Students' Learning Through Teaching Creativity: Teachers' Perception

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Abstract

During the last few decades educators and parents have focused on the special needs and abilities of children thereforecreativity and solving problems in creative way is identified as a mainfactor in reaching high educational aims. This paper is a study based on the literature and previous research papers to explain students' learning through teaching creativity, with regarding teacher's perception.Researchers cannot study creativity by isolating individuals and their work from the historical and social environment in which they act. So teachers' perspective about creativity can be effective in process of student's learning. The findings of this study show there are many definitions and concepts about creativity which they should be considered by teachers to improve students' creativity.

Keywords: students' learning, creativity, teachers' perception, creativity in education

Introduction

Creativity is emphasized in the education filedsince the 20th century. Consequently creativity has become one of the goals at schools in many different countries.If a person has higher levels of domain-specific knowledge, but does not possess creative problem solving skills then utilization of the domain-specific knowledge may be less effective (Renzulli, Owen, & Callahan, 1974). Studies have shown novice creative problem solvers can demonstrate improved ability in creative problem solving situations when training of these techniques was implemented (Basadur, Graen, & Green, 1982; Dow & Mayer, 2004; Esquivel, 1995).

The ability of firms or agencies to offer new products or services depends on the presence of creativity and the organizational capability of turning new ideas into innovations (Brown & Duguid, 2001).There are great demands placed on organizations to produce innovative services, products or processes (Storey, 2000). In order to stay competitive, they themselves often need to learn to adapt, which can be a manifestation of organizational learning or organizational innovation (Schein, 1996)**.**

For decades, administrations, many state departments of education, teacher educators, and teachers of the world have agreed that inefficient classroom management skills are a major problem for teacher retention and effective teaching(Darling-Hammond & Bransford, 2007).Researchers found that teachers who use their creative ability to solve variety of problems in classroom are more successful in their teaching and are unlikely to decide to leave the profession (Esquivel, 1995; Feldhusen & Hoover, 1986; Simplicio, 2000). Davidovitch and Milgram (2006) found a positive correlation (r=.64) between creative thinking and teacher effectiveness in solving realistic classroom problems. Chant, Moes, and Ross (2009) posited that teaching creative problem solving is a useful process for generating innovative curriculum and creative activities that will help students of the elementary and secondary classroom learn content of subjects as expected by state guidelines.

For all these reasons the researchers choose to focus on the creative problem solving intervention in this study.Learning, creativity and innovation are intertwined, but there is little understanding, based on research, of how they interact when they are considered to be socially based.In particular, there is little understanding of the intersection of creativity and learning within groups that generate new ideas. Aspects of this problem are that the factors, conditions and processes that are in play are not well understood (Watson, 2005)**.** Thus, this study tries to explain importance of creativity and perception of teachers about creativity through reviewing previous studies.

Conceptand definition of Creativity

A review of the literature summarized several definitions for creativity or innovative people. While several creativity researchers defined creativity as a model that consist of some constructs or dimensions between individuals (Torrance & Safter, 1999), still there has not been a unit explanation for creativity. For example, creativity was explained as the mixture of divergent and convergent thought (Brophy, 2001). Viewed the theory of, divergent thinking includes the creation ofchoicesandexclusiveide asinthethinkingprocedure,whereas convergent thinking includes choosing ideas based on their uniqueness, achievability, and quality (Kirton, 1987).

Most of the time creativity is identified as a psychological process including the finding of novel idea or concept, while many composite variables appearing as researchers investigate inthe large display of current talent fildesof creativity (Milbrandt & Milbrandt, 2011).

Gowan (1975) offered definition of creativity as a motivatingpowerderiving from the preconscious mind and conveyed in a manner that is consistent with the person's character. Additionally, Csikzentmihalyi (1996) gave his definition of innovation as an idea or creation that changes or modifies an existing area and is supported by professionals inside the exactingdispute area.

The concept of creativity may be different according to the investigators' focus, but most investigators agree on the two main standards of novelty and suitabilityof ideas or products. On the other hand, the meaning of "novel" and "suitable" may differ depending on the social situation and a product may be considered as creativity in one society but not in other.

Richards (2001) divided creativity to two parts, Big-C and mini-c creativity. Typically Big-C creativity ishapping in wide and board social context consequently mini-c is occurring in a narrow and delicate social context. The concept of creativity based on Big-C is effective for some teachers who are not successful to recognize the importance of "mini-c" levels of creativity in their classes(Beghetto & Kaufman, 2007). Each person has this ability to becreative. Richards (1990) focused on importance ofeveryday creativity while researchers and teachers emphasize on Big-C creativity rather than mini-c creativity, which concerns extremely creative individuals. In addition, mini-c creativity has been described as creative potential of pupils that can happenthrough the learning process, so making that level of creativity is part of educators' duties**.**

More over creativity can be judged in a different wayand it depends on object or situation; sometimes a creative product can be seen as original and useful by children who do not have enoughexposure to topics on the other hand that product is not creative and original by professionals or adults who have a lot of exposure. So should considered this point that creativityyoung students is an extremely personal and related to their experiences issue, if the students' ideas or their solutions in problematic situation are novel and suitable, after that they can be estimated as a creative person (Runco & Chand, 1995).

Based on Torrance's(1999)view, creativity divided into three coreparts, so there are three characteristics to verify creative behavior: creative abilities, creative skills, and creative motivations. At this juncture creative motivation is an important characteristic which has main role to creative achievement, so persons with highdegree of creative motivation have more creative achievement rather others. In addition various type of commitment, and the skills are essential to make creative abilities. Consequently creative achievers will be persons who have a high degree of creative abilities and skills if they have enough motivation. As well, a creative person as a creative achiever requires to mixture of these characteristics (Torrance & Safter, 1999).

According Torrance and Safter (1999)creative abilities as a construct has somecharacteristics such as: (a) problemconsciousness, (b) capacity to produce and consider plenty ofoptions, (c)

flexibility, (d) originality, (e) ability to emphasize the essence, (f) capacity to develop, (g) openness, (h) being conscious of feelings, (i) ability to get ideas in a context.

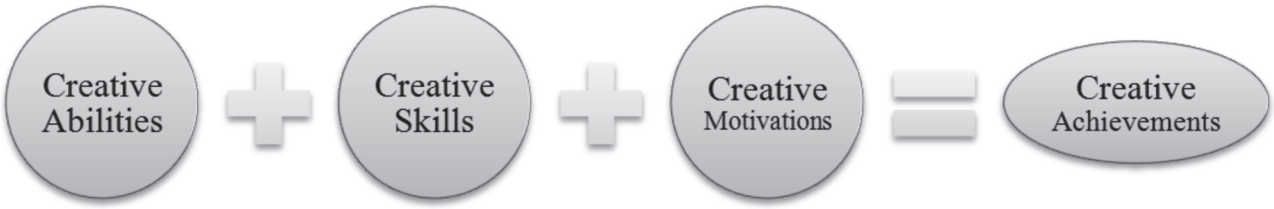

Figure 1: Torrance and Safter model for creative behaviors factors

Based on Torrance and Safter (1999) the construct of creativity is regularly referred to fluency (the ability to produce options), flexibility (the creation of ideas from views that are diverse from the ones related to a problem) and originality (novel or unique idea). More over there are a lot of researches which show the importance of flexibility as an significant part in creative thinking (Fearn, 1976; Torrance & Safter, 1999). One more creativity construct is uniqueness or originality. According Torrance, originality is a trait which individuals with this characteristic are able to getting away and escape from the clear and usual situation. Furthermore another important trait of creativity is the ability to emphasize the essence in problems. Many creative people be unsuccessful to solve problems or create creative products for the reason that they be unable to find sight of what is essential. Little awareness has been paid to measurement of the capability to emphasize on the real meaning (Torrance & Safter, 1999).

Teachers'beliefs about creativity

The majorityof scholars have agreed that there are link between individual's belief and their actionsthat means beliefs canmakeactions (Cooney, 1985; Pajares & Bengston, 1995; Rubenson & Runco, 1992). With regard to many researches, teachers' beliefs work as a filter which several decisions about curriculum and instructional are made based on these beliefs. While beliefs areessential to lead actions, so experiences and reflection as factors to make action can change or add to beliefs. In this area, Quintin in 2012 have explored on changing teachers beliefs duringthe experience which teachers obtain in organized teacher education programs at the pre- and in-service levels. In addition teachers' views are situational and may be transmitted into instructional practiceswhen they face to the complexities in their classroom (Quintin, 2010).

Literature reports that most of the people, including teachers, talk about creativity as being related solely to artistic or musical performances,

as leaping from natural talent and as being the features of a genius (Virgolim, 2005). These mythology about creativity stifle the creative potential of pupils and create difficulty to fostering creativity in schools.

According to Quintin's study in (2010) the viewabout the role of creativity in the curriculum varies considerably between teachers. Approximately, around half of teachers suppose that creativity plays a main role in the curriculum. In addition, teachers' opinion of the role and relevance of creativity in the curriculum varies significantly between countries. This is not amazing as school curricula are country specific. At first glance, there seems to be great scope for the improvement of creativity within the curriculum (Quintin, 2010).

Researchers have found that teachers with creative problem solving skills are more efficient (Davidovitch & Milgram, 2006; Esquivel, 1995; Feldhusen & Hoover, 1986). There is proof that although teachers extend creative problem solving simply during years of practice, some parts of teachers' creative problem solving is based on learning to mix academic subject knowledge with teaching skills and transmitting that new knowledge to new conditions that occur every day.

So in arguments on improving education, lots ofeducators and policy makers have promoted the use of models of teaching and learning that modify the role of the teacher as a deliverer of knowledge to a promoterfor extra activity of students learning (Aboukinane, 2007).

Student's Creativity

This study attended the problem that various educational institutions are focused on exams and their results, leaving little or no time to improve creative thinking skills (Longo, 2010). All students deserve the opportunity to develop creative capacities in a high challenge, low threat environment. If ignored, students' creativity scores will decline and educational institutions may fail to graduate students capable of complex, creative problem-solving (Zagursky, 2011).

The capacity to think strategically is the skill that takes time and practice to increase and individuals who possess thecapacity to think in creative way are those wanted to solve complex problems (O'Brien & Shennan, 2010).

Based on Runco (2003) novel interpretations are assimilatory, while convergent thinking approach need accommodation, so assimilation happens when the individual has information and creativity is created by modifying the information however accommodation happens when the individual adjusts and change constructions to obtain the new data into consideration. He believed that everyone is able to construct novel interpretations if this is useful and unique interpretation will be entitled as creative approach. In addition by supporting novel idea with suitable interpretations in the class, teachers can protect creative latent and actual creative presentations (Runco, 2008).

Currently the majority of teachers in educational area, many economists in business filed admitthe significance of growing creative abilities among

young children and students, they have realized the fundamental role of creativity in building the skills which are needed for living in 21st century (Kerr & Lloyd, 2008).

Carrinton and Robinson (2009) encouraged educators to focus on instructions and methods which enforce in educational organizations to find out the reason of failing these instructions to prepare students for living and working in the 21st century. They believed that educational systems are draining pupils and their curiosity with several, written lesson plans and unflexible tests, or leaving students without having enough time for trialing and collaboration to others. In this system children have to sit lazily and listen for the content which they should remember and repeat them at a future test (Baldensperger, 2014).

Group creativity

Vygotsky (1978) believed that process of creativity should be considered as a internalization or inherent tool which is affected by culture and social communication. Internalization does not have simple mechanism, but it is a kind of revolution or reorganization of receives information and mental organizations regard to personal's traits and his previous knowledge. On the other hand externalization is a mixture of meaning that has emotion based with cognitive symbols. Consequently, can suppose within these two social processes, internalization and externalization, and individuality and culture, are some conflict and argue (Moran, John-Steiner, & Sawyer, 2003). Therefore, an important point about creativity is that creativity is an extremely social phenomenon. More over the most significant creative insights usually emerge from cooperative teams (Sawyer, 2004). The innovation and creativity in groups can make collaborative plans in other world individuals are be able to organize and integrate various ideas for one product in their groups (Sawyer, 2006).

Sawyer (2006) clarified the characteristics of grouping creativity as invention, group trying and appearance or emergence. Generally creativity occurs in encounter time and accidently, in such a meaner that all members in one group have contribution and interaction dynamically in presentation the result. On the other hand emergence is affected by mixture of phenomenon; in addition always a whole of things is higher than components. As a result, learning environments must be designed to grow cooperation and collaborative activities for improving students' creativity, so it has many pedagogical and disciplinary efficient (Sawyer, 2006).

In collaboration creativity, individuals can learn from each other by teaching what they know (John-Steiner, 2000). New ideas, new solutions, new sparks and even new knowledge come from learning. From a practice perspective, viewing innovation as learning that results in changes in communities' interpretive views, the interest is in looking at learning as the bridge between working and innovating (Brown & Duguid, 1991). Learning within and between members of a community therefore serves as a bridge and as a cycle of mutual sharing. Learning is a shadow, an influence and an explicit process in creativity.

In the case of collaborative creativity new product develop by teams. It is as if the hall ways, where conversations can be testing grounds for processing information in new ways, become populated by a designated membership or team members. What makes working together possible is evolution through stages of learning in response to felt needs. From low collaboration, transparency, mindfulness and finally synergy, teams learn to search for creative solutions and experience a felt need to harness serendipity (Jassawalla & Sashittal, 1999).

In other words, some teams can learn how to reach a capacity for high-performance which is characterized by the team's ability to generate creative new products. As the primary subject is how teams, as a unit, go through a learning process in order to create together, believing together that new meaning arises from increasing awareness of the need for rapid, high quality and highly competitive new products is a critical factor. The motivators are equality and success.

Understanding learning to take place in groups is foundational to exploring learning that results in or leads to socially based creativity. Elements of importance are being able to connect to team purpose and the value of teams. Processes include action, reflection, collective problem definition and the treatment of group work as malleable and capable of refraining and experimentation. Power and its ability to influence behaviors within teams and in the external environment is generative (Watson, 2005).

Creativity in education and learning

Typically creativity is related with some special activities like visual arts, music, culinary arts, and other learning environments where learner and students can have active role and participation to make their knowledge. However Robinson (2001) indicated that creativity is not allocated a small number of activities; probably creativity and intellectcan be used in different situation for doing many tasks. So it is not a related to special kind of activities. According to this may be found why these days the importance of creativity between most of the people is increased. Consequently this idea which creativity is an inherent factor and is allocated to few numbers of people is a wrong conception which must discover academic environment to find the reason of this. Chavez-Eakle (2010) claimed growth of creativity definitely related to individual's experience in childhood. If experiences of children give them this opportunity to make their meaning from outside of experiences they capable to adapt and absorb new knowledge in diverse area.

In addition children, who do not have a chance to emerge and develop their individuality and creative abilities when they are very young, rarely they can be creative with divergent thinking ability at adulthood. Some educators who work to enhance the result of standardized test believe that creativity is frivolous and unvaluable; on the other handsome educators recommend creativity as a way to develop practical abilities logical capacities of students.

These days having new generation of students who are ready for future careers is a important aim for most of educational systems, for receiving to this goal these institutionsneed to be more flexible to let students discover and examine new design and various ideas in this way teachers and educators must have facilitator and supervision role to support and protect them. This kind of training is suitable for confines of a comprehensive, program for articulating arts. In a program where students are involved in the learning and they have communication with their classmates consequently students canpromote their public speaking abilities and exchanging ideas they have chance to solve the problem in different situation. These abilities are factors which they would count on when they enter the work force (Buda, Fedorenko, & Sheridan, 2012). When the educational system is reliable, learning will be improved because students can relate new information with previous knowledge. In this kind of reliable learning system, students are free to experiment and share ideas without feeling danger or fear, student explore and examine their knowledge in safe and genuine environment (Caine, 2009).

According some studies a high-quality educational system must make opportunities for creating creative production and critical thinking.In this system academic leaders should experiment new educational strategies to promote students' requirement for entering them into a technological and competitive marketing (Wu, Kulshrestha, Yin, Tillander, & Plass, 2011).Permitting pupils to discover and experiment new knowledge in a secure and challenging situation can help educators and investigators to develop their understanding about strategies of improving students creativity.

However these days society changing quickly andneed for novelty is increased many schools still trying to maintain strict order, put downing students' curiosity and strangletheir natural tendencies to discover new ideas (Carrington & Robinson, 2009). Hong and Kang (2010) considered increasing sizes of class are reducing the freedom needed for open exploration and the growth of creative idea. So expanding the environments of learning for all students is a most important demand from a global vision, Shin (2012) advocated educators should support students to startmaking their new knowledge beyond the classroom, students must learn by imagination, contribution and active participation in inquiry-based experiences.

Teachers mustattempt to consider divergent thinking as an option to grow creative thought among students. Teachers can give opportunities to students for making more questions; they can evoke students to examine more ideas for getting more new experience. Hanson and Herz (2011) specified that if teachers are interested to encourage creativity they should design some activities to promote creative attitudes, teachers are able to develop creativity through open-ended options. Teachers must supply options to support students in making links between new idea and their previous knowledge. Teachers must endeavor to encourage risk-taken though and be patient in errors situations.

Fischer (2009) recognized what a lot of educators fail to identify; students should have abundant chances to complete tasks by physically involvement in the process. They are frequently taught to whit a so-called teacher expert, or they read tales about exciting experiments, however they rarely have the chance to actually participate in the active process of creation. Bryant (2010) consented that giving opportunities to join creativity and technical abilities, suggesting open-ended tasks and promoting creative problem-solving and encouraging peer dialogue calls on students' natural curiosity. Curiosity is regularly considered the initiation factor which tends to guide certain individuals to experience livingin a different way than the others, cause of the brain to grow crucial relations between saved information and new training (Umewaka, 2011).

As current schools should consider students' need such as worldwide competition, economic exclusion, and many environmental issues, educationalists should offer ideas to motivate and encouragestudents (Sousa & Tomlinson, 2011). Teachers should not capitulate to predictable forms and unchangeable rule. Educators require to make ready a place for student where they canpromote their experience, pursue dreams. Students should feel freedom to express their idea, they should not be worried about prevention factors to create new opinions (Tokuhama-Espinosa, 2010). Educators and other experts need to focus on developing creativity levels, using some approach which includes the individual spirit, ability and culture of students (Baldensperger, 2014).

Conclusion

This study attempted to define students' learning through teaching creativity, based on teacher's perception.This study reveal s that teachers have an inclusivevision of creativity. Approximately many of teachers consider that creativity may be applied to every area of knowledge and creativity may be used to all school subject. Though, smaller amount teachers are believed that creativity is not only related to visual arts, music, drama and artistic presentation. Whereas most of the teachers were active in developing creativity in their teaching, they were more probably to support activities and abilities which are more clearly connected to creative learning, for example learning how to learn. As wellother activities which are helpful for creative learning, for instance play and multi-disciplinary work, were considered less relevant. Based on these results, we claim that there is a difference between how teachers recognize creativity and the way they assert to foster creativity through their teaching. Teachers' views about creativity in education are more effective than their practices. This means that there is a lot of wayfor development creativity in schools. While more courses are needed on how creativity might be fostered at school, we believe that creative practices must be institutionalized. Frequently creative performs are not allocated adequate time and space because they do not suitable the educational agenda. Educational policy documentation need to increase awareness on the advantages not only of creativity for training, but also of connecting teaching practices and techniques with creative outcomes, in order that

teachers can become thoughtful practitioners able to distinguish how a teaching technique or activity can suffocate or activate creativity in their pupils. This study aimed to help the curriculum planners, designers and teachers to find suitable view and conception about creativity for present curriculum and reinforcing its weakness and increasing its effectiveness in the future.

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