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# The Development of Creativity across the Different Stages of Growth

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#### Introduction

The lack of a broad agreement on a unified theory of creativity results in different definitions of creativity. Taylor (1964, 1995) and Torrance (1977) hypothesized that any human activity may be looked at from four angles: the person who performs it, the thing which is done, the process of activity itself and the conditions which affect the above three divisions. Taylor and Torrance's hypothesis seems to stand up well. They argued that the creative product can be observed as a production of the creative process, which is affected by creative abilities and other characteristics of a person. Similarly, the creative product is affected by environmental conditions, which also affect people and creative processes. Based on this argument Moony (1963/1999) defined creativity under the four Ps which he introduced as following:

\_Creative Person.

\_Creative Product.

\_Creative Process.

\_Creative Press (environment).

Here, it is worth mentioning that in the current study, the researcher adopted Torrance's definition of creativity which entails all four Ps as they are not mutually exclusive.

Moreover, the primary focus of creative person definitions is the characteristics of highly creative people. Creative personality characteristics have been described in the literature as intelligent, imaginative, original, curious, artistic, energetic, risk-taking, and open-minded (Barron, 1969; Barron and Welsh, 1952; Barron and Harrington, 1981; Hussain and Kumar, 1991; MacKinnon, 1962; Taylor, 1995; Torrance, 1962a, 1967a, 1977, 2004; Weiss, 1997; Welsh, 1975). Taylor asserted that "all persons have some degree of potential to be creative in one or more ways" (1964, p.8). Additionally, Lowenfeld (1960) argued that there are two types of creativity, the actual creativity (which is already developed and functioning) and potential creativity which includes the total creative potential (developed and undeveloped) of an individual. Daniels (1997) backed Lowenfeld, and further argued that creativity is a set of both abilities and traits.

A number of scholars assert that creative thinking has an important role in the curriculum (Cropley, 2001; Guilford, 1968; Sternberg, 1999; Vong, 2008). The challenge is therefore to

# ABSTRACT

Motivated by the lack of agreement on the stages of creativity, the researcher endeavours to outline them. Guided by Torrance concept of creativity, this paper extrapolate on a wide array of research to achieve its aim. The paper concludes by discussing its premises. As such, it is hoped that the current research benefits, future investigation.

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define creativity, measure it, analyse its effects on children in urban and rural areas, and extrapolate these results into findings to assist in creative pedagogy. Creative thinking can be described as a series of dimensions or attributes of an individual's ability to produce valuable ideas, or novel and workable tasks, or a unique talent, or to use imagination (Amabile, 1996; Ausubel, 1963; Boden, 2001; Lubart, 1994; National Advisory Committee on Creative and Cultural Education, UK (NACCCE), 1999; Onda, 1994a; Rogers, 1954; Zabelina & Robinson, 2010). There is substantial literature on creative thinking, with the early theorists being Guilford and Torrance (Sternberg, 2006a). Building on Guilford's work, Torrance developed the Torrance Test of Creative Thinking (TTCT) in the 1960s as a measure of divergent thinking which is predictive of creativity, and the foremost extant test was revised several times, the last being in 1998. 'TTCT appears to be a measure, not only for identifying and educating the gifted, but also for discovering and encouraging everyday life creativity in the general population' (Kim, 2006, p.11). The Torrance test comprises two verbal forms, termed A and B; and two figural forms, also A and B (AL Zvoudi, 2009; Rudowicz, Lok, & Kitto, 1995). To that end, the researcher departs into demonstrating the stages of creativity development.

# The Developmental Stages of Creativity

Cognitive development varies from one human to another and is influenced by a large number of biological, social, and cultural factors (Runco, 2007). However, cognitive researchers (e.g. Ausuablel, Ligon, and Piaget) established several theories to explain the existence and development of various intellectual activities and characteristics. Today, there are many cognitive theories in which the nature and processes of change are described. However, the origins of most, if not all, cognitive theories is the work of Piaget (Ginsburg and Opper, 1988). Additionally, Piaget's cognitive development stages are characterized by being widely influential. According to these theories creativity growth depends on the development of abilities which were thought to be involved in creative thinking such as imagination, abstraction, and logical thinking.

The developmental stages of creativity will be presented in this section. In presenting this information the current researcher will refer to Piaget's stages in the development of children's cognitive structure in 1953. The current researcher will also adopt Torrance's method of using different educational levels (the preschool, elementary school, and high school periods). A third emphasis in this section relates to Torrance's treatment of Ligon. In his summary of Ligon's (1940) extensive project "Their future is now: The growth and development of Christian personality" Torrance (1962a, p. 85-102) focused on the characteristics. Based on the exhaustive review, the researcher outlines the growth of creativity in the following section.

#### **Preschool Years**

The stages of development during the preschool years embody children from birth to the age of six. According to Piaget during this period the infant develops his/her sensorimotor thinking. In general the infant relies on innate reflexes and uses trial and error learning to learn simple skills. The infant can reach the permanence phase (that is, represent objects and events mentally) at the end of age two. An infant of this stage is egocentric. He/she understands the world from his/her own perspective and finds difficulty in understanding alternative views held by other people. An important characteristic of this stage is dealing with language which entails using and understanding symbolic shapes: letters, words and numbers. Language allows the infant to communicate with other people in his/her environment.

The ability of imagination develops and expresses itself between the ages of four to six in two aspects: interest in telling and hearing stories (especially imaginative stories) and using imagination in playing (e.g. playing with a stick as a horse and the like). The child starts to search curiously for "truth and right" even in areas that may be embarrassing to adults. Ligon affirmed that the search for truth should never be inhibited by shame or guilt. Children's questions at this stage can be rewarded by simple but direct and honest answers and sharing the child's discovery of new things and helping him/her in his/her search for truth by exploring the meanings of words.

A hallmark of a child who is under the age of two at this stage of development is his/her ability of manipulating the environment and objects physically to satisfy his/her curiosity. Therefore, simple games, large building blocks, dolls, and encouraging the child's desire to explore are some ways of supporting creative growth at this age. Creative growth at the age of two can be nurtured by providing the child with toys like blocks or a ball of clay which could stimulate more imagination. At the age of four creativity and confidence can be built up through arts and word games. (Ligon, 1947; Novak, 1977; Torrance, 1962a; Piaget, 1953).

# **Elementary Years**

According to Piaget, the stage of concrete operations is attained during the primary school period. Stages of development during the elementary school years include children from six to the age of twelve. Curiosity continues to develop at this stage if not restricted by adults. Children at this stage enjoy learning unless school experiences are unrewarding. Children can learn adult-imposed rules. They also can and do create rules to guide their own behaviour and protect the rights of others. They also love creating characters and making others guesses who they are. At the age of six to eight, creativity can be developed through role-playing lessons, stories, discussions, and characters personifying moral principles (Ligon, 1947; Novak, 1977; Torrance, 1962a; Piaget, 1953).

The child between eight and ten is able to use and discover ways of using his/her creative abilities. The child's ability to ask critical questions also increases. The child might worry about what he/she can and cannot do as a result of his/her awareness of differing from others. Although at this stage children should be helped to realize the impossibility of being good at everything, they should be provided with support when the task they do is difficult.

Lowry (as cited in Torrance 1962a, p.95) described the developmental vision of nine-year-olds as the worst possible visual organization. Lowry also reported that the majority at this age depart from "ideal" or theoretical vision. Furthermore, Lowry asserted that the nine-year-old child will practice endlessly with little improvement when provided with vision training or rehabilitation. Therefore, Lowry suggested that training or therapy should be delayed six months to a year.

It is worth mentioning that in the current study along with the concept mapping technique, the TTCT will also be used to avoid the possibility of poor visual organization reported on Lowry's study. The child between ten and twelve is able to read and think for long periods. Therefore, it is a great age for helping the child to read, think, persist in difficult tasks, and challenge him/her to learn things because they are difficult (Ligon, 1947; Novak, 1977; Torrance, 1962a; Piaget, 1953). As a result of the Minnesota studies Torrance (1968, 1962a, 1967a) arrived at a general pattern for the development curve of most of the creative-thinking abilities. From the curve Torrance concluded that these abilities reached their highest points in grades three, six, eleven, and first year of high school.

Growths of these abilities decreased in grades four, eight, and twelve. According to Torrance (1962a) the Minnesota studies results come into line with that of Kirkpatrick (1900), Colvin and Meyer (1906), Simpson (1922), Mearns (1931), Vernon (1948), Lally and LaBrant (1951), Wilt (1959), and Barkan (1960). Torrance presented some explanations for the declines which occurred at some grades, especially at fourth and seventh grades, he states that:

\_ These declines could be explained by pressures met at each new stage or each new transitional state in education, whereby a temporary decline in performance results from a period of shock. \_ They may be explained by accompanying physiological changes which occur at certain ages, as around age nine, according to Lowry.

\_ According to the theory of Harry Sullivan (1953), the skills acquired during the transition period that usually occurs between third and fourth grade are accompanied with a group of social development aspects, causing pressures toward socialization. By this time, strong dependence upon consensual validation develops, and unusual ideas are ridiculed and condemned. This creates a tendency to reduce the freedom and excitement of communication, especially of original ideas. (1962a, p. 94-95). Torrance (1962a) drew attention to the possibility of being misled by using the age-level characteristics to look for an average behaviour. He also asserted the importance of looking for a range of possible abilities and stimulating children toward their maximum. Barkan in 1960 (as cited in Torrance 1962a) observed that fourth grade children were easily discouraged by adult pressure.

Furthermore, Wilt in 1959 (as cited in Torrance 1962a) maintained that only a few children would be able to retrieve their creativity after a decrease in grade four. Others will lose their creativity forever and will only be able to retrieve some of their creativity. It might be worthy of note that the participants in the present study were chosen from fourth and fifth graders because of the decrease in creative ability which possibly will occur between nine and ten.

# **High School Years**

According to Piaget, the stage of formal operations is attained during the high school period. Stages of development during the high school years include children from twelve to the age of eighteen. The age of twelve to fourteen is the age of adventure both socially and emotionally. Abstract thought characterizes this stage. A twelve-to-fourteen year-old youth is capable of thinking without the necessity of the object of thinking to be present. Creativity can be developed through planning specific short-range goals, and by giving the youth practice and experience in making decisions and using creative solutions.

A fourteen to sixteen year old youth can focus his/her imaginative activity on a future career. Creativity can be developed by helping the young person in evaluating his/her abilities realistically to choose a career in which he/she can achieve success. Intellectual developments express itself in social behaviour between the ages of sixteen to eighteen. The young person can harness his/her emotional energy creatively. Although adults should avoid competing with the young person, the young person must be treated as a fellow learner. Creativity and confidence can be built up through helping the young person to find creative ways to assimilate his/her beliefs, and to practice his/her social skills (Ligon, 1947; Piaget, 1953; Torrance, 1962a).

# Discussion

To conclude, the development of creativity is influenced by other developmental processes such as imagination and attention (Runco, 1996, 2007). Moreover, we should concentrate on how far rather than how fast, and also we should and could accelerate children's growth and progress through each stage as Piaget suggested in 1953. Here, it must be acknowledged that in 1969 Piaget and Inhelder wrote a book in which they attempt to dispel misinterpretations of Piaget' theory. They asserted that: (1) The age at which the stages transpire is vary considerably both within and among cultures; (2) Although the course of an individual's development is continuous, an individual may demonstrate many forms of behaviour intermediary between two adjacent stages; (3) Vertical decalage (which describe acrossstage gap) is the process in which the individual is not always in the same stage of development with regard to different content areas; (4) Horizontal decalage (which describes within-stage gaps) is the process in which an individual in a certain advanced stage may not always be able to apply this mode of thinking to wider range of content areas. There have been many criticisms of Piaget theory of childhood cognitive development, most notably, psychologists debate whether children actually go through the four stages in the way that Piaget proposed, and further that not all children reach the formal operation stage (Bourne et al., 1979; Flavell, 1971, 1976; McShanc, 1991; Novak, 1977; Sutherland, 1992). However, Gardner (1982, 1993) asserted that Piaget's theory corrected the mistaken notion of considering the child as a "little adult" who perhaps knew less than an adult but reasoned in the same way an adult do. In his words: Piaget provided the most crucial information that we have about what children know, how they come to their knowledge, what they are likely to be able to learn, and what is completely beyond their grasp at various stages of development (Gardner, 1982, p.7).

The current researcher has chosen to address the developmental stages of creativity because it is an essential consideration for each adult who interacts with children. An understanding of the developmental stage helps parents and teachers to understand what the child needs in each stage and

how to meet these needs. Torrance asserted that: teachers who know most about the age-level characteristics of the students whom they teach do a better job of teaching, establish better relationships with children, and enjoy their teaching more than do their less informed colleagues (1962a, p.84). The current researcher, therefore, argues that understanding the creative growth at every development stage is necessary to reward creative behaviour successfully at each stage. For example, creative abilities decrease between the age of nine and ten because children at this stage of development are easily discouraged by adult pressure. Yet, they are able to use and discover ways for using their creative abilities. Creative behaviour at this stage can be rewarded by providing the child with some support when the task he/she is doing difficult, and helping the child to overcome the worry about what he/she can and cannot do by realizing that it is impossible to be good at everything. Teaching those children through open-ended activities which have no right or wrong answers probably will remove the fear of failing that "one" right answer.

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