IDENTIFYING DIMENSIONS OF CREATIVE THINKING IN PRESCHOOL CHILDREN DURING IMPLEMENTATION OF PHILOSOPHY FOR CHILDREN (P4C) PROGRAM: A DIRECTED CONTENT ANALYSIS

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Abstract

Background: fostering creativity thinking in children needs a program with focusing on process and let children expressing their own ideas and listening to others ideas as well challenging them and creating new ideas. To develop creativity in children teachers should be able to accept children uniqueness and their idea. Before children start the school, they need learning experiences to promote their cognitive, social, moral and emotional development and this lays the foundation for later success at school.

One of the programs that developed for enhancing creative thinking alongside other thinking and social skills is philosophy for children (P4C). Implementing this program on school age children have shown effectiveness of P4C on creative thinking but little is known about this related to preschool children.

Objectives: The aim of this study is identifying the elements of creativity thinking based on Torrance creative thinking framework during implementing P4C program for preschool children.

Materials and Methods: A qualitative design with directed content analysis was conducted to explore four aspects of creative thinking during implementing P4C program. 6 healthy children five to six years old selected from one preschool in Tehran and P4C program conducted for 16 sessions. All of the sessions recorded and after each session all events of the recorded films were transcript. Torrance creative thinking aspects were the framework in this study and data and codes classified into these four elements and their definitions as main criterion. The codes emerged from data, compared to the main framework and if they matched with the definitions and evidences, they classified as a sub group of the themes.

Results: All four aspects of creative thinking were seen in codes and categories. Even in first days of running the program there was a little evidence for creative thinking but gradually the related creativity codes emerged.

Conclusion: according to finding implementation of P4C program helps preschool children to develop their creativity thinking. More investigation is needed to empower these results and answer to the questions about why and how this is happened.

Key word: Creativity- Philosophy for children- Preschool students
1. Background

Children who amaze their teachers or parents with unusual responses or opinions or display a keen sense of humor are thinking creatively. Even those are unpredictable or perhaps nonconforming may be creative children (DeBord, ?). Creativity is: “creation of new and useful products including ideas as well as concrete objects.” (Mayer, 1999). According to Mumford (2003) creativity “involves the production of novel, useful products” (Mumford, 2003). Creativity is essentially a special form of problem solving. It is related to those problems that have not easy answers or conventional responses do not work (Moran, 1988). A common framework for creativity and creative thinking process is developed by Torrance (1979). In his theory, Torrance described four aspect of creative thinking: fluency, flexibility, elaboration, and originality. Fluency refers to the production of a great number of ideas or alternate solutions to a problem. It mentions understanding rather than remembering the information. Flexibility is described as producing ideas that show a variety of possibilities or realms of thought. It involves the ability to see things from different points of view. Elaboration is process of enhancing ideas by providing more introducing detail. Originality refers to production of unique or unusual ideas (Almeida, Prieto, Ferrando, Oliveira, & Ferrándiz, 2008).

Creativity has been canonical on four Ps: Product, Process, Person and Press (Glăveanu, 2011). In dealing with young children the focus should be on process such as developing and generating original ideas (Moran, 1988). It is suggested that a process rather than a product orientation will be much more adequate for our understanding of children’s creativity. Creative process is being played out in interactions with a physical and social world (Glăveanu, 2011). Considering the importance of process in children’s creativity selection of those programs which emphasis on this aspect, facilitate achieving to our purposes. Since the late 1990s fostering creativity in children have been considered especially in the educational systems and many programs about this issue have been developed and implemented in schools (Craft, 2006). But it seems before entrance to the schools, children should be educated for creativity. Before children start the school, they need learning experiences to promote their cognitive, social, moral and emotional development and this lays the foundation for later success at school. Preschool is significant period for children because they should prepare for their most important change in lifestyle: entrance to school and scholastic learning (Hockenberry & Wilson, 2011).

Encouraging creativity in young children is not feasible without acceptance of positive attitudes such as allowing children to experience and accepting their uniqueness. Young children are naturally curious. They wonder about many things and events around their world. When they enter preschool, they already have a variety of learning skills acquired through questioning, inquiring, searching, experimenting and playing. They need time for the creative encounter (Torrance & Goff, 1990). Providing an environment that allows children to explore and play without unnecessary restrictions, emphasizing process rather than product, adapting to children's ideas and avoiding impose adult’s ideas on children, accepting unusual ideas from children by suspending judgment of children’s divergent problem solving, and allowing time for the children to explore all possibilities and moving from popular to more original ideas are the ways to foster creativity in children (Moran, 1988). Philosophy for children (P4C) is one of the most matched educational programs to these instructions. It is one example of the educational programs aimed to enhance children’s creativity and other cognitive, social and moral skills and the focus of it is process (Ghaedi, 2004). The basic idea in P4C is "teaching for thinking "and its aim is emphasizing on development of reflexive, flexible and creative thinking as an objective for educating young generation (Gruioniu, 2013). Philosophy for children is a form of dialogic teaching that emphasizes creative and critical thinking via questioning and dialog between children and
teachers and between children and children. Philosophical enquiry helps develop creative thinking because it provides the capacity to generate hypotheses and build on the ideas of others. The focus of P4C is not only on questioning, but on developing discussion and thinking skills. Creative thinking skills develop through "being playful with ideas, suggesting possible hypotheses, applying imagination to thinking, and to look for alternative explanations and ideas" (Fisher, 2006). The effectiveness of implementing philosophy for children program on Iranian students' creativity and other cognitive gains is investigated in some studies (NADERI, TAJALI, SHARIATMADARI, & SEIF, 2012), (Hosseini & Hejazi, 2014) but at this time our knowledge in this area, about preschool children is not enough.

Objectives
The aim of this study is identifying the elements of creativity thinking based on Torrance creative thinking framework during implementing P4C program for preschool children.

Materials and Methods
3.1. Design
A qualitative design with directed content analysis was used. Content analysis is a qualitative analytical method through which data are summarized, described, and interpreted. It is used to identify main themes from the data and is appropriate for examining experiences and attitudes toward a particular subject (Polit, 2013). Directed content analysis is useful in circumstance where theory or prior researches exists about the phenomenon. Potter and Levine-Donnerstien (1999) categorized this approach of content analysis as a deductive method (Hsieh & Shannon, 2005).

3.2. Data collection
A purposive sample includes 6 healthy preschool children (3 girls and 3 boys) age 5 to 6 years old that had not previously participation in any P4C program, lived in Tehran, and interested to attend this study, selected from one preschool in Tehran. Sommer (2010) explained that the main purpose of research with children is understanding their life from their perspective. Therefore children are the best source of information about themselves life (Rengel, 2014). Aubrey et al (2000), mentioned that research with children have a broad framework and because emphasize of qualitative methodology is importance of the personal perspectives; it can be employed in research with children. Corsaro (2011), Christensen & James (2008) and Mayall (2001) stated that qualitative research enables us to gain insight into ways children see things and events, what is important to them, ways they conceptualize their around world and ways they position themselves in that world (Rengel, 2014).

Baseline of the study, investigators invited each parent to preschool and the objectives, trend, educational content, and other main points of the project were discussed. It was emphasized that participation in the program is free of charge and there is no compulsion to participate in the study. Also it is explained that in order to data gathering all of sessions will be recorded using camera and researchers committed to maintain anonymity and confidentiality of all research data. Parents assured that they will be allowed to access their child data at the end of project and this data will be discussed in a privat session with parents, child and a child Psychologist. After taking parental consent, researchers talked with each child individually and simply explained to them about the research program and the educational session. All of their questions answered truly. It was explained about recording the sessions using camera. All of 6 children that invited to take apart the study agreed to participate in 16 session of P4C program. The preschool was equipped with closed circuit cameras and the researchers conducted the necessary coordination with preschool officials for receiving the films after each session.
The main program started after these primary steps and lasted for 8 weeks. It conducted for 2 times in each week and each session lasted 30 minutes. Researchers selected educational content from the story books in Persian and in each session one or a part of the stories were read for children. After reading the story children discussed about the concepts or their opinions in a community of inquiry. The teacher as a facilitator attended to classes.

3.3. Data analysis
In cases existing theory for the phenomenon, the qualitative researchers might choose to use directed content analyzing approach (Hsieh & Shannon, 2005). All of the video tapes were watched by researchers after each session and all of conversations transcribed. All nonverbal communications transcribed too. These transcribed data imported to Nvivo 8. The minimum unit of analysis was a sentence typically. Sometimes the unit of analysis was the whole paragraph. These data were searched for evidence that provide an accurate description of the four elements of Torrance creativity thinking framework: fluency, flexibility, elaboration, and originality and if matched the definition of each element as a pre-established category that code was assigned to the text. The codes emerged from data, compared to the main framework and if they matched with the definitions and evidences, they classified as a sub group of the themes. The text that could not be coded within the initial categories was given a new category and definition. After peer debriefing some of these categories merged to existing categories.

3.4. Rigor
Guba and Lincoln’s four criteria were used judging the soundness of this qualitative research (polit.2013). To realize credibility and dependability triangulation of researchers’ trough presence of all researchers in research team was done. All researchers had work experiences related to pediatric and P4C program in educational settings. Along with these proceedings all transcribed data and codes were verified through peer debriefing. Researchers shared their ideas about codes, categories and themes and resolved the conflicts. Reinforcement strategies for transferability are describing the context and ensuring about that representativeness of data. Also researchers recorded and reported the study’s various processes to enable replication. All these process help the researchers to ensure confirm ability.

3.5. Ethical consideration
Permission to conduct the study was obtained from the research Committee of Kharazmi University. Study objectives were described for parents and the children and they were assured of their anonymity and confidentiality. Parents signed the provided written consent.

Results
In four initial sessions the great amounts of time spent to expression and stabilization rules and reading the story and almost all of the Children rarely discussed their ideas and desired to be silent and listen to the story. But this trend changed inchmeal and children propounded more new ideas and focused to creating flexible and detailed reasoning. According to the Torrance creativity thinking theory, we found the evidences matched to these elements. The themes are the four elements of the theory.

Fluency
Fluency refers to the production of a great number of ideas or alternate solutions to a problem. It mentions understanding rather than remembering the information (Almeida, Prieto, Ferrando, Oliveira, & Ferrándiz, 2008). In four initial sessions the great amounts of time spent to expression and stabilization rules and reading the story and almost all of the Children rarely discussed their ideas and desired to be silent and listen to the story. But inchmeal this trend changed and children propounded more new ideas:
Facilitator: ok guys! This is the thirteenth session. Would you like we read the rest of the story? One of child(R) raised his hand.  
Facilitator: yes dear (R).  
R: I have something. I want to show the “Differences”.  
Facilitator: ok honey. Show us  
“R” put a few coins on the table and pointed up to one of them. Then took it and said: it is different from another.  
Facilitator: would you please tell us why you think it is different? “R”: because it’s color and size.  
Another child “A” raised his hand.  
Facilitator: yes dear “A”. Do you want to disagree with “R”? “A”: No. I want to say another thing. It is different because the writings are different [Writing carved on coins]. These [coins] are foreign. These writings came from another country.  
A: I tell you just now. [Pointing to 3 coins], these are 5 Rails coins but the other are not.  
Flexibility  
Flexibility is described as producing ideas that show a variety of possibilities or realms of thought. It involves the ability to see things from different points of view (Almeida, Prieto, Ferrando, Oliveira, & Ferrándiz, 2008).  
Facilitator: ok my dears. Now tell me about a bad day. What is a bad day in your opinion? “S” raised her hand and told: may I tell?  
Facilitator: of course my dear. “S”: a bad day is the day that someone getting seek. “C”: may I tell now?  
Facilitator: yes honey “C”: the bad day is a day that we die. It is very bad day. “M” raised his hand.  
Facilitator: yes my dear “M” my bad day was at park. When we went to park, and played, and I hurt my head. “D” raised her hand and told: the bad day is day of our death. Or When we like doing something but our moms don’t let us to do it. “A”: when our dreams don’t fulfill. It is a bad day.  
Elaboration  
Elaboration is process of enhancing ideas by providing more introducing detail. “A”: she [One of the characters in the story] lied! She did what she liked but it was not true.  
Facilitator: did you listen to what “A” told? [To the children].Did you understand what she said? “D”: Yes. She told that when we do any things that we like, maybe we are wrong. For example it is impossible going to a deep well and uptake any toy we like. We like toys but if we go to a deep well, we will die. “M” raised his hand and told: if we do every things we like, it isn’t true. For instance when we have a good thing and we don’t care about it, and if we put it somewhere that everyone can see it, because we like everyone know that we have it, maybe thieves steal it.  
Originality  
Originality refers to production of unique or unusual ideas (Almeida, Prieto, Ferrando, Oliveira, & Ferrándiz, 2008).  
Facilitator: do you know where the dolls hospital is? “D”: it a kind of hospital that they dress the dolls.
“A”: no it is a factory for doll making.
Facilitator: who is agree with”A”?
“S” AND “C” raised their hands.
Facilitator: why other are disagree with “A”?
“D”: No the factory is not a hospital. We go to hospital for caring. But in factory they make new dolls. They are not sick.
“M”: for example maybe his father has glue and repairs the doll. Then is her father a doll physician?
“A”: it is possible. If the doll hospital has not any free bed, we have to cure our dolls in other place.

2. Discussion

Torrance (1969) defined creativity as the capacity to detect gaps, suggestion of diverse solutions to solve problems, generation of novel ideas and recombination of them to address the relationship between them. Fluency as number of relevant response to an issue or question (Almeida et al., 2008) is known. At the initial sessions, it seemed creating diverse and novel ideas related to problems was difficult for children. The first ideas were typical and very ordinary but implementing philosophy for children program, created a capacity for expression of ideas, challenging them and searching for new relationships. Experiences and studies have shown that P4C programs contribute to development of critical thinking (Gasparatou & Kampeza, 2012). In all four aspects of creative thinking children showed progress in their idea developing. They suggested alternate ideas and introduced more details for their reasons. Some of the ideas were unique. Flexibility of thinking strengthened gradually and children learned to express their own ideas. Some of the responses were beyond the expected. Although in early sessions children tried to persist in their personal ideas but after some sessions they learned about others ideas and tried to challenge it. Philosophy for children can help enhance communicative skills as well creativity as a habit of intelligent behavior. Philosophical enquiry helps develop creative thinking as a capacity to generate new ideas or hypotheses (Fisher, 2006). Iranian studies about effectiveness of P4C program on creativity in adolescent or school age children showed implementation of this program has a positive effect on developing creativity (Hosseini & Hejazi, 2014; NADERI et al., 2012).

2. Conclusion

Children are creative and to develop this skill need to be protected. To foster creativity we should prepare a flexible environment allows children to explore, express and challenge their and others ideas. We as a facilitator should avoid to impose our or routine ideas on children and try to accept unusual ideas. We should try to provide enough time for children to explore all possibilities and challenge them. It is important to focus the process rather than product. Philosophy for children is an educational program that is very match to these instructions. In a community of enquiry in this technique children learn how to think, generate idea and express it. They learn listening, respecting to other and generating new and diverse ideas. Preschool children need to educate how to flexible in their thinking, enhancing ideas by providing more introducing detail, to product unique or unusual ideas and producing ideas that show a variety of possibilities or realms of thought.

Limitations of the study

This study is limited by sample size and method. The researchers suggest applying mixed method in future researches to achieve deeper insight about the phenomenon and answer to the questions about how and why.

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