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Effectiveness of Training Creativity on Preschool Students

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Abstract

This study explores the effectiveness of training creativity on preschool students. The study involves creativity training using experimental and control groups. Each experimental and control group comprised 30 preschool students, with pretest and posttest done in both experimental and control groups. During the study, 12 sections of training creativity were carried out using instruments for Brainstorming, Tell Story, Web Link and Role Plays, Checklist and Torrance Training Creativity Test. Results showed positive significant difference between pretest and posttest experimental group, and strong effect of training creativity on the preschool students. On the other hand, results found no significant difference between pretest and posttest of the control group. There are several implications that could be discerned from the study which could be utilized by the Ministry of Education, school administration, teachers and parents.

Keywords: Brainstorming; preschool student; role plays; tell story; training creativity.

1. Introduction

American psychologist JP Guilford pioneered the study on creativity since 1950’s and became known as one of the founders of Psychology of Creativity. Several other researches made further contributions towards understanding and recognizing creativity as a human capability [1,2]. Guilford developed the Structure of Intellect (SI) model which identified two distinct forms of thinking: divergent thinking and convergent thinking. Divergent thinking is associated with creative thoughts or the ability to access memory to derive unique, multiple,
and numerous answers to open-ended questions. While convergent thinking means coming up with one-right-answer for each question, commonly associated with IQ tests [3]. Further, creativity was defined as a multilevel phenomenon [4]. Creativity is best conceptualized not as a personality trait or as a general ability but as a behavior resulting from particular constellation of personal characteristics, cognitive abilities and social environment [5]. However, Harrington [6], Schoenfeldt and Jansen [7] say creativity is an interaction between personality and environment. Gale [8] and Gute et al. [9] believe that creativity is a heritable trait and a child born with creative potential, can be trained and increase throughout life. While Gale [8] reports that there is stronger influence between creativity and environment than hereditary. Creativity is so important that Rogers [10] says “we are doomed to annihilation unless we improve our creative abilities”.

This study intends to test training creativity as a pathway to increase this skill in the preschool students in the Region 4 of Tehran, Iran. This study focuses on the following two questions. First, is there any significant difference between experimental and control group based on Brainstorming, Wet Link, Tell Story and Role Play? Secondly, is there any significant difference between pretest and posttest in the experimental group based on Brainstorming, Wet Link, Tell Story and Role Play?

2. Literature Review

Researches on the effectiveness of training creativity reveal that using sufficient education and training programs can enhance creativity among the students. This is because in the skills of creative thinking practice, encouragement, and training lead to the enhancement of the degree of creativity [11]. Since the potential of creativity exists among all people, it can be identified and fostered by training [9].

Cramond [12] believes that primary goal of learning and teaching should be sharpening and refining of the thinking process and should be a priority in education. Furthermore, if it is expected to train the students as independent thinkers, effective thinking which is critical and creative, should be taught to them during their school years. This will make them effective thinkers and will help them during their life after school. In accepting that Torrence [13] mentions that although critical and creative thinking are significant, teaching children the creative thinking skills is essential. It will help them to solve problems they face and challenges in the future. Li [14] opines that since creative thinking can be learnt and taught, creativity can be increased by education and training [15]. Hence, according to quantitative review on creativity training programs done by Scott et al. [16] on 70 studies, it is shown that training can create divergent thinking and creative performance in the individual.

Parnes and Noller [17] carried out a creative study projects at Buffalo College State university of New York involving 350 students who were divided into two groups; the control group and experimental group. They trained the experimental group in Creative analysis, Creative problem solving and for two years included four semesters. The control group was not given any creative training. The outcome of the study showed that the experimental group could solve problems significantly better than those who were not given creative training. One of the measures used was by testing the ability of students to solve real world problem. The results indicated statistically high significant difference between the two groups. This study indicated that training can enhance the creativity of the students.

On the other hand, Zarrin [18] carried out a research on the English language teachers’ creative behavior at a secondary school in Malaysia. The results indicated that teachers do not pay attention to teaching strategies which could enhance the student’s creativity. This result is similar to the research result by Joseph [2]. His study was on “creative behavior of English teachers and classroom methodology” in 20 primary schools in Selangor state in Malaysia. Results of this study showed that teachers and their method of teaching have significant effect in increasing the creativity among school students. As a result, it is important to enhance the skills and knowledge of teachers in creative teaching by providing suitable psychological situation to accelerate and increasing creativity and imagination of their students. Furthermore, various training and teaching styles can be capitalized
on the talent and interests of students in response to global challenges. Diakidoy and Kanari [19], and Chan and Chan [20] emphasized the role of teachers in facilitating the creativity of students since teachers are believed to have most important role to identify and develop the student’s creative potential [21]. Hence, teachers should be careful in their creativity classes by not marginalizing the students [2].

3. Methods

3.1. Process

Torrance Training Creativity Test was used on the experimental group to measure the students’ creativity. Divergent thinking was taught using strategies such as Brainstorming, Tell Story, Wet Link and Role Plays. The training period was recorded to see creative behaviors of each student in the experimental group. Analysis of the present study was done using SPSS version 19. Mean, standard deviation, skewness and kurtosis were extracted as descriptive statistics. Apart from the descriptive statistics, Pearson product moment coefficient was used to determine comparability between pretest of experimental and control groups. In addition, paired-Sample t-test was used to determine the difference between pretest and posttest in the experimental and control groups.

3.2. Research Design

This study formed four groups of two experimental and two control groups, each group comprising 15 randomly selected preschool students. Creativity training was taught to the two experimental groups. Conversely, no creative training was given to the control groups. Comparison was done between pretest and posttest of the experimental group as well as posttest of experimental and control groups of specified influence of creativity training. To explore influence of every method used (Brainstorming, Tell Story, Wet Link and Role Plays), a checklist was used to determine if any of the methods transfer more effect in enhancing creativity.

4. Results and Discussion

Current experimental study was based on the main objective of influence of creativity training on preschool students. Torrance Thinking Creativity Test was used to assess the initial creative ability in the participants (N=30). Descriptive statistics’ results of pretest and posttest of Torrance Training Creativity Test showed mean scores of pretest was 152.30, and mean scores of posttest was 156.63. The pretest’s skewness (-0.103), posttest skewness (-0.284), pretest’s kurtosis (-0.262) and posttest’s kurtosis (-0.395) were determined. In the control group mean score of pretest was (152.50) and posttest (151.36) which is approximately equal (see Table 1).
Table 1. Comparison of Pretest and Posttest in Two Separate Groups (Experimental and Control Groups)

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t</th>
<th>df</th>
<th>Sig (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre EG</td>
<td>30</td>
<td>152.300</td>
<td>16.039</td>
<td>5.827</td>
<td>29</td>
<td>0.000**</td>
</tr>
<tr>
<td>Post EC</td>
<td>30</td>
<td>156.633</td>
<td>16.011</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre CG</td>
<td>30</td>
<td>152.500</td>
<td>17.393</td>
<td>1.251</td>
<td>29</td>
<td>0.221</td>
</tr>
<tr>
<td>Post CG</td>
<td>30</td>
<td>151.366</td>
<td>18.185</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**=0.05 P value

Pre EG=Pretest of Experimental Group, Post EC=Posttest of Experimental Group,
Pre CG=Pretest of Control Group, Post CG= Posttest of Control Group

A paired-samples t-test was conducted to evaluate the impact of training creativity on the preschool class. There was statistically significant increase in creativity ability scores from pretest (M=152.300, SD=16.039) and posttest [M=156.633, SD=16.011, t(29)=5.827, p<0.000] in the experimental group. On the other hand, current results stated that strong effect of training creativity by increasing creativity in the preschool children. Furthermore, there was no significant difference in creativity ability scores from pretest (M=152.500, SD=17.393) and posttest [M=151.366, SD=18.185, t(29)=1.251, p<0.221] in the control group. In addition, comparison between mean score of posttest in the experimental group (M=156.633) and control group (M=151.366) showed that training was useful to develop creative children.

Present result supported several earlier studies such as Gute et al. [9] that indicated training can be identified and fostered creativity among all people. Also Joseph [2] reported enhanced creativity to training and practice by divergent thinking.

5. Implications

Current study provides implication for the increase of training creativity in the preschool students. It is anticipated that the findings are important to Ministry Education and school administrations to give more attention to enhance creativity in students and more attention to training problem solving. In addition, results can be important to parents to enhance creativity in their children.

References


