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THE CORRELATION BETWEEN CREATIVITY IN MALE AND FEMALE IRANIAN EFL LEARNERS AND GUESSING THROUGH ETYMOLOGY

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ABSTRACT

The main purpose of the present study was to determine whether there was any significant correlation between high and low levels of creativity in male and female Iranian EFL learners and guessing the meaning of unknown words by using etymology. To this aim, 161 Iranian EFL intermediate learners were selected for the purpose of this study, and were asked to respond to the creativity questionnaire in order to determine the creativity levels of them. Consequently, 68 participants whose scores were between 50 to 75 (low creativity) and 85 to 100 (high creativity) were selected for the purpose of this study. In order to know whether the participants were familiar with the meaning of words or not, a vocabulary test was administered to them. Finally, the participants were given an etymology test constructed by the researchers in order to check the guessing power of the participants by using their etymology knowledge. Applying non-parametric Pearson correlation, the results revealed that the high and low levels of Iranian EFL learners' creativity and guessing the meaning of unknown words by etymology were correlated. The results have implications for language teachers and materials developers.

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Contribution/ Originality

This study contributes in the existing literature area of foreign language learning in which it is attempted to scrutinize the correlation between creativity in male and female Iranian EFL learners and guessing through etymology. This study uses new estimation methodology to probe the degree of correlation between two variables.

1. INTRODUCTION

Words stand for ideas and are the tools of thought. If learners' word power is limited, they are necessarily a limited thinker, since they can neither receive ideas nor communicate with others except within the confines of their inadequate vocabulary. It is generally recognized that EFL learners while reading a text or listening to something or someone may encounter some unfamiliar words which inhibit their understanding of the text or listening. So lexical problems will hinder successful comprehension with unfamiliarity with words in the text and inability to guess unknown words correctly may impede reading comprehension. One of the factors that contribute to successful guessing is the learner's knowledge of etymology. It is possible to guess the meaning of an unfamiliar word when

one knows the meaning of its root. Etymology is one of the most systematic and effective ways of enhancing the word power which can increase the learners' ability to figure out unknown and difficult words with ease and without continual reference to unabridged sources. By using etymology, the student learns something that already knows. If learners learn one root, they will have the key that will unlock the meaning of up to ten, twenty, or even more English words in which that Latin or Greek element exists. It helps learners expand their English vocabulary and also helps learners acquire any language in depth. By using etymology in learning a foreign language, students will be able to guess a lot of unknown words correctly (Chatzisavvas, 2005) and learners are not hindered by lack of understanding of context and context does not overwhelm students.

Participants' performance when facing unfamiliar word depends on many aspects. One of these aspects is cognitive variables. It should be noted that creativity as a cognitive ability plays a significant role in the process of teaching and learning a language. Creativity is finding concepts or association between existing and new concepts or rearranging what is known in order to find out what is not known. It is essential to the success and fulfillment of learners. According to Akinboye (2003) without creativity, a person is not able to access the fullness of information and resources available, but is locked up in old habits, structures, patterns, concepts and perceptions. This is why creativity should form the basis of any education for sustainable development. In this study, the researchers tried to find out whether high and low creativity in male and female Iranian EFL learners has any correlation with guessing the meaning of unknown words by etymology or not.

2. THEORETICAL FRAMEWORK

Vocabulary knowledge is an essential factor in foreign language learning. So students must expand their vocabulary knowledge since it is an important element in language instruction. The problem is that learners are usually faced with vocabularies they do not understand. In such cases, a number of choices are available to learners for learning unfamiliar word meaning. One of these choices is etymology. If no clues may be gathered from the context of the word, learners can decipher the word itself based on suffixes, prefixes and root words within the unfamiliar word. According to Gagen (2007) direct instruction in the common Latin and Greek root words is highly beneficial in expanding vocabulary knowledge. Study of the Greek and Latin root words provides a strong foundation for vocabulary development. In etymological approach to vocabulary learning, students learn about Latin and Greek prefixes, roots, and suffixes and they can identify the word's meaning from the meaning of its basic elements or can guess at least part of the meaning (Rivers, 1981; Mohseni-Far, 2007). According to Binon, Cornu and Delbecque (1984, as cited in Knibeller (1989)) language learning means inferring the unknown from the known. Thelen (1986) believes that meaningful learning occurs when learners relates new learning to what they already know. Meaningful learning is a quality of learning which is related to prior learning. According to Farid (1985) cited in Zolfagharkhani and Moghadam (2011) there are two ways in which learning roots can be helpful: first, when reading one comes across a new word containing the root or prefix, one will be able to guess what the word means by his/her knowledge of the prefix or root meaning. Second, learning word through etymology makes it easier to remember the definitions of new words. In other words, knowing prefix and root meaning is a good memory aid. Davoudi and Yousefi (2009) state that using the etymological approach can be considered as a shortcut. In fact, etymology knowledge enables learners to interpret novel words by knowing morphological origins and morphemic elements, for example, word roots, affixes and inflectional affixes Mori (2003). Rivers (1981) asserts that knowledge of lexical roots (etymological information and morphological origins) will help students guess what the word means when they encounter a new word containing that root and will help them memorize and recall the definitions of new words easily. Fekri (2011) claims that learning a number of words that share a common origin can help students to recall the meaning of words faster. So one of a good memory aids is knowing the root meaning.

Another factor which is important in language teaching and learning is creativity. Torrance (1965;1966) defines creative thinking as the ability to sense problems, make guesses, generate new ideas, and communicates results. Duffy (2006) also describes creativity as the ability to see things in fresh ways; learning from past experiences and relating this learning to new solution; thinking along unorthodox lines and breaking barriers; using non-traditional approaches to solving problems; going further than information given; and creating something unique. According to Albert and Kormos (2004) Guilford was among the first to put forward a list of cognitive processes involved in creativity. Guilford believed that these processes include sensitivity to problems, creative fluency of production, ability to come up with novel ideas, flexibility of mind, synthesizing ability, analyzing ability, reorganization or redefinition of organized wholes, a high degree of complexity of the conceptual structure, and evaluation. Guilford (1950, as cited in Albert and Kormos (2004)) characterized thinking as divergent and convergent thinking. He defined divergent thinking as the ability to produce many different ideas in response to a problem or to create many solutions to a problem by original and unique view. According to Guilford's model of creativity (1959, cited in Albert and Kormos (2004)) divergent or creative thinking is viewed as:

- Producing a large number of ideas (fluency)
- Producing a wide variety of ideas (flexibility)
- Producing unusual ideas (originality)
- Developing or embellishing existing ideas (elaboration)

Creativity is a matter of great importance in teaching and learning. "Creativity is fundamental to successful learning. Being creative enables students to make connections between one area of learning and another and to extend their understanding" (QCA, 2000b, as cited in Duffy (1998)). According to Graves (2007) fluency, elaboration of ideas and originality which are aspects of creativity are necessary for vocabulary growth and developed communication between learners, their peers and teachers. Vocabulary learning uses different parts of the brain like other brain activities, for example, creativity. Many scholars have suggested that there is a strong relationship between learning and creativity (Karnes et al., 1961; Torrance, 1981, cited Fasko (2001)). According to McCallum (2012) creativity involves the generation of new meaning, and meaning refers to what can be understood, and learning also brings new meaning into being, so creativity is learning and learning is creativity. Guilford (1950, cited in Truman (2011)) states that creativity can be considered as a sub-type of learning. A number of researchers (Skehan, 1989; Larsen-Freeman and Long, 1991; Ellis, 1994; Otto, 1998; Albert, 2006) have conducted studies on the relationship between foreign/second language acquisition and self- efficacy, motivation, self-esteem and anxiety but creativity has been neglected. Or they have studied the relationship between creativity and some vocabulary learning strategies such as autonomy, guessing, dictionary and note taking strategy. So this study aimed to find out the relationship between creativity and guessing word meaning through etymology as a type of vocabulary learning strategy.

3. PURPOSE OF THE STUDY

Due to the importance of creativity and also vocabulary to learners in language learning and teaching, this study aimed to investigate any possible correlation between high and low creativity in male and female Iranian EFL learners and guessing the meaning of unknown words by etymology. To achieve the purpose of the study which the following research questions were proposed:

1. Is there any significant correlation between high level of Iranian male and female EFL learners' creativity and their ability to guess the meaning of unknown words by etymology?

2. Is there any significant correlation between low level of Iranian male and female EFL learners' creativity and their ability to guess the meaning of unknown words by etymology?

4. METHODOLOGY

Correlational design was used in this study to find the correlation between high and low creativity in male and female Iranian EFL learners as independent variable and guessing the meaning of unknown words by etymology as the dependent variable.

4.1. Participants

In order to collect the needed data for this study, 161 Iranian male and female EFL learners who were studying English at Simultaneous Interpretation Cultural and Publishing Institute in Tehran ranging in age from 20 to 50 years old were selected. One hundred and thirty intermediate students were chosen based on their scores on Oxford placement tests of proficiency. All 130 participants were given an Abedi's creativity questionnaire. Consequently, 98 of them, 47 men and 51 women, were chosen for conducting this study based on their performance on an Oxford Placement Test (OPT) and Abedi's creativity questionnaire.

4.2. Instruments

The following instruments were used in this study:

Proficiency test: In order to check the homogeneity of the participants, an Oxford Placement Test was employed. This test contains 50 multiple-choice items which assess students' knowledge of grammar and vocabulary, 5 true and false and 5 multiple-choice reading items based on a passage for homogenizing the participants as the learners with the intermediate level of language proficiency.

Creativity questionnaire: Abedi's creativity questionnaire was administered to the participants in order to measure their creativity level. Since the participants were Iranian, the Persian version of creativity questionnaire was employed. This standardized creativity questionnaire (O'Neil and Abedi, 1996) consists of 60 multiple-choice questions with three choices of A, B, and C in which the test-taker faces a question about him/her. Each item has three choices that obtain 0 to 2 scores and the scores gained by each participant shows the potential level of his/her creativity. The scores were ranged within 50 to 75 and 85 to 100 in order to measure only the participants' low and high creativity. The intermediate creativity level was omitted from this study. Abedi has confirmed the validity and reliability of this test in the context of Iran. The Torrance Test of Creative Thinking (TTCT) and Abedi Test of Creativity(ATC) were administered simultaneously to the student of secondary schools in Tehran and the results showed a correlation of 0.46 between TTCT and ATC which reflects the plausible criterion-related validity of the test. Moreover, the Coronbach's Alpha for total creativity was equal to 0.85 which showed a high reliability (Auzmendi *et al.*, 1996). Vocabulary test: To be sure that the vocabulary items going to occur in etymology test were unknown to the participants, a list of vocabulary items was given to them to find out if the knowledge of word items already existed among the participants. The vocabulary items were selected from the *vocabulary workbook for ESL students* by Farid (1985) *English lexicology and etymology* book by Rezai (2009) and National Classical Etymology Exam (NCEE) (n.d). The participants were asked to write the meaning of words in Persian. After the test, those words which were known even to one participant were omitted from the list.

Etymology test: In order to determine whether the participants could use their etymological knowledge to guess the meaning of unknown words or not, the etymology test was given to them. This process involved administrating the 60 item test which was constructed by the researcher according to the 83 words that were unknown to the participants.

Pilot study of etymology test: To choose the most appropriate level of etymology test, the 80 item test was administered to a pilot group comprising 32 students, 16 males and 16 females, with the same language proficiency level of the target group. Then, the researcher employed KR-21 formula to obtain the reliability of the test. The

purpose of this process was to determine item characteristics and gain some insights about the test to control the problems that the participants might encounter in the test administration.

4.3. Procedure

First, under testing conditions, 161 participants were given the standardized proficiency test (Oxford Placement Test) for homogenizing the participants as the learners with the intermediate level of language proficiency. Second, a validated Abedi's creativity questionnaire was given to this 130 participants who were at an intermediate level of language proficiency in order to determine the creativity levels of them. Consequently, 98 of them, 47 men and 51women with an age range between 20 and 50, whose scores were between 50 to 75 (low creativity) and 85 to 100 (high creativity) were selected for the purpose of this study. Then, vocabulary test was administered to participants in order to know whether they were familiar with the meaning of words or not,. After the test, those words which were totally unknown to the participants were left. Finally, the participants were given an etymology test which contained 60 researcher made items with unknown words in order to check the guessing power of the participants by using their etymological knowledge. To fulfill the objective of this study, Pearson correlation was conducted.

5. RESULTS

The objective of this study was to probe any significant relationship between high and low levels of EFL learners' creativity and their ability to guess the meaning of unknown words by etymology. The data were analyzed through the Pearson correlation which assume normality of the data. Normality is usually tested through the ratios of skewness and kurtosis over their respective standard errors. As displayed in Table 1 the assumption of normality was met. The ratios of skewness and kurtosis over their respective standard errors were lower than +/- 1.96.

Table-1. Testing the Normality Assumption

	N	Skewness			Kurtosis		
	Statistic	Statistic	Std. Error	Ratio	Statistic	Std. Error	Ratio
Etymology	98	-.157	.244	-0.64	-.140	.483	-0.29
OxfordPlacement	98	-.391	.244	-1.60	.193	.483	0.40

The creativity test was administered to 130 cases in order to select two groups of high (ranges of scores between 85 and 100) and low (ranges of scores between 50 and 75) groups in order to participate in the main study. As displayed in Table 2, the creativity enjoyed a KR-21 reliability index of .81. It also enjoyed normal distribution. The ratios of skewness and kurtosis over their respective standard errors were lower than +/- 1.96.

Table-2. Descriptive Statistics of Creativity

Mean	79.24
Std. Deviation	13.666
Variance	186.772
Skewness	.031
Std. Error of Skewness	.212
Skewness Ratio	.14
Kurtosis	.019
Std. Error of Kurtosis	.422
Kurtosis Ratio	.045
KR-21	.81

5.1. KR-21 Reliability Index for Creativity

As displayed in Table 3, the creativity (for 98 selected subjects) had a KR-21 reliability index of .92.

Table-3. Descriptive Statistics, Creativity

	N	M	Variance	KR21
Creativity	98	77.21	192.211	.92

5.2. Testing the First Hypothesis

Null hypothesis 1: There is no significant correlation between high level of Iranian EFL learners' creativity and guessing the meaning of unknown words by etymology. The Pearson correlation was run to probe any significant relationship between high level of Iranian male and female EFL learners' creativity and their ability to guess the meaning of unknown words by etymology. Based on the results displayed in Table 4 it can be claimed that there was a significant relationship between high male (r (21) =.66, p < .05, representing a large effect size) and female (r (21) = .73, p < .05, representing a large effect size) subjects' creativity and etymology. Thus the first null-hypothesis was rejected. There was a significant correlation between high level of Iranian male and female EFL learners' creativity and their ability to guess the meaning of unknown words by etymology.

Table-4. Pearson Correlation; Creativity with Etymology

				Etymology
High	Male	Creativity	Pearson Correlation	.668**
			Sig. (2-tailed)	.001
			N	23
	Female	Creativity	Pearson Correlation	.739**
			Sig. (2-tailed)	.000
			N	23

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

5.3. Testing the Second Hypothesis

To test the second hypothesis, i.e. there is no significant correlation between low level of Iranian EFL learners' creativity and guessing the meaning of unknown words by etymology, the Pearson correlation was used in order to describe the relationship between these two variables. The results of the Pearson correlations (Table 5) indicated that there was a significant relationship between low male (r (22) =.76, p < .05, representing a large effect size) and female (r (26) = .89, p < .05, representing a large effect size) subjects' creativity and etymology. Thus the second null-hypothesis was rejected. There was a significant correlation between low level of Iranian male and female EFL learners' creativity and their ability to guess the meaning of unknown words by etymology.

Table-5. Pearson Correlation; Creativity with Etymology

				Etymology
Low	Male	Creativity	Pearson Correlation	.768**
			Sig. (2-tailed)	.001
			N	24
	Female	Creativity	Pearson Correlation	.894**
			Sig. (2-tailed)	.000
			N	28

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

6. DISCUSSION AND CONCLUSION

Based on the findings of this study, it can be concluded that there is a significant correlation between high and low creativity in male and female Iranian EFL learners and their ability to guess the meaning of unknown words by etymology. The Pearson correlation was utilized to analyze the correlation between students' creativity and their

ability to guess the meaning of unknown words by etymology. Thus the null hypothesis suggested that there is no significant correlation between the creativity levels of Iranian EFL learners and guessing the meaning of unknown words by etymology has been rejected. So, the more learners were creative, the more familiarity they had with etymology (prefixes, suffixes and roots of words). In other words, by increasing students' creativity, their ability to guess the meaning of unknown words by etymology will be increased as well.

In recent years, teachers have focused on the learner's role as an active participant in teaching and learning process. So, it shows a move from the behavioristic era to the cognitive approach. In this regard, EFL learners with high creativity level can construct a new aspect in learning vocabulary. As this study revealed, there was a significant correlation between creativity levels of the EFL learners and their ability to guess the meaning of unknown words by etymology. Therefore, creativity as a cognitive ability can have a significant correlation with the learners' ability to guess the meaning of unknown words. So, being aware of the learners' creativity level and trying to improve it can help learners develop their ability to guess the meaning of unknown words by etymology.

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