

# Investigating the Association between Emotional Intelligence and Creativity in Students

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**ABSTRACT:** In this study aiming to investigate the relation between emotional intelligence and creativity, 344 high school students were selected as sample, and fill out the EQ-I, and Abedi questionnaire. Results showed that there is a significant relation between emotional intelligence and creativity in students; boys and girls have a significant difference in terms of emotional intelligence, and girls have higher emotional intelligence than boys; there is a significant difference between the sexes in terms of creativity and no significant difference is there between boys and girls in this components; there is significant correlation between creativity and emotional intelligence of girls, the correlation between creativity and emotional intelligence of boys is significant. Given to the results obtained, it is necessary that emotional intelligence and creativity components be considered in teachers training and its components be considered in curriculum.

**Keywords:** Emotional Intelligence, Creativity

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## INTRODUCTION

Emotional intelligence is one of the structures that appears through the emotional manifestation and through understanding and consolidation of the emotions. According to Mayer et al. (2000), emotional intelligence is kind of the social intelligence that covers the ability to deal with emotions in themselves and others. They also believe that emotional intelligence is a capability which directs thinking and actions of each individual. Such a perception of intelligence raises this question whether emotional intelligence has a correlation with creativity, which is sort of thinking and is a behavior that individual shows?

The other issue is that, many emotional intelligence theorists have operated their theories through assessments which they have performed on adults, and they have used tools in this regard, such as emotional intelligence multi-factors scale of Mayer et al. (2000) and Barnet emotional perception scale (1998), Schutte et al emotional intelligence test and scale (1998). Nonetheless, more tools which are made to evaluate the various aspects of emotional intelligence are generally used for adult age group, and sometimes for children.

Among the tools that can be used for young group is Bar-on and Parker emotional intelligence inventory (2000). Anyway, emotional intelligence is confirmed since of advantages such as improving the level of confidence, flexibility, empathy, harmony with others and its effect on individuals' innovative performance, and is considered as a constructive factor in social life of the person (Lazarus and

Folkman, 1984). Goleman (1995) believes that, we can improve the ability to know ourselves, and to control and resist against our emotions through identifying the emotional intelligence bases and training individuals, we can improve the ability to know ourselves and to control and resist against our emotions, and make large changes in different aspects of growth in cognitive, emotional, moral, and social dimensions.

In the case of general intelligence and creativity, this question is under consideration that whether creativity is one of the intelligence factors, or there is kind of independence between them? Some believe that there is a strong relation between them, and they are the same, and creativity without intelligence is meaningless.

Others believe that there is no relationship between the two and they act independently. In this viewpoint, it is stated that, creativity is an integrated mix of different fluid elements of creativity, flexibility, and extension, that makes a special dimension as creativity, and these elements interact and communicate with each other.

In the case of correlation and emotional intelligence and creativity influence, little researches have been done in Iran. And given that emotional intelligence is a context for creativity performance improvement and the young generation needs it for more constructiveness, however much efforts haven't been done, so the recent study is seeking to answer to the question whether there is correlation between emotional intelligence and creativity of high school students or not?

## MATERIAL AND METHODS

This is a correlation study.

### Statistical universe

The statistical universe of the study consists of all high school students in Arak who were studying in academic year of 2014- 2015.

### Sample and sampling

First, through PILOT, 20 questionnaires were distributed among subjects, and the highest standard deviation and mean were calculated based on them, then using the simple random sample size calculation formula and with 95% confidence level, the sample size calculated for 350 subjects.

$$n = \frac{z^2 \sigma^2}{d^2}$$

### Data collection tools

In this study, two standard questionnaires regarding Bar-on emotional intelligence and Abedi creativity were used. A sample of the inventory is attached on appendix.

**A: Bar-on emotional intelligence test:** This questionnaire consists of 13 sub-scales of emotional intelligence, which includes emotional-self-awareness, assertiveness, independent, self-regard, Empathy, interpersonal relations, social responsibility, problem solving, reality testing, flexibility, stress tolerance, impulse control. In addition to these sub-scales, another factors named facilitators of emotional intelligence, which includes emotional characteristics such as happiness, optimism and self-actualization are examined in these test (Siarouchi et al., 2004).

In Eqi, a total score of emotional intelligence is obtained, and each of the sub-scales individually achieves a score. This questionnaire also has another 4 valid indexes that through them we can evaluate the subjects' random or misleading responses in order to prevent them from giving

an image that is more important or worse than what they are in reality (Siaroochi et al., 2004). After conducting the questionnaire, a total EQ score, the mixed scale score, and 15 sub-scales are achieved, which change to standard score with 100 and 15 value for mean and standard deviation, respectively (Shams Abadi, 2004).

**B: Abedi creativity test:** This test assesses the following four psychological characteristics:

- 1- Fluency
- 2- Flexibility
- 3- Originality
- 4- Elaboration

Abedi creativity test is a three-options test, which its main form included 50 questions, which was first performed in Iran in 1982 to study a group of 60 students in ninth and tenth high school grade. The test was re-performed after one week to study a group of Iranian students (150 persons), and the test-test constancy was again 85%. The test was revised several times in 1986 and 1991. In 1994, the test was introduced by Onil, Abedi, and Spilberg, and in 1996, the 60-question test was set. In 1997, its new form was developed with 56 questions, which the mentioned form is used in this study (Maghsoudi, 2004).

### Measuring method of creativity grading tool

In this test which is a three-item test, answering to item A has 1 point, replying to item 2 has 2 points, and answering to C item has 3 points. It means, if one presumably chooses C item for all questions, his/her score will be 168, and if one chooses item A for all questions, the score will be 56 (Maghsoudi, 2005).

## STATISTICAL METHOD

In this study, the results were analyzed by using descriptive statistic (such as mean tables, standard deviation, and diagramming), and parametric statistics (such as t-test, Pearson correlation coefficient) (Table 1).

**Table 1.** Descriptive Statistics

Item	Mean	Std. Deviation	N
Emotional Intelligence	460.78	54.050	344
Creativity	120.03	13.813	342

## RESULTS

The results of Table 2 show that, there is a significant correlation between emotional intelligence and creativity in students. The correlation coefficient is in moderate and relatively acceptable.

The results of Table 3 show that, there is a significant relation between creativity and each of the emotional intelligence components. This correlation is positive and significant at the 0.99 confidence and  $P < 0.01$ .

The results of Table 4 show that, a significant difference is there between boys and girls in terms of emotional intelligence, and girls have higher emotional intelligence than boys.

The results of Table 5 show that, there is no significance difference between two boys and girls in terms of creativity, and they don't have noticeable difference in this component.

The results of Table 6 show that, there is a significant correlation between creativity and emotional intelligence.

The correlation coefficient obtained is in moderate and relatively acceptable. The results of Table 7 show that, there is a significant correlation between creativity and

emotional intelligence of boys, and the correlation coefficient obtained is in moderate and relatively acceptable.

**Table 2.** Correlations

Item	Items	Creativity	Emotional intelligence
Emotional intelligence	Pearson correlation	1	0.558**
	Sig.(2-tailed)	-	0.000
	N	344	342
Creativity	Pearson correlation	0.558**	1
	Sig.(2-tailed)	0.000	0
	N		

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

**Table 3.** The correlation between emotional intelligence and creativity components

Items		Creativity	Self - Awareness	Assertiveness	Self-Regard	Self - Actualization	Independence	Interpersonal Components	Empathy
Creativity	Pearson Correlation	1	0.411**	0.331**	0.391**	0.385**	0.248**	0.498**	0.360**
	Sig. (2-tailed)	—	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	.0001
	N	342	342	342	342	342	342	342	342
		Creativity	Interpersonal Relationship	Social Responsibility	Interpersonal Components	Problem Solving	Reality Testing	Flexibility	Adaptability – Components
Creativity	Pearson Correlation	1	.425**	.300**	.424**	.462**	.331**	.365**	.518**
	Sig. (2-tailed)	.	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
	N	342	342	342	342	342	342	342	342
		creativity	Stress Tolerance	Impulse Control	Stress management-Components	Happiness	Optimism	General Mood-Components	--
Creativity	Pearson Correlation	1	0.418**	.288**	0.396**	0.307**	0.549**	0.479**	--
	Sig. (2-tailed)	—	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	--
	N	342	342	342	342	342	342	342	--

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

**Table 4.** Comparison of emotional intelligence between girls and boys

Emotional intelligence	Group	Numbers	Mean		St. deviation		St. deviation illusion		
	Girls	201	466.98		55.334		3.903		
	Boys	143	452.08		51.121		4.275		
	Leven's Test for Equality of Variances		T	F	Sig. (2-tailed)	Mean Difference	St. deviation illusion	%95 confidence level	
F	Sig.	Less						More	
Assuming equal variance	.337	.562	2.54	342	0.012	14.90	5.867	3.364	26.442
Assuming non-equal variance			2.575	319.68	0.010	14.90	5.789	3.514	26.292

**Table 5.** Comparison of girls and boys creativity mean

Creativity	Group	Number	Mean		St. deviation		St. deviation illusion		
	Girls	200	120.72		14.854		1.050		
	Boys	142	119.06		12.183		1.022		
	Leven's Test for Equality of Variances		T	F	Sig. (2-tailed)	Mean Difference	St. deviation illusion	%95 confidence level	
F	Sig.	Less						More	
Assuming equal variance	4.675	.031	1.095	340	0.274	1.66	1.515	-1.322	4.639
Assuming non-equal variance			1.132	332.921	0.259	1.66	1.466	-1.22	4.542

**Table 6.** The correlation between creativity and emotional intelligence in boys

Item		Emotional intelligence	Creativity
Emotional intelligence	Pearson correlation	1	**613
	Sig.(2-tailed)	0	000
	N	201	200
Creativity	Pearson correlation	&**613	1
	Sig.(2-tailed)	000	0
	N	200	200

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

**Table 7.** The correlation between creativity and emotional intelligence in boys

Item		Emotional intelligence	Creativity
Emotional intelligence	Pearson correlation	1	**477
	Sig.(2-tailed)	0	000
	N	159	158
Creativity	Pearson correlation	**477	1
	Sig.(2-tailed)	000	0
	N	158	158

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

## DISCUSSION

According to analysis performed, the results obtained about each of the research hypotheses are as follows:

The main hypothesis to the effect that the relation between emotional intelligence and creativity is accepted. The components based on the most relation including 1) optimism sub-scale, 2) adjustment component, 3) intrapersonal mood component, 4) general mood, 5) problem solving sub-scale, 6) interpersonal relationship sub-scale, 7) interpersonal component, 8) tension control sub-scale, 9) self-awareness sub-scale, 10) stress component, 11) self-respect sub-scale, 12) self-actualization, 13) flexibility sub-scale, 14) assertiveness sub-scale, 16) joy sub-scale, 17) social responsibility sub-scale, 18) impulse control sub-scale, 19) independence sub-scale

The second hypothesis to the fact that there is a difference in emotional intelligence between boys and girls is also accepted. This difference is positive, and given to the mean of two groups and results of t-test we can say that girls have higher emotional intelligence than boys.

The third hypothesis to the fact that, there is a difference in creativity mean between boys and girls isn't accepted, and the difference in creativity between girls and boys is not significant.

Given to the results obtained, it is necessary that emotional intelligence and creativity components be considered in teachers training and its components be considered in curriculum.

Of course, there were some restrictions in the recent study including the statistical universe limitation to students of...; lots of questions in emotional intelligence,

and its concurrent execution with creativity test, and fatigue in some students caused by prolonged creativity test.

## REFERENCES

- Maghsoudi, J. (2005). Investigation and comparison of personality and psychological characteristics (emotional intelligence, creativity, self-concept, control source) Tehrani entrepreneurs with ordinary people, MA thesis, Allame Tabatabaei University.
- Siarouchi, J., Forganse, J. & Meyer, J. (2004). Emotional intelligence in everyday life, translators: Noori Emamzadehei, Asghar & Nasiri, Habibollah, Isfahan: Neveshteh publication.
- Goleman, D. (1995). Emotional intelligence. New York: Bantam Books.
- Bar-on, R., & Parker, J. (2000). Handbook of emotional intelligence. Jossey. Bass.
- Mayer, J. D., Caruso, D., & Salovey, P. (2000). Emotional intelligence meets traditional standards for an intelligence. *Intelligence*, 27: 267-298.
- Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25: 167-177.