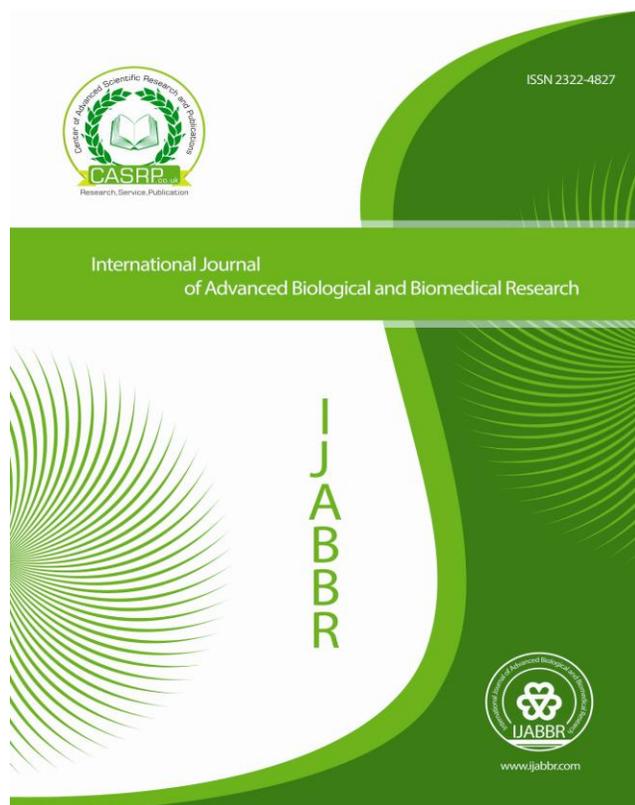


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Original Article

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Analyzing effect of teachers' creativity education on students academic achievement in secondary schools

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Abstract

Schools have been considered as a place to development individuals' potential creativity. However, we should emphasis that in generally teaching process in our schools not preparing students to progress and high

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levels of explore sense. Unfortunately, we are still facing with training in which lecture is dominance, students are passive, of them asked to memorized trusts mechanically, students idea are disregard and emphasis on traditional teaching methods. Such training does not encourage students to activities and learning. Therefore, aim of this study which performed by experimental or semi-experimental, was to analyzing effect of teachers' creativity training on student's academic achievement in secondary schools. Statistical population of this research was consisted of secondary Students Tehran city; from that 384 students were selected as sample using cluster sampling. Data was analyzed by SPSS software. The results showed that creativity educated for teacher effect on student's academic achievement.

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Keywords: Creativity education, Teachers, Academic achievement, Students.

1. Introduction

Nowadays, globalization, progress of information technology, speed of decision-making, caused that people change their lifestyle; While, teaching method have remained the same form (Shevyrev, 2007). Continuously creativity development is an essential key in sustainable society development and educational systems have a fundamental role in creativity development. Creative teachers could foster successful students (Adomo and Horkheimer, 2010; Habermas, 2010; Hosle, 2007). Researches on creativity (mainly in the field of cognitive and psychological approaches, cognitive linguistic, cognitive psychological applied thinking model) were done in early 70s (De Bono, 1986; Buzan, 2010). Education is real tool to positive change and transmission values, attitude and cultural to new generations and it will not be possible unless interaction between teachers and students in the classroom; and this work require the teacher's awareness and intentional attempts for delivery knowledge to students (Modebelu, 2007). Creativity teachings help to student to remember their learning through integration the cognitive process theory and apply action theory. In generally, students to learn more than what is in their books, requires teach in the classroom. Creativity teaching is one of the important educational techniques that were used in different educational approaches (Bradshaw, & Lowenstein, 2013). Since curriculum content in direct education approaches transmission in directly, creative skills have a basic and important role in teaching process (Rodgers, 2014). Explanation is the most important character in lecture method. Teacher takes a step beyond mere provision of information and them expression cause of events, relationship between concept and opinions, and descriptive of process. In fact, the purpose of education process is created the positive and permanent change in individuals' behavior. Therefore, education is a fundamental key for development and teachers have essential role in progress education activities. Teaching method and teachers' creativity in education process could lead to permanent learning in students. Based on Arnaudova (1996) research there are exist several theories about how teachers can effect on students' creativity development. Based on natural theory in education, teaching process should be directed normally and teachers should be increasing students' creativity alone. But, according to the interventional theory, teachers have three role such as practical, corrective and promotion role. Teachers' creativity is the first and prerequisite step in education process that leads to students' academic achievement (Hernandez and Shewchuk, 2012). Thus, teacher's creativity is necessary to creative education. This statement has two dimensions: (a) process of training the futures teachers, and (b) the teachers' life time educated systems. Considering the education systems that prepare students to enter university, we realize these systems more than increasing students' creativity decreasing it. Therefore, the future teachers educated in first have recoup role that its purpose is increasing the students' creativity. Teachers participate in strategies of creative teaching prepare them to use creativity method in their classes (Embassy, 2013). Nowadays, our country also require to combination different cognitive course in creativity education system. In contrary to linear thinking, creativity educations perform with different assumptions and its purpose is to solutions specific problem. Importance of correct and suitable teaching process has been emphasis in numerous of study. Teachers to create the creative place in their class and progress student's skills should be awareness about creativity and have a positive attitude toward it. Also, teaches should be recognize creativity teaching skills and approach which increasing creativity and it is necessary that pass the education course about creativity. Teachers' education and correct and suitable planning in education know as one

of the important elements in creativity development. Teachers' attitude and understanding level of creativity as well as teaching method have significant and direct relationship with classroom enrichment and progress of students' creativity (Hossaini, 2007).

Lakatos (1970) believed that spent creativity courses for teachers in pre-service and in-service are so essential. Results of researches (De Bono, 1986; Gidens, 2000; Lakatos, 1970) showed that increasing children's creativity is so important and it is necessary that performed creativity course for teachers in pre-services. While, teachers teaching program are not enough emphasis on methods that increase the creativity. Also Woolfolk (1987) declared that only handful college and universities performed creativity course in U.S.A. Wujec and Muscat (2002) in an empirical research analysis effect of implementation creativity workshop for teachers on student's cognitive and creativity in primary schools. They conclude that factors related to teachers and schools have most important effect on students' performance in developing country.

Wujec and Muscat (2002) research have shown that educated teachers have great effect on students' creativity performance, academic achievement, and cognitive development. According to this result, Parado suggested that perform regular and continually education for teachers in all countries and especially in developing country. Martino and Maher (1999) meanwhile criticism of traditional education, emphasizes on changing traditional programs and direct it toward creative programs and educations. These researchers believe that to accomplish to this issue, it be should that enrichment education's place and perform creativity programs.

Neirnberg (1995) concluded that teachers in the classroom are decisive factor in students' creativity. Hosaini (2002) in her study shown that if provided a good structural education to teachers, their knowledge increased and their attitude will change and they can use new teaching skills to development student's creativity.

Considering dependent all humans sphereto creativity, thus creativity is prerequisite for success in any human activity. On the other hand, providing a new chance for humans to return to their nature and achieve to humanization in society. The new education systems statethat the traditional schools could not answer the new challenges of education. Schools that achieve to creativity process in students and teachers have bright future, while other schools are increasingly inefficacy and often threaten students' academic achievement. Thus, according to creativity in schools condition is one of the important tasks for modern schools that in first not only meet the student's needs but also considered to modern society in which schools is basses of progress. Therefore, the aim of this study is to analyzing effect of teachers' creativity education on students' academic achievement in secondary schools.

2. Materials and methods

This research in its nature is aexperimental or semi-experimental; in terms ofobjective is an applied and in term of statically is descriptive-correlation. The purposeof this studywas to analyzing effect of teachers' creativity training on student's academic achievement in secondary schools. Statistical population of this research consisted of whole students in one grad of secondary schools in Tehran city; from that 384 students were selected as sample using cluster sampling. In total 50 teachers and 192 students were selected in control group as well as in experimental group. To educated creativity to teachers various technique such as role-play, group work, and presentations were used. In the pattern of creativity, analysis five factors such as physical conditions, social-environmental, emotional, cognitive, intellectual, and educational and impact of these factors on students' academic achievement. The main tool to collect data was a researcher made questionnaire that Content validity of the questionnaire was approved, by a panel of experts and Exploratory factors analysis and its reliability was confirmed by calculating Cronbach's alpha coefficient. Finally, Data was analyzed by SPSS software.

3. Results

Based on the results of descriptive statistics (Table, 1) the students' academic achievements in experimental group after the intervention have been increased. While, in control group no significant differences observed.

Table 1

Mean and standard division of groups' academic achievement in pretest and posttest.

| Depended variable | Groups | Stage | Control group (n= 192) | | Experimental group (n = 192) | |
|----------------------|--------|----------|------------------------|-----|------------------------------|-----|
| | | | M | SD | M | SD |
| Academic achievement | Boys | Pretest | 14.49 | 1.3 | 16.98 | 1.3 |
| | | Posttest | 14.58 | 1.3 | 17.65 | 1.4 |
| | Girls | Pretest | 14.53 | 1.3 | 17.1 | 1.2 |
| | | Posttest | 14.62 | 1.3 | 17.7 | 1.3 |

Research hypotheses: dose teachers' creativity course effect on students' academic achievements? To answer to this question covariance test were used that its results has been shown in table 2. Variance significant level (F) for academic achievement is greater than 0.05. This confirmed equally of variance error to all scales for dependent variable.

Table 2

Summary of Leven's test to analyzing equally of variance error in academic achievement.

| Variable | F | Df1 | Df2 | Significant level |
|----------------------|------|-----|-----|-------------------|
| Academic achievement | 1.27 | 1 | 382 | 0.541 |

According to the findings (Table 3), with controlling the pretest effect and calculating academic achievement's standard alpha (0.05), there are significant differences between students' academic achievement in experimental and control group. Therefore, it can argue that creativity training to teachers, impact on students' academic achievements. Effect size indicates that about 44.4 of the increasing students' academic achievement effected by creativity training to teachers. The second row in table (3) indicated that there insignificant effect between groups (also see table 4).

Table 3

Covariance test to compare students' academic achievement after the intervention.

| Source of change | x^2 | DF | $\frac{x^2}{n}$ | F | sig | Effect size |
|----------------------|--------|-----|-----------------|--------|-------|-------------|
| Group | 92.07 | 1 | 92.07 | 57.53 | 0.001 | 0.444 |
| Academic achievement | 182.70 | 1 | 182.70 | 114.20 | 0.001 | 0.696 |
| Error | 201.20 | 381 | ----- | ----- | ----- | ----- |
| Total | 82023 | 384 | ----- | ----- | ----- | ----- |

Table 4

Adjusted average of academic achievement's variable that extracted from covariance test.

| Groups | Mean | Standard error | Confidence interval of 95% | |
|--------------|-------|----------------|----------------------------|------------|
| | | | Low level | High level |
| Experimental | 13.80 | 0.117 | 13.57 | 14.03 |
| Control | 15.28 | 0.117 | 15.05 | 15.51 |

4- Conclusion

Findings showed that those students were trained by educated teachers have greater level of academic achievement in rather than control group. In fact, results confirmed that creative education effect on creativity development and its effect size showed 44.40% of students' academic achievements were increase by creativity training to teachers. These finding confirmed the results of Oxay (1999), Hossaini (2002), Torence (1990) Mack

(1987), Parado (2002), Chesler (1991), Reansoly (2002), Marjison (2004) researches. They are in their study concluded that creativity training to teachers influence on students' academic achievements. According to these finding it can be suggested that:

- Teachers to create the positive atmosphere about creativity thinking in their classrooms and students, it is essential have a positive attitude toward creativity process and attempt to awareness about creativity. Moreover, teachers should be awareness about creativity teaching skills and approaches that increasing creativity and spend training courses in this area.
- Education systems should be embedded creativity techniques in teachers' curriculums content and reducing the costs of creativity training for teachers and it is essential that creativity education become as a necessity for teachers trainings centers in local and national space.

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