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The Power of Aural and Picture Vocabulary Size Test in Piiii ttingrrania FFnnnnnnmnnVViewing Comprehension

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Abstract

The aim of this investigation has been to predict Viewing Comprehension through Aural and Picture Vocabulary Size among Iranian EFL Learners**.** To this end, 110 intermediate students were selected from two institutes of a city in Khorasan Razavi province, Iran. Pictorial vocabulary knowledge of learners was tested by Picture Vocabulary Size Test, Aural vocabulary knowledge was measured by Aural vocabulary size test and viewing comprehension was tested by a multiple-choice question test. All analyses were carried out using SPSS for Microsoft windows 22. Pearson product moment correlation analysis was run to analyze the relationship among viewing comprehension, picture vocabulary size and aural vocabulary**.** After the correlation analysis, we did step-wise multiple regression analysis to predict an outcome variable from two predictors**.** Interestingly, it was found that both picture and aural vocabulary size have a significant positive correlation with viewing comprehension. It was also proved that only aural vocabulary size can be considered as a significant predictor of EFL learners' viewing comprehension ability.

Keywords: viewing comprehension, aural vocabulary size, picture vocabulary size, EFL learners, video

Introduction

First years of education is primarily devoted to teaching students how to read, how to speak and how to communicate fluently, appropriately, and with adequate comprehension. Several factors are known to predict comprehension. It has been proved in many findings that vocabulary knowledge emerged as a reliable predictor for general comprehending in a foreign language. Comprehension is one of many factors that help to determine the quality of the main idea and topic sentence from the written or spoken text. It is believed that any kind of learning difficulties and problems which hinder students' comprehension process can not only pave the way for academic failure but exert negative influences on EFL students' personal lives (Hulme & Snowling, 2011). Therefore, the role of comprehension is a critical concept in second language learning. Through this ability, learners can comprehend meaning from written and spoken language. It has been stated that in conditions when a reader does not have a sufficient range of vocabulary knowledge, it would hinder an efficacy of text processing, which indicates complexities in text comprehension of readers. Iranian EFL learners are suffering seriously from problems in comprehension process either reading or aural comprehension (Moghadam, Zainal, & Ghaderpour; 2012). More technically, both reading and listening skills can be evaluated through comprehension tasks, but they rely on different input modalities. The cognitive theory of multimedia supports the assumption that visual and auditory input help to process of information (Paivio,1986). Combination of visual imagery and aural input provides some support that students learn words easier through viewing.

Videos, accompanying audio or written inputs, facilitate how foreign language input and output are comprehended and produced, respectively (Wen, 1989). A very important skill in communication is viewing because it images the data in the record and permits an observer to connect visual image in video with accompanying spoken words. Unlike traditional comprehension task which is restricted to one modality, in innovative viewing comprehension both (seeing and listening) modalities are combined. Chapple and Curtis (2000) suggested that the images used in TV

programs or movies is important as it does not only establish communicative and comprehensive interaction but also assists in our understanding of the role of comprehension. At the same token, Laufer (1997) stated that a text cannot be fully or even acceptably comprehended in L1 or L2 unless the vocabulary used in that text is understood by the reader.

The most common impediment and challenging obstacle in the comprehending of the text is EFL learners` insufficient vocabulary knowledge. Learners` lack of vocabulary knowledge may have led to reduced rates of meaningful communication (Zimmerman, 1997). Amirian et al. (2015) believed that without a satisfactory repertoire of vocabulary items, neither communication nor comprehension can be occurred successfully. In fact, single and multi-word vocabulary items form an integral part of linguistic competence, whose acquisition can greatly improve the mastery of receptive and productive language skills. This was previously justified by Nation and Waring (1997) in their claim that to be proficient in spoken discourse, reading authentic texts and acquiring extensive knowledge of lexis, it is necessary for learners to master the 3000 most frequent word families. Although picture vocabulary size and aural vocabulary are central in EFL learners' viewing comprehension, in the Iranian EFL context, there is some refusal in using these new strategies from the side of both teacher and learner. This refusal may result from the educational system which is not able to provide learners with sufficient exposure to this kind of strategies. This necessitates research on the comprehension problems of this important skill.

The role of both pictorial and aural vocabulary in viewing comprehension has received much less attention in both research and theory. In this article, I briefly review many of the studies that have shown that those new techniques of learning vocabulary are important for viewing comprehension. Previous studies have failed to examine the role played by picture and aural vocabulary in viewing comprehension. Therefore, it is of utmost importance to further study the centrality of picture vocabulary and aural vocabulary in viewing comprehension.

The Significance of Vocabulary Knowledge

Vocabulary knowledge plays a significant yet complicated role in language learning process (Schmitt, 2000). As Harmer (1991) stated,

grammatical structures are the underlying foundation of language, but vocabulary is the main organ which gives life to language. Every language has a system of vocabulary, which includes a number of words for constructing or comprehending sentences (Miller, 1991).

In a more general definition, Hornby (2000) considered vocabulary as all the words that are typically and normally utilized in describing a particular thing (subject, action, phenomenon) or a collection of words with their meanings gathered in the form of a list in a foreign language learning material. Likewise, Neuman and Dwyer (2009, p.385) define vocabulary as "the words we must know to communicate effectively; words in speaking (expressive vocabulary) and words in listening (receptive vocabulary)."

Knowledge of vocabulary is an essential aspect of language proficiency, which facilitates how successfully learners speak, listen and write (Renandya & Richards, 2002). Mart (2012) addressed that lexical knowledge is invariably evolving, meaning that lexical resource can never be mastered completely because through time, more vocabulary items are learned and the previously-acquired ones are understood more deeply. Therefore, vocabulary knowledge is central in achieving language proficiency (Amirian, Mallahi, & Zaghi, 2015). Since words express meaning, the wider the range of an individual`s vocabulary range, the better they can comprehend and produce meaningful language, and thus the more proficiency they can be (Vermeer, 2001; Zimmerman, 2005).

In recent decades, the EFL/ESL experts and researchers have proposed distinct but complementary frameworks for further clarifying what vocabulary knowledge is. One of these frameworks proposes breadth and depth of one`s understanding of a word as the most discerning aspects of second language (L2) vocabulary research (Gyllstad, 2013, as cited in Janebi Enayat et al., 2018). Vocabulary breadth refers to the number of words learners know their meaning even limitedly, while vocabulary depth refers to the quality of learners` vocabulary knowledge, and the extent to which they know different aspects of a vocabulary item and its meaning (Qian, 1999). The findings of other studies (Janebi Enayat & Amirian,

2020) have confirmed an interrelationship between the breadth and depth of lexical knowledge.

Taking these conceptualizations into account, it can be concluded that vocabulary knowledge is an essentially important aspect of overall language proficiency. Therefore, performing different skills of a foreign language (i.e., listening, speaking, reading and writing) would be extremely challenging for EFL learners without adequate vocabulary knowledge (Chastain,1988).

Picture Vocabulary Size

Teaching vocabulary by using picture is one of many techniques useful for classroom activities. One of the famous theories that explains the relationship between pictures and words as stimuli and memory was Paivio's dual coding theory (DCT) introduced in 1986. This view proposes that learning can be facilitated through forming relevant mental images (Reed, 2010). This theory also presents two internally-related yet separate systems of storing, coding, and processing information in memory: (a) a verbal and (b) a visual/non-verbal system. The verbal system stores linguistic information such as text and sound in sequential units called "logogens", whereas the visual/non-verbal system processes and keeps visual information such as pictures, animations, or videos in units called "imagens."

According to Davies and Pears (2003), new lexical items should not be taught through rote memorization and without actual objects or images. When learners encounter a new word accompanied by pictures, they can more successfully understand and store the word in long-term memory. In a study to test this theory, Michas and Berry (2000) confirmed that when learners have videos or pictures to learn from, they perform better than when their only source of learning is a unimodal single text. Milton (2009) proposed that learners retain and recall vocabulary items learned through pictures faster and more easily since referential connections of image-to-word are activated through pictures. In other words, when learners are exposed to multimodal meaning representation of words in which sound or picture accompany written text, they can better develop their vocabulary knowledge (Al-Seghayer, 2016).

Previous researches have suggested that learners who are good at comprehension greatly differ from those who are weak at it, in that the first group can visualize what they read while reading (Ekwall & Shanker, 1998). Therefore, students` extensive exposure to visual items helps them to retain, and retrieve newly learned English vocabulary items through concrete modes of representations such as pictures or objects. In line with this claim, Rieber (1994) stated that when visual elements such as pictures are used with new words, they reduce memory load and facilitate vocabulary retention and recall.

Aural Vocabulary Size

In another categorization of vocabulary knowledge, Coltheart and Rastle (1994) presented aural and orthographic knowledge as two central components of knowing vocabulary. However, the activation of one of these components or both of them depends on the language skill learners are performing. For example, during reading and writing processes, orthographic knowledge is activated, while during speaking process, aural knowledge is triggered; and during listening comprehension process, both components are needed. It is expected that learners` vocabulary size, when measured receptively in an orthographic test, holds significant correlation with their writing skill ability. On the other hand, when this measurement is done through an aural test, it is expected that learners` vocabulary size associates well with their aural skills ability. Nation (2001) believed for learners, identifying words aurally is as essential as recognizing them orthographically.

Aural vocabulary refers to "the ability to recognize the phonological [aural] form of the word, access existing knowledge of that word and produce a representation of it under time constraints" (Matthews & Cheng, 2015, p.4). Matthew further clarified that aural vocabulary knowledge forms when words are learned through aural modality (Matthew, 2018). Learners` aural knowledge of lexical items is tested through A-Lex test (Milton & Hopkins, 2005). It is a kind of computer-based test in the form of yes/no questions which measures learners` knowledge of the 5000 most frequently occurring word families in English. Studies have shown that learners`

orthographic vocabulary knowledge is richer than their phenological/aural word recognition ability; therefore, they should be exposed to spoken materials so that they will better be able to recognize words aurally (e.g., Milton, Wade, & Hopkins, 2010).

The Nature of Viewing Comprehension

Sometimes both picture and sound of the words are used simultaneously for teaching vocabulary. Based on the dual coding theory of vocabulary learning, it is assumed that if vocabulary is learned both aurally and orthographically, it is more likely to be retained and remembered than when it is through one medium only. The reason is that human brain has two separate channels for processing visually and auditory represented information (Mayer, 2005).

Viewing is one of the most important skills in communication because it is a way of portraying information in the record, thus, giving more emphasis on the importance of mental faculty that allows a perceiver to give details about a target that is difficult to get to normal senses due to time, distance or shielding. During viewing process, any visual image used in different media such as videos, websites or even computer programs is interpreted based on the accompanying words through connecting images with the written or spoken vocabulary item (Rodgers, 2018). Viewing comprehension is learners` ability to comprehend visual information; their ability to analyze, evaluate and interpret this type of information. Because videos possess audio and visual information representation, viewing them can enable children to better conceptualize the meaning of words, compared with when they just see a picture of them in books (Neuman & Koskinen ,1992).

According to Woottipong (2014), when students are involved in non-verbal forms of communication, or when they are viewing multimedia presentations such as videos or movies, the viewing process significantly improves their listening comprehension skills. Viewing can also positively influence reading skills if students who are exposed to text accompanied by visual elements or affordances of other media sources. For this reason, educators should not focus on students` listening, speaking, reading and writing skills only, but they should also pay attention to their viewing as well, since these enhance both their reading and listening skills. When students encounter visual information such as images accompanying spoken

or written text, they are encouraged to use viewing strategies for comprehending them (Baltova, 1999).

Related Studies on the Dimensions of Vocabulary Knowledge

In recent years, plenty of studies have been devoted to the investigation of different aspects of vocabulary knowledge. The majority of them focused on the quantity and quality of learners' vocabulary knowledge (i.e., breadth or depth) and the effects of different factors and variable that may play any role in this regard have been examined.

In a study to investigate how aural vocabulary knowledge (AVK) of second language (L2) learners is associated with their listening comprehension and overall language proficiency, Matthews (2018) targeted 247 learners of English at three different levels studying it as their second language. The results of Regression analysis revealed that AVK could well predict L2 listening in all three levels of proficiency. However, this predictive ability of AVK was higher for level two and three compared with level one learners of L2. In another study, Masrai (2019) explored how aural vocabulary knowledge, written vocabulary knowledge and working memory capacity are associated with listening comprehension. The findings revealed that while aural vocabulary knowledge could most strongly predict listening comprehension, working memory capacity could moderately and written vocabulary knowledge could only weakly predict listening comprehension. In a recent study on the role of different vocabulary dimensions, Ha (2021) investigated how receptive vocabulary knowledge (i.e., AVK) can predict students` academic reading comprehension. The findings revealed that this dimension of vocabulary knowledge is significantly associated with and can well predict how students comprehend L2 academic reading texts.

Related Studies on the Viewing Comprehension

Recently, there is a large volume of published studies describing the theme of viewing comprehension and there are relatively few historical studies in which this comprehension skill has been investigated in the EFL/ESL context. Rayhana and Minalang-Limbona (2018) designed a mixed method investigation to explore the effects of viewing video materials with intervention to the viewing comprehension and vocabulary of

the matched 25 (twenty-five) pairs of grade four Section A and B pupils of MSU-ILS. It was found out that (a) constant or repetition of viewing is helpful for younger children, (b) the affectivity of a technology would still depend on the way it will be integrated in teaching, (c) combination of viewing techniques and viewing activities as an intervention is effective, and (d) viewing video materials with intervention has many benefits such that participants got happy, excited, relaxed, interested, attentive and motivated to learn; help learners gradually possess learning competencies; promote values formation; and do not increase viewing comprehension and vocabulary acquisition only, but improve listening skills as well.

In the same line of research, Peters (2019) investigated the effect of imagery in TV programs in three viewing conditions: with L1 subtitles, with captions, and without subtitles. Data were collected from 142 Dutch speaking learners of English as a foreign language. A pretest posttest design was used in the study in which learners were asked to watch 12 minutes of a documentary. The findings revealed that vocabulary gain was the highest among the caption group. Moreover, the use of imagery was positively correlated with learning, meaning that when words are in close proximity to their aural occurrence, they are more likely to be learned.

Pursuing the same trend, Durbahn, Rodgers, and Peters (2020) explored how lexical coverage is associated with viewing comprehension, and how the use of imagery can relate to viewing comprehension. They designed audio-based, audio plus imagery-based, and imagery-based comprehension questions. The findings illustrated that a moderate correlation exists between lexical coverage and viewing comprehension with audio-based questions; however, no relationship was found between lexical coverage and imagery plus audio-based questions. The results indicated that lexical coverage is more demanded in reading as opposed to viewing and listening.

In a much more recent study, Pujadas and Muñoz (2020) explored how captions and subtitles can affect extensive TV viewing comprehension of elementary adolescent EFL learners, and how learner-related factors, pre-teaching of the words and the lexical coverage of programs can influence their comprehension. Results showed that subtitles more strongly affect comprehension compared with captions, and background vocabulary

knowledge was found to significantly predict comprehension when captions are available.

A number of investigations have accompanied the vocabulary breadth and depth with reading comprehension to determine any likely associations between them. Therefore, it seems that very few investigations have focused on the other aspects of vocabulary knowledge such as aural and picture vocabulary size. It also, appeared to be an obvious lack of research in which the viewing comprehension has been investigated in relation with two dimensions of vocabulary knowledge i.e., aural and picture vocabulary size. On the basis of the above-mentioned gap in the literature, this study aims to critically contribute to this growing area of research by exploring whether there is any interplay between EFL learners' aural and picture vocabulary size and their viewing comprehension ability. Based on the mentioned objective, this paper will examine two main research questions:

RQ1. What is the relationship among Picture Vocabulary Size (PVS), Aural Vocabulary Size and Viewing Comprehension of Iranian EFL learners?

RQ2. Which one of the Picture Vocabulary Size (PVS) or Aural Vocabulary Size is a better predictor of Viewing Comprehension of Iranian EFL learners?

Method

Participants

The target population for the present study was 110 non-native speakers of English from different institutes in Dargaz, Khorasan Razavi. The reason for high number of participants was to provide desirable outcome. The sample included both female and male students, with intermediate level of proficiency in English language. Their age was from 16 to 21. Almost all the subjects had at least six years of English studying experience either in private institutes, schools, or universities. All the students' first language was Persian.

Materials and Instruments

One of the most well-known tools for assessing students' English language proficiency is Quick Oxford Placement Test (QOPT). It consisted of 60

multiple choice question. Pictorial vocabulary knowledge of learners was tested by Picture Vocabulary Size Test. In this test, test takers need to recognize the correct target word and match them with a series of pictorial cues. The test consisted of 96 test items and was presented in a multiple-choice format. Several methods currently exist for the measurement of Aural vocabulary size of the learners. One method is through A-Lex test. In this test learners hear words, aurally, one by one. By clicking on happy face (Yes) or sad face (No), learners indicate whether or not they know each word. In this test, Test-takers were asked to answer 120 items one by one to indicate whether they know each word or not. Viewing comprehension of learners was tested by a multiple-choice question test. The participants were shown a film and were asked to recall the event and answer 15 comprehension questions about the program content. These. Students were given 15 minutes to answer to the questions.

Procedure

This study is based on quantitative method with regression design which examines the relationship among three variables of picture vocabulary size, aural vocabulary size, viewing comprehension.

First, to determine the participants` proficiency level, they were asked to take the Quick Oxford Placement Test in a predetermined allocated time. Based on the result of this test, 110 out of 130 students who had the same proficiency level were selected as the sample for this study.

In the second phase of the study, Picture Vocabulary Size Test (PVST) was administered in the class. This test was consisted of 96 items and was used to measure picture vocabulary size of learners. Students were taken a test in a silent classroom, one by one which was equipped with headphone, in order to create a comfortable and non-threatening environment. The instructor provided participants with enough explanation about the research project before data collection began. The scores participants received in the test were recorded. When the participants finished this test, their scores were recorded. In the third phase of the study Aural Vocabulary Size Test was administered, the test included 120 items (100 real English words and 20 pseudo-words). The instructor taught the participants how to run and use the software and how to perform the task. Participants sat in front of a computer

screen, and were given a headset. After completing the test, their scores were recorded in an Excel file.

In the last phase of the study a short video clip was presented for participants based on their proficiency level. Immediately, after watching the short video clip, 15 comprehension tests were administered in order to evaluate their viewing comprehension. The data, gathered by the children's responses, indicated clear results which led to the formation of particular conclusions. Data management and analysis of three tests were performed using SPSS for Microsoft windows 22. First, the data gathered from the Picture Vocabulary Size Test were analyzed for the mean and standard deviation of the scores. Subsequently, the other two tests underwent the same procedure.

Some statistical procedures were conducted to analyze the obtained data and answer the research questions. First, for each of variables, descriptive statistics such as mean, standard deviation were run for analyzing distribution of data. Second, in order to measure the reliability of three instruments (i.e. picture vocabulary size tests, aural vocabulary size and viewing comprehension test) Cronbach's alpha method were used to identify the correlation coefficient for these tests. Third, to answer the research questions Pearson product moment correlation analysis were used to analyze the relationship among viewing comprehension, picture vocabulary size and aural vocabulary. After the correlation analysis, we did step- wise multiple regression analysis to predict an outcome variable from two predictors. The predictor variables were picture vocabulary size and aural vocabulary size and the outcome variable was viewing comprehension.

Results

The results of the descriptive analyses for the participants' scores in all three tests, that is, Aural Vocabulary Size (AVS), Picture Vocabulary Size Test (PVST), and Viewing Comprehension Test (VCT) are presented in Table 1.

Table 1
Descriptive Statistics of the Participants' Scores on AVS; PVST; VCT

Test	N	Min	Max	Mean	Std. D	Skew	Kurt
Aural	110	55	113	86.05	10.86	.572	.736
Picture	110	58	89	73.02	6.52	.637	.441
Viewing	110	5	15	9.29	2.71	.732	.562

As it is shown in Table1, the participants score in Aural Vocabulary Size (AVS) ranges from 55 to 113 and the mean score found to be 86.5 (*M* = 86.5, SD = 10.86). Concerning the picture vocabulary size test (PVST), the rang of scores is from 58 to 89 with the mean score of 73.02 (*M* = 73.02, SD = 6.52). Further, the obtained scores in the viewing comprehension test also ranges from 5 to 15 and the mean score is 9.29 (*M* = 9.29, *SD* = 2.71).

The first research question sought to investigate whether there is any significant relationship among aural vocabulary size, picture vocabulary size and EFL learners' viewing comprehension. To answer this research question, a Pearson product-moment correlation analysis was conducted.

After ensuring that the normality and linearity assumptions have not been violated, the main correlation analysis was run and the summary of results are illustrated in Table 2.

Table 2
Correlation *matrix between AVS, PVST, and VCT scores (N = 110)*

Variables		Viewing	Picture	Aural
1. Viewing	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	110		
2. Picture	Pearson Correlation	.695**		
	Sig. (2-tailed)	.000		
	N	110	110	
3. Aural	Pearson Correlation	.338**	.583**	
	Sig. (2-tailed)	.000	.000	
	N	110	110	110

**. Correlation is significant at the 0.01 level (2-tailed).

As the results in Table 2 suggest, there is a strong, positive correlation between picture vocabulary size scores (as measured by PVST) and viewing comprehension ability (as measured by VCT), r =.695, n = 110, p < .005, with high levels of the former associated with higher scores on the latter. Further, a moderate level of positive correlation was indicated between aural vocabulary size (as measured by AVS) and viewing comprehension ability (as measured by VCT) (r =.338, n = 110, p < .005).

To get an idea of how much variance the variables share, the coefficient of determination was also measured and found to be 47.61% for picture vocabulary size and viewing comprehension and 11.42% for aural vocabulary size and viewing comprehension. It means that picture and aural vocabulary size can help to explain nearly 48 and 12% of the variance in respondents' scores on the viewing comprehension test, respectively.

The second research question intended to explore whether aural and picture vocabulary size can predict the EFL learners' viewing comprehension ability. To answer this research question, a multiple regression analysis was conducted.

Preliminary analyses were run to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity are witnessed. After ensuring there was no violation of the assumptions, a standard multiple regression analysis was run and the obtained results were illustrated in Tables 3 and 4.

Table 3
Model Summary of the regression analysis

Model	R	R Square	Adjusted R Square	Std. Error of Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.699[a]	.489	.480	1.965	.489	51.24	2	107	.000

a. Predictors: (Constant), Picture, Aural
b. Dependent Variable: Viewing

As shown in Table 3, a standard multiple regression analysis was conducted to predict EFL learners' viewing comprehension ability based on their picture and aural vocabulary size. As it is illustrated in Table 3, the obtained R value for the model was .699 which was significant at 0.00 level (two-tailed). Moreover, 48 percent of the variance in EFL learners' viewing comprehension was explained by aural and picture vocabulary size which is a quite respectful amount of variance.

The ANOVA statistics also indicates that aural and picture vocabulary size as a whole make statistically significant contribution to predict the EFL learner' viewing comprehension ability, F (2, 107) = 51.224, $p <$ .005. However, in order to determine whether the contribution of each of these variables individually is significant the Beta value should be inspected which has been illustrated in Table 4.

Table 4
Beta values of independent variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-10.945	2.145		-5.103	.000
	Aural	-.025	.021	-.101	-1.190	.120
	Picture	.315	.036	.354	8.859	.000

a. Dependent Variable: Viewing comprehension

Furthermore, considering the absolute values of the standardized estimate of aural vocabulary size (B = .025, t = 1.19, p > .05) and picture vocabulary size (B = .315, t = 8.85, $p <$ .05), it is obvious that the latter is a significant predictor of EFL learners' viewing comprehension, while the former does not make any significant contribution to prediction of EFL learners' viewing comprehension. This finding shows that picture vocabulary size is a better predictor of viewing comprehension than aural vocabulary. Also, this result implies that those Iranian EFL learners who possess the higher levels of picture vocabulary size can show better performance in the viewing

comprehension test and the level of aural vocabulary size has not any significant effect on the learners' skill in viewing comprehension.

To sum up, the conducted multiple regression analysis revealed that 48% of the variation in EFL learners' viewing comprehension can be significantly explained by aural and picture vocabulary size as a whole model *(F (2, 107) = 51.224, p < .005)*. Further, it was found that among two variables only picture vocabulary size was found to be significant predictor of the EFL learners' viewing comprehension.

Discussion

This study was an attempt to explore the interrelation between Iranian EFL learners' aural vocabulary size; picture vocabulary size and their viewing comprehension. Further, it was intended to determine if aural and picture vocabulary size can predict the viewing comprehension ability of these EFL learners.

The results of correlation analysis indicated that there was a strong, positive relationship between picture vocabulary size and viewing comprehension ability, as well as a moderate level of positive correlation between aural vocabulary size and viewing comprehension ability. It means that the higher the level of aural and picture vocabulary size among EFL learners can lead to promotion of their viewing comprehension ability. It was found that students can understand aural massages more successfully, and in this way, acquire more words because they visual and verbal annotations accompanied the aural material as well. With the help of visual and verbal annotations learners can link information with the aural message and thus better retain information in long-term memory for later comprehension and vocabulary recall.

On a broad level, the nature of the findings in this study (i.e., the role of vocabulary knowledge in reading comprehension) are supported by recent similar studies revealing that learners` mastery of vocabulary can strongly associate with and well predict how successfully they comprehend English texts (Manihurak, 2020; Zhang & Zhang, 2020). There is also similarity with Mizumoto and Shimamoto (2008)'study in which they found that

language proficiency was positively and strongly correlated with aural and written vocabulary size. The obtained results are also consistent with those of Moinzadeh and Moslehpour (2012) who indicated that the depth of vocabulary knowledge, breadth of vocabulary knowledge and reading comprehension have positive correlation. In a similar vein, the findings of Matthews (2018) also support the results of the present study. He found that aural vocabulary knowledge can greatly improve learners` listening comprehension ability. The other major finding of this study suggested that 48% of the variance in the EFL learners' viewing comprehension can be significantly explained by aural and picture vocabulary size as a whole model. Further, it was found that among two variables only picture vocabulary size was found to be significant predictor of the EFL learners' viewing comprehension.

It is believed that vocabulary size is associated directly with the person's potential ability and skill to use English in various domains of life. In fact, it was proved that using English efficiently for everyday oral communication, needs knowledge of the 2000 most frequently occurring word families, which can provide the required lexical resources in this respect (Schonell, Meddleton, & Shaw, 1956). More similarly, establishing any spoken discourse and preparing for reading authentic texts requires the learners to have a knowledge of most frequent 3000 words (Nation & Waring, 1997). Furthermore, reading authentic texts and making accurate meaning inferences and guesses from context, as well as, getting an understanding of the communicative context of the text requires the learners to equip with the most frequent 5000 words (Hazenberg & Hulstijin, 1996). Pursuing the same line, Michas and Berry (2000) in an investigation proposed that learners' performance is improved when they learn from multiple media (video plus pictures) than merely from one of these channels.

The results are also consistent with those of Mehrpour et al. (2011) who suggested that both the depth and breadth of vocabulary knowledge can well predict EFL learners' reading comprehension performance. The findings are also in line with the obtained results by study on Korean EFL context in which Kang et al. (2012) revealed that after controlling for the role of listening comprehension, both aspects of vocabulary knowledge are significant predictors of reading comprehension abilities and vocabulary

depth was found to make relatively greater contribution in development of learners' reading comprehension compared to vocabulary breadth, regardless of the role played by language proficiency. Further, the findings of Afshari and Tavakoli (2017) who indicated a highly positive correlation among the vocabulary dimensions with listening comprehension corroborates the results of the present study. They also found that that both vocabulary breadth and depth can predict the EFL learners' listening comprehension.

Conclusion

Taking the importance of vocabulary knowledge, especially vocabulary size, the present research was conducted to confirm the effectiveness of aural and picture mode of vocabulary size on the EFL learners' viewing comprehension. To this end, a group of EFL students selected from private language institutes took part in this study. The needed data for this study was gathered using three testing instruments including Aural Lex Test, PVST, and researcher-made viewing comprehension test. The most obvious finding to emerge from this study is that both aural and picture vocabulary size were positively correlated with the EFL learners' viewing comprehension ability. The second major finding was that only picture vocabulary size can make significant contribution and consider as a significant predictor of EFL learners' viewing comprehension. Taken together, based on the theoretical evidences and empirical findings, it can be concluded that having a large coverage of vocabulary knowledge can make a great contribution to the language learners for achieving the desired outcomes in all language skills especially comprehension process. As Amirian et al. (2015) believed, in second or foreign language classroom contexts, huge emphasis is placed on learning vocabulary, since it is generally seen as a factor strongly related to successful performance on other Language skill. More specifically, when the learner's vocabulary size is accompanied by aural and picture cues, its effectiveness is increased.

The findings of the present study can have several pedagogical implications for language teaching. Considering the association between vocabulary knowledge and viewing comprehension, it seems necessary for

classroom pedagogy to explicitly focus on increasing learners' vocabulary size. Findings of this study imply that the presence of imagery can facilitate learners' comprehension of video presentations. Future research should distinguish more clearly between different sources of information (i.e., verbal, pictorial, both) necessary to answer comprehension questions.

To improve learners' viewing comprehension, especially in the EFL context, teachers should also work on learners' picture vocabulary size as well, since it can well predict their viewing comprehension. Also, as picture vocabulary size could explain much of the variance in learners' viewing comprehension, it is suggested that activities which can enhance this aspect of vocabulary knowledge should be taken into consideration in EFL learners' language classroom.

Declaration of interest: none

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