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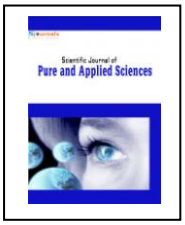

Original article

Effectiveness of implementing philosophy for children program on students' creativity

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ABSTRACT

The present research has done to evaluate "the effectiveness of applying philosophic period for kids on the creativity of second grade secondary school, school boys". After performing Raven IQ test and determination of equality of average intelligence in both pilot model classes, students with low creativity in by performing the first form of the Torrance Test of visual creativity were signified and randomly were chosen as experimental and control groups. By performing philosophic period for kids for experimental group, the second form of visual creativity, the Torrance Test of Creativity by each group were examined and results are got analyzed. The results of crediting the effectiveness of applying philosophic period for kids is divided into three component, Initiative, it was expansion and the fluid of the four components of creative thinking but in flexibility component there was no palpable observation difference between experimental groups. The result which is gained by this research in comparison with research history which is predictor of the effectiveness of philosophy for kids plan is on creativity that is coordinated and the results of other similar researches also confirm the gained result by this research.

1. Introduction

Children play important role in the life of each generation and without child growth and his education, the progress of the human society is not possible. Thus, the education experts should attempt for actualization of children talents and increase their intellectual capabilities and innovate new methods to achieve this goal. In order to have effective measurements for thinking training, we need changes in quality and quantity of teacher-student and student –teacher discussion in classroom. It is difficult to make these changes (Triki and Taping, 2007a). "Philosophy for children" is teaching thinking" (Fisher, 2007) and this can be a good solution in making these changes. This plan was raised by Lipmann in the early 1970s. Philosophy for children is a teaching method via conversation developing critical and creative thinking via questions and conversation between teacher and students and students and students (Fisher, 2007). The interesting combination of child and philosophy is an important factor to attract various audiences to this idea. Great acceptance of children and adolescents developed this plan in American society and other communities. Now about 102 countries in the world use this plan in their education system (Qaedi, 2009). According to Fisher (2007), philosophy for children can develop some habits of intelligent behavior as curiosity, intellectual collaboration, critical thinking, creativity and self and others care.

Today, it is proved that creativity is not inherent and it is varied and it can be developed (Seif, 2001). To be successful in various fields of science and industry, it is necessary to educate creative scientists to meet the society demands and raise new ideas. In other words, one of the most important missions of education is actualization of talents, developing innovation and creativity and providing dynamic, creative and efficient human resources (Mahdizade, 2009). Educational methods in Iran are not only creative-based, but also they eliminate any opportunity to show this ability by illogical and cliché methods (Hosseini, 1999).According to Lipmann, good thinking is full of imagination as we are immersed in a story or when we make an assumption. Philosophy for Children (P4C) is successful for children namely in creativity (Naji, 2010). If a child expresses his experiences, he can investigate it and by a logical thinking can view it and this leads to developing imagination and self-motivation and the child can present various aspects for a phenomenon (Qaedi, 2004). Thus, creative thinking is considered as the main element in P4C theorist ideas and some studies should be conducted in this regard to prove his claim. To do this, we should investigate the effect of starting P 4C course on various components of creative thinking and clarify the effect of this course on student's creativity.

Gilford (1962) considered creativity a set of individual features leading to creative thinking. Thinking is a process by which a person attempts to define his problems and solve them in accordance to his experiences. Torrance and Gilford considered creativity as a combination of four main factors as "fluency, creativity, flexibility and elaboration. These elements interact with each other and they make a special dimension called creativity (Hosseini, 2003).

P4C is an example of educational methods to create thinking growth in schools. P4C is consisting of some stories for students and a teacher book (Lipmann, 2003). According to Lipmann, P4C besides providing uniform curriculums (P4C) has unified educational design in which students of various levels start the class by reading aloud the story. Then, some questions are raised about the story and they discuss. During the class, mutual criticism and beliefs are expressed carefully (Naji, 2010). The stories are based on age and their aim is stimulating question and discussion models, at first they talk through legendary characters in the stories and then they discuss by internalization of the items (Lipmann, 2003).

2. Research Methodology

The present study aimed to investigate P4C as an educational method to increase creativity. It is including four components of increasing fluency of thinking, increasing flexibility of thinking, increasing innovation in thinking and increasing thinking elaboration. The present study applied experimental, pre-test and post-test with control group to determine effectiveness of P4C for creativity of students. In experiment group, P4C was implemented by research group during 5 sessions for 75min. No education was received in control group and they only conducted pre-test and post-test. The study population is all the boy students of second of guidance school, district 2 of education department in Tehran during academic year 2012-2013. Among schools in district 2 of education, Taleghani guidance school was used as convenient sampling method. Then, among 9 second of guidance school classes, two classes with 32 students were selected based on curriculum and presence of researcher in the school. After performing pre-test, creativity of fairly low students was selected as experiment

and control group. One of them was selected randomly as experiment group among them. Both classes were homogenous in terms of age, gender, level and intelligence (based on Raven test scores). To evaluate study variables, Raven progressive matrices (middle form) were used. These tests are designed for age group 9-18 years and it is including 5 parts and each of them has 12 questions. The percentage norms of this test are obtained for English language children and adults (Abedi et al., 1995). It is standardized in Iran by this test in various cities. This test is including 60 questions, the time is 45min. For scoring, it is required to compare the true responses key with response form. After scoring and achieving raw score, the equivalent intelligence is extracted by the tables.

After obtaining permission of education department in Tehran, by informing the principal of Taleghani guidance school, two classes were selected among 9 classes of second of guidance school. At first Raven intelligence test was performed for both classes. There was no significant difference between intelligence mean of two classes based on the results of Raven test. By visual creativity test of Torrance, pre-test scores of creativity were obtained. Based on the results of creativity test, the students with creativity were selected as studied group (experiment and control). After defining experiment group, P4C course was performed during 5 sessions (75 min) for three months as intermittently. Community of enquiry method was used in P4C. The researched was trained already for P4C. Different stories as intellectual stories for children 2(Philip Cam, Translated Bagheri, 1999) and Iranian stories of Molanasredin stories were used.

In these sessions, community of enquiry method was applied. The students were sitting as U-shape and each of them had their names on the paper on their chest and this increased their feeling of respect and self-confidence. The researcher started by reading a part of story, then the students were asked to raise their questions about the story or talk about interesting parts of the story. Then, he directed the discussion in the class by the views and questions of students. Finally, to evaluate the effect of P4C sessions on students' creativity, the second form of Torrance creativity test was performed for control and experiment groups.

For data analysis, SPSS software, version 16 was used. Descriptive analysis (mean and SD) and inference statistics (independent t-test and covariance analysis test) were used to analyze study data.

3. Findings

The results of intelligence mean calculation of both groups are observed in Figure 1. According to this figure, the mean intelligence of experiment group was 120.8 and control group 119.3 and T test showed that intelligence mean of both groups are equal with error 0.5.

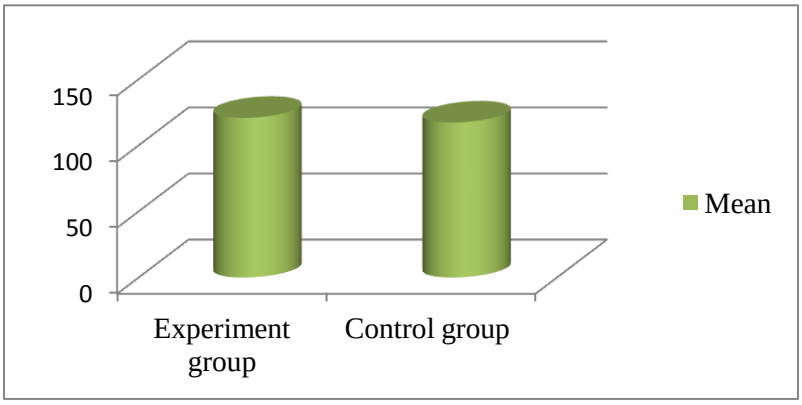

Fig. 1. The results of comparison of intelligence in experiment and control groups.

The descriptive data of pre-test and post-test of fluency component of creative thinking of students for visual Torrance creativity test in experiment and control group are shown in Table 1.

Table 1
The mean and standard deviation of fluency scores of experiment and control group

Group	N	Test	Mean	SD
Experiment	16	Pre-test	15.437	3.75
		Post-test	38.062	23.77
Control	16	Pre-test	18.562	4.661
		Post-test	23.562	10.750

As shown in Table 1, the mean difference of experiment group was 22.625 in pre-test and post of fluency test and the mean difference of control group were 10.467 in pre-test and post-test. According to these differences, experiment group showed more score increase in post-test compared to pre-test compared to control group. T-test of independent groups to investigate significance of the differences of pre-test and post-test scores of control and experiment group showed that this difference was due to the activity and the effect of chance and other factors is lower than 5%.

The results of the investigation of performing P4C on flexibility of creative thinking of the students, descriptive data of pre-test and post-test of this component of Torrance creativity visual test in experiment and control group are shown in Table 2.

Table 2
The mean and SD of flexibility scores of experiment and control groups.

Group	N	Test	Mean	SD
Experiment	16	Pre-test	12.937	3.296
		Post-test	21.125	7.850
Control	16	Pre-test	16	4.289
		Post-test	17.187	7.458

As shown in Table 2, the mean scores of flexibility of experiment group was increased after performing P4C but covariance analysis for independent variable effect on dependent variable showed significance level greater than 0.05. Thus, there is no significant difference between flexibility scores of experiment and control groups. To investigate the effect of P4C on creative thinking of the students, the descriptive data of pre-test and post-test of visual creativity test of Torrance in experiment and control groups are shown in Table 3.

Table 3
Mean and standard deviation of innovation scores of experiment and control groups.

Group	N	Test	Mean	SD
Experiment	16	Pre-test	20.812	6.272
		Post-test	47.500	27.817
Control	16	Pre-test	26.187	9.064
		Post-test	23.937	22.394

According to Table 3, innovation score in experiment group was increased after performing P4C and the test showed the significance of this difference. The descriptive data of pre-test and post-test regarding the effect of P4C on creating thinking elaboration of the students arising from visual creativity test of Torrance in experiment and control groups are shown in Table 4.

Table 4
The mean and standard deviation of elaboration scores of experiment and control groups.

Group	N	Test	Mean	SD
Experiment	16	Pre-test	63.562	22.099
		Post-test	148.38	51.325
Control	16	Pre-test	69.5	17.457
		Post-test	91.312	40.407

As shown in Table 4, the mean scores of elaboration of experiment group was increased after performing P4C and the statistical test showed that this difference is dedicated to the effect of experiment (independent variable).

4. Discussion and conclusion

There was no significant difference between experiment and control group in terms of fluency pre-test scores. However, there was a significant difference between fluency post-test in control and experiment group and this difference is as the result of experimental act considered for experiment group and control group underwent to experiment. Regarding the first hypothesis, it can be said, P4C increased fluency component of critical thinking of the students. The results in previous researches regarding the effect of performing P4C and increase of fluency component are consistent with the results of the present study. The researches of Rostami (2011), Rostami (2012) and Naderi (2012) supported the results of the present study. Determining the findings of this hypothesis showed that it was observed that the students avoided expressing their views at the beginning and this habit is an important inhibiting factor to show their creativity. When students attend P4C program, they find themselves in a friendly environment in which all people, other students or teachers respect the views and try to dedicate their time for their views. This inhibiting factor of creativity is eliminated. All students namely the shy student tries to participate in the discussion. It seems that in such process, the ideas of students are increased rapidly and this leads to better performance of creativity test.

In addition, in this method, self-confidence of students increased and this can be investigated in further studies. According to the results, the second hypothesis of this study, “performing P4C course leads to the increase of flexibility of students thinking” was not supported. Naderi (2012) in a similar study supported validity and trust of P4C in developing creativity and four main components, fluency, elaboration, innovation and flexibility. There is main difference between this study and research of Naderi (2012) regarding the measures. Despite this study in which Torrance creativity test was used, Naderi used Abedi creativity test. In a similar study done by Rostami (2012), a similar result was achieved and there was no significant difference between flexibility score of experiment and control group after performing P4C. Like the present study, Rostami applied Torrance s creativity test. Also, Rostami applied Form B of visual Torrance test of creativity in pre-test and post-test and this makes the results of this study ambiguous. Torrance s recommended using Form A for pre-test and From B for post-test.

To discuss about the result of the present study and Rostami study, based on P4C, we can say concentration of the discussions of each session about specific issue and the teacher efforts to manage the discussion and more focus of the students to talk about the current issue hindered flexibility of students thinking. One of the limitations of the present study is limited number of sessions as students were involved with limited issues. To eliminate this problem, it is recommended to increase the sessions with diverse issues. The result was consistent with the review of literature predicting the effect of P4C on creativity and the results of the similar studies supported the result in this study. Rostami (2011), Rostami (2012) and Naderi (2012) in their researches reported the effect of P4C on fluency of creative thinking of the students. In a community of inquiry, the students are faced with friendly climate to express their views and they receive positive feedback to any new idea and they consider their views effective in promoting the discussion. In such conditions, the students express their imaginations and innovation views and we observed their interesting talents. During P4C sessions, the students to have a better perception of important results about the story and their problems are directed to details of the story and by generalizing this feeling in life and other conditions; the students can produce more details in their creativities and extend their ideas. The result is consistent with the review of literature predicting the effect of P4C on creativity and the results of the similar studies supported the result of this study.

Rostami (2011), Rostami (2012) and Naderi (2012) in their studies reported the effect of P4C on elaboration component of creative thinking of the students. It seems that in major part of P4C sessions, a similar method with brainstorming is used and according to the results of the researches in the past reported considerable effectiveness of this method on creativity. The researches of Yaghubi (2011), Ganji (2005) and Shahrabi (2005) in the second chapter are referred. The greatest limitation of this study is difficulty of experiment work in education as the teachers and authorities less collaboration in experimental designs. It is recommended to conduct similar studies namely more samples in other academic levels by other researches regarding the effect of P4C on their creativity. For facilitation of performing similar studies, the research design is presented at the beginning of

academic year to pursue the research in long-term and the effect of the increasing number of P4C sessions can be investigated.

References

Abedi, J., 1993. Creativity and new method in its measurement. Psycholog. Resear., Per., 2, No. 1, 2.

Fisher, R., 2007. Dialogic teaching: developing thinking and metacognition through philosophical discussion. Early Child Dev. Care., 177, 6 - 7, 615–631.

Ganji, H., 2005. The effect of brain storming on increasing creativity of students. Educat. j., Year 21. NO. 1.

Guilford, J., 1962. Creativity: Its measurement and development. In J. J. Parnes and H. F. Harding (eds.) A source book for creative thinking. New York: Scribners.

Hosseini, A.A.S., 1999. The nature of creativity and its development methods. Fifth edition. Astan Qods Razavi.

Hosseini, A.A.S., 2008. Creative learning, creative class. Fourth edition. Tehran. Madrese Publicat.

Kam, P., 1999. Thinking stories (1). Philosophical research for children.Translated by EhsaneBagheri, Tehran. Amirkabir publicat.

Lipmann, M., 2003. Thinking in education (Cambridge, Cambridge University Press).

Mahdizade, E., 2009. The effect of developing math creativity on math performance. Motivational beliefs.Cognitive involvement and academic stability in math of female students of the third of guidance school. MA thesis. Psychol. Educat. Sci. Tehran Univ.

Naderi, E., 2012. The study of the effect of "P4C" on developing creativity of boy students of the first of high school. District 14 of Tehran.Thinking and child. Human sci. res. cultur. stud., Year 3, No. 1.

Naji, S., 2010. Philosophical exploration for children and adolescents. Talking with new revolutionary pioneers in education. First Vol. Human sci. res. culture. stud.

Qaedi, Y., 2004. The study of philosophical views for children. PhD Thesis.Psychology and educational sci. Tarbiat Moalem Univ.

Rostami, K., 2011. The comparison of the effect of thinking stories of Philip Cam and thinking stories of MortezaKhosronejad on developing creativity of children in pre-school level in academic year 2010-2011. MA thesis. Tehran: AlameTabatabayi Univ.

Rostami, K., 2012. A survey of the effect of community of inquiry in P4C on creativity. Think. child., Year 3, No. 2.

Seif, A.A., 2001. Educational psychology, Learning psychology and education. Second edition. Tehran. Agah publicat.

Shahrabi, F., 2005. The effect of teaching brainstorming on creativity of female students of ShahidChamran of Ahvaz University with intelligence control. Educat. psychol. sci., Ahvaz. Spring 2005. No.

Topping, K.J.,Trickey, S., 2007a. Collaborative philosophical enquiry for school children: Cognitive gains at two-year follow-up. Brit. J. Educat. Psychol., 77(4), 787-796.

Yaghubi, A., 2011. The comparison of the effectiveness of various techniques of creative thinking on creativity of students of the first of high school. creat. innovate. human sci., Year 1, No. 2.