

***Comparison of Creativity Dimensions (Fluency, Flexibility, Elaboration, Originality)
between Bilingual Elementary Students (Azari language-Kurdish language)
in Urmia City – Iran***

Marzieh Arefi, Islamic Azad University, Iran
Nesa Jalali, Islamic Azad University, Iran

The IAFOR International Conference on Language Learning - Dubai 2016
Official Conference Proceedings

Abstract

In Urmia city, many children learn and speak their first language (either Azari or Kurdish) at home and study all of their courses in Farsi throughout their education.

The goal of this study was to compare the creativity abilities between bilingual elementary students (Azari- Kurdish language). Almost (N=387) students from 10 schools from all over Urmia city participated in the study. Their creative abilities were measured by using the Test of Torrance Creativity (Form A).

Results indicated that the fluency dimension from creativity was significant differences between the two groups of bilingual students. Also finding showed that there was moderate significance differences between two groups of bilingual students' flexibility, but there was no significant differences in elaboration and originality dimensions. Furthermore, it was shown that there was a significant differences between the level of parents' education and creativity of the students, it means that whatever parents' education level is much higher, creativity of the students is even better. Also significant differences in creativity scores and gender has been seen.

Keywords: Creativity – Bilingual students - Azari language – kurdish language

iafor

The International Academic Forum
www.iafor.org

Introduction

Being bilingual has been shown in the literature to have some advantages over being monolingual. Because bilingual children have two referent symbols for most referents, they have alternative means for the expression of a given idea. As Ben-Zeev (1977) noted, they become aware that there is a connection between an idea and its means of expression. Ben-Zeev (1977) suggested that bilingual children developed an analytical strategy towards language to counter interference between their two languages. When it occurs, the interference between the two languages caused the child to develop strategies which accelerated linguistic and cognitive development.

Bialystok et al.(2005) showed that bilingual children have an advantage over their monolingual counterparts when it comes to cognitive tasks employing certain executive processes. Moreover, Bialystok, Craik, Klein and Viswanathan (2004) have shown that bilinguals were found to benefit from control processes including selective attention to relevant aspects of a problem, inhibition of attention to misleading information, and switching between competing alternatives. These benefits were explained by bilinguals' extensive practice with two active language systems during which they constantly have to focus on one language, inhibit another language, or switch between the languages (Bialystok et al., 2005). It was argued that due to such cross-linguistic practice, bilinguals exercise crucial cognitive skills that enhance the problem solving abilities that require attentional control in order to ignore or inhibit misleading cues (Bialystok, 2001).

However, the positive influence of bilingualism on human cognition seems to extend beyond conscious functioning. A number of studies investigating the relationship between bilingualism and creativity (Kharkhurin. 2008, 2009) provide indirect evidence that bilingualism may also have an influence on unconscious automatic cognitive processing that requires no attentional control, such as divergent thinking. This study reports bilinguals' advantages on a number of supposed creativity tasks. However, these creativity assessments specifically measure divergent thinking rather than creativity as a whole.

According to Guilford, divergent thinking involves a broad search for information and the generation of numerous novel alternative answers to problems. In contrast, convergent thinking is the ability to narrow all possible alternatives down to a single solution. Divergent and convergent thinking are assumed as two major components of the creative process. The product of the interplay of these two processes, the creative product, should satisfy the requirements of novelty, appropriateness, and usefulness. (Kharkhurin & Samadpour, 2008).

Guilford (1967) associated the properties of divergent thinking with four main characteristics: fluency (the ability to rapidly produce a large number of ideas or solutions to a problem); flexibility (the capacity to consider a variety of approaches to a problem simultaneously); elaboration (the ability to think through the details of an idea and carry it out); and originality (the tendency to produce ideas different from those of most other people). Kharkhurin (2008) has factor analyzed these characteristics and found that they can be grouped together as two types of creative functioning: fluency, flexibility, and elaboration traits seem to represent the ability to generate and to elaborate on various, often unrelated, ideas, while the originality trait is likely to represent the ability to extract novel and unique ideas. (kharkhurin, 2009)

Studies conducted by Kharkhurin (2009) are concerned with positive effects of bilingualism on creativity and demonstrate that bilingual people possess stronger creativity compared to their monolingual peers. Gilford outlined creative thinking characteristics with four traits; fluid, resilience, initiative and extension. Kharkhurin places them in two categories via addressing and analyzing these four traits such that traits of fluency, flexibility and extension are placed in one group and in the second group stands being creative (being original). Kharkhurin named the first group as productive talent which returns to the personal capacity in activation a large number of concepts and works through concepts previously activated. The second group is called innovative talent or capacity which refers to the individual's abilities in offering useful and creative ideas. In a research in which the relationship between bilingualism and divergent thinking was addressed, Kharkhurin (2009) concluded that bilingual participants were more successfully compared to their monolingual peers in terms of fluency, flexibility, and elaboration of issues with regard to divergent thinking and these results are found to be consistent with other results in previous researches in this regard. According to results of previous studies, if bilinguals are equipped with more generative competencies, they can act better in different fields and in numerous categories and this will raise their abilities in going beyond known borders (Kharkhurin, 2009).

One of the factors affecting creativity is parents who seem to be one of the major factors contributing to increasing and decreasing creativity. Variables of the family setting like social-economic positions, emotional atmosphere of the family, manners and attitudes of child rearing on creativity have been underlined by researchers.

Soleiman (2009) states that family and values and parental attitudes are of high significance in evolving creative thinking of children. Researchers place emphasis on the impacts of degrees of culture in increasing and decreasing creative thinking. In addition to the fact that these factors are effective on children's creativity, parents' personality traits could be found to be effective on evolution of children's creativity.

Given the results of researches, the role of parents in emerging or eliminating creativity among children becomes manifest more. In this research, too given the role of parents., the impacts of parents' education level as asked to be assessed on the students' creativity, assuming that the more parents' educational level goes higher, the more comfortable and freer environment could be provided for children's creativity and hence the more the children will be socially higher.

Our attempts in this research will be centered on addressing the role and significance of bilingualism in increasing various dimensions of creativity (fluid, resilience, initiative) among bilinguals and comparing them with each other, particularly among elementary students (sixth grade) who speak in mother tongue (Azari-Kurdish) at home and learn Persian at school

Method

Participants

The sample consisted of 387 participants (N = 387): 202 boys (52.2%) and 185 girls (47.8%). The participants were grade six primary school students living in Urmia city. The research involved students from 15 classes drawn randomly from 10 schools. The study involved bilingual students from different languages (Azari language = 261, 67.4%) and (Kurdish language = 126, 32.6%). It is noteworthy that selection of schools in different regions has been done on the basis of social- economic status of the residents being similar.

Measurements

Turence Creativity Questionnaire A: This questionnaire contains 60 three choice questions which considers creativity as including the following four major elements; the following elements are:

1. Fluency: Power to produce data and numerous answers;
2. flexibility: necessary abilities for changing thinking direction or the ability to produce varied ideas;
3. originality: the ability to produce new and innovative ideas or product, i.e. personal answers are not already seen nor are they new and modern;
4. Elaboration with details: the ability to pay attention to details related with an idea, i.e. creative people show more attention to details of an idea.

Reliability was based on the results of the research done by Abedi . The reliability of the Creativity Test which was done through Retest on Tehran's Junior students was obtained in four parts as following: Reliability coefficients of fluency, originality, flexibility and elaboration were found to be 85%, 82%, 85% and 80% respectively (Abedi, 1994).

Results

The current research was performed on two bilingual groups and different cultural grounds where the descriptive investigation of research data indicated that from among 387 students under survey, 52% (202 people) were male while 48% (185) were female. Statistics demonstrated that 67.4% of whom were Azari speaking people (Turks) while 32.6% were Kurds. Investigating subscales of creativity shows that from among student, the least and most average rates pertained to extension of creativity and fluidity of creativity styles respectively and with respect to the average rate of the four creativity scale (fluidity, extension, resilience and initiative) of the number of 387 people, 2% had very low creativity, 31% had low creativity, 28% had medium ranged creativity, 30% had high creativity while the 9% remaining constituted the students with so much creativity.

Table 1. Number, minimum, maximum, average and standard deviation of the creativity subscales

Creativity subscales	No.	Minimum	Maximum	Average	SD
Fluency	387	14	42	29.52	5.163
Elaboration	387	4	22	14.1	3.589
Originality	387	3	32	21.76	5.169
Flexibility	387	2	40	15.59	4.125

The Table above indicates that the least and the highest scores belong to elaboration and fluency respectively.

Table 2. Comparison of the average of subscales of creativity between bilinguals

	Group	No.	Average	SD	Freedom degree	T	P
Fluency	Azari	261	30.06	5.038	385	3.002	0.003
	Kurdish	126	28.4	5.258		2.058	0.003
Flexibility	Azari	261	22.08	5.258	385	1.733	0.08
	Kurdish	126	21.11	4.934		1.772	0.07
Originality	Azari	261	15.93	4.114	385	2.351	0.01
	Kurdish	126	14.89	4.074		2.359	0.01
Elaboration	Azari	261	14	3	385	2	0.03
	Kurdish	126	13	3		2.077	0.03
Ethnicity	Group	No.	Average	SD	Freedom degree	T	P
Azari	Male	135	83	14	259	1.000	0.0001
	Female	126	81	13			
Kurdish	Male	67	73	14	124	-3.000	0.001
	Female	59	82	14			

Table (2) shows difference of creativity among Turkish and Kurdish students. The findings suggest that students' fluency of thinking among bilingual Kurdish and Azari students, at level of $p=0.003$ are significant, and this results is consistent with Kharkhurin's findings (2008-2009).

Also, results indicate that there is moderate significance differences between two groups of bilingual students' flexibility; the significance level obtained ($p=0.08$) is greater than the existing alphas (0.01 and 0.05). and there is no significant difference between the two groups. This could as Kharkhurin stated suggest conflicts and inconsistency within peoples' creative patterns. Results indicate there is a significance difference between two bilingual groups of Kurdish and Azari people and there is a significant difference between the two groups in terms of elaboration score.

In this research which was done on two lingual groups (Azari and Kurdish speaking people) with gender distinction, the results of investigations indicated that there is a significant difference between both genders; the results obtained in the Table (indicate that there is a significant difference between two Azari speaking male and female groups in terms of creativity score where this difference weight to the benefit of boys. Also, creativity scores between two male and female groups among bilingual Kurdish subjects showed there is a significant difference between the two groups in terms of significance level where this significance has been weighed to the benefit of girls and the creativity of Kurdish girls has been higher than that of boys.

Table (3): Comparison of parents' average of creativity and education level of the bilinguals

		Freedom degree	Square average	F	Sig.
Father	Intergroup	3	4	4.0000	0.003
	Intragroup	382	1.012		
	Total	385			
Mother	Intergroup	3	3	3.000	0.009
	Intragroup	382	1.018		
	Total	385			

Significance levels obtained in the above table indicate there is a significant difference between students' creativity in regard to parents' educational levels. In other words, the creativity score among students whose parents have lower educational levels (illiterate and under diploma) is lower than people whose parent having higher educational levels (diploma and academic). Significance levels obtained (0.003 and 0.009) are smaller than the existing alpha (0.01); for the same reason, one can state with a 99% confidence level that parents' educational level affects the students' creativity score and this differs between educational groups.

Discussion

The experience of becoming bilingual in a subtractive context is common for young children in Iranian educational institutions. According to Makin, Campbell & Diaz (1995), in some situations, mother languages are gradually replaced by second or dominate languages. In our society, the dominant language in schools is Farsi. Although many minority bilingual children are successful in learning Farsi at school, their bilingualism is often limited because their first (home) language is not supported in the mainstream educational settings.

Work done by Kharkhurin (2008 and 2009) show this point that bilinguals have higher productive talents (fluidity, resilience and extension) and innovative talent (initiative) compared to monolinguals. Findings y Kharkhurin (2009) demonstrates that bilinguals have higher innovative (initiative) talents compared t monolinguals. Also findings by Kharkhurin (2008) illustrate that bilinguals act better compared to monolinguals in terms of generative or productive talents (fluidity, resilience and extension).

Results of the current research indicate that the level of thinking fluidity among bilingual Kurdish and Azari speaking students implicates a significant difference which is consistent with Kharkhurin (2008-2009) findings.

Also results obtained indicate that there is no significant difference in respect to average resilience of bilingual students where this could, as Kharkhurin stated results from conflict and inconsistency in creative behaviors of people.

Results demonstrate there is a significant difference between two bilingual Kurdish and Azari groups in terms of initiative scope where this is in line with Kharkhurin's findings and there is also a significant difference in terms of score extension.

In this research which was done on two bilingual groups (Azari and Kurdish speaking people) of two genders. The results of investigations indicated that there was a significant difference

between two Azari speaking male and female groups in terms of creativity score where this difference weighed to the benefit of boys. Also, creativity scores between two male and female groups among bilingual Kurdish subjects showed there was a significant difference between the two groups, where the creativity of Kurdish girls has been higher than that of boys.

Results of another research done by Rahnama and Abdul-Malaki (2010) at the University of Shahed in Tehran concluded that there was no significant difference between the two genders. In the research by Rashidi and Shahr Aray (2008), no significant difference was found between the two genders in terms of total creativity. Of interesting results in the current research is the difference of gender in terms of creativity score between Kurdish boys and girls which requires its own interpretation. To the researcher this difference arises out of the fact that more educational opportunities are made available for minorities and ethnic groups which implies that better access to education could lead to positive outcomes such as creative thinking.

Studies by Soleiman (2009) indicated that social and cultural factors in each country could leave strong effects on the emergence of creativity of which one can refer to families, education, gender, values, religion and social and economic factors where all of which could affect evaluations of creativity in the community.

Family is the primary institution being responsible in terms of evolution of personality and growth and development of talents and creativity of children and educational advancement and it also involves wide-ranging functions in terms of person's adaptability with the country, because the child's behavior will be founded from the family. We are living in a country where we need grown up personalities and intellectual brains to improve our skills in personal, social, economic, industrial, scientific and cultural areas. Such personalities and brains have to be developed and educated and the role of the family is a key factor. In fact, the basic relations of family members will help children and adolescents' personality growth evolve. Given these results, the role of parents in creativity of children becomes manifest. This means that the score of creativity among students with parents having higher educational level sees a significant difference. In other words, the creativity score among students whose parents have lower educational levels (illiterate and under diploma) is lower than students whose parent having higher educational levels (diploma and academic).

References

- Ben-Zeev, S. (1977). The influence of bilingualism on cognitive strategy and cognitive development. *Child Development*, 48, 1009-18.
- Bialystok, E. (1986). Children's concepts of world. *Journal of Psycholinguistic Research*, 15, 13-31.
- Bialystok, E. (2001). *Bilingualism in Development: language, literacy, and cognition*. New York: Cambridge University Press.
- Bialystok, E. (2005). Consequences of Bilingualism for Cognitive Development. In J. F. Kroll & A. M. B. de Groot (Eds.), *Handbook of bilingualism: Psycholinguistic approaches* (pp. 417-432). New York: Oxford University Press.
- Guilford, J. P. (1967). The nature of human intelligence. New York: McGraw-Hill.
- Kharkhurin, A. V. (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 & Cognition*, 11(2), 225-243.
- Kharkhurin, A. V., & Samadpour Motalleebi, S. N. (2008). The impact of culture on the creative potential of American, Russian, and Iranian college students. *Creativity Research Journal*, 20(4), 404-416.
- Kharkhurin, A. (2009). The role of Bilingualism in Creative Performance on Divergent Thinking and Invented Alien Creatnres tests. *Journal of Creative Thinking*, V43, N1
- Makin, L., Campbell, J. and Diaz, C.J (1995). One childhood many languages. *Australia: Harper Educational Publishers*.
- Rahnama, A., Abdolmaleki, J. (2009). Study of Relationship between Emotional Intelligence with Creativity and Academic Achievement among Shahed University's students. *Educational Modern Thoughts (in Persian)*. Vol 5. N2.
- Rashidi, E., Shar Aray, M. (2008). Study of Relationship Between Creativity and Locus of Control. *New Thoughts in Educational Sciences (in Persian)*. Year 3. No.3.
- Soleiman, A.N. (2009). Cross – Cultural Studies and Creative Thinking Abilities, Umm AlQura University. *Journal of Educational & Psychological Science*, Vol,1 No, 1.