GOALS FOR INCORPORATING A CREATIVITY PROGRAMME INTO TODAY'S SCHOOL EFFECTIVENESS PROGRAMME IN MAINSTREAM SCHOOLS

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Abstract

The current paper investigates factors such as aims, necessity, outcomes, ability, and the application of a creativity programme in comparison with today's school effectiveness programme, aiming to understand the quality and possibility of their integration. The emphasis of the creative psychological construct or the ability to apply original ideas to the solution of problems (Corsini, 2002) is on the thinking process, and is believed to be a main aim of education associated with self-actualisation in which we could realise our potential (Rogers, 1959). Effectiveness is the fullest possible attainment of the goals and objectives of the school, shown as examination results or test scores (Knight, 1993). Results of the reviewed literature indicate that since creativity constructs cover a wide range of cognitive, emotional, rational, creative and behavioural aspects of students, it is important that educators combine them in school effectiveness goals for school improvement.

Key words: *creativity, effectiveness, critical thinking, problem solving, self-regulation, creative teaching*

Introduction

Nowadays the system of education in the majority of countries, especially developed countries, is an important issue. Social needs, order and economics, together with rapid shift of technology, the issue of globalisation and the need for preparation for life and communication with other countries for the next decade or decades have brought to the attention of researchers the need to think about reconstruction of the education system by systematic and scientific review of an organisation. Therefore, two models of creativity programme and the effectiveness characteristics of today's school will be discussed in this article.

The study of school effectiveness shows that during the last few decades large amounts of research have been done which have supported the idea that individual schools have made pupils progress further than might be expected (Mortimore, 1991, cited Hopkins, 2003). They mainly focused on academic achievement in terms of basic skills in reading and mathematics, or examination results (Goodlad, 1984). As a result, a number of studies have been done in schools to investigate and understand the characteristics of school effectiveness with the aim of improving outcomes of today's schools. However, according to Stoll and Fink (1996) many of our effective schools would be considered good schools if this were 1965.

In contrast to this, in this era of unprecedented breakthroughs in technology and constant change in many aspects of life, educators are challenged more than ever before by the need to develop students who will be adaptable in fast-changing environments and this requires students to be creative with better thinking skills and learning abilities (Tan, 2000). In this position, creativity could be looked at as a principal aim of education in which educators wish to develop human minds to make people more creative.

The issues identified above are discussed in more detail below by evaluating how the goals of the creativity programme differ from those of school effectiveness. In this article, I outline the issues and ask if a creativity programme and school effectiveness programme can be combined and integrated. For this purpose, the questions below will be discussed: What are the aims, necessities, outcomes and quality of application of these programmes? What are the abilities of these programmes? To what extent could creativity programmes be incorporated into mainstream schools?

A literature review of the aims, necessity and outcomes

Rapid advances in communication and technology mean that the capacity to learn throughout life has become as important to human survival as access to food, water, and shelter. Since education is now crucial, it is a theme which demands not only research, but immediate action (Barber, 1993). Historically, school effectiveness is measured based on the students' outcomes. The focus of school effectiveness is concerned with the idea that schools do have major effects and make a difference (Reynolds and Creemers, 1990). Furthermore, the focus has been on academic achievement in terms of basic skills in reading and mathematics, or examination results (Goodlad, 1984).

In reviewing early school effectiveness studies in the US context, a wide range of studies shows that the effective schools movement was committed to the belief that children of the economically deprived areas could succeed and schools could help them succeed (Sammons et al., 1995), but, more recent research of school effectiveness, especially in the UK context, has moved toward a focus on achievement of all students, a concern with the concept of progress over time. One definition of an effective school is that it is where the focus is on students' outcomes and in particular

on the concept of the value added by the school (McPherson, 1992). For example, Mortimore (1991) has defined an effective school as one in which students progress further than might be expected.

In contrast to this, creativity in contemporary times has increasingly become an objective of interest from all sorts of different provenances because of the perceived influence of creative abilities on economic changes that are taking place in contemporary work (Karwowski et al., 2006). As our societies evolve at an ever faster pace, we are increasingly faced with new challenges in our daily lives. As a result, the ability to produce novel ideas to solve problems may be considered one of the most valuable human assets (Mouchiroud and Lubart, 2002). In this context, the psychological study of the development of creative abilities is a relevant research topic. Historically, creativity emphasised the quality of thinking. The studies by Torrance (1974) and Gainer (1990, cited Puccio and MurDock, 2001) emphasised the creative skills programme and Creative Problem Solving, which was developed by Osborn (1963).

Also Torrance (1974) saw creativity as a term which is associated with creative solutions and creative thinking. Since creative thinking is related to the process of creativity and cognitive skills, it is associated with solving a problem and the progression from a problem which needs a creative solution and becoming sensitive to problems.

Creative thinking is an essential life skill (Puccio and Murdock, 2001). Creativity could be seen as a principal aim of education in which educators wish to develop human minds to reach the quality of a creative mind. Educators have tried to define some concepts such as critical thinking and problem solving to increase the quality of thinking. Most psychologists and educators such as Piaget (1954), Bloom et al.

(1956), Rogers (1959), and Osborn (1963) considered creative thinking as an important aim of education. For example, creative thinking and creative problem solving enable us to cope with the challenges of life (Torrance, 1974), creative thinking skills promote well-being and good mental health and to survive and thrive in a complex world we need to think creatively (Puccio and Murdock, 2001). Creative thinking skills are associated with self-actualisation, in which we are able to actualise our potential (Rogers, 1959). Florida (2003) developed the theory of Creative Class (Puccio and Murdock, 2001).

There is a need in this complex world for creative thinking to survive. Creative thinking is a basic skill required in today's workplace. In light of these developments, a thinking programme was rationalised and conceived, aiming to enhance students' capacity to learn how to learn, to enhance problem solving abilities, and to enhance students' capacity to adapt and confront change (Tan, 2000). Creativity can be measured using important psychological tools known as Cognitive Ability Tests to find out the quality of thinking, such as the ability to attempt different possible ways of organising and planning future steps for the solution of a problem (flexibility), the ability to reason, and the identification of similarities (fluid intelligence).

What are the abilities of these programmes?

Focus on thinking process or focus on teaching material

An effective school needs professional leadership that has characteristics such as: firmness and strength of purpose, sharing responsibilities with others (Mortimore et al., 2001), and a leading professional (Rutter, 1983). Effective schools also have a shared vision and mission in goals (Mortimore et al., 2001), unity of purpose (Levin, 1994), and consistency of practice (Mortimore et al., 2001).

Another important ability of effective schools is having an effective learning environment, by having an orderly atmosphere (Lightfoot, 1983) and an attractive working environment (Rutter, 1983).

Moreover, an effective school has the ability to concentrate on teaching and learning by maximisation of learning time (Mortimore et al., 2001; Alexander, 1992), academic emphasis (Levin, 1994), and focus of outcomes (Moretomore et al. 2001). Also, effective schools have purposeful teaching (Mortimore, 1993), with well organised objectives (Levine, 1994), and structured lessons. Furthermore, effective schools are regarded as having high expectations (Sammons et al., 1995) and monitoring progress (Mortimore et al., 2001). Finally, in effective schools pupils have rights and responsibilities which raise pupil self-esteem (ibid), co-operation between home and schools, parent involvement (Coleman et al., 1993, cited Sammons et al., 1995), and staff development.

In comparison with this, while pupils' competencies in inventive thinking and problem solving is a rather neglected issue in traditional schooling (Sternberg and Lubart, 1996), creativity can be defined as a set of capacities enabling a person to behave in new and adaptive ways (Gardner, 1993; Lautrey and Lubart, 1998; Lubart, 1994, cited Mouchiroud and Lubart, 2002).

Creativity focuses on students and their thinking processes, which could help them to learn by developing cognition and metacognition. For example, in developmental studies in verbal and figural models of creativity, children are asked to solve problems concerning well-known objects, or to draw pictures based on various materials or the physical world (Mouchiroud and Lubart, 2002). Moreover, other studies on social problem solving among disadvantaged children showed student's thinking and teaching skills could have a significant effect on pro-social behaviour. In addition, it

has been suggested that social and cognitive abilities are linked in childhood and that family and cultural variables have an effect on children's social behaviour (Bronstein, 1986, cited Mouchiroud and Lubart, 2002). Furthermore, on a more everyday level, social creativity may be seen as contributing favourably to interpersonal problem solving as well as leadership, self-actualisation, and psychological health (Mouchiroud and Lubart, 2002). Also, the study by Vigotsky illustrated how social creativity could be improved by social interaction and fostering cognitive development (Vygotsky, 1978).

Creativity is often defined as the ability to produce work that is both novel (such as original, unexpected and imaginative work) and appropriate (such as useful, adaptive work) (Guilford, 1976; Simonto, 2000; Sternberg and Lubart, 1996, cited Barak and Mesika, 2006). Creative thinking is a key competency for the 21st century, indeed it has been viewed as the ultimate economic source and as essential for addressing complex individual and societal issues (Plucker et al., 2006), with the ability to offer new perspectives and generate novel and meaningful ideas, new questions and identify problems (Amabile, 1996; Feist, 1998; Sternberg and Lubart, 1999, cited Beghetto, 2006).

Creativity could help students to become more active and use their own thinking. A key aspect of creativity enhancement involves providing students with informative feedback, so they can develop their capacity to determine how and when to appropriately express their ideas (Plucker et al. , 2006).

In addition to activating students, it seems that creativity affects students in a self-regulated process. For example, Pintrich's (2000) framework for self-regulated learning represents an integrated dynamic concept of how thinking and learning can be developed (Moseley et al., 2004). Creative thinking is very important because it is

involved with intuition rather than inspiration (Fisher, 1995). As a result we need to think that creativity is a collection of attitudes and abilities leading creative persons to make creative, original and appropriate products, thoughts, ideas, or images.

In a creativity programme, the emphasis is on the meaningfulness of learning by creating new relationships with other elements. Based on Fisher's theory (1995), when the mental process leads to a new invention, solution, or synthesis in any area, a creative solution may use pre-existing objects or ideas, but creates a new relationship between the elements, so it can be defined as the ability to apply original ideas to the solution of problems. For example when students start to generate new ideas from their mind at an early age they become very effective learners in the future. In a creativity programme the student is given a chance to rely on her/his own work. It seems that most students rely on their parents and their teachers to teach them, but they have fewer opportunities to reflect on why they need to learn this sort of information. We can acquire numerous types of information and use them whenever we need to. However, we may not have any idea which information is appropriate, because students are rarely required to use thinking skills such as inference, deduction, analysis and evaluation.. As Fisher (1995) reminds us, imagination is more important than knowledge, because knowledge is limited, whereas imagination embraces the entire world.

In a creativity programme, methods of learning such as critical thinking and problem solving, inquiry, and metacognitive strategies can promote creative thinking among students. For example, (Puccio and Murdock 2001, p. 69) illustrated how Creative Problem Solving continues to be useful for practicing many skills identified with creative thinking. They also showed that working with CPS develops skills

which help people learn and develop cognition such as perceiving, conceiving and imagining, and metacognition such as knowledge of own cognitive activity

The process of Creative Problem solving or creative thinking includes three basic elements: problem defining, idea generation, and solution development and implementation with two basic operations, i.e., divergent thinking (involves a broad search for many diverse options) and convergent thinking (involves focused search and selection) (Osborn, 1963, cited Puccio, et al., 2001).

In addition, affective skills or feelings is other area which has been investigated by educators. According to (Bloom et al. 1956), cognitive skills are related to thinking about thinking and affective skills relate to focusing on feelings. To help students to become creative, educators identified some techniques in this process, for example, based on the theory of Torrance (1974), teachers can teach students to become sensitive to problems, search for solutions, make guesses or formulate hypotheses by deficiencies, gaps in knowledge and missing elements. According to (Puccio et al., 2001, p. 70), when we take together these three groups provide a multifaceted way of organising and simplifying the diverse creative thinking skills used in applying the Creative Problem Solving process.

Application

Could we combine a creativity programme with a school programme?

We can improve some of the characteristics of schools in order to make them effective. According to Sammons et al. (1995), effectiveness studies have focused exclusively on students' outcomes in areas such as reading, mathematics or public examination results. However, we have less evidence about school and classroom processes that are important in determining schools' success in promoting social or

affective outcomes such as behaviour, attendance, attitudes and self-esteem (Reynolds, 1996, cited Sammons et al., 1995). However, merely emphasising some limited factors is not enough and further research on the ways effective schools influence social and affective outcomes, including student motivation and commitment to school would be desirable.

In contrast to this, in a creativity programme there are numerous theoretical approaches around the problem of creative education in schools, especially those that concentrate on shaping creative abilities, such as developing creative skills and problem solving abilities, shaping creative attitudes and education for creativity. One important programme named the Problem Based Learning approach, was developed as Problem-Based Creativity Learning (PBCL), advocated by Boud and Feletti (1996), and then used by Tan (2000). A problem-based learning approach was particular used in divergent-creative thinking and development of creativity.

Another thinking programme known as the Cognitive Modifiability Intervention (CMI), was based on the theory of structural cognitive modifiability (Feuerstein, 1990, 1998; Sternberg, 1985, 1986) and was conceived to enhance problem solving abilities and students' capacity to adapt and confront change (Tan, 2000). This programme consisted of lessons, prepared for 30 weeks, under four major clusters of cognitive domains, namely, the Affective Motivation Domain, the Systematic-Strategic Thinking cluster, the Analytical Inferential Thinking cluster and the Divergent-Creative. Moreover, another approach known as the Geneplore Model provides useful examples of the cognitive process, structures and properties by Isaak and Just (1995, p. 5). It focuses on the importance of "releasing unwarranted constraints".

There are also some important tools for measuring creativity such as the Cognitive Ability Test (CAT), which provides a set of measures of the students' ability to use and manipulate abstract and symbolic relationships. The emphasis of the CAT is on the discovery of relationships and discovery of flexibility of thinking and fluid intelligence and fluency. For example, the study by Tan (2000) reveals that students can benefit from a PBCL programme which is aimed at enhancing creativity. In this case the creative cognitive functions such as associative thinking, analogy, imagery, taking multiple perspectives, flexibility, fluency, originality, refraining from premature closure and elaboration are important in developing the ability to relate to learning and problem solving. Another example from a study by Tan (2000) showed PBCL as measured by CAT produces statistically significant gains in creativity, which is good news for educators in the challenge to develop students to be flexible and creative thinkers.

Another important approach known as the Creative Personality Scale is offered as Hong Kong's current education reforms. In Hong Kong education, the use and understanding of creativity has recently been defined by the Hong Kong Curriculum Development Council (CDC) as "the ability to generate original ideas and solve problems appropriate to the contexts" (Forrester and Hui, 2006, p. 2). This is a combination of Guilford's (1950) idea of originality and Amabile's (1983) idea of appropriateness. The Curriculum Development Council (CDC) in Hong Kong introduced Learning to Learn followed by teachers' curriculum guides for the five key-learning areas of Chinese and English Language, Arts, Mathematics and Science (ibid). These guides provide suggestions of how teachers can reform class time to develop students' specific creative abilities, attitudes, attributes, how to apply the Creative Problem Solving model and creative thinking strategies (Forrester and Hui,

2006), how to empower teachers as decision makers and how to modify their classroom behaviour by providing more instructions to pupils, less frequent use of discipline, raising more questions and providing more convergent and divergent tasks by seeking to empower decision making (ibid).

In addition, for academically weaker students, "education" may also be skill-oriented, for example, the use of various creativity strategies, such as brainstorming in problem identification or creative and critical thinking in computer problems (Hung, 2002, cited Forrester and Hui, 2006). One important programme known as Classroom Discussion provides an ideal forum for students to develop their creative thinking skills (Beghetto, 2006) so teachers can support students' creative thinking by encouraging and rewarding students' novel ideas, unique perspectives, and creative connections (Sternberg and Grigorenko, 2004, cited Beghetto, 2006)

There are also some important programmes for teachers. One programme to encourage teachers to develop their competence, known as Teacher Educators, can also help prospective teachers to develop their competence in supporting students' creative thinking, developing strategies for teaching students how to self-regulate and develop creative expression during classroom discussions (Beghetto, 2006). For example, educators help teachers consider how their beliefs about the value of novel student responses may influence their subsequent instructional practices and, ultimately, creative expression, models and images of classroom discussion, instead of emphasising recitation of the correct answer (Parker and Hess, 2001, cited Beghetto, 2006). They can apply the combination of uniqueness and relevant response within a classroom discussion rather than a simple recitation of facts and see how they might react to students who offer a wide range of responses during classroom discussions.

To equip students with this learning capacity requires a more comprehensive view of education reflected in valuing creativity as a generic skill. For example, based on learning approach, creative teacher characteristics as who has comprehensive and explicit guidance that encompasses abilities, attitudes, attributes and observable behavioural outcomes. For example, teachers now need to think beyond the traditional boundaries of promoting "subject-knowledge" towards enhancing each individual student's abilities, attitudes, attributes and observable behaviour in order to become an effective "facilitator of learning" and focus on the field of interaction between teachers and students.

Discussion and conclusion

As we understood from the literature, many efforts of school improvement over the past few decades have failed, or suffered because of a limited view of educational effectiveness, a lack of focus on the important purposes and aims of schooling, pupil outcomes, and an inability to show results. The aim of this article was to emphasize the importance of creativity in today's schools. This literature review could be one step towards understanding the necessity of including a creativity programme in a mainstream school programme.

A fresh look at the aims, goals, necessity, outcomes and application of the education system and the curriculum simply shows us the necessity of fundamental change in the way education is now going. It is now obvious that the system of education must guide students to not only the best method of knowledge-gathering by the students, but also lead them to think about new things. Also all people in the world would like to be creative, and the education system needs to prepare people to use their potential in facing numerous questions in real life.

Focusing on academic subjects, maximising school learning time, and using these to define an effective school would not help the new generation if they lack the skill of judgement. They also need to generate novel methods rather than copying and quoting knowledge.

Moreover, emphasis on the rigorous assessment of students' outcomes and monitoring them is not very useful when the students are not equipped with the skill of self-regulation. As the ethos of the effective school is determined by the vision, values and goals of the staff in an orderly atmosphere, the climate needs to be evaluated as to whether or not the working environment is attractive. Today's students need to cope with the challenges of life in the complex world instead of just being prepared for society's needs, and economic purposes. Although current effective school studies consider pupils' rights and responsibilities, it seems they have failed to follow current psychological studies about thinking and its processes, as the teachers and students need to learn skills which help them to be masters of intuition rather than inspiration.

They also need to learn how to learn by understanding the value of meaningfulness of learning which leads them to generate original ideas rather than reproducing taught material. In this situation the teachers must help students to focus on imagination rather than focus on memorisation. Indeed, how we could change the aim of education with regards to the outcomes is now a very controversial subject and the answer is not too difficult, as it implies that the system of education needs to focus on an ideal critical thinker rather academic performance. It must also focus on the creativity process rather than value added concept, focus on flexibility rather than an orderly atmosphere, and focus on inventive thinking rather than teaching and learning material.

In schools, effective teachers have been identified as those who teach the class as a whole, present information, keep teaching sessions task-oriented, promote subject knowledge and show their high expectations by giving more homework, whereas, creative teachers equip students and encourage more discussion among them, lead them to become self-regulated, encourage novel ideas and responses, enhance the individual's abilities and attitudes. They are facilitators and focus on interactions rather than the transfer of knowledge.

In this situation there is a necessity for a system of education to design a new learning environment and curricula that conduct and equip firstly the motivated teachers by reforming educational programmes based on creativity programmes which promote learning to learn for life. The literature has illustrated the possibility of teaching creativity which contain identifiable concepts, definition, and principles that can be simplified, coordinated and measured.

Therefore, in order to put a creativity programme into the schools, we need to change firstly our understanding of the aims, necessities, outcomes, abilities and application of today's educational goals and ambitions. Everyone must be equipped with a basic level of learning capacity in order that they can learn throughout their lives, become critical thinkers, novel designers, problem solvers, and good decision makers.

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