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THE RELATIONSHIP BETWEEN IRANIAN EFL LEARNER'S CREATIVITY AND BILINGUALISM

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ABSTRACT

The purpose of the present study is to explore the correlation among creativity, bilingualism in male and female bilingual and monolingual EFL learners. In order to address these issues, a quantitative study was conducted on 171 EFL bilingual and monolingual students who were randomly selected from some high schools of Markazi province (Arak and Farahan). To meet the mentioned aims, all subjects were given Torrance test of creativity, background questionnaire. By utilizing UNIANOVA revealed that there would be statistically significant differences between the above-mentioned subjects as follows: In performing creativity test, Male bilingual learners outperformed their male monolingual peers and, female bilingual learners could get higher scores than female monolinguals. As a result Male bilingual learners had higher level of creativity in comparison with female peers.

Keywords: *Creativity, Bilingualism, Monolingualism*

INTRODUCTION

Bilingualism

People use the term “bilingualism” in different ways. For some, it means an equal ability to communicate in two languages. For others, it simply means the ability to communicate in two languages, but with greater skills in one language. In fact, it is more common for bilingual people, even those who have been bilingual since birth, to be somewhat “dominant” in one language (Maghsoudi, 2010).

Creativity

Olatoye (2010) argued that creativity is the act or ability to create something new through imaginative skills. It is a mental process involving the generation of new ideas. 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. The creative process takes place in the thought. Creative thinking has two aspects: Divergent Thinking (intellectual ability to think of many original, diverse and elaborate thought) and Convergent Thinking (intellectual ability to logically evaluate critique and choose the best ideas from a selection of ideas).

Creativity comprises an important dimension of cognition and ample attempts have been made to unravel its underlying processes and functions. Although Goltan (1869) was the first to introduce creativity, however, this concept was mainly brought to attention by the efforts of Guilford (1950) and Torrance (1962) that are considered as the key figures that made creativity studies scientific. They approached creativity from a psychometric perspective to make its assessment possible. Many researchers have tried to provide a comprehensive definition of creativity but this is too vast a concept to be shortly defined.

According to Palaniappan (2007), creativity is some of the many intellectual constructs that has been defined in as many different ways as the number of researchers investigating them. Creativity has been defined as a product, process, person as well as the press (environment) that impact on the individual. Sternberg and Lubart (1995) suggest that creativity can be defined as the ability to produce work that is novel and adaptive with regard to task or situational limitations.

A number of studies have focused on the relation between creativity and intelligence. Michalko (1998) regards creative thinking as distinct from intelligence. That is neither high level of intelligence guarantee creativity, nor does creativity represent intelligence. Srinivasan (2006) also confirms the low correlation

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between intelligence and creativity; however, he asserts that some forms of intelligence such as fluid intelligence may play a significant role in creativity. There are also some counterclaims; Silvia (2008), for instance, reanalyzed the previous data through advanced methodologies. It was found that intelligence could be strongly predicted by two components of creativity: originality and fluency (cited in Hennessey and Amabile, 2009). Nevertheless, many researchers such as Runco (2007) believe in threshold theory that considers a minimum level of intelligence to be necessary and below which creativity is rarely observed.

Kharkhurin (2008) found that Russian-English bilingual immigrants in the U.S. showed superiority in fluency aspect of divergent thinking. He further analyzed the same sample and noticed advantage in nonverbal creativity for bilinguals. In another study, Kharkhurin (2009) compared Farsi-English bilinguals living of U.A.E. with their monolingual peers living in Iran and found greater performance in measure of originality and fluid intelligence for bilinguals. However, these and similar studies in the field suffer from a serious drawback which is ignoring the developmental factors such as the age of L2 acquisition, the conditions under which the L2 was acquired, the degree of proficiency in L2 (Lemmon and Goggin, 1989; cited in Kharkhurin, 2011).

Bilingualism and Creativity

Creativity can be conceptualized as a process of perceiving new relationships and new challenges through interactions between a creative individual and his or her environment, including culture or language use (Raina, 1999). Bilinguals are those who are able to speak two languages that represent two different cultures (Bialystok, 2001; Fleith, 2002). Thus, bilingualism may critically influence a bilingual individual's creativity.

Research on bilingualism has indicated that bilingual children tend to be more creative than monolinguals (Lasagabaster, 2000). One cause of the increase in creativity may be the flexibility that is required for students to frequently switch codes and cultural behaviors from one to another (Walters, 2005).

As discussed earlier creativity is enhanced by cognitive functions, so it can be expected that developments in bilinguals' cognitive functions facilitate creative abilities. To compensate for the scarcity of creativity research on adult bilinguals, Kharkhurin conducted a series of studies on creativity among adult bilinguals.

Kharkhurin (2007) considered cross-linguistic factors such as bilinguals' proficiency in both languages and the age of acquisition, as well as cross-cultural factors such as the experience of bicultural interactions, affect their cognitive development. Bilinguals' experience of participation in two cultures makes them see the world through two different conceptual systems. These enhanced conceptual representations may enhance cognitive flexibility, divergent thinking, and creative expression of experiences.

Research Questions and Hypotheses

The present study will set out to find answer to the following research question:

Q1: Is there any difference between monolingual and bilingual learners creativity regarding their genders?

On the basis of above questions the following hypotheses are formulated

H1: Gender of monolingual and bilingual learners affects their creativity.

MATERIALS AND METHODS

Methodology

Participants

The initial sample of this project will consist of 171 students with the age range of 15-18. They include two groups: Monolingual and Bilingual. By means of a background questionnaire some information about subjects will be elicited, so by using the background questionnaire the subjects will be divided into four groups as:

- A) 41 male monolinguals
- b) 44 female monolinguals
- c) 46 male bilinguals
- d) 40 female bilinguals

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Instruments

The following instruments will be used in this study:

A) Background questionnaire: It will utilize to elicit some information as: the subjects full name, their age, name of their school and the language/languages they use.

B) Torrance Test of Creativity (TTCT): Torrance Test of Creative Thinking (TTCT) to measure the creativity levels of the participants. The test is comprised of four scales: fluency, originality, elaboration, and flexibility. Time allocated for this test to be done is 30 minutes.

Procedures

The researcher firstly read instructions printed on the top of their questionnaires clearly to the subjects and then before the start of each test, the investigator cleared their doubts. The way of answering the questions was made clear to the participants and in case of any difficulty they were encouraged to ask question and were provided with help. The subjects were also informed that their performance will be kept confidential and will not have any effect on their final exam scores.

The administration of proficiency and creativity tests took 70 minutes. The whole study was completed in three phases as shown below:

Phase 1: First, the creativity test was administered to the students to be completed in 30 minutes as determined at the pilot study in order to have an assessment of their creativity.

Phase 2: Soon after completing the creativity test the subjects were given the background questionnaire in order to elicit some information on the basis of the participants' age, gender and linguality status.

RESULTS AND DISCUSSION

Results

To analyze the hypothesis, that is, to investigate the difference between monolingual and bilingual learners' creativity regarding their genders, UNIANOVA has been used. Table 1 shows descriptive statistics of comparison between mean scores of male and female bilingual and monolingual learners.

Table 1: Descriptive statistics of UNIANOVA test (Dependent Variable: Creativity Scores)

Gender	Lingual	Mean	Std. Deviation	N
Male	Monolingual	49.29	12.506	41
	Bilingual	70.57	14.320	46
	Total	60.54	17.150	87
Female	Monolingual	23.55	17.285	44
	Bilingual	56.87	13.986	40
	Total	39.42	22.959	84
Total	Monolingual	35.96	19.872	85
	Bilingual	64.20	15.668	86
	Total	50.16	22.767	171

According to table1, mean scores of 41 male monolinguals is 49.29 and in 46 male bilinguals is 70.57. It seems, there is meaningful difference between two groups. Also, mean scores of monolingual learners is 35.96 and in bilinguals is 64.20 which reveal great difference between their mean scores. It is worth mentioning that mean scores of creativity in male bilinguals (70.57) is bigger than mean scores of creativity in female monolinguals (23.55).

Figure 1 presents summary of difference between male and female bilingual and monolingual learners in creativity scores:

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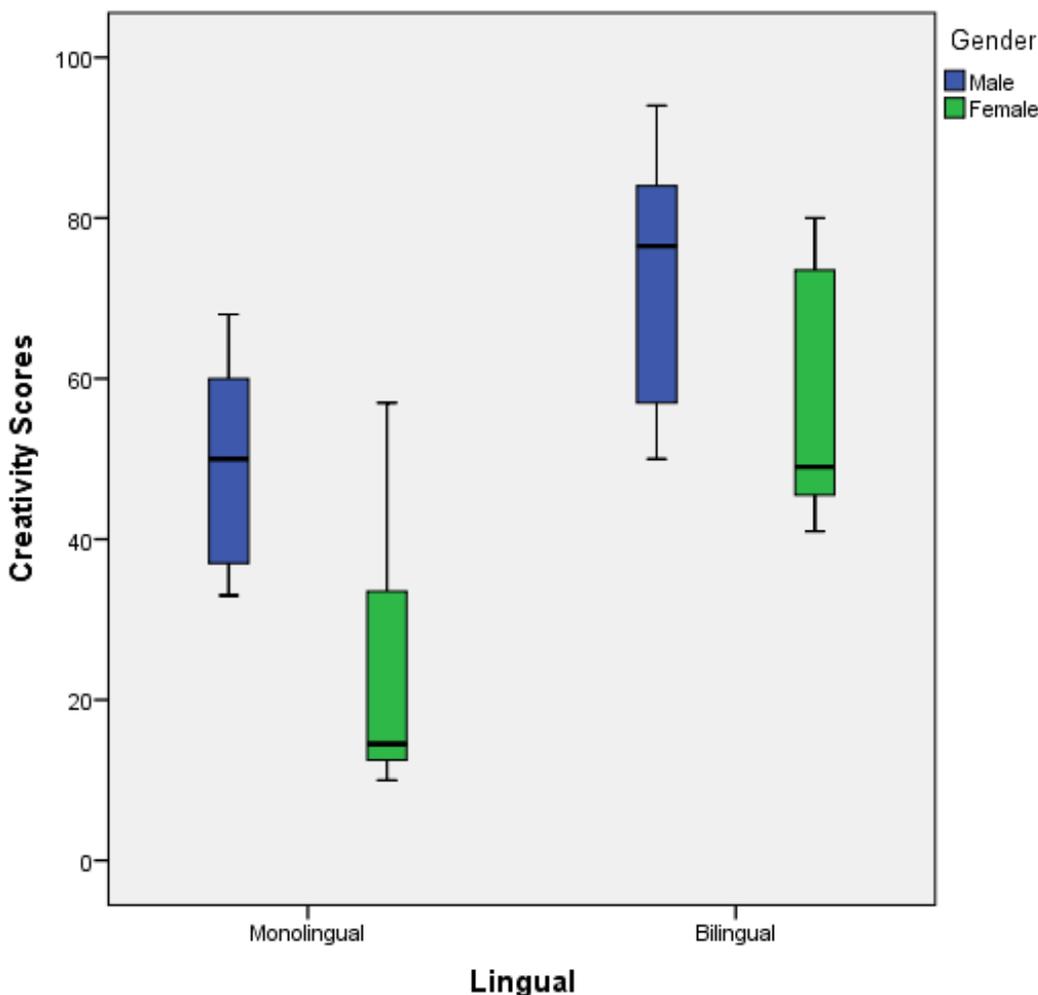


Figure 1: Mean difference between male and female bilingual and monolingual learners

Figure 1 indicates that minimum, maximum, first quarter, median and third quarter of creativity scores in male and female bilinguals is more than male and female monolinguals. Generally, it can be expressed that males have more creativity than females and also bilinguals have more creativity than monolinguals. In this section, table 2 applied for examining meaningful or meaningless of whole model and also separate effect of every independent variable on dependent variable

Table 2: Test of effectiveness in variables

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	52154.339 ^a	3	17384.780	80.738	.000
Intercept	427368.979	1	427368.979	1984.773	.000
Gender	16571.145	1	16571.145	76.959	.000
Lingual	31765.327	1	31765.327	147.524	.000
Gender * Lingual	1548.868	1	1548.868	7.193	.008
Error	35959.076	167	215.324		
Total	518418.000	171			
Corrected Total	88113.415	170			

a. R Squared = .592 (Adjusted R Squared = .585)

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Regarding reported values in table 2, the effect of gender ($F=76.959$, $sig=0.000$) on learners' creativity is meaningful. It means, mean scores of male and female are different. Based on the effect of bilingual variable on statistical value ($F=147.524$, $sig=0.000$), meaningful difference between creativity scores in bilingual and monolingual learners is observable. It means, bilingual and monolingual learners have different level of creativity. On the other hand, the balance between gender and linguality and simultaneous effect on creativity is meaningful ($F=7.193$, $sig=0.008$). Other result that is clear in above table is $R^2 = .592$ which shows that gender and linguality indicates 0.585 percent of creativity and so other variances (0.415) of creativity are under the effect of variables which are not examined in this hypothesis.

Figure 2 displays the distribution of mean scores of creativity in bilingual and monolingual learners based on their genders.

With regard to above statistical analyses and discussion, it is concluded that hypothesis (gender of monolingual and bilingual learner's effect their creativity) is accepted.

Some researches like Palaniappan (2000) is in line with current research that investigated gender differences in creativity and it was detected that males obtained significantly higher scores on initiative than females.

Conclusion

Regarding hypothesis above, it is worth mentioning that the main aim of this study is investigation on the relationship between learner's linguality and the degree of creativity in the subjects regarding their genders' differences. In order to determine the level of creativity, creativity test (TTCT) has been administered. In order to measure the impact of variables some statistical analysis such as UNIANOVA have been used. By using this test it can be expressed that males have more creativity than females and also bilinguals have more creativity than monolinguals. So the hypothesis is accepted. It is recommended that creativity should be taught, facilitated and assessed in the educational system. Teachers have to be trained to know and adopt methods which foster complementary values by fostering creativity-friendly school environment. It is therefore, important that school authorities manage the students and teachers in a way that encourages the culture of creativity values. These values should be recognized and rewarded. Learning environment should be rich in team spirit, tolerance of the genuine mistake caused by creative predisposition.

REFERENCES

- Berne JE (1988). Examining the relationship between L2 listening research, Pedagogical theory, and practice. *Foreign Language Annals* **31** 169-190.
- Bialystok E, Craik FIM, Green DW and Gollan TH (2009). Bilingual minds. *Psychological Science in the Public Interest* **10** 89-129.
- Galton F (1869). Hereditary Genius: an inquiry into its laws and consequences. Macmillan, London.
- Guilford JP (1950). Creativity. *American Psychologist* **5** 444-454.
- Harkhurin AV (2008). The effect of linguistic proficiency, age of second language acquisition, and length of exposure to a new cultural environment on bilinguals' divergent thinking. *Bilingualism: Language and Cognition* **11** 225-243.
- Hennessey BA and Amabile TM (2010). Creativity. *Annual Review of Psychology*. Available: <http://dx.doi.org/10.1146/annurev.psych.093008.100416> **61** 569-98.
- Kharkhurin AV (2009). The role of bilingualism in creative performance on divergent thinking and Invented Alien Creatures tests. *Journal of Creative Behavior* **43** 59-71.
- Kharkhurin AV (2011). The role of selective attention in bilingual creativity. *Creativity Research Journal* **23**(3) 239-254. Available: <http://dx.doi.org/10.1080/10400419.2011.595979>.
- Lasagabaster D (2000). The effects of three bilingual education models on linguistic creativity. *IRAL: International Review of Applied Linguistics in Language Teaching* **38** 213-228.
- Lemmon CR and Goggin JP (1989). The measurement of bilingualism and its relationship to cognitive ability. *Applied Psycholinguistics* **10** 133-155.

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Maghsoudi M (2010). The interaction between bilingualism, educational and social factors and foreign language learning in Iran. *Journal of Language and Culture*. <http://www.academicjournals.org/JLC>. **1**(3): 35-46

Michalko M (1998). Thinking like a genius: Eight strategies used by the super creative, from Aristotle and Leonardo to Einstein and Edison. *The Futurist* **32**(4) 21.

Olatoye RA (2010). Relationship between Creativity and Academic Achievement of Business Administration Students in South Western Polytechnics, Nigeria. *An International Multi-Disciplinary Journal, Ethiopia* **4**(3a) 134-149.

Palaniappan AK (2000). Sex differences in creative perceptions of Malaysian students. *Perceptual & Motor Skills* **91** 970-972.

Palaniappan AK (2007). *Academic Achievement of Groups Formed Based on Creativity and Intelligence*. Paper presented at the 13th International Conference on Thinking Norrköping, Available: <http://www.ep.liu.se/ecp/021/vol1/020/index.html> Chusmir.

Raina MK (1999). Cross-cultural differences. In: *Encyclopedia of Creativity*, edited by Runco MA and Pritzker SR, San Diego (CA: Academic Press) 453–464.

Runco MA (2007). Creativity. *Theories and Themes: Research, Development, and Practice* (CA: Academic Press) San Diego.

Silvia PJ (2008). Creativity and intelligence revisited: a latent variable analysis of Wallach and Kogan (1965). *Creativity Research Journal* **20** 34-39.

Srinivasan N (2007). Cognitive neuroscience of creativity: EEG based approaches. *Methods*. Available: <http://dx.doi.org/10.1016/j.ymeth.2006.12.008> **42** 109-116.

Sternberg RJ and Lubart TI (1995). *Defying the Crowd: Cultivating Creativity in a Culture of Conformity* (Free Press) New York.