345	1.335	1.781	-.061
post.tre	15	7	216	14.40	.550	2.131	4.543	.364

Statistics for vocabulary test score, for the treatment group, are presented in Table 2. In treatment group, the means on vocabulary score from the pretest to the posttest improved from 11.73 to 14.40. Similar improvements in sum and range scores were also found. The standard deviation (SD) also increased (from 1.335 to 2.131). The two distributions had neither significant skewness nor kurtosis problems.

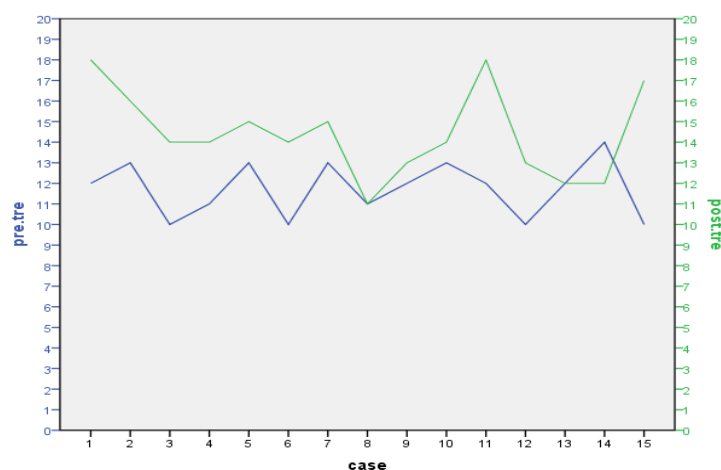


Figure 4. The comparison of differences of each student's scores on pretest and posttest of vocabulary test (treatment group)

Figure 4 displays the comparison of differences of each student's pre- and post-vocabulary test in the treatment group. It indicates that most of the students' posttest vocabulary test score increased. Except three students (8, 13 & 14), all students were able to boost their scores up to 7 numbers. In other words, the difference between pre-test and post-test in the control group was significant.

Inferential analysis of the data

Table 3. Paired samples t test (control group)

Table 5. Paired samples t-test (control group)									
		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	pre.con - post.con	-.571	1.016	.272	-1.158	.015	-2.104	13	.055

Table 3 shows the result of a paired *t* test of vocabulary test score in control group ($M = -0.571$, $SD = 1.016$, at a 95% confidence). It shows that the difference is not statistically significant, $t(13) = -2.104$, at $p < .05$, 2-tailed. Therefore, it is observed that there was no significant difference within the group means. That is, the average difference of -0.571 between vocabulary test score in the pretest and in the posttest was not statistically significant. This suggests that the students did not improve in terms of their vocabulary to a statistically significant degree in the 6-week period, during which they engaged in learning vocabulary based on a traditional instruction.

Table 4. Paired samples t test (treatment group)

		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	pre.tre - post.tre	-2.667	2.498	.645	-4.050	-1.284	-4.135	14	.001

Table 4 shows the result of a paired *t* test of vocabulary test score in treatment group ($M = -2.667$, $SD = 2.498$, at a 95% confidence). It shows that the difference is statistically significant, $t(14) = -4.135$, at $p < .05$, 2-tailed. Therefore, the null hypothesis of no difference within the group means was rejected. That is, the average difference of -2.667 between vocabulary test score in the pretest and in the posttest was statistically significant. This suggests that the students improved their vocabulary to a statistically significant degree in the 6-week period, during which they engaged in learning vocabulary through gestures.

Table 5. Independent samples t test (the post-tests of control group and treatment groups)

	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	3.222	.084	-2.364	27	.026	-1.543	.653	-2.882	-.203
Equal variances not assumed			-2.406	22.681	.025	-1.543	.641	-2.870	-.215

Table 5 shows the result of an independent t test of vocabulary test score between the post-test of the control group and the treatment group ($M = -1.543$, at a 95% confidence). It shows that the difference was statistically significant, $t(27) = -2.364$, at $p < .05$, 2-tailed. Therefore, the null hypothesis of no difference between post-test of group means was rejected. That is, the average difference of -1.543 between vocabulary test score in the post-test of control group and treatment group was statistically significant. This suggests that the students in the treatment group improved their vocabulary to a statistically significant degree compared to the control group in the 6-week period, during which they engaged in learning vocabulary through gestures.

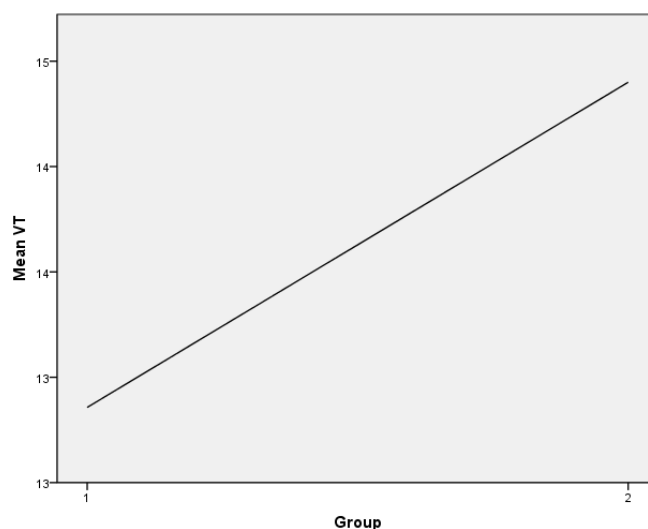


Figure 5. The comparison of each group's mean scores on the post-tests

Figure 5 shows the comparison of control and treatment groups mean scores, where no.1 is the control group and no.2 is the treatment group.

Qualitative Findings

Participants felt that gestures could help them improve their English vocabulary knowledge. Moreover, they found it more interesting and funny. The attitudes toward learning vocabulary through gestures were positive and favorable. Participants enjoyed making gestures in pairs or groups since they considered it a game. Participants did feel that making gestures would make them more active and energetic.

CONCLUSION

The aim of this research was to investigate the effects of teaching English vocabulary through gestures on English vocabulary knowledge of pre-school Iranian EFL learners. This study used a quantitative method in addition to interviewing participants (a qualitative method) to examine the effects of teaching vocabulary through gestural techniques and its effect on vocabulary learning by Persian young students. In the first part, the quantitative part, data were collected from two intact classes- one as a control group (14), another as treatment group (15) - studying at Zaban-e-No Language Institute. Participants studied English words. They were tested twice: before the study and a week after the study. Data from vocabulary tests were used to make comparisons

demonstrating the effect of teaching vocabulary through gestures on vocabulary knowledge. In the second part, the informal interview (qualitative part), treatment group were questioned individually about their experience with the gestural techniques. In addition, feedback from the teacher was collected. The results of vocabulary tests showed that participants of the treatment group got significantly high scores in the posttest than the pretest. Improvement also appeared in the participants of the control group, but the difference was not statistically significant. It was also shown that the posttest scores of treatment group were significantly high than the posttest scores of control group.

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