



A STUDY ON THE CORRELATION BETWEEN CREATIVE THINKING OF IRANIAN EFL LEARNERS AND USING METAPHOR IN DESCRIPTIVE WRITING TASKS



 **Shahriyar Yazdanjoo^{1*}**

 **Hadiseh Fallahpour²**

¹M.A. in TEFL, Letters and Humanities Faculty, Department of English Language and Literature Shahid Beheshti University, Tehran, Iran
Email: shahriyaryazdanjoo88@gmail.com

²M.A. in TEFL, Letters and Humanities Faculty, Department of English Language and Literature University of Payame Noor, Tehran, Iran



(+ Corresponding author)

ABSTRACT

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The main purpose of the present study was to determine whether there was any significant correlation between high, mid and low levels of creativity in male and female Iranian EFL learners and using metaphor in descriptive writing tasks. To this aim, a validated creativity questionnaire was administered to 50 intermediate and advanced EFL learners in order to determine the creativity levels of them. Consequently, 22 men and 28 women aged between 20 to 30 whose scores were between 50 to 75 (low creativity), 75 to 85 (mid creativity) and 85 to 100 (high creativity) were selected for the purpose of this study based on the results of the questionnaire. The data from the questionnaire were then compared to the learners' scores on descriptive writing prompt titled "describe a face night of Tehran through an observation deck" which encouraged the use of metaphors. The writings were rated by three raters using Brown (2007) rubric of assessment. Applying Pearson correlation and one-way analysis of variance were employed to analyze the data. The results revealed that the low, mid and high levels of Iranian EFL learners' creativity and metaphor use in the process of descriptive writing tasks were correlated. The results have implications for language teachers and materials developers.

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 using metaphor in descriptive writing. This study uses new estimation methodology to probe the degree of correlation between two variables.

1. INTRODUCTION

Creativity through which an abstract or concrete concept is designed or optimized is a notion of paramount importance, with its footprints observable in almost any scientific, semi-scientific, or literary works. Runco (2004) for instance, considers creativity as one of the most significant aspects of any organization or businesses. Boden (2001) defines creativity as the ability to think of novel thoughts that happen to be beyond belief on one hand yet comprehensible on the other, and to some extent appreciated as well. Torrance (1966) described the concept as:

A process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies, and so on; identifying the difficulty; searching for solutions, making guesses, or formulating

hypotheses about the deficiencies: testing and retesting these hypotheses and possibly modifying and retesting them; and finally communicating the results. (p.6)

Having its roots in psychology and cognitive functions, creativity can be used as an interdisciplinary concept which can be applied to teaching second language skills such as writing and speaking. For instance, descriptive writing can be facilitated by the provision of a range of creativity-based activities which will enrich the learners' language learning experience. Vecino (2007) applied the creativity concept in teaching writing with an appealing strategy. Therefore, Pardlow (2003) view on creative writing may be supported by this statement. This current study presented a statistically significant correlation between variables of creative thinking and construct of descriptive writing capability in EFL learners. In this regard, creative thinking as a cognitive function can be enhanced through various methods and it can have its outcomes in productive tasks, namely, writing which is, in this study, canalized into descriptive facet.

2. REVIEW OF LITERATURE

In recent years, the learner's role as an active participant in teaching and learning process has gained a significant attention and it is symptomatic of a shift from the behavioristic era to the cognitive approach. In this regard, creativity as a cognitive ability, can influence the quality of learning a foreign language. However, creativity like many other brain-based functions is too vast to be easily defined. Thus, there is no clear-cut consensus on the definition of creativity. For instance, the definition of creativity offered by Torrance (1965;1966) as the ability to sense problems, make guesses, generate new ideas and communicates results is a widely accepted definition among researchers. Elsewhere Duffy (2006) provides a comprehensive definition of creativity and describes it as the ability to see things in fresh ways; learning from past experiences and relating this learning to the 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 Pandey and Sharma (2009) creativity is a new, useful, appropriate, accessible and innovative response to solve organizational problems. Otto (1998) defines creativity as "a cognitive process whose intended outcome is a number of alternative responses to a given special task which are perceived in some way as noble or unusual" (p.764). Creativity refers to a person's ability to come up with a large number of noble ideas and statistically rare solutions on a given task which has been operationalized by the total score achieved on a standardized creativity test (Albert and Kormos, 2004). Guilford (1950, as cited in Albert and Kormos (2004)) can be regarded as another case in point, characterizing 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 the original and unique view. According to Guilford's model of creativity, there are four aspects of divergent or creative thinking skills:

- Generating new ideas (Fluency)
- Producing a wide variety of ideas (Flexibility)
- Producing unusual ideas (Originality)
- Developing or embellishing existing ideas (Elaboration)

Many scholars such as Beghetto and Kaufman (2010); Craft *et al.* (2001) state that creativity is important to successful learning. Creativity is a model of learning and creative activity can be considered as a type of learning due to the following reasons: (1) creativity includes a flexibility in which there may be a conscious effort to challenge the preconceptions of the self; (2) It attempts to find, construct, reconstruct something new and to increase the possibilities of any situations (National Advisory Committee on Creative and Cultural Education (NACCCE), 1999). According to McCallum (2012) creativity involves generation of new meaning where meaning refers to what can be understood, and learning also brings new meaning into being, so creativity is learning and learning is creativity. Similar to creativity, writing performance employs different parts of the brain; therefore, many writing problems might be related to thinking problem. Hence, another area which can be of particular

interest to study on creativity is the writing performance of learners. For instance, descriptive writing can help students' writing be full of details and promote learners to utilize new vocabulary. Good descriptive writings often make use of figurative languages such as simile and metaphor.

2.1. Metaphors

One phenomenal concept in the field of second or foreign language learning which has been well-researched in different studies (Steen, 2007) and can play a key role in the construction of reality (Lakoff and Johnson, 1999) is a metaphor. Metaphors make the language as a way to examine the individuals' experiences and knowledge within an organizational learning context (Wittink, 2015). Therefore, as highlighted by Halliwell (1986) metaphors take us on a personal and social journey into the words to express and understand complex concepts. Greene (1994) also states:

The metaphor is at the center of language and it is the cognitive capacity that allows human beings to construct alternative modes of being and to envisage what might be if things were otherwise. It is a metaphor that enables us to make creative sense of what is around us and what we carry in our memories. (p. 456).

As regards the mentioned claims, metaphors have entered the soul of individuals' consciousness as they attempt to express their understanding of reality. Metaphors can be regarded as a way of thinking about or conceptualizing the world that functions as a bridge for people to gain a better cognition and understanding of the new, abstract and not well-delineated concepts (Zheng and Song, 2010). Therefore, metaphors can be identified as a category of different types that can be utilized as an analytical tool in many discourses. However, Weade and Ernst (1990) believe that metaphors are a selective phenomenon in which a part of the phenomena is represented. In line with (Hersberger (1943) as cited in Janson (1981)) metaphors can be consisted of four types of allegory, catachresis, parable and pun with the special features as follows:

1. **Allegory:** Allegory is an extended metaphor that within a story illustrates an important attribute of the subject. Allegory can be distinguished from metonymy as one of two fundamental modes of thought. In the way, that allegory works by bringing together two concepts from different conceptual domains, whereas metonymy works by using one element from a given domain to refer to another related element.
2. **Catachresis:** Catachresis is a mixed metaphor that can be used by design or accident.
3. **Parable:** Parable is an extended metaphor that can be narrated as an anecdote illustrating and teaching.
4. **Pun:** Pun is similar to a metaphor, although it alludes to another term. The main difference between pun and metaphor is that a pun is a frivolous allusion between two different things whereas a metaphor is a purposeful allusion between two different things. (Hersberger (1943) as cited in Janson (1981)).

2.2. Writing and Metaphors

As was mentioned, metaphors can be identified as a style that is central to individuals' discourse as a way of thinking about or conceptualizing the world by the means of governing their everyday talk, thought and even their action. Therefore, it can be said that metaphors are able to provide an interesting context for making intellectual abilities of creativity. Metaphors are linked to creative thinking processes (Dunbar, 1999; Gentner, 2002) and have been found throughout all creative aspects of professional science (Dunbar, 1999; Dunbar and Blanchette, 2001). With reference to the importance of metaphors used in the process of creative writing, it can be concluded that making use of metaphorical concepts in different aspects of second or foreign language learning such as writing is crucial to develop learners' creativity. The ability of intellectual and critical thinking about metaphorical relationships in different aspects of language learning can function as a predictor of the individual's ability to generate a creative context. In other words, the ability of intellectual thinking about metaphors is related to the ability to generate creative and novel metaphors. Consequently, engaging second or foreign language learners in

thinking process about metaphors may be a pathway to enhance their conceptual understanding of different contents that leads to enhancement of learners' creative ability (Hansen *et al.*, 2011). In the area of second or foreign language writing, metaphors can be used to illustrate the writer's intention or experiences (Beard, 1998). Metaphors can be part of a "rhetorical give and take" between different conceptual elements that help readers to define writing (Eubanks, 2010) and could be seen as a cognitive mechanism in which "one projects an experiential domain on to a different experiential domain so that the second one is made more comprehensible in terms of the first one" (Barcelona, 2000). In the meantime, descriptive writing as a considerable aspects of writing skill in the field of language learning that mainly focuses on how to help the readers to "see" what the text is on Barasovska (1998) inspires imagination within the readers by the means of making them pay more attention to details and refine their perception about things (Black, 1979). Metaphors as a figure of speech refer to one thing by mentioning another thing and should be emphasized as an undeniable part of descriptive writings in which readers can catch the main idea of the writer by providing the clarity or identifying the hidden similarities between two ideas (Black, 1962). Metaphors can be identified as an inseparable part of literature in which writer's idea is transferred to the readers by the means of cognitive thinking process that leads to a high level of creativity. Engaging language learners' creative thinking ability in the process of writing skill is one important part of literature that helps in a better understanding of metaphors. There have been a number of published studies measuring the relationship between creativity and writing performance of EFL learners. Among the comprehensive studies conducted thus far is Soleimani and Najafgholian (2014) who measured the relationship between ESL learners' creativity and writing performance in comparison/contrast method of developments. A positive correlation was found between Creativity in thinking and components of writing performance, whereby learners at higher levels of creativity used language lexis and structures more accurately than others in their writing task. In another study, Pishghadam and Javdan (2011) explored the correlation between creative thinking of EFL learners and writing performance in narrative tasks. The results showed a significant relationship between learners' creativity and their performance in written narrative tasks. In a similar vein, Zabihi *et al.* (2013) scrutinized the relationship between the subjects' creative originality score and argumentative tasks. As they reported, a negative relationship was observed between the above-mentioned variables. Among other noteworthy studies delving into the role of creativity, mention can be made of Ally and Bocon (1999, as cited in Hyland (2003)) study where the researchers believe that ordering details in compare and contrast writing requires some thought that is an evidence for the importance of creativity in the area of second language writing. Despite the bulk of research on creativity and writing tasks, some areas have remained less heeded. One of these areas which have abided unattained is description task. Therefore, this study was carried out to shed light on the above-mentioned area to encourage the educators to perceive the importance of fostering learners' creativity and their writing performance on description task. To this end, the present study seeks to provide responses to the following research questions which concern the correlation between Iranian male and female EFL learners' creativity levels and their ability to use metaphor in descriptive writing.

2.3. Research Questions

1. Is there any significant correlation between the low level of Iranian male and female EFL learners' creativity and using metaphor in descriptive writing?
2. Is there any significant correlation between the intermediate level of Iranian male and female EFL learners' creativity and using metaphor in descriptive writing?
3. Is there any significant correlation between the high level of Iranian male and female EFL learners' creativity and using metaphor in descriptive writing?
4. Is there any significant difference between Iranian male and female EFL learners as far as creativity and descriptive writing are concerned?

3. METHOD

3.1. Participants and Context

The participants in this study were altogether 50 EFL learners (22 males and 28 females) (convenience sampling) whose age ranged from 20 to 30. Administering the *Oxford Placement Test for Solutions Series*, 2nd Edition, by Edwards (2009) the participants of the study were randomly selected from a pool of a population of 175 learners in a private English language center in the city of Tehran. The participants were reported to be at intermediate and higher levels of language proficiency. The participants based on the Common European Framework of Reference (CEFR) were categorized under the B1-B2 spectrum. In terms of background language knowledge, the participants had a prior exposure to EFL classes at the university level, 3 years of which had been developed in a range of private language associations. None of the learners had the experience of staying in an English-speaking country. At the time of the study, the participants were taking general English classes, which offered four hours of classroom instruction per week. In addition, fostering communicational skills of learners was the cornerstone of the course the learners were attending.

3.2. Materials and Instruments

3.2.1. Placement Test

The proficiency level of the population from which the participants were to sample was measured in accordance with the *Oxford Placement Test for Solutions Series*, 2nd Edition, by Edwards (2009).

3.2.2. Writing Prompt

In order to measure the relationship between the creativity and ability to produce descriptive texts, the participants were provided with a descriptive writing prompt titled as *Describe a face night of Tehran through the observation deck*. The prompt was selected due to the localization issues and that the learners could have a clear understanding of their immediate environment and its bearing resemblance to real-life situations.

3.2.3. The Assessment Rubric

In order to evaluate and mark the writing papers of the participants, Brown (2007) Rubric of Assessment for descriptive text was used. The scoring rubric included 5 aspects including Content (30%), Organization (20%), Grammar (20%), Vocabulary (15%), and Mechanics (15%) each containing distinctive definition and weight. In terms of scoring, based on the provided rubric, the score of (4) in the range (1 to 4) was counted as the highest score for the learner's performance on the task while the score (1) was assigned to the weakest performance. To achieve a perfect scoring, decimal scores of (0.25, 0.5, 0.75) along with the full marks were used to label partial achievement in task completion. Three skilled academicians rated the final texts of the learners for the sake of authenticity of scoring. The following formula represents the method of calculation the raw score out of 10.

- C=Content (30%)
- O=Organization (20%)
- G=Grammar (20%)
- V=Vocabulary (15%)
- M=Mechanics (15%)
- Score Range for each aspect: [1-4]

$$\text{Raw Score} = \frac{3C+2O+2G+1.5V+1.5M}{40} (10)$$

3.3. Creativity Questionnaire

In order to answer the research questions raised above, the standardized creativity questionnaire (Auzmendi *et al.*, 1996) was administered to determine the participants' creativity levels. Given that the participants' first language was Farsi, the Farsi version of the questionnaire was used to avoid misinterpretation of the proposed

questions. The provided questionnaire was the localized and translated version of Torrance (1965;1966) Test of Creative Thinking and Creative Behavior. This standardized creativity questionnaire measured the construct of the creative thinking which was categorized into three broad levels of high, intermediate (mid), and low. The questionnaire included 60 multiple-choice questions which rated each applicant based on the total selection of letters of (a, b, c) where the test-taker faced a question about himself/herself. Each item of three options was worth (0 to 2) points and the scores gained by each participant showed the potential level of his/her creativity. The scores ranged from 50 to 100 and measured the participants' creativity at low, intermediate and high levels. This questionnaire was categorized into four subscales of Fluency (16 items), Flexibility (11 items), Originality (22 items), and Elaboration (11 items). O'Neil and Abedi (1996) have confirmed the validity and reliability of this test in the context of Iran. The above-mentioned studies showed the correlation of 0.46 between TTC and ATC which reflects the validity of the test. Moreover, the Cronbach's Alpha for total creativity was 0.85 which showed a high reliability (Auzmendi *et al.*, 1996). Therefore, O'Neil and Abedi (1996) claim that this questionnaire can predict the creativity level of people.

3.4. Procedures

In order to achieve the purpose of this study, and to ensure the minimum proficiency level of the learners, 175 participants were given the standardized *Placement Test of Oxford for Solution Series* by Edwards (2009). The supplied test contains 50 multiple-choice items. The test assessed students' knowledge of grammar and vocabulary within 30 minutes. The standardized creativity questionnaire includes 60 multiple-choice item of three choices. Each item is worth (0 to 2) marks. The scores ranged from 50 to 100 and measured participants' low, intermediate and high creativity. The time allocated for doing this questionnaire was 30 minutes. Consequently, 22 men and 28 women aged between 20 and 30, whose scores were between 50 and 100 were selected for the purpose of this study. After specifying the creativity levels of participants, in order to grade learners' writings on description tasks in terms of creative thinking levels, a descriptive writing prompt titled "Describe a face night of Tehran through an observation deck. was assigned to the subjects to write on. The given topic was selected from pool of 20 offered topics by the authors and provided on a card with the following guideline.

You should spend about 25 minutes on this task.

Describe a face night of Tehran through an observation deck.

Write at least 175 words

4. RESULTS

The researchers in the current study were primarily concerned with the correlation between the creativity levels of Iranian EFL learners and metaphor use in the process of descriptive writing tasks. Prior to delving into the findings, some preliminaries such as a test of normality will initially be dealt with. The Pearson correlations and one-way analysis of variance were employed to analyze the data. Since these tests are parts of the parametric analyses, the assumption of normality had to be proved. As displayed in the following Table 1 the absolute values of the ratios of skewness and kurtosis over their respective standard errors were lower than 1.96; hence normality of the data.

Table-1. Descriptive Statistics; Testing Normality Assumption

Creativity levels		N	Skewness			Kurtosis		
			Statistic	Std. Error	Ratio	Statistic	Std. Error	Ratio
Low	OPT	8	1.016	.752	1.35	.160	1.481	0.11
	Creativity	8	.000	.752	0.00	-1.456	1.481	-0.98
	Writing	8	.000	.752	0.00	-.700	1.481	-0.47
Mid	OPT	21	.716	.501	1.43	-.804	.972	-0.83
	Creativity	21	.273	.501	0.54	-.812	.972	-0.84
	Writing	21	.490	.501	0.98	.639	.972	0.66
High	OPT	21	.713	.501	1.42	-.684	.972	-0.70
	Creativity	21	.086	.501	0.17	-1.225	.972	-1.26
	Writing	21	-.634	.501	-1.27	.759	.972	0.78

4.1. Inter-Rater Reliability of Writing Test

The writing task was rated by three raters. Based on the results displayed in Table 2 it can be concluded that there was a significant agreement between these three raters ($\alpha = .994, p = .000$). If a single rater had rated the participants' performance on the writing tests three times, the intra-rater reliability would have been .982 ($p = .000$).

Table-2. Intra-class Correlation Coefficient; Writing Test

	Intra-class Coefficient	95% Confidence Interval		F Test with True Value			
		Lower Bound	Upper Bound	Value	df1	df2	Sig.
Single Measures	.982	.972	.989	168.823	49	98	.000
Average Measures	.994	.991	.996	168.823	49	98	.000

4.2. Homogenizing Groups on OPT

A one-way ANOVA was run to compare the high, mid and low creativity groups' means on the OPT test in order to prove that they were homogeneous in terms of their general language proficiency prior to the main study. Besides normality; one-way ANOVA assumes homogeneity of variances of the groups which is probed through the Levene's test. Based on the results displayed in Table 3 it can be concluded that the groups enjoyed homogenous variances on the ($F(2, 47) = 2.71, p = .076$).

Table-3. Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
2.717	2	47	.076

The Table 4 displays the descriptive statistics for the groups on the OPT test. The results showed that low ($M = 51.25, SD = 7.34$), mid ($M = 47.76, SD = 6.01$) and high ($M = 51.67, SD = 9.63$) creativity levels had fairly close means on the OPT test.

Table-4. Descriptive Statistics; Oxford Placement Test by Creativity Levels

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Low	8	51.25	7.344	2.596	45.11	57.39	44	65
Mid	21	47.76	6.016	1.313	45.02	50.50	41	59
High	21	51.67	9.635	2.103	47.28	56.05	40	70
Total	50	49.96	7.997	1.131	47.69	52.23	40	70

The results of one-way ANOVA ($F(2, 74) = 1.39, p = .257, \omega^2 = .016$ representing a weak effect size) (Table 5) indicated that there were not any significant differences between the three creativity levels' means on the OPT test. Thus, it can be concluded that they were homogeneous in terms of their general language proficiency prior to the main study.

Table-5. One-Way ANOVA; Oxford Placement Test by Creativity Levels

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	175.944	2	87.972	1.398	.257
Within Groups	2957.976	47	62.936		

4.3. Results Related to the First Research Question

There is not any significant correlation between Iranian EFL learners with low-level of creativity and use of metaphor in descriptive writing. A Pearson correlation was run to investigate any significant correlation between the low level of Iranian EFL learners' creativity and using metaphor in descriptive writing in order to probe the first question. Based on the results displayed in Table 6 ($r(6) = .632$, $p = .092$, representing a large effect size) it can be concluded that there was a non-significant but large relationship between creativity and using metaphor in descriptive writing. Although these results should be interpreted cautiously due to the large effect size value which suggested a large relationship between the two variables.

Table-6. Pearson Correlation; Creativity with Writing (Low Level)

		Writing
Creativity	Pearson Correlation	.632
	Sig. (2-tailed)	.092
	N	8

4.4. Results Related to the Second Research Question

There is not any significant correlation between mid-level of Iranian EFL learners' creativity and using metaphor in descriptive writing. A Pearson correlation was run to investigate any significant correlation between mid-creativity EFL learners and their using metaphor in descriptive writing in order to probe the second question. Based on the results displayed in Table 7 ($r(19) = .893$, $p = .000$, representing a large effect size) it can be concluded that there was a significant and large relationship between creativity and using metaphor in descriptive writing among mid creativity group.

Table-7. Pearson Correlation; Creativity with Writing (Mid-Level)

		Writing
Creativity	Pearson Correlation	.893**
	Sig. (2-tailed)	.000
	N	21

4.5. Results Related to the Third Research Question

There is not any significant correlation between the high level of Iranian EFL learners' creativity and using metaphor in descriptive writing. A Pearson correlation was run to investigate any significant correlation between high creativity EFL learners and their using metaphor in descriptive writing in order to probe the third question. Based on the results displayed in Table 8 ($r(19) = .754$, $p = .000$, representing a large effect size) it can be concluded that there was a significant and large relationship between creativity and using metaphor in descriptive writing among high creativity group.

Table-8. Pearson Correlation; Creativity with Writing (High Level)

		Writing
Creativity	Pearson Correlation	.754**
	Sig. (2-tailed)	.000
	N	21

4.6. Data Analysis

The collected data with reference to each and every research question in the present study were analyzed using SPSS software. The given data were analyzed based on the comparison of the means (within groups and outside groups) providing descriptive statistics for both genders classified as males, females and both. For comparison of the means of the samples t-test of unpaired samples in two-tailed fashion with independent groups of unequal variances at $p < 0.05$ was used.

4.7. Results Related to the Fourth Research Question

There is not any significant difference between Iranian male and female EFL learners' creative thinking skills. An independent t-test was run to compare the male and female subjects' means on creativity. As displayed in the following **Table 9**, the male students ($M = 80.50$) showed a higher mean on creativity than female subjects ($M = 78.31$)

Table-9. Descriptive Statistics

	Gender	N	Mean	SD	SEM
Creativity	Male	22	80.50	10.78	1.55
	Female	28	78.31	14.282	1.859

The results of the independent t-test ($t(105) = .88, p > .05; R = .086$) with a weak effect size) indicated that there was not any significant difference between male and female subjects' means on creativity.

Table-10. Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	3.442	.066	.880	105	.381	2.195	2.495	-2.752	7.142
Equal variances not assumed			.905	104.471	.368	2.195	2.425	-2.614	7.004

5. DISCUSSION AND CONCLUSION

The current study investigated the possible relationship between creative thinking of Iranian EFL Learners and use of metaphor in descriptive writing tasks. After conducting the correlation analysis, it was found that creativity bore a significant relationship with EFL learners' abilities to employ metaphor in descriptive writing. According to the results obtained in this study, the difference between writing score of the high creative learners and those of two other creativity levels was significant. Put another way, the high creative learners employed more metaphor and enjoyed higher grades than the mid and low creative counterparts. Although the low level of creativity and using metaphor in descriptive writing have a non-significant but large relationship that it should be interpreted cautiously due to the large effect size value which suggested a large relationship between the two variables. The results confirm that of Hansen *et al.* (2011) who found a significant positive relationship between the students' ability to engage with a metaphor's deep, structural aspects and ability to generate creative and novel metaphors. Also, the results can be in line with the finding of some other studies that showed a significant relationship between metaphor recognition as the initial stage in metaphor processing and creative thinking process (Lubart and Getz, 1997; Piri, 2010). By the same token, the result of other studies also showed a positive relationship between creativity and other language skills, such as reading and writing (Wang, 2012) vocabulary

learning strategy like guessing the meaning of unknown words through Etymology (Seddigh and Shokrpour, 2013; Soleimni and Fallahpour, 2016). Moreover, in the field of writing performance, Whitney *et al.* (1992) indicated a significant relationship between creative thinking and metaphorical usage in writing performance of experienced and novice writers. The results show that the more experienced writers would display consistent patterns of figurative language production while novice writers would die in their production of metaphorical language as a function of writing context. Also, Fraser (2006) investigated the creative potential of metaphorical writing in the literacy classroom and concluded that students deserve opportunities to create their own metaphors enable the creative exploration of emotional depths, and that surface original voices. In another study, Sanchez-Ruiz *et al.* (2013) explored the connection between children creative thinking and their achievement in writing performance and support this idea that there is a significant relationship between creativity and metaphorical thinking in the process of writing. Lengelle *et al.* (2016) carried on a study to examine reflexivity, metaphor and change processes through narrative and showed that in the process of career writing, participants first enter into feelings, then make sense of those by finding the appropriate words to describe them, and experience (by thinking and feeling) that their new story makes sense on a gut level and provides meaning. All mentioned studies confirm the findings of the present study and indicate a significant relationship between creativity in thinking and using metaphor in writing performance. In addition, it was attempted to probe the significant difference between Iranian male and female EFL learners' creative thinking skills. The results of independent t-test indicated that there was not any significant difference between male and female subjects' means on creative thinking skills; so that the fourth question was answered. These results match other studies' findings that relatively show no differences in the creative thinking of men and women (Maccaby and Jacklin, 1974; Baer, 2005). However, Baer (1999) indicated gender differences in the process of writing poems and stories under conditions favoring both intrinsic and extrinsic motivation. The results showed that older girls suffered more on their creativity when they anticipated evaluation than boys of the same age under the same conditions. In conclusion, the findings of the present study support the notion that there is a significant correlation between creative thinking and learning foreign language especially on improving metaphor usage in the process of descriptive writing. In other words, it can be concluded that creativity and metaphor are two important variables that have a significant relationship to each other in the field of foreign language learning, especially descriptive writing. This notion seems more acceptable as it can be claimed that using metaphor in language writing can be related to the level of learners' creative thinking process. The results of this study have some main implications for syllabus designers, material developers, English language teachers and EFL learners. It persuades curriculum designers, material developers and English language teachers consider creativity as one of the important factors in successful foreign language learning in general and in writing in specific. Since a significant correlation was found between the high, intermediate and low levels of Iranian EFL learners' creativity and their ability to employ metaphor in descriptive writing, it can be concluded that utilization of creative thinking can help learners write more easily.

Curriculum designers and material developers can apply the results of this study as a reference to design educational programs in making EFL learners more aware of their potential creativity and also develop instructional materials for EFL learners' training sessions in the classroom. Incorporating creative thinking in course books results in the educated learners with analytical abilities that are well-reasoned in dealing with writing which is always faced by EFL learners.

The findings of this study can be utilized in the educational system to bring a change in applying the creativity concept in the field of language teaching. It will be helpful for the teachers to switch on the cognitive abilities. In other words, teachers should try to move from behavioristic approaches towards the cognitive approaches, in order to make the learners challenge the writing ability more effectively with the help of their creative thinking.

The results of this study showed that creative learners were more successful in using metaphor in their writing. So, Applying these results can make teachers more familiar with the concept of creativity and its benefit in the educational system and help them to consider writing skill with a more creative thinking process in teaching.

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