

Full Length Research Paper

Methods of nurturing creativity during preschool term: An integrative study

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Today our society needs intelligent and creative people more than ever and in the current situation, the matter of the creativity is one of the most important issues that needs to be addressed, therefore the present study was conducted with the aim of investigating the ways of fostering creativity among 3-6-years-old preschool children. The context of this research includes all of the available written and digital sources related to the ways of fostering creativity that are appropriate for pre-school age. In order to review and analyze the planned studies and approaches regarding ways of fostering creativity, an integrative method (synthesis studies) was used. The instrument for collecting data was receiving and collecting 100 articles from information data base and the method of data analysis was through subject decoding. The results of data analysis showed that creative techniques for children can be classified into three categories: techniques of individual creativity, techniques of group creativity, techniques group-individual creativity. And one of the most important findings of this research is the design of pattern on the basis of creativity techniques during pre-school period.

Key words: Creativity, preschool, pattern design.

INTRODUCTION

Every educative system through planning and production of specific curricula tries to transfer different kinds of knowledge and skills to learners, transfer and prepare them to undertake their roles and responsibilities in their real life. Researchers believe that the pre-school period is the golden age of creativity. The current literature shows the intellectual flexibility of children during the pre-school year. Also, the positive and successful outcomes of promotion of creative thinking have been reported in this age. Programs of training creativity can help children in understanding the world around them and building relationship between its components and increase

children's flexibility, imagination, skills of formulating issues (Benlliure et al., 2013). The research in this regard shows that creativity starts from the early childhood and becomes stable during adolescence. In the case of fostering it in this period of life one can extend it until the end of life (Mirgheydari, 2001, p. 6). In fact, some experts believe that children are the real embodiment of human creativity (Glaveanu, 2011).

In the researches, various methods have been proposed to foster creativity. For example, Oncu and Unluerin in their research entitled 'creative use of children from play materials', they consider play as one of the

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most important activities that promote creativity and imagination of children (Anco and Unluer, 2010). Sahin and Ozdemir (2012), taking advantage of the available technologies, develop innovative educational materials and Scott et al. (2004), in a meta-analysis, understood that there are four general themes in the educational programs of creativity. Teaching the ways of giving idea, imagination, cognitive training and thinking skills (2004), despite the attention to and emphasis on fostering creativity in different researches and including them among the pre-school educational goals and the claim of the training officials and executives in practice to enforce and apply methods of fostering creativity, there is no comprehensive and complete view. However, fostering creativity in children plays a key role in their future life. Self-creation, self-actualization, words, prosper through creativity.

Different researchers propose different methods such as ways of brain storming, list of characteristics, compulsory association, Synaptic, technique of creative questions, balanced movement, immersion in critical reflection, problem solving, learning about other cultures, etc. (Husseini, 1997; Kampe and Nissenberg, 2000; Maker et al., 2008; Leu, 2008, Chu and Lin, 2008). This research study that has been done in the field of fostering creativity in pre-school education can help education managers and planners to gain a comprehensive view of methods that foster creativity and its growth in preschool children and provide appropriate environment and facilities for nurturing this talent into planning and designing into an integrative and appropriate program in the field of creativity. Therefore, this study was conducted with the aimed of analyzing the methods of fostering creativity and selecting the appropriate methods of each age group from 3 to 6-years-old in order to answer the following question.

Which methods can be used for fostering creativity in pre-school children?

RESEARCH METHODOLOGY

This research is an integrative study (the research synthesis). A form of research was used that resulted in integrative knowledge. According to Roberts, the joint element of the various strategies of synthesis approach is "analysis and re-classification of data in a way that can be easily exploited by clients" (Quoted in Short, 2009, p. 352). In this study, the researcher after receiving and collecting 100 articles from information data-base were analyzed initially by specifying the name of the investigator or investigators, year of research, the research subject and the providing findings of the research and then through coding studies according to their subjects. The study used all of the available written and digital sources related to the ways of fostering creativity for pre-school age; to analyze the data the method of subject encoding was used. Reviews were necessary. Regarding reliability and validity of this research after analyzing the theoretical principles through subject codification, the obtained results were provided to the prime experts in the context of creativity and programming and after receiving their opinions the transformative measures and the needed modifications were taken (Table 1).

FINDINGS

Research question: What are the ways used to foster creativity in preschool children?

The results are as follows.

Figure 1 represents the obtained individual techniques suitable for children: literature-based methods, methods based on experience, methods based on values, miniaturization, imaging techniques, activation and symbolization techniques and methods based on the application and development of the arts.

The obtained results of this study are in line with the results of Mantegi's study (2012) that creative education has a positive impact on children's creativity and that of Radbakhsh et al. (2013) research that using games and storytelling significantly enhances children's creativity.

Mantegi (2012), in his study on the positive impact of creative education on preschool subjects, wanted to provide a prototype on how to apply methods of teaching creativity to preschool and school students. 1) Requesting preparation of a creative painting from children (using colored pencils, water color, gouache, and leaves, etc.), 2) Demanding for the preparation of a creative object using scrap objects, 3) Demanding provision of an appropriate solution for a posed issue by children, 4) Demanding doing an innovative art work by children (such as encouraging children to paint with unconventional methods, painting on the stones in a way that from different angles two or three objects can be seen. Painting the roots of plants in the shape of various objects and animals), 5) Demanding creative reading by children (demanding reading pictorial but unwritten books, reading book in a way that child feels himself at the heart of the conditions, and processing the read text in the form of a picture, etc.), 6) Encouraging children to clarifying the ambiguous terms (such as completing two or multiple people dialogue, provision of story based on multiple pictures, demanding them transfer a sense into another), 7) Demanding children to do an art work of using the new communication technologies (such as provision of stamps using the internet images, design book cover and the like).

Radbakhsh et al. (2013) in their research concluded that using the method of playing and storytelling has significantly resulted in the increase of creativity in each of its four elements in the playing and storytelling groups, and using these methods by removing barriers of creativity, thinking inertia and helping to solve problems with an enjoyable procedure resulted in the creativity of the students. Therefore, those students who attend in playing and storytelling sessions are more successful in finding new and original solutions to problems.

According to the results, achieving a significant innovation in education is a difficult issue (Simmons and Thompson, 2008), one of the posed issues in the twenty-first century education, is the art of training and fostering



Figure 1. Techniques of individual creativity.

thought (Layton, 2012). The researcher's commentary is as follows: certainly the talent of creativity and innovation exists in majority of the people, and it just has to be strengthened. Eighty to ninety percent of this talent is acquirable and only a small fraction of it is inherent in human and is related to the inner talent of individuals. Creative people have unique characteristics that differentiate them from non-creative one. These characteristics are as follows: 1. Persistence, high energy, hard work: Creative people are pursuant of their goal and show commitment to their work. They embark on their work with a lot of energy and despite the obstacles that may be encountered, show stability and are able to endure failures, 2. Curiosity and having a sense of being creative: creative people have high levels of curiosity and a wide range of interests. They like complexity and are good at them, have high forbearance for vagueness and uncertainty, and self-awareness, 3. The autonomy and independence in judgment: Creative people do not like external influences to have intervention with their work, they are not dependent on social approval in their decisions: they have a high self-confidence and can easily disregard others' ideas (Shally and Gilson, 2004).

Figure 2 shows the techniques used in this research: Innovative teaching method, method of facilitating the process of thinking, Socratic method, collaboration method, discussion method, method of problem solving

and training games.

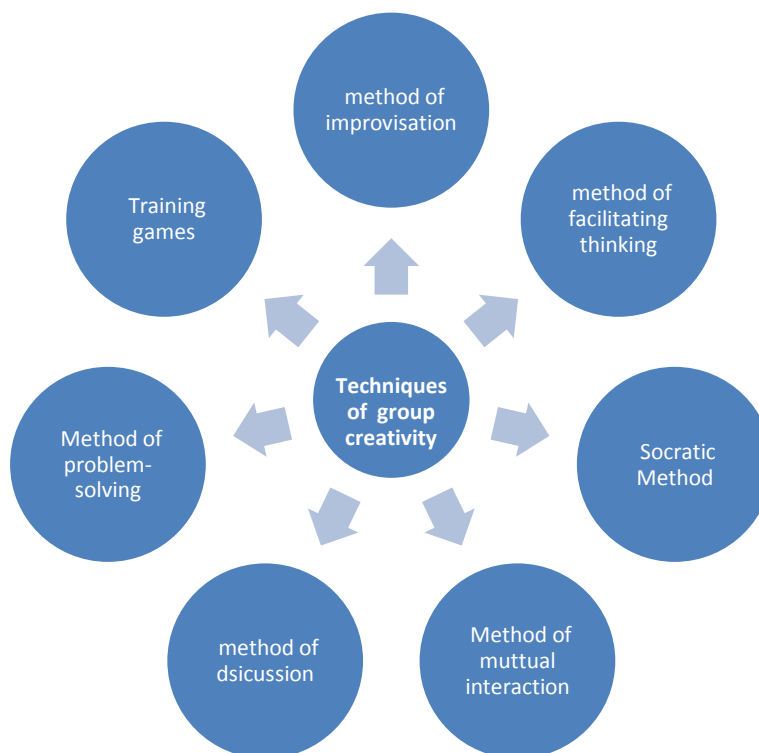
The obtained results are in line with the findings of Afshar and Osareh (2011) in the field of fluency factors, flexibility, ingenuity and expansion, and findings of Jebelli Ade and Sobhani (2012), that there was a significant difference between the experimental and control groups regarding the four components of creativity (fluency, flexibility, originality and expansion), and that there was a significant difference between the post test scores of the components of fluidity, creativity and expansion (Ahadi et al., 2013).

Han (2013) claimed that techniques of creativity involve five components: 1) Motivation 2) Digressive process, 3) A convergent process of selecting an idea, 4) Putting the idea into practice, and 5) Assessment.

In the analysis of the results it can be said that, childhood is full of imagination, the basis of building a life full of happiness in adulthood and also the way to training coping skills to deal with life problems. Make-believe plays that begin in early childhood and continue until adulthood provide the mental health in the individuals' future. That is, in make believe plays the object or sign replaces something else or used as the sign or symbol of something else. A box is used as the symbol of a car, a doll, as the symbol of a baby, and so on. That is why imaginative play is sometimes also called symbolic. Make-believe plays enhance learning processes

Table 1. Demographic characteristics of the experts.

	Academic degree	Academic field of study	Scientific qualification	Teaching experience
1	PhD	Curriculum planning	assistant professor	15 years
2	PhD	Philosophy of education	assistant professor	20 years
3	PhD	Educational curriculum	assistant professor	28 years
4	PhD	Curriculum planning	assistant professor	18 years
5	PhD	Curriculum planning	assistant professor	10 years

**Figure 2.** Techniques of group creativity.

such as: observation, experimentation, problem solving and creativity in children (Parsamanesh and Gharamaleki, 2013). Majority of scientists and scholars consider problem solving as the same as creativity and believe that an individual who has the ability of problem solving is a creative person; but Gotzels suggests that it is better to define creativity than the problem solution. Because in solving the problem, the individual regards solution; but in creativity, individuals both create the problem and reviews its solutions (Isa Zadeh ShamsFakhr, 2013).

Therefore, innovative training programs can help children to understand the world around them and create relationship between its constituent components that result in increasing flexibility, imagination and skills of formulation of problems with children (Bonluer, 2013).

Finally, individual and group creativity techniques are techniques that can be used both individually and

mutually. The obtained results of this study with respect to Figure 3 shows some of the individual creativity techniques as the following: methods of graphic-expressive mandatory connection, replacement, scamper, experimental methods, methods based on design and innovation, methods based on the growth of mobility or joyful effects, methods of establishing a creative communication and creative completion.

The obtained results of this research are in line with the findings of Anco and Unluer, (2010), that students should be encouraged to play freely with unstructured materials and tools and play in various situations and environments, Emami et al. (2011) claimed that team play results in increasing the creativity of children.

According to Qasim et al. (2013), creative drama significantly increases children's social development and Jamali et al. (2010) effectiveness of painting in a free



Figure 3. Techniques of individual-group creativity.

manner and subject selection on the increase of children's creativity are in line with the findings of this study. According to the results, it can be said that being creative means having the ability to find ways that others have not. It is for the sake of creative human beings that there is advancement and this has caused people not to live in the Stone Age. If your child has creativity, in fact, he has a pure and rare talent that needs to be guided to activities, and in the future, to works that require creativity. A job in which he flourishes, is one of the things that all of its components has already been planned (Dobo, 2013). Creative thinking is a thinking that is designed in a way that tends to lead to creative results. This definition notifies that the criterion of creativity is productivity. In fact, a person is called creative when he achieves creative results. Constituents of creative thinking are as follows: 1) positive thinking 2) active learning, 3) self-expression, 4) recognition of the other rights of selection and 5) identification of new solutions to problems.

Creative individuals are usually diligent and active and insist a lot on their action, in addition to the long time and great effort that they spend, they try to put aside the other ways since they are seeking out anything that restricts their ability and knowledge. Usually creativity includes the outer inner motives rather than external motives. Therefore, some students should work in the fields of

intrinsic values and motivations (Marzino, 2010).

In addition to achieving the techniques, teaching strategies that focused on methods are categorized in a separate set on the basis of based researches. Strategy literally means the way of action in a specific condition. Strategy is a general map or program that is composed of a set of operations and is designed to achieve a definite goal. When this plan is to achieve education, it is a training strategy. The obtained results of this study with regard to Figure 4 shows that teaching strategies involve: opportunities, space, classroom atmosphere, provision of resources, cognitive and meta-cognitive strategies, motor skills (fine and coarse), core and basic courses and strategies related to the parents.

The results of this study are in some cases in line with the findings of Han-Ping (2013), Davis et al. (2014), Han-Ping and Huang (2014). Han-Ping (2013) in his study found these results that creative methods could help teachers to plan effective programming and improvement of teaching and learning. The positive effects using these methods include: increasing the knowledge and skills of teachers, injecting creativity into the realm of children's learning, changing methods of teaching from teacher-centered to child-centered ones.

Davis et al. (2014) in a systematic review of 210 educational, political and professional literature research



Figure 4. Strategies of teaching.

from 2005 to 2011 on the title of roles and needs of developing teachers to promote creativity: a systematic review of this literature provided this conclusion that teacher's skills, attitudes and desire to play role, his awareness regarding the needs of students, flexible structure of teaching courses and a variety of classroom interaction creative teaching are important.

Han-Ping and Han (2014) research showed that the perceived creative personalities by the preschool teachers in Hong Kong in comparison with the thing that is perceived by western teachers are to a large extent consistent. These studies has resulted in increasing valid instruments for measuring perceptions of preschool teachers about the creative personality and can encourage further research about teachers' characters on classroom procedures and creative learning of students.

DISCUSSION AND CONCLUSION

The results of the present study indicate that regarding methods of fostering creativity each authority has discussed about the special method or techniques, but generally it can be said that in order to classify and integrate methods according to Figures (1, 2, 3) they can be categorized in three classes of techniques of personal creativity, techniques of group creativity, techniques of

group -individual creativity.

In a general conclusion with regard to the obtained results, it should be said that, childhood is the first and foremost period of an individual's life, a particular period for development of fundamental and movement skills (Hardy et al., 2010). In this period, the child plays an active role in the learning and understanding structure, and the knowledge that he/she gains during this period, is very crucial and determining (Krosh and Slents, 2010). When children start school, they are eager to learn new things and if they have the required preparations of entering into this movement in the child, certainly enough guarantees for his future successes will be provided. Pre-school and school period are the first stages of the formal education and are a very important behavioral environment for many children. And the more the training quality of this course, the stronger academic period they will have as school children. If the aim of this course is to make children achieve success and skills, it is needed to make a decision regarding their curriculum. The curriculum of this period is considered a product and requires a fundamental review, reconsideration and should have its own content and method (Saadatmand et al., 2012). Attention to fostering creativity in preschool and school students is an important issue that has attracted attention of experts and scholars, and has continuously been recommended by them. This period is

meant for students whose principle characteristics have not yet been formed and the type of education and learning in this period can quantitatively and qualitatively have a deep impact on the future performance of these individuals. Based on this principle paying attention to the procedure of training and educational programming should again be the main activities of any educational system. Irresponsibility in this field can turn the educational system of a country into a deadly vortex with unworthy products, development and without any positive impact on sustainable development. With regard to the above-mentioned issues, it is necessary that the officials use appropriate methods, instruments, and curriculum that will enable students to develop different learning processes and progress in their different talents, including creative talent of the students. Existence of an appropriate and comprehensive pattern and various aspects of creativity from different angles can be absolutely necessary and fruitful for teachers. With regard to the results, it can be suggested that: If we want our students to be creative, we should enrich the educators' knowledge in this field and create an atmosphere for discussion in the classrooms by trainees and teachers.

Conflict of Interests

The authors have not declared any conflicts of interest.

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