

The Impact of Rote Learning on Vocabulary Learning: The Case of Iranian EFL Learners with Visual and Auditory Learning Styles

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Abstract. This study aimed to explore the effect of rote learning (word list learning) on boosting visual and auditory learners' vocabulary retention. To this end, the Oxford Placement Test (2007) was administered, in order to identify the learners' proficiency level. Then 31 subjects who were studying at the Iran Language Institute (ILI) in Bushehr, Iran, and belonged to available sampling were singled out. To distinguish the learners' preference for learning styles in gaining vocabularies, Barsch Learning Style Inventory (1991) providing a focus on visual, auditory, and tactual learning style preferences was employed. Afterwards, the researcher-made pre-test was carried out. Then, during the 8 treatment sessions, some new vocabulary items were instructed through word list learning. At the end of the treatment, the researcher-post-test was conducted. Next, after two weeks, the delayed posttest was carried out to differentiate the degree of retention among the visual and auditory participants. Finally, to analyze the data, Independent samples t-test was conducted. The findings cast light on the fact that the large number of the learners favored visual learning style. Furthermore, the visual learners outperformed the auditory learners in recalling the new words while exposed to the rote learning.

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1. Introduction

Learning vocabulary viewed as an essential element of learners' success in language learning has been the heated discussion in a variety of studies. To Laufer (1997), vocabulary learning is the focal center of interest in learning any language. It is considered at the heart of language teaching as well. On that account, several researchers hold a deep conviction that just a few studies have been conducted in this realm (Folse, 2004; Hunt & Beglar, 2005). However, applying the most efficacious approach has been highly controversial (de Groot, 2006). In recent years, the majority of researchers, teachers and publishers have taken an interest in carrying out some studies in the field of vocabulary learning and teaching. Moreover, they have sought to find successful ways to further vocabulary learning (Nation, 2001; Read, 2000).

Generally, most accomplished EFL learners are those who have a great number of words and try to promote them since they regard learning vocabulary necessary. In this line, Wilkins (1972) strongly believes that "without grammar very little can be conveyed, but without vocabulary nothing can be conveyed" (p, 11). His statement substantiates the claim that knowledge of words is at the heart of language learning. It also implies that most learners' errors stem from the lexical errors.

From the early 1970s on, there have been great ongoing movements which bring to light effective teaching methods, class techniques, and instructional materials so as to forward better teaching and learning efficacy. But in spite of all attempts, little success has been achieved which has raised considerable concerns.

Due to the fact that gender, age, social status, motivation, attitude, aptitude, culture, and learning styles are various individual differences that exert an influence on learning language, what is effective for one person might not effectual for another one. On this account, not any approaches, methods, or techniques are always promising for all learners. Accordingly, it would be wise to refer to Grenfell and Harris' (1999)

claim that “Methodology alone can never be a solution to language learning. Rather it is an aid and suggestion” (p. 10).

With regard to the big concerns about vocabulary learning, the emphasis has shifted from language teaching methodology to language learner and those elements that have impacts on language learning. As a result, majority of researchers have conducted a great number of research studies on some issues related to language learning and personal characteristics among which learning styles are of great important. Learning styles, indeed, are viewed as the general approach to language learning the learners employ so that their learning behavior is directed by the overall patterns (Cornett, 1983).

To the best of the researchers’ knowledge, little stress is mostly given to vocabulary in Iranian educational system. In other words, teaching and learning words are mainly incidental in almost all classes. However, when learners encounter a new word or phrase, they are required to look it up in the dictionary. It seems that learning vocabulary follows an ad hoc pattern which highly relies on teachers’ and learners attempts. As a result, this ad hoc approach to learning words causes insufficiency in learners’ repertoire knowledge of words, all of which results in poor performance of learners in exams. Consequently, it seems to be the right time to discover the appropriate ways to boost learners’ knowledge of words. By the same token, personality factors like learning styles which have been ignored so far should roar into life and become the main focus in language learning. On this account, the mismatch between teaching and learning styles which is a hindrance to the optimum learning will be kept to a minimum.

As such, this study was designed to investigate the influences of different learning styles, namely visual and auditory learning styles in vocabulary acquisition, on basic EFL students when exposed to traditional way of teaching approach. In this line, the major research question was then as follows:

1-Is there any difference between the performance of visual and auditory learners in vocabulary retention when exposed to rote learning?

2. Review of Literature

To Behlol (2010), rote learning (word list learning) is on the basis of the definitional approach. In this way, vocabulary learning can occur by consulting with a dictionary and doing some drills. Some scholars (Fitzpatrick, Al-Qarni, & Meara, 2008) shared the same view that rote learning is a constructive way to learn vocabulary so that learners are able to acquire lots of words faster and in the short period of time (Milton, 2009).

Likewise, some researchers proclaimed that learning through rote learning lead to remarkably higher vocabulary recall than contextualized vocabulary learning (Laufer & Shmueli, 1997; Qian, 1996). They came to the conclusion that word list learning yield better vocabulary recall than any other methods. By the same token, Mehrpour's (2008) finding echoing the previous studies pinpointed that memorizing English words with its translation in L1 enhanced vocabulary recall a lot better than making sentences.

On the other hand, effective learning takes place when the methods of teaching are in tune with the learners' leaning styles. Dunn and Dunn (1979) described learning style as "a term that describes the variations among learners in using one or more senses to understand, organize, and retain experience" (p. 44). Sensory learning styles can be categorized into three types: visual, auditory, and tactile/kinesthetic (Dornyei, 2005; Oxford, 2001) among which the first two learning styles were under investigation in this study.

Those learners who favor visual learning style are called visual learners. They tend to gain information by visual tools like diagrams and videos (Felder, 1993; Ldpride, n.d). In contrast, those learners who obtain information by means of verbal discussions and listening to other speech are mainly called auditory learners. They generally perceive everything through putting emphasis on the pitch, tone and speed of voice (Ldpride,n.d.).

There is a positive relationship between learning styles and instructional methods. Moreover, regarding the fact that each person is distinctive, their needs thus are different and the instructional methods vary

from person to person. To say it differently, one method which seems helpful for one person with a specific learning style is likely not to be efficacious for others with different learning styles. Furthermore, employing optimum learning styles presents the learners with unique opportunities to utilize a variety of methods effectively which promise with certainty the educators' accomplishments in handling various issues in education and communication (Coffield, Moseley, Hall, & Ecclestone, 2004; Felder & Silverman, 1988; McCarthy, 1982).

Chamot and Kupper (1989) revealed that almost all learners were not well-informed about constructive strategies to employ; therefore, it would be of great importance to raise their awareness to smooth the path to forward learning. To be consistent, Reid (1987) confirmed that when learners became conscious of their learning styles, they could manage their learning far better.

Dunn and Dunn (1979) affirmed that just 20-30% of school age children showed their preference for auditory learning style, 40% favored visual learning style, 30-40% were in favor of tactile/ kinaesthetic or visual/ tactile learning styles. Based on Barbe and Milone's (1981) findings, the most frequent learning styles applied by school children were visual learning style (30%) or mixed (30%), then auditory (25%) and kinaesthetic learning styles (15%).

Every young child the most tactile/kinesthetic, but gradually s/he was move further away, and depended more on visual sense when entering elementary grades, afterwards in fifth or sixth grade s/he was dependent on auditory sense to learn and recall information (Price, Dunn, & Sanders, 1980). Carbo (1983) revealed that skillful readers had strong preference for visual and auditory learning styles, whereas poor readers liked tactile and kinesthetic learning more. From Reid's (1987) viewpoint, compared to US and Japanese learners, Korean learners mainly were in favor of visual learning style. Quite contrary, compared to Chinese and Arabian learners, Japanese learners showed preference for visual learning styles.

Concerning additional factors such as gender, major, and educational level, the learners in English speaking countries revealed interesting findings which were related to the relationship between these factors and the

learning style preferences. In this light, they found out that in comparison to the undergraduate students, the graduate students generally were in favor of visual and tactile learning style. On the other hand, the undergraduate students leant on more auditory learning style (Dunn & Dunn, 1979).

Additionally, males liked visual and tactile learning styles better than females. Likewise, those learners who lived in the US showed preference for auditory learning style compared to those who did not. It is worth mentioning that in comparison to those who lived in the US for a shorter time, those who lived there more than three years were in favor of auditory learning style. It suggested that the learners adjusted their learning styles to the learning environment. This result complies with Kafipour, Yazdi, and Shokrpour's (2011) finding. They reached the conclusion that the learners chiefly depended on individual learning styles. To put differently, they favored visual, group, tactile, and kinesthetic learning styles, and auditory learning style was discovered to be the least desired learning style.

The following section involves the method through which this study was carried out.

3. Method

3.1. Participants

In order to carry out this study, the participants belonging to the available sampling was homogenized through the Oxford Placement Test (2007). As a result, 31 basic-level female learners in the 18-23 age group who studied English as a foreign language for about one year at the ILI in Bushehr, Iran, and had the similar background knowledge, and the proficiency were selected.

3.2. Instrumentation

In order to conduct this study, the researchers carried out the Oxford Placement test (2007), Barsch learning style inventory (1991), as well as four researcher- made tests.

The Oxford Placement test (2007) which is a standardized placement test by Oxford University Press consisted of the different parts including

50 multiple choice questions on grammar and vocabulary, 10 questions on reading comprehension and an optional writing task to assess learners' ability to generate the language. But based on the objective of the study, the researchers selected only the vocabulary part which was relevant to the present study including 24 multiple choice questions. It was designed to be done in 20 minutes. Its reliability estimated in the piloting test was reported 0.75 (Noraizan, Bahry, Saiful, Zulkeffi, Mohd, & Szarina, 2011). The Oxford Placement test (2007) is supported by a dedicated research program to assure it is just, accurate, reliable and valid (Oxford University Press, n.d.)

Barsch Learning Style Inventory (1991) was made up of 24 items which the language learners had to answer. It had three choices including "often", "sometimes", and "seldom". It included three learning styles, namely visual, auditory and tactual. But for the reason that the focal point of the current study was on the two learning styles, that is, visual and auditory, the tactual learning style was not taken into account. As a result, the test takers were assumed to reply to the sixteen items in 15 minutes. Its reliability which was estimated in the piloting test was reported 0.73 (Noraizan, Bahry, Saiful, Zulkeffi, Mohd, & Szarina, 2011). In order to assess its validity, the researchers had face to face consultation with four subject matter experts. They all were on the same opinion that Barsch Learning Style Inventory (1991) was famous for its simplicity of the language and the format so that the majority of test takers can comprehend it without any assistance from a facilitator. They considered its face validity and content validity, and finally they agreed on its validity.

Based on the Basic ILI course book, four types of the researcher-made tests were established and served as the piloting test, pretest, posttest, and delayed posttest. Moreover, while the piloting test, posttest, and delayed posttest had forty questions, the pretest comprised forty-three questions. Through administering the piloting test, three items were noticed as poor and vague which were revised. Cronbach's Alpha was run in order to estimate the reliability of the piloting test which was reported 0.78. In order to assess the validity, the researchers asked four experts to validate these tests. They examined their face validity

by looking at the items and agreed that the test was a valid measure of the concept which was being measured just on the face of it as well as their content validity.

3.3. Procedure

Initially, the participants were homogenized through conducting the Oxford Placement Test (2007). On this account, 31 learners were selected in the terms of the same proficiency level. Barsch learning styles inventory (1991), then, was administered in order to recognize their learning styles. After that, one of the researcher-made tests was employed as the piloting test whose reliability was reported .78, and validity was examined by subject matter experts; thereafter, the pretest was carried out to know the unfamiliar words to be taught in the treatment phase. Thereupon, on the basis of the pretest, the treatment phase started for 8 sessions. Based on the objective of the study, the learners underwent the treatment in the form of the rote learning. Accordingly, they were required to learn the words through doing the translations in their mother tongue. Subsequently, to realize the numbers of the words obtained by the participants, the post-test was administered. After a two-week interval, the delayed posttest was run so as to determine the differences in the total average score between the immediate and delayed post-tests. And the end, Independent-sample t-tests were used to determine discrepancies in the performance of the test takers with different styles of learning.

4. Result

4.1. The result of Barsch learning styles inventory (1991)

The results of the Barsch learning styles inventory (1991) replied by the participants were depicted in table 4.1.

Table 4.1: Descriptive statistics of the learners

Group	Learning Style				Total
	Visual		Auditory		
	No	%	No	%	
Traditional way of learning	24	77.41%	7	22.5%	31

The total number of participants was 31 students among whom 21 of them were visual learners and 7 were auditory learners. To put it another way, 77.41 percent of the participants favored visual learning style, while 22.5 percent preferred auditory learning style.

4.2. Result of the learners' performance

Tables 4.2 and 4.3 present the result of the visual and auditory learners' performance when exposed to word list learning.

Table 4.2: Group statistics of the visual and auditory learners

	Group	N	Mean	Std. Deviation	Std. Error Mean
Pretest	Visual	24	5.54	1.14	.232
	Auditory	7	4.71	.487	.184
Posttest	Visual	24	30.62	2.65	.541
	Auditory	7	29.57	2.37	.895
Delayed posttest	Visual	24	25.62	4.12	.842
	Auditory	7	17.42	3.40	1.28

Table 4.3: Independent sample t-test of the visual and auditory learners

							95% Confidence Interval of the Difference	
	Sig	t	df	Sig (2-tailed)	Mean difference	Std. Error Difference	Lower	Upper
Pretest	.051	1.85	29	.010	.827	.297	.21	1.4
Posttest	.529	.945	29	.336	1.05	1.04	-1.25	3.36
Delayed posttest	.347	4.78	29	.000	8.19	1.53	4.83	11.56

The research question posed in this study sought whether or not there was a significant difference between the performance of visual and auditory learners in vocabulary retention when exposed to rote learning approach. On this account, the scores of the visual and auditory learners were analyzed through applying Independent Sample t-tests as follows. In the pretest, as tables 4.2 and 4.3 indicated, the visual learners were 24 while the auditory learners were 7. The mean scores of the visual learners and auditory learners were 5.54 and 4.71, respectively. The finding showed that the visual learners did much better than the auditory learners [$t(29) = 1.85, P = .010$].

In the posttest, there was a rise in the mean score of the visual learners from 5.54 in the pretest to 30.62 in the posttest. Likewise, the mean score of the auditory learners was increased from 4.71 to 29.57. Moreover, the visual learners did much better in the posttest. Nonetheless, considering table 3, there was no meaningful difference between the mean scores of the visual and auditory learners [$t(29) = .945, P = .336$].

Regarding the delayed posttest, there was a decrease in the mean scores of both visual and auditory learners from the posttest to the delayed posttest. In other words, the mean scores of the visual and auditory learners were 25.62 and 17.42, respectively, in the delayed posttest. Besides, the learners with visual learning style outperformed those with auditory learning style [$t(29) = 4.78, P = .00$]. Consequently, the findings did reject the null hypothesis that held that there was no important difference between the performance of visual and auditory learners in vocabulary retention when exposed to traditional approach.

5. Discussion

Table 4.1 showed the result of the questionnaire answered by the test takers. The result indicated that the majority of the learners in this study were visual learners. To put it differently, they had strong preference for visual learning style. This result is in line with Gilakjani (2012) who investigated the learners' preference learning style at the Islamic Azad University of Lahijan, Iran. He concluded that about 50% of the learners were visual learners, while 35% preferred auditory learning style and 15% expressed their preference for kinaesthetic learning style. It implied that visual learning style was the common learning style among learners at the Islamic Azad University of Lahijan. In the same vein, Kafipour, Yazdi, and Shokrpour (2011) studied learners' learning style preferences in gaining knowledge. They reached the conclusion that the majority of learners favored visual learning style over auditory learning style. They also accentuated that visual learning style was the most pervasive learning style among Iranian EFL learners.

This finding echoes the result achieved by Reid (as cited in Zokae, Zaferanieh & Mahdieh, 2012) argued that different learners prefer different learning styles in learning language. He stated that the Korean learn-

ers gained knowledge more through visual learning style. They seemed to be mainly more visual than American and Japanese students. In comparison with Arabic and Chinese language learners, Japanese students seemed to be less auditory.

The finding contradicted with the study carried out by Hyland (1993) on Japanese learners to find out their preferred learning style. The results revealed that most learners showed great preference for auditory and tactile styles, and were not interested in visual and group styles. In order to answer the research question, the performances of the visual and auditory learners were compared in the pretest-posttest and posttest-delayed posttest as follows. The result yielded through applying Independent sample t-tests threw light on fact that the visual learners outperformed the auditory learners in the pretest.

However, there was no significant difference between the performance of the visual and auditory learners in the posttest. But in the delayed posttest the visual learners performed better than the auditory learners. In fact, the results produced in the posttest and the delayed posttest appeared to be rather unexpected. Actually, against expectations, the auditory learners failed to succeed in retaining the new vocabularies. Based on the ample evidence in the literature review (e.g. Carbo, 1983; Dunn & Dunn, 1978; Eisenstein, 1982; Reid, 1984) auditory learners lean highly on hearing and speaking to gain knowledge of material. In this study, one of the researchers who was also the teacher read out the new vocabularies three times. In this way, the participants picked up the right pronunciation, and decided upon the syllabus receiving the prime stress; soon afterwards, they were required to utter each word after her first chorally and then individually. Finally, they were offered the translations of each word. Accordingly, the auditory learners were supplied with the sufficient stimuli; in spite of that, their performance in recalling the vocabularies was different to what expected. One possible explanation might be that due to disability of the auditory learners in decoding the unfamiliar words, they failed to retain them successfully.

Another likely reason which was consistent with Chastain's (1988) claim is associated with a phenomenon referred to as decay. In actual fact, recollection will occur effectively when information moves to the

long-term memory through repeating various exercises and tasks. It seemed that word list learning did not provide sufficient exercises to help the auditory learners to transfer the new information to the long-term memory.

On the other hand, reviewing the way the words were introduced to the visual learners proved that the stimuli provided were not sufficient either. Nevertheless, they managed to recall the newly taught words more promising.

The further possible reason might be related to the phenomenon called memory decrement. To say it differently, a much memory decrement happened to the auditory learners which stemmed from not going through deeper word process, all of which led to less successful encoding, thereby having less retention (Spear, 2014).

The result was in tune with study done by Rollins and Hendricks (as cited in Owen, 1991) who came to conclusion that the visual learners could recall more words than the auditory learners. In a similar vein, some researchers (e.g. Boyatzis & Kolb, 1995; Dharmangadan, & Subramony, 2007; Henmon, as cited in Jensen, 1971; Kirkpatrick, as cited in Balmuth, 1968; Siegal & Allick, as cited in Raj) came to know that the visual learning style is much better than the auditory style. This finding was also in accordance with the result produced by Margrain (1967) who claimed that the delayed recall of visual lists seemed to be more successful than the delayed recall of auditory lists.

The finding was in tune with the study conducted by Kassaian (2007) who attempted to find out the impact of two types of methods on recalling of the new words. His findings pointed out that the visual learners remembered the words more successfully than the auditory learners. Likewise, Kia, Alipour, and Ghaderi (2009) discovered that those pupils who had preference for visual learning style represented considerable academic achievements in Payame Noor University in Iran.

6. Conclusions

An awareness of learning styles is of great importance since they help learners promote gaining knowledge of materials. On this account, exploring each learner's learning style is highly recommended. In other

words, in order to become an attentive learner and succeed in achieving goals, identifying individual's learning styles can be very beneficial. In this way, learners are aware of their strengths and weaknesses.

Regarding aforementioned advantages of learning styles, it is wise to identify the optimum learning styles of language learners and incorporate them into educational systems. Moreover, teachers can match teaching methods to learning styles in order to tackle the fundamental problems. It leads to promote learners' overall learning effects, boost their motivation, efficiency and positive attitude towards language learning. Accordingly, the most important reason behind identifying learning styles is to find out the right ways for learners to achieve learning success and for teachers to teach effectively and successfully.

To recap what has been discussed so far, the performance of the visual and auditory learners through word list learning was compared in this study. The findings shed light on the fact that the visual learners did a lot better in recalling the new words than the auditory learners by means of word list learning. Besides, a great number of the participants favored visual learning style.

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