The Journal of Asia TEFL

The Effect of Pantomime Games on Learning Vocabulary among Iranian EFL Learners

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Introduction

Vocabulary learning is an inseparable part of learning English as a second or foreign language so much that Nation (2013) considers learning language without its vocabulary a useless effort. As a result, many studies have dealt with vocabulary learning as long as applied linguistics has been recognized as an independent discipline. The result of such studies has aided scholars to understand that vocabulary learning means not only recalling the lexical items, but also retaining them (Laufer & Hulstjin, 2001). In terms of retention, memorization plays a key role which is in turn relevant to factors such as cognitive load of the vocabulary tasks (Plass, Chun, Mayer, & Leutner, 2003), the role of language learners in the vocabulary learning process (Yamada, 2009), and language learners' learning style (Isazadeh, Makui, & Ansarian, 2016). The inability of language teachers in weighing these considerations in their classes has, in many cases, resulted in failure of their learners in vocabulary learning.

In English as a foreign language (EFL) contexts in Iran, for example, language learners at the high school level need to increase their knowledge of vocabulary to be able to tackle the university entrance exam (Hamzah, Kafipour, & Abdullah, 2009). The language section of the tests has at least 10 vocabulary questions. Besides, sufficient knowledge of vocabulary is required for answering questions on the other sections of the test. Isazadeh et al. (2016) posit that language educators in Iran still need to know what techniques they should use in order to aid learners to acquire vocabulary. On the other hand, Hamzah, Kafipour and Abdullah (2009) note that educators have accorded excessive focus to teaching methods in Iran and scant attention has been given to learners' challenges.

A possible approach to vocabulary learning which results in cognitive involvement, as well as an active role on the part of the learners in the learning process is game-based vocabulary learning (Hwang & Wu, 2012). Language games are interesting, empowering and result in critical analysis of the learning context and content (Peterson, 2010). Among many different language games which are used in language classes, pantomime has unique features which affect learning. It results in performing conversations (Smotrova & Lantolf, 2013). It also affects learners' memory and involves cognitive learning (Macedonia & Klimesch, 2014).

Features of pantomimes, as a guessing game used in classes to help the learners guess a job, an object, an action, etc by looking at a person who acts it out, raised a question in the mind of the researchers, i.e., to what extent can pantomimes result in both recall and retention of vocabulary items among Iranian EFL learners at the high school level? Understanding the answer to this question could help pre-service high school teachers with one of their most serious challenges, that of vocabulary recall and retention. In addition, it could guide teachers on how to use class time more creatively by involving the learners in the learning process.

Review of the Related Literature

Games-Based Language Learning

The goal of game-based learning has been to overcome the difficulty that normally exists in instructional settings. Benoit (2017) asserts that language games move learners from explicit and form-based instruction to more implicit and meaningful learning. In terms of vocabulary games, Derakhshan and Khatir (2015) note that the learners think about the vocabulary items; thus, higher chances of learning the word. Such features of game-based learning have resulted in excessive use of such techniques in language classes. Hmelo-Silver (2004) asserts that providing the learning problem in a meaningful context is not easy. The meaningful context should guide the learners in thinking about the problem. Unlike many instructional settings in which knowledge is taught to the learners, language games require the learners to play, enjoy and explore knowledge.

Indeed, language games require the learners to analyze and decode the context of the game. To do so, they should seek information. Prensky (2006) notes that this reduces competition and fosters collaboration as the learners begin to help each other. Oxford (1997) however, thinks that language games are not as comprehensive as they should be. To Oxford (1997) language learning occurs in a social context and the meaningful context of the game should have a social role for the learners. However, it seems that the social role is the neglected aspect of many language games.

Bryant (2006) asserts that language games solve one of the main problems in language classes and that is getting introverted or less motivated learners involved in classroom activities. Most introverted learners find it difficult to create the conversation with others and language games already provide them with this opportunity.

Pantomime Games

While language games have different forms to get the learners involved with different aspects of learning, i.e., form of the word, meaning of the word, part of speech, and usage, pantomime entails all such aspects. Żywiczyński, Wacewicz, and Sibierska (2016) note that pantomime is a) communicative, 2) mimetic, 3) non-conventional, 4) motivated, 5) multimodal, and 6) improvised. Two other significant features of pantomime are its universality and open-endedness (Sibierska, 2017). Pantomime games involve both meaning and form of the words. The learners are informed of the number of syllables in the word by fingers first and then should guess the name of the action. In some contexts, and in order to make the leaning process more complete, the learners are asked to make sentences with the word or jot down its spelling on the board.

Although pantomime is a multimodal game, it is primarily visual and kinesthetic (Żywiczyński et al., 2016). The learners are basically in two different groups. Those who perform the action and those who guess the name of the action. The former benefits kinesthetic learning and the latter benefits visual learning.

Empirical Background

The studies that have dealt with gesture-based games and vocabulary learning are not confined to learning English. For example, Tellier (2008) investigated the effects of gesture-based games on second language memorization among the French learners. Through an empirical study with a between-subject design, the researcher realized that children's active knowledge is affected by gestures and they reproduce the vocabulary items more easily compared to those who use conventional vocabulary learning techniques in which the meaning is decoded and the form is practiced.

In another study, Kalaycıoğlu (2011) focused on pre-school learners' vocabulary learning through language games. The results of this experimental study on 4-year-old language learners proved that games can have a positive effect on vocabulary learning as they increase visual exposure to the learning content. Griva and Sivropoulou (2009) believed that a supportive and playful environment is required for vocabulary learning by young learners, therefore, they focused on how 'rule play' could enhance vocabulary learning of Greek learners. Their study revealed that gesture-based games significantly affect learners' oral skills and vocabulary learning as a subcomponent of oral skills. Ebrahimi and Zamnian (2013) who focused on the effect of practical games (e.g., pantomime) on the language achievement of young learners also concluded that pantomime affects both vocabulary learning and sentence making among language learners in Iran.

Although the consensus among many scholars is that gesture-based language games can affect vocabulary learning of language learners, some scholars find the difference between game-based and traditional education in terms of vocabulary negligible. For example, Boroujeni, Akbar and Afshar (2015) who focused on language learners in public schools believed that games are not practical for public school language learners. As a result, this study was also conducted with public school learners to find out whether non-public school learners can benefit from vocabulary learning through pantomime. However, unlike many previous studies, this study did not focus on young learners, as vocabulary learning is a need for all learners at all stages of language learning.

Method

Research Design

This quasi-experimental study has a between-subject design, as comparisons occur between the control group and the experimental group, as a quantitative study, the main philosophical paradigm used was positivism, as conclusions were made based on observable data.

Participants

This study was conducted at an all-female high school. To determine the required number of participants, power analysis was run and it was found that at least 24 participants were needed in each group. A total of 3 intact classes with 79 female language learners were used. The learners were all 16 years of age and were studying in the 9th grade. Using the Oxford Placement Test (OPT) as a homogeneity test, 53 participants were selected. These participants did not statistically differ in their English as a Foreign Language skill and were divided into two groups, i.e., the experimental group (n = 27) and the control group (n = 26).

Instruments

The Oxford Placement Test (OPT) version 1.1 was given to the participants as a homogeneity test, the purpose of which was to select the participants whose language skill was not statistically different. In addition, as the focus of the study was on vocabulary learning the Vocabulary Knowledge Scale (VLS) based on Wesche and Paribakht (1996) was designed and given to the learners prior to the treatment. The purpose of the VKS was to determine unknown vocabulary of the learner. By using the VKS, the researchers could determine 54 unknown vocabulary words of all participants. Finally, a researcher-made vocabulary test was given to the participants as a posttest. The test contained 30 multiple-choice items based on the selected vocabulary for the course. A different vocabulary posttest was administered after a two-week interval. This test entailed questions regarding the same vocabulary items; however, the questions were redesigned and reworded to avoid the practice effect.

Procedure

In the first phase of the study the researcher informed the participants about the research and obtained their signatures on consent forms. Next, the OPT test was administered, and later the VKS was given to the selected participants. The participants in both groups went through 17 sessions of instruction. The control group participants were taught the vocabulary items through wordlists as suggested by the educational system in Iran. The participants in the experimental group (n = 27) practiced the targeted vocabulary through pantomime.

In the experimental group, the learners formed groups of two learners at the beginning of each session and were asked to guess the meaning of the words collaboratively. The performer of the word also decided on how to perform the word by negotiating it with her group-mate. The first phase of the pantomime game was showing the number of syllables of the targeted word with finger movements. Next, the performer attempted to show the act in a meaningful context. For example, when the word 'weave' was targeted, the performer attempted to show the act of weaving a carpet. The participants were expected to decode the act and secondly guess the meaning to the word. Having found the word, they were asked to make a sentence or suggest any other alternative way to perform the act.

In the control group, the vocabulary items were presented to the participants in the form of a list at the end of each unit of the book. In addition, at the beginning of each unit, the learners received examples of the words in sentences. Present-practice-produce based on the positivist approach to learning is the suggested method of learning by the educational system; thus, the participants were not expected to guess the meaning of the words. They were provided with the required knowledge and were asked to memorize the meaning of the words.

Data Analysis

Before all, normality of distribution of the scores was checked. As ratios of skewness and kurtosis were within the range of +/−1 and based on George and Mallery (2003), normality of scores on the homogeneity test was assumed. Next, the reliability of the scores was checked. It was found that all tests had reliable scores ($.78 \leq \alpha \leq .82$).

Prior to the main analysis, the researcher checked the distribution of the homogeneity of two groups based on the OPT test.

It can be assumed that the immediate posttest and delayed posttest given to the participants had content validity, as the vocabulary items were selected from the school course book. In order to check the construct validity of the test, the two tests were given to a panel of experts (5 high school teachers) who were involved in designing school language tests. Table 1 shows the comparison of the pretest scores prior to the treatment.

TABLE 1
Independent-Samples t-test; Control vs. Experimental Group

	Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference		Lower	Upper
Equal variances assumed	8.11	.000	3.77	51	.001	.17	.668		1.675	3.637

According to Table 1 (*t*(51) = 3.77, *p* = .001) [1.675, 3.637], it can be concluded that the difference between the two groups was negligible.

Next, item analysis was run for the immediate posttest (recall) and delayed posttest (retention) to make sure the test had sufficient discriminative power and an adequate difficulty level. As ratios of discrimination (ID) and item facility (IF) were within the acceptable range for all items ($.33 \le \alpha \le .66$), it was assumed that the tests could be used in the study.

The Research Question

In order to find out whether pantomimes have effects on the recall of vocabulary items by the participants, independent samples t-tests were run between the immediate posttest results of both groups.

TABLE 2
Descriptive Statistics: Immediate Posttest

Groups	N	Mean	Std. Deviation	Std. Error Mean
Experimental	27	23.50	3.763	.655
Control	26	19.00	3.675	.647

As can be seen in Table 2, the experimental group outperformed the control group (MD = 4.50).

TABLE 3
Independent Samples t-test; Immediate Posttest of Control Group vs. the Experimental Group

	Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference		Lower	Upper
Equal variances assumed	5.83	.000	4.15	51	.000	4.50	.583		3.673	6.873

As observed in Table 3 (*t*(51) = 4.15, *p* = .000) [3.673, 6.873], it can be assumed that pantomimes had significant positive effects on the recall of vocabulary items among Iranian high school students in the 9th grade. The same procedure was adopted for the result of the delayed posttest.

TABLE 4
Descriptive Statistics, Delayed Posttest

Groups	N	Mean	Std. Deviation	Std. Error Mean
Experimental	27	23.10	3.763	.655
Control	26	18.00	3.675	.647

As can be seen in Table 4, experimental group participants outperformed the control group participants (MD = 5.10).

TABLE 5
Independent Samples t-test, Delayed Posttest

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	4.23	.000	3.46	51	.000	5.10	.533	3.342	6.998

The results of the independent samples t-test ($t(51) = 3.46$, $p = .000$) [3.342, 6.998] show that the effect of pantomime games on the retention of vocabulary items by Iranian students at 9th grade was significant.

Discussion

The retention of newly learnt learning content is a concern to many educators. Boud and Feletti (2013) note that the learners lose up to 90 percent of the knowledge over time. However, Savery (2006) notes that the application of cognitive thinking can help increase the retention of knowledge. Cognitive thinking skills such as guessing, decoding, and analyzing, lead learners to use their higher order thinking skills (Ansarian, Adlipour, Saber, & Shafiei, 2016). As a result, the newly learnt information is processed prior to being stored. Pantomimes require the learners to use their cognitive thinking skills (Lamm, Batson, & Decety, 2007). This seems to be the main reason for high retention of vocabulary items by the learners in the experimental group.

Another significant feature of pantomimes is collaboration. As learners form groups of two learners to decide how they can perform the task and also to guess the word for the act, they make use of each other's knowledge (proximal zone). Collaborative learning, due to benefiting from other's proximal zone is a more effective approach to learning (Dang, 2013). This can justify why in this study, the experimental group's scores on the delayed posttest were lower than the ones in the control group.

Language games, in general, can influence affective factors of the learners. Mijares-Colmenares, Masten and Underwood (1993) noted that games reduce trait anxiety of the learners; hence, the learners become more capable of using creative thinking skills. In most cases, language games are conducted in a friendly manner, competition is replaced with collaboration, and an interesting atmosphere exists among the learners. Gass and Selinker (2008) acknowledge that competitiveness and anxiety are among the most influential affective factors which negatively affect vocabulary learning. In addition, the multimodality of pantomimes, i.e., application of various senses in learning (visual, kinesthetic, etc.), and cognitive skills results in a learning procedure which is suitable for learners with different learning styles.

The findings of this study are also in line with Tellier (2008) who concluded that gestures foster memorization. Tellier (2008) believes that emblematic nature of gestures in language games such as pantomime is among the main reason why learning through gestures are effective. Emblems should be decoded by the learners and decoding them requires creative thinking. Moreover, it should also be mentioned that this study was an attempt to see the effect of pantomimes on intentional vocabulary learning, as the vocabulary items were targeted prior to the study. As it was found that intentional vocabulary learning can be affected by pantomime, the findings of this study are in contrast with Madarsara, Youhanaee, Barati and Nasirahmadi (2015) who found language games suitable for incidental vocabulary learning.

Conclusion

This study was an attempt to solve vocabulary learning problems of Iranian 9th grade high school students. It was found that through pantomime games both the recall and retention of vocabulary items can be positively affected. It seems that guiding learners through higher order thinking skills, avoiding competitiveness and reduction of anxiety by pantomime are among the most influential factors contributing to higher recall and retention among Iranian EFL learners. The results of this study can be of prime significance to language teachers who may be looking for alternative ways to teach vocabulary in a more cooperative and interesting manner.

The Authors

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