Multimodal Pedagogy and L2 Vocabulary Retention

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ABSTRACT

One of the major problems learners face in vocabulary learning either in EFL or ESL settings is the issue of vocabulary retention in which vocabulary items are mostly forgotten in the first hours or days since learning or memorizing occurs. Although many studies offer the effects of different modes of meaning making such as print mode or visual mode on vocabulary retention, there is a paucity of research on the relative effectiveness of the combination of different modes in comparison with the application of one specific mode. In the present study, the application of multiple modes of meaning-making i.e. a combination of linguistic, visual, audio, spatial, and gestural communicative modes in the new century in learning skills and sub-skills has been referred to as Multimodal Pedagogy. In order to fill in the gap by investigating the effect of multimodal pedagogy on L2 vocabulary retention, an experimental study was done on 60 Iranian EFL female pre-intermediate learners in an English Language Institute in Gonbad-e-Kavous, a northern city in Iran. The treatment sessions lasted for ten ones during which the experimental group received vocabulary presentation using Multimodal Pedagogy. The control group followed the conventional pedagogy based on which they just received the library dictionary definition of vocabularies using print-based educational materials. The findings suggested that students who were exposed with a variety of modes of meaning making displayed better long-term vocabulary retention. This may be due to the fact that learners learn vocabulary items more efficiently as the experimental group pedagogy makes connections between their in-class and out-of-class language practices. This study is also of pedagogical implications for curriculum designers and English language teachers to redefine and reconsider their notions of vocabulary learning and teaching based on new pedagogies.

1. Introduction

Vocabulary learning, in recent years, has been an increasingly interesting topic of discussion especially for researches, teachers, curriculum designers, theorists and others involved in language and literacy teaching and learning process (Ellis, 1998; Zarei & Keysan, 2015). All these educational stakeholders see vocabulary as being a very important element in this

process which provides much of the basis for how well learners speak, listen, read, write and, in general, being literate (Richards & Renandya, 2002).

Mohammed (2009) and Demir (1998) argue that vocabulary learning makes the greatest difficulty for vocabulary retention for language learners. Indeed, forgetting vocabulary items in the first hours or days since learning or memorizing makes learners consult this problem with their language teachers so that they want to get rid of rote-learning vocabulary lists. In this regard, Mohammed (2009, p.16) defines vocabulary retention as "the ability to keep the acquired vocabulary and retrieve it after a period of time to use it in different language contexts". Suleiman (2009) also mentions that retention is a function of memory that can be defined as including more complex functions as memorizing or learning, recalling, and recognizing. He adds that there are some processes preceding retention noticing in taking, and storaging in the short term memory and later in the long term memory.

The failure in retention of vocabulary items may, in effect, come from the dominant conventional pedagogies in which language teachers still use pedagogies taken from the print mode of meaning-making to teach new vocabulary items (Richards, 2001).

In response to such failure, New London Group (1996, 2000) called for including the increasingly prominent role of multiple modes of meaning-making like images and visual ones in combination with other modes like gestural, linguistics and spatial ones in language and literacy learning. They argue that there is a strong need to redefine traditional pedagogies such as those that mainly focus on one mode of teaching, for instance, print-based mode in language education to bring about a

retainable process for learning vocabulary items.

Although many studies have so far been conducted on the effects of modes such as print mode or visual mode (Zarei and Gujjar, 2012) on vocabulary retention, the effect of these modes have rarely been studied as they combined together. In fact, there is no research about the relative effectiveness of the combination of these modes in comparison with the application of one specific mode. There seems to be a paucity of research on this issue, and this study attempts to bridge part of this gap by investigating the effect of Multimodal Pedagogy as combination of various modes on L2 vocabulary retention. This is, indeed, to answer whether students' vocabulary retention ability as one of the language sub-skills is enhanced through the application of Multimodal Pedagogy as one of the innovative pedagogies (New London Group, 1998) in English language literacy teaching and learning.

2. Review of Literature

Over the past few decades, a massive amount of research has been conducted on numerous aspects of vocabulary learning, especially vocabulary retention and effectiveness of different pedagogies. What follows is a part of this.

2.1. Vocabulary Retention Studies

In a study under the title of "The Role of In-class Vocabulary Strategies in Vocabulary Retention of Turkish EFL Learners", Demir (2013) centered on intentional vocabulary learning instruction, aimed at providing an understanding of vocabulary teaching and learning. In this regard, he specifically investigated whether in-class vocabulary strategies developed by the researcher were supportive for students' English vocabulary retention among Turkish 8th grade EFL (English as a Foreign Language) compared to the

conventional vocabulary instruction. Findings showed a significant difference between the vocabulary retention scores of the students instructed with in-class vocabulary strategies (Experimental Group) and those following traditional instruction (Control Group) in favor of the Experimental Group.

Nemati (2013) investigated the effect of teaching vocabulary learning strategies on short-term and long-term retention of vocabulary items. The sample included 303 randomly selected from an Iranian all-female Pre-university school. They were then grouped into control and experimental ones in terms of their different proficiency levels. Using repeated measure ANOVA, the obtained results showed that strategy training enhance long-term retention of vocabulary items significantly and the experimental group did better than the control group during the same instruction period. Furthermore, when various experimental proficiency groups were compared, the results reflected that high proficiency level participants outperformed their low and intermediate counterparts. Finally, "grouping" was an effective strategy for all proficiency level participants among those various strategies focused.

In a study on the impact of online and also paper dictionaries on vocabulary performance of Iranian EFL learners, Zarei and Gujjar (2012) found that the online dictionary group performed better than the paper dictionary group. They found out that such an outperformance can be resulted from high capacity of vocabulary, their tempo in looking up new vocabulary items, their colorful LCD, low weight, stylish character, to name few, compared to paperback dictionaries which are heavy to handle and time consuming when new

words are looked up. In addition, compared to the paper dictionaries which will become out-of-date having being published, electronic dictionaries are able to become easily up-dated.

In a study aimed at investigating whether teaching critical reading strategies can influence intermediate EFL learners' vocabulary retention significantly, Khabiri and Pakzad (2012) selected 72 male and female students aged 17 to 32 years at intermediate level, at two language schools in Tehran, Iran from among a total number of 114 participants. These students were selected in terms of their performance on a teacher-made vocabulary recognition test and a PET (2009) piloted on the experimental and control groups of 36 participants each. The participants in both groups were exposed with the same content i.e. 8 reading texts during the 19-session treatment. However, unlike the experimental group taught based on critical reading strategies, the control group followed the conventional comprehension-based approach. At the end of the instruction, the researcher administered a post-test vocabulary retention parallel to the vocabulary pre-test on the participants of both groups with an interval of two weeks. Finally, the both groups' mean scores on the post-test were compared using an independent samples t-test leading to the null hypothesis rejection. Therefore, findings showed that teaching critical reading strategies can influence intermediate EFL learners' vocabulary retention significantly.

In Elsalvador, Garcia (2011) also investigated power point presentations impacts on vocabulary learning of EFL learners. She reported a profound effect of power point presentations on vocabulary learning enhancement among the focused

EFL learners.

Zeller (2011) studied vocabulary retention rates among 63 third grade students selected from low-income schools one year after instruction. The researcher compared two tasks like decontextualized definition and expressive labeling across years. Word knowledge related to the decontextualized task fell in 40% in grade two to 26% in grade three.

Word knowledge on the expressive task was reported 46% in grade two to 19% in grade three. Participants with high IQ scores (115 or higher) excelled retention rates specifically for the expressive task. Those participants suffering from identified disabilities showed lower retention rates in contrast with those without identified disabilities. Results also represented that 15-minute supplement of vocabulary instruction could boost up rather challenging vocabulary acquisition for the participants retaining most learned vocabulary a year following instruction without review or practice.

Mohammed (2009) investigated the helpfulness of total physical response storytelling, known as TPRS in vocabulary acquisition and retention of EFL introductory stage students and their perceptions towards English. In this study, 80 subjects were randomly selected from among first year introductory school students. They were grouped into two. experimental and control ones. Participants in the experimental group learned vocabulary items based on TPRS unlike the control group who learned the same vocabulary items using traditional method. Using pre and post-test, the vocabulary achievement and the perceptions scale were also administered. The same vocabulary achievement test was administered to control and experimental groups again as a follow-up test. The main objective of this test was to measure the vocabulary retention following a month from the treatment. Findings revealed that TPRS was an efficient method in boosting up vocabulary acquisition and retention. Furthermore, TPRS method contributes to the students to transform their perceptions towards English language.

In a quasi-experimental research, Min (2008) compared and contrasted the efficiency of narrow reading (NR)-repeated reading thematically related articles versus plus vocabulary-enhancement activities (RV) on vocabulary acquisition and retention among EFL secondary school students. The participants were 25 male students in grade 3 at intermediate-level English proficiency level. The participants were exposed with weekly instructional treatment lasting 2 hours for five weeks. The RV group read selected texts and practiced various vocabulary exercises. In a thematic manner, the NR group read supplemental materials taken together with the selected texts. Employing a Chinese modified Vocabulary Knowledge Scale, students' knowledge on 50 vocabulary items was assessed. Findings showed that reading besides focused vocabulary exercises influenced target vocabulary acquisition and retention among EFL secondary students compared to the narrow reading approach.

Chen (2008) investigated the use of various types of printed dictionary on academic performance in retention, vocabulary acquisition and reading comprehension among non-English major learners. The 273 participants were selected from six English classes in three departments in a private two-year college in southern Taiwan. Based on the used dictionary i.e. monolingual and bilingual, the participants were divided into two groups considering class from each

department. Embedded in a quasi-experiment design, this study consisted of two retention tests, five vocabulary acquisition tests, reading comprehension pretest and also posttest, and the pre and post Language Attitude questionnaire. Findings depicted that the bilingual dictionary users excelled monolingual dictionary users in vocabulary acquisition and retention tests. However, the type of the use dictionary could not influence comprehend posttest performance.

As the above literature review on vocabulary retention showed, although there is a tendency of research towards visual modes, mental images, translation, using synonyms and antonyms compared to other modes of meaning-making, there still a paucity of research on investigating the effect of Multimodal Pedagogy which is combination of different modes on vocabulary achievement and retention which necessitates this study as well.

2.2. Multimodal Pedagogy as a New Pedagogy for L2 Vocabulary Learning

The concept of Multimodal Pedagogy which has been used as new pedagogical framework for vocabulary learning in this study was originated in discussions by a panel of well-known language literacy scholars in New London, New Hampshire, USA. The main purpose of this panel discussion was to explore how language literacy education should react to the ever-increasing shifts made by cultural diversities of the new era (Cope & Kalantzis 2008). Their discussions started with the desirable cultural outcomes of being literate and the pedagogies needed for achieving them. The outcome of their discussion (New London Group 1996, 2000), as Anstey and Bull (2006) points out, was that the goal of educational attempts should be on making learners ready for social, cultural futures in which they dynamically participate.

The present pedagogic framework helps educational stakeholders like teachers and learners adapt to the changing nature of communication nowadays and to identify what they need in order to achieve success in their own lives (Stevens 2006). In other words, learners should be designers of their cultural futures. Multimodality as a specific pedagogic framework, here, for vocabulary learning, can be useful in an EFL classroom because it allows for conceptualising the prospect of teaching and learning a language subskill like vocabulary in the complex ever-changing context of the world. To accommodate the cultural shifts in our complex world, new practices are needed for achieving a citizenship in this locally-globally connected era which is embedded with multiple modes of meaning making (Cope and Kalantzis 2003). The concept of "multimodalities" as a more wide-ranging term acknowledges that multiple modes of meaning are interwoven in multiple cultural worlds (Lotherington 2007). This idea has been welcomed by a large number of language literacy scholars who challenge the notion of a singular, monolithic mode of meaning making limited to a monocultural, and so-called standard view like paper-printed mode of meaning making in language education (Gee 1996, Pahl & Rowsell 2005).

In fact, the New London Group (2000) tries to expand the notion of language and literacy education to embrace the negotiation of a multiplicity of modes of meaning-making. The multiplicity introduced by them includes two principal aspects. Firstly, they want to "extend the idea and scope of literacy pedagogy to account for the context of our culturally and increasingly globalised societies." Secondly, they argue that "[language] pedagogy must now account for the burgeoning variety of

modes which result in different text forms [in the new era]" (New London Group ibid: 9).

Anstey and Bull (2006: 19) also indicate that, Multimodal Pedagogy is a "concept that has evolved in response to concerns about how literacy teaching can equip learners for the changing world in which they live". With that goal in mind, teachers need to help learners develop the capacity to produce, read, and interpret face to face, print, and technological texts in the multicultural complex world they are living in. Likewise, learners need to "acquire practices they need for different domains, i.e. work and leisure, active citizenship, participation in social and cultural community activities, and personal growth".

According to Anstey and Bull (ibid), we can argue that this perspective gives rise to the view that " a literate person for vocabulary learning : (1) is flexible: strategically responsive to changes in modes of meaning making and; (2) can maintain mastery: knowledgeable enough to be capable of reformulating existing knowledge on shaping and reshaping modes of meaning and learn new literate practices resulted from different modes for vocabulary learning ; (3) has a repertoire of practices resulted from different modes for vocabulary learning : enjoying a wide range of different knowledge, strategies to apply as appropriate; (4) can make use of various kinds of modes represented in various texts including (a) traditional texts like print and paper textbooks, magazines, newspapers for teaching and learning vocabulary items, (b) face-to-face or live texts like classroom interactions between teacher and learners; and (c) digital and electronic texts. In general, the growing body of works related to Multimodal Pedagogy can develop understandings from texts created by different modes in pedagogy related to
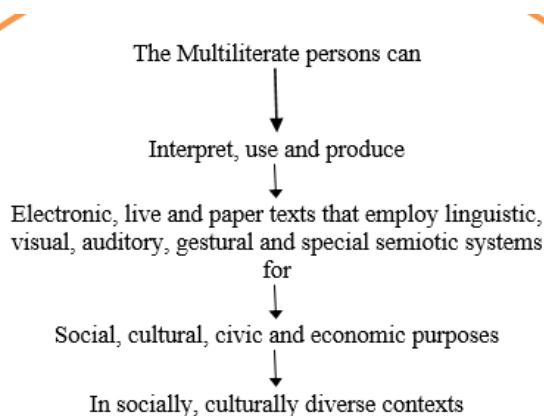
language skills and subskills as follows (Durrant & Green 2000; Freebody & Luke 2003; Cope & Kalantzis 2009):

- A text constructed for vocabulary learning can be in different forms- paper, electronic, or live.
- A text constructed for vocabulary learning may consist of one or more semiotic systems.
- Texts for vocabulary learning are meaningfully constructed.
- Meanings resulted from various modes are dynamically constructed.
- A text for vocabulary learning may be of numerous promising meanings.
- Texts for vocabulary learning can be interactive, linear, and nonlinear.

In summary, introducing a pedagogical framework like Multimodal Pedagogy, the New London Group (2000: 10) intended to address both "the defining of [language] literacy and the implications of the practices needed for many varied contexts of the 21st century, including the multiplicity of communications channels and increasing cultural diversity in the world today". Learners in our complex world are users of various texts embedded in and by different modes for learning language subskills like vocabulary items and need to take advantage of the changing in-class and out-of-class language practices which help them with the necessary engagement required to design their cultural futures (Stevens, 2006). Hence, as the New London Group (2000) explains, it can be concluded that Multimodal Pedagogic framework focuses on how language practices, here, the vocabulary practices are being influenced by local and global cultural changes represented in different modes of meaning making. In fact, a literate person in vocabulary knowledge is expected to focus on: (1) concepts of various kinds of modes embedded in

different texts for vocabulary learning in the 21st century, and (2) the influence of increasing cultural diversities resulted from various modes of meaning making on vocabulary learning practices. In other words, learners should be flexible and strategic for various ever-increasing modes of meaning making; they should comprehend and apply language practices like vocabulary learning practices (1) with a wide range of texts for vocabulary learning practices, (2) in a culturally responsive manner, (3) in a socially, culturally diverse world; and (4) fully take part in life as an informed and active citizen.

Figure 1: Characteristics of Learners based on Multimodal Pedagogic Framework for Vocabulary Learning: Adapted from Anstey & Bull (2006: 41)

The Multiliterate persons can

↓

Interpret, use and produce

↓

Electronic, live and paper texts that employ linguistic, visual, auditory, gestural and special semiotic systems for

↓

Social, cultural, civic and economic purposes

↓

In socially, culturally diverse contexts

3. Research Methodology

In order to achieve the research objective, this quantitative study with experimental design, the data were collected through simple random sampling. In the simple random sampling, the researcher selected participants so that any individual had an equal probability of being selected from the population, and individuals were representative of the population. Therefore, to make sure that the participants were all the same level of language proficiency and to establish the homogeneity of the participants, the Objective Placement Test (OPT) was used.

Based on the test-scoring chart, those learners whose scores in the test were between 37 and 49 were considered as the pre-intermediate level and were categorized to be at the same level. In this study, 60 Iranian pre-intermediate EFL learners, aged between 12-15, studying English at language institutes in Gonbad-e-Kavous, whose mother tongues were either Persian or Turkmen were divided into two groups. An experimental group with thirty learners received special treatment implementing new designs of meaning making. They were taught based on Multimodal Pedagogy, whereas, the control group with the same learners received the traditional print-based pedagogy. The study was carried out in a time span of 10 sessions.

Specifically, all learners were also given some vocabulary items included in each unit of New Headway written by John and Liz Soar. For the control group, the teacher used the traditional print-based mode in his instruction, for example, using library dictionaries while for the experimental group, the researcher used new designs of meaning making, e.g. online dictionaries, pictures, animated slides, gestural presentation, auditory, and special semiotic modes in which these new words were contextualized. Then after all sessions, the learners were given a vocabulary test in the form of vocabulary multiple choice as a immediate posttest immediately at the end of the treatment period and second time, after an interval of three weeks, a delayed posttest was given. The results of the pretest and posttests were compared to show the effectiveness of treatment. All the gathered data were analyzed quantitatively through the Statistical Package for Social Sciences (SPSS) version 19 as shown in the following.

4. Results & Discussion

4.1. Normality of Distribution of OPT

scores

In order to test the normality of distribution of the scores gained by the participants, a One-Sample Kolmogorov-Smirnov test was run among the OPT scores of both experimental and control groups. The level of significance for control group was 0.587 that is higher than 0.05. Therefore, it could be said that the distribution of scores for control group were normal.

Table 1: One-Sample Kolmogorov-Smirnov Test for the control group IOPT test

N		30
Normal Parametersa	Mean	36
	Std. Deviation	4.31741
Most Extreme Differences	Absolute	.155
	Positive	.155
	Negative	-.112
Kolmogorov-Smirnov Z		.774
Asymp. Sig. (2-tailed)		.587

Test distribution is Normal.

In addition, the results of Kolmogorov-Smirnov showed that the level of significance for experimental group was 0.42 that again is higher than 0.05. Therefore, the researcher assured the normality of the distribution of the scores of experimental group.

Table.2: One-Sample Kolmogorov-Smirnov Test for the experimental group IOPT test

N		30
Normal Parameters	Mean	36.26
	Std. Deviation	3.82986
Most Extreme Differences	Absolute	.146
	Positive	.124
	Negative	-.146
Test Statistic		.146
Asymp. Sig. (2-tailed)		0.47

Test distribution for the experimental group is normal.

4.2. Investigation of the Research Question

This study was to find whether Multimodal Pedagogy which bases multiple modes of Meaning-making could significantly enhance the Iranian EFL learners' vocabulary retention. In order to answer the research question, the following steps were taken. At first, a placement test was given to the participants to make sure the participants were homogeneous. The comparison of means showed that the participants were the same in terms of their general proficiency test. The Table (3) demonstrates the mean comparison of the two groups on placement test.

Table 3: Mean Comparison of Experimental and Control Group on Placement Test

Mean	N	Mean	Std. Deviation	Std. Error
Control group	30	36.63	4.01277	.73263
Experimental group	30	36.26	3.82986	.69923

Based on the stated figures in Table 3, it can be estimated that the mean difference of the placement test of the two groups is 0.37 (the mean of control group being 36.63 and experimental group 36.26) that is not considered to be significant. In order to be more exact, an independent sample t-test was run between the placement scores of both groups. Table 4 illustrates the results of the t-test. As evident in this table, the level of significance is higher than the identified level of significance (0.948 > 0.05). Therefore, the difference is not statistically significant and this proves that the participants of two groups were homogeneous before the experiment started.

Table 4: Independent Samples t-test on placement test

	Levene's Test for Equality of variance		t-test for Equality of Means						
Equal variance assumes								95% Confidence interval of the Difference	
	F	Sig.	t	df	sig (2-tailed)	Mean difference	Std. error difference	lower	upper
Equal variance not assumed	0.000	0.984	0.06	58	0.948	0.0666	1.0127	-1.96	2.09391
			0.06	58	0.948	0.0666	1.0127	-1.96	2.09401

Having done the placement test, the researcher decided to give a vocabulary pretest to make sure the participants' knowledge of vocabulary is at the same level. The test included 25 items in a multiple-choice format. In order to ascertain the reliability of the pretest, it was piloted between two groups of learners with the same level. The reliability of the test was calculated using Alpha formula that revealed that the reliability was 0.88 that is satisfactory (see table 5).

Table 5: Reliability of Pretest

Cronbach's Alpha	N of Items
.880	25

Then, the pretest of vocabulary was given to both groups. The results showed that they had a similar knowledge of vocabulary as it can be seen in Table 6. the mean scores of the participants in both groups were at the same level.

Table 6. *Mean Scores of Participants on Pretest*

	N	Mean Mean	Std. Deviation	Std. Error
Control	30	19.4333	1.16511	.21272
Experimental	30	19.3667	1.56433	.28561

After making sure of the homogeneity of the two groups, the experimental group was exposed to the treatment that included using slides, pictures, online dictionaries, etc. at the same time the participants in the control group were taught the vocabulary items using traditional dictionary based on vocabulary definitions and synonyms and antonyms. At the end of the treatment sessions, both groups were given a posttest. The posttest included 25 items. In order to ascertain the reliability of the posttest a pilot test was administered to a group of students with a similar proficiency level. The results of the pilot test proved that it was reliable. The reliability of the test turned out to be 0.88 that is very good for a test. The mean comparison of the scores showed that the experimental group outperformed the control group. Table 7 & 8 show the results of this delayed test.

Table 7: Mean scores of control and experimental groups on delayed posttest

	N	Mean	Std. Deviation	Std. Error Mean
control group	30	19.2667	1.61743	.29530
experimental group	30	20.2333	1.50134	.27411

Table 8: Independent samples T-test on delayed posttest

	Levene's Test for Equality of variance		t-test for Equality of Means				
	F	Sig.	t	df	sig (2-tailed)	Mean difference	Std. error difference
Equal variance assumes	0.065	0.799	-2.399	58	0.020	-96667	0.40291
Equal variance not assumed			-2.399	58	0.020	-96667	0.40291

Based on the above tables, it is clear that the mean score of experimental group was higher than the control group on delayed posttest. This showed that the effect of multimodal pedagogy had a positive effect on long-term retention of vocabulary. In order to be more precise and exact an independent samples t-test was run to determine the exact difference between the two groups performance on delayed posttest.

4.2. Discussion

Findings of the present study showed that when the participants learned new vocabulary with the help of multiple

modes of meaning-making support superior retention ability is displayed compared to those participants did not use them. In fact, it can be argued that Multimodal Pedagogy which bases different modes of meaning making is so motivating that they may attract learners' attentions to retain vocabulary items.

A part of findings of this study accords these positive views on the role of visual modes, besides print-based modes, especially pictures in teaching vocabulary. Avgerinou and Ericson (1997), Hopkins and Bean (1999), Armstrong (2000), Stokes (2002) , Jones (2004) and Bush (2007), for example, are those studies which investigated the effect of using visual mode like pictures in teaching vocabulary. These researches generally realized that visual modes in general and pictures in specific simply carries more information than written texts and allows for greater comprehension and retention. Indeed, students who accessed visual annotations understood and retained their knowledge of the passage best because the dense/deep quality of images allowed long-term memory to remain. In other words, visual modes of meaning-making attracted the students' attention for better learning. When they associate new words with an image, it is easy for them to remember the meaning of the words. Therefore, visual modes are a popular way of teaching and learning to be chosen very carefully.

Unlike the previous studies which only resorted to merely one mode i.e. mostly visual ones, mental images, translation, using synonyms and antonyms, the main contribution and novelty of findings of this research is to introduce Multimodal Pedagogy, a new pedagogy which composes and combines a variety of modes as an effective one in the vocabulary development and retention among EFL learners, especially the pre-intermediate ones. Indeed, the findings suggested that students who were composed with a variety of modes of meaning-making displayed better long-term vocabulary retention.

This may be, on one hand, due to the fact that learners learn vocabulary items more efficiently as the experimental group pedagogy makes connections between out-of-class language practices which are composed of different ever-changing modes with their in-class language practices. Multimodal Pedagogy as a new pedagogy can be matched with the learners' new identities for 21 century in which transformation of meaning-making modes is a bare-bone essential for the learners' long lasting engagement with language skill and sub-skill practices.

Another factor contributing to the obtained results may have been the participants' familiarity with the implemented pedagogy in their real life context although the focused pedagogy was not very familiar in our educational system in comparison with other methods. This novelty could have generated enthusiasm for vocabulary retention.

5. Conclusion

Based on the findings of the present study, it may be concluded that different pedagogies have differential impacts on foreign language vocabulary learning. This implies that careful and informed selection of the pedagogies, here, multimodal pedagogy can contribute learners' vocabulary learning for retention as an issue for learners. In general, several meaningful conclusions can be drawn from this study.

First, it was found that learners could improve their vocabulary achievement if they are exposed to new design based instruction such as, online dictionaries, pictures, and slides. In other words, through analyzing their performance

on immediate and delayed posttests it was realized that their long-term retention was improved, that is, multi modes of meaning making tools enhanced low long-term retention of vocabulary learning in English language and literacy classroom since they encouraged learners to be engaged more in the process of memory.

Second, vocabulary is one of the important factors in all language and literacy teaching-learning process and the learners must continually learn new words as they learn structure as they practice sound systems, but most of the learners are not interested and motivated. The research results revealed the effect of multimodality on Iranian EFL learners' motivation in vocabulary acquisition process. Therefore, it is recommended that Iranian teachers understand the value and effectiveness of multi-modes of meaning makings in teaching vocabulary and other aspects of English language. Therefore, use of multimodal methods of teaching contributes to one of the most effective strategies in teaching that benefits the learners in many ways.

Third, the new design based multimodal technique can help the learners to understand the difficult words easily through association and meaningful learning. Hence, they make the vocabulary learning more enjoyable and interesting because they can retain the meaning of the difficult words by, for example, reading a text while looking at the pictures of key words without asking another person or looking them up in the online dictionary.

To sum up, this study may also have theoretical and pedagogical implications for teachers, learners, researchers and syllabus designers. Specifically, the findings may also have pedagogical implications for teachers; a clearer and better understanding of the nature of the causal relationship between multimodal pedagogy and L2 vocabulary learning, especially vocabulary retention may help teachers make more informed decisions on their choice of language pedagogies. These findings may also encourage learners to make use of the more effective and productive pedagogies in their self-study.

References

Anstey, M. &. Bull, D. (2006). Teaching and learning multiliteracies: Changing times, changing literacies. *International Reading Association*, 112-135.

Armstrong, T. (2000). *Multiple intelligences in the classroom*. Alexandria, VA: ASCD. Ellis, N. C. (1999). Vocabulary acquisition: Word structure, collocation, word-class, and meaning. In N. Schmitt & M. McCarthy (Eds.), Vocabulary: Description, acquisition and pedagogy (pp. 122-139). Cambridge: Cambridge University Press.

Avgerinou, M., & Ericson, J. (1997). A review of the concept of visual literacy. *British Journal of Educational Technology*, *28*(21), 280-291.

Bush, M. D. (2007). Facilitating the Integration of culture and vocabulary learning: The categorization and use of pictures in the classroom. *Foreign Language Annals, 40* (4), 727-743.

Chang, A. (2007). The impact of vocabulary preparation on L2 listening comprehension, confidence and strategy use. *System, 35(24), 534–550.*

Collins, J. & Blot, R. (2003). *Literacy and literacies:* Texts power and identity. Cambridge. Cambridge University Press

Cope, B., & Kalantzis, M. (2003). Digital meaning and the case for a pedagogy of multiliteracies. In Ambigapathy Pandian, Gitu Chakravarthy, and Peter *Kell New Literacies, New Practices, New Times*. Pp. 26–52.Universiti Putra Malaysia Press, Malaysia

Cope, B., & Kalantzis, M. (2008). The teacher as designer: pedagogy in the new media age, *E-learning and Digital Media,*

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7(3), 200-223.

Cope, B., & Kalantzis, M. (2000). *Multiliteracies: literacy learning and the design of social futures.* London: Routledge.

Demir, Y. (2013). The Role of in-class vocabulary strategies in vocabulary retention of Turkish EFL learners. *Elementary Education Online*, 12(4), 1173-1187.

Durrant, C. & Green, B. (2000). Literacy and the new technology in school education: meeting the literacy challenge. *The Australian Journal of Language and Literacy, 23(5) 89-109.*

Ellis, N. C. (1999). Vocabulary acquisition: Word structure, collocation, word-class, and meaning. In N. Schmitt & M. McCarthy (Eds.), Vocabulary: Description, acquisition and pedagogy (pp. 122-139). Cambridge: Cambridge University Press.

Hopkins, G. & Bean, Th. W. (1999). Vocabulary learning with the verbal-visual word association strategy in a native American community. *Journal of Adolescent and Adult Literacy, 42* (4), 274-281.

Khabiri, M. & Pakzad, V. (2012).The effect of teaching critical reading strategies on EFL learners' vocabulary retention. *The Journal of Teaching Language Skills (JTLS). 4* (1), 64-66.

Lotherington, H. (2007). Rewriting traditional tales as multilingual narratives at elementary school: Problems and progress. *Canadian Journal of Applied Linguistics*,10, 241–256.

Mohammed, E. F. (2009). *The effectiveness of TPRS in vocabulary acquisition and retention of EFL students and their attitude toward English language*. MA thesis. Marsoura University, Egypt

Nemati, A. (2013). Vocabulary Learning Strategies: A Short Way to Long Term Retention. *Linguistics and Literature Studies* 1(1), 8-14.

New London Group (1998). *Education for citizenship and the teaching of democracy in schools* London: Qualifications and Curriculum Authority.

New London Group (1996). A Pedagogy of Multiliteracies: designing social futures. *Harvard Educational Review, 66(1): 60-92.*

Richards, J. C. (2001). *Curriculum in language education*. Cambridge: Cambridge University Press.

Richards J. C. & Renandya, W. A. (2002). *Methodology in language teaching: An anthology of current practice*, Cambridge: Cambridge University Press.

Stokes, S. (2002). Visual literacy in teaching and learning: A literature perspective .*Electronic Journal for the Integration of Technology in Education, 1*(1), 10-19.

Suleiman, H. M. (2009). *Implicit and explicit vocabulary acquisition with a computer assisted hypertext reading task, comprehension, and retention*. MA thesis. University of Arizona.

Zarei, A.A. & Gujjar, A.A.(2012). The Contribution of Electronic and Paper Dictionaries to Iranian EFL Learner's Vocabulary Learning. *International J. Soc. Sci. & Education.* 2(4).

Zarei, A.A. & (2015). The Effect of Mnemonic and Mapping Techniques on L2 Vocabulary Learning**.** *Applied Research on English Language.*5(1).

Zeller, A. (2011). *Vocabulary retention of third grade students from Low-Income homes following second grade vocabulary instruction*. Master Thesis. The Ohio State University.