CREATIVITY AS A SPARK TO INNOVATION AND ENTRPRENEURSHIP

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MSC IN INNOVATION, KNOWLEDGE AND ENTREPRENEURIAL DYNAMICS

MASTER THESIS

Contents

1. Introduction

Introduction to the Problem

Both the European Commission and academic research admit the vital value of creativity for education nowadays. The wide range of nuances attributed to the word "creativity" is embedded in a large streak of assumptions and implications about and of it. The meaning of creativity can be correlated with the artistic sphere and with the creative industries- such as fashion, theatre and film industry, but it can also be associated with the achievements of eminent people, such as Bill Gates or Elon Musk, or even with the imaginative and original play of young children. Creative learning encompasses components of inquisitiveness, analysis, imagination, all of these accompanied by critical and strategic thinking. Any attempt at analyzing the creative processes cannot avoid mapping stakeholders' connotations and of course, the tacit understanding of creativity. The economic downturn in the early 21st Century has inspired and determined new approaches to education. Both creativity and innovation have been placed on many nations 'agenda for future progress in both the economy and education (Brazell, 2009; Tucker, 2011).

Torrance Tests of Creative Thinking pointed out the fact that while IQ scores amongst students have increased for the last 20 years, creative thinking scores have significantly decreased since 1990 (Kim, 2011). Nowadays, when creativity and innovation are being explored as channels in which education can positively raise its relationship and outcomes with and for the national economy (National Center on Education and the Economy, President's Committee on the Arts and Humanities, 2011) this drop is extremely significant and highlights the need for research on creativity in educational environments of all kind.

Creativity has initially been associated with expressive arts (Frey, 2002; Ivcevic & Mayer, 2009; Sharp & Le Metais, 2000). In a study of the expressive arts in schools, creativity has been connected to increased learning behaviors which have a positive impact on both classroom learning, confidence and motivation (Catterall, Chapleau & Iwanaga, 1999; DeMoss & Morris, 2002; Fiske, 1999; Israel, Ingram & Reidel, 2009). Despite this, it is important to understand that creativity's outcomes and developments go beyond the arts 'sphere. Many of those people who are considered highly creative -Albert Einstein, Charles Darwin, or Marie Curie, for example, were considered creative, even though they were not connected in any way with the expressive arts. In return, they were considered creative because they were able to imagine possibilities (Gardner, 1993; Gruber, 1988; Runco, 1999).

As schools are being pressured by the constant fast-changing social, political and economic environment to consider creativity as a vital skill for the 21st Century, the present research is valuable. Still, schools are very dynamic and different systems. It is important to point out that what may frame the study of creativity outside the bounds of schools may not be as relevant when creativity is studied within schools. When studying creativity, schools should consider aspects particular to education since practical curricular information will be needed on its integration and application. A creative pedagogy is emerging at the moment, and it examines the above-mentioned integration. This new pedagogy implies the examination of creative teaching, teaching for creativity and creative learning as an arbor for the study and the practice of creativity in schools (Lin, 2011, Robinson, 1999).

The actual descriptive case study addresses the need for additional research on creativity in school environments. Constructs and practices that can impact the use and integration of creativity in schools (as a part of the daily school activities) are described in the present study. The present research study can be added to the limited research available as well as forward knowledge on the practice of creativity in schools. The learning and teaching behaviors revealed during the development of the study can be examined more extensively in future research of integration of creativity in the curriculum as a directive of school boards or Ministries of Education, where applicable. Likewise, a picture of how integration of creativity in the school curricula reveals itself and how it influences learning behaviors can also contribute for an additional foundation for further research in the curriculum area and education as a whole.

Background, Context, and Theoretical Framework of the Study

Today, there is an increased worry as to how education may not be correctly preparing students with the skills required for the careers and workforce of the 21st century (Brazell, 2009; Tucker, 2011). The interest and the efforts could have been prompted by international competiveness in the bosom of the economic downturn of 2008 (Brazell, 2009; Oke, Munshi & Walumbwa, 2009; Van Den Broeck, Cools, & Maenhout, 2008). There is a push for education to incorporate both innovation and entrepreneurship into school curricula (McNeil, 2011; Wang, 2011). Innovation and entrepreneurship, however, require the underlying essential element of creativity (Bilton, 2007; Bennett, 2006; Paulus & Horth, 2002; Ward, 2004).

The demand for the development of creativity and innovation was beginning to create increased interest in Europe in the year 2000. The European Council considered creativity's role when it challenged its member countries with a strategic goal to become the most competitive dynamic economy in the world (Ferrari, Mutka, & Punie, 2010). The European Council declared 2009 as the Year of Creativity and set as its goal to raise awareness of the social, economic, and personal importance of creativity as well as to promote best practices and research policy debates related to creativity (European Council, 2009). This way, the business the industry, and the education worlds, were challenged to regard creative practices as becoming increasingly vital for their success.

Despite the latest general increased interest in creativity, there are some indicators that creativity amongst students is on the downturn. Latterly a 272,599 sample of the Torrance Tests of Creative Thinking pointed out that while IQ scores amongst students have grown for the last two decades, creative thinking scores have reduced meaningfully since 1990, showing a more significant descent between kinder and third grade which was not apparent earlier (Kim, 2011). This loss of creativity among students constitutes a problem as it may probably daunt or inhibit the development of innovation and entrepreneurship skills in schools and society since innovation necessitates the component of creativity. This damage is significant for education as schools traditionally have equipped students to join the workforce, that workforce now requires creativity (McNeil, 2011; Wang, 2011).

Exploration on creativity has been carried out mainly in the field of psychology. In the middle of the 20th century, Guilford (1950) challenged the ground of psychology on the absence of research on the matter of creativity and therefore developed the Structure of Intellect Model in which he proclaimed that creativity was connected to the divergent thinking aspect of intellect (Gowan, 1972). Torrance (1965, 1970, 1995) built on Guilford's research and developed the Torrance Tests for Creative Thinking (TTCT) which are widely used nowadays to measure

creativity. The early research and work led by Guilford and Torrance started an amazing awareness on creativity. The volume of research led Rhodes (1960) to categorize some of the early research into classes of person, product, process, and press. These classes are still widely used currently to organize the widespread literature on creativity (Kozbelt, Beghetti & Runco, 2010; Runco & Pagani, 2011). The person category observed individuals as well as behavior traits often linked with creativity. Csikszentmihalyi (1990), Gardner (1993) and Gruber (1984) inspected and recognized many individual personality traits associated with creativity. Products or what is produced through creativity is considered a pertinent feature of the nowadays definition of creativity. Associations of creativity with the product are supposed to lie in the production of something appropriate, relevant and useful (Amabile, 2013; Runco, 1999; Sternberg, 2006). Rhodes also considered process as one of his classes of creativity. Incubation (Wallas, 1926), divergent thinking (Baer, 2011; Batey & Furnham, 2008; Runco, 1999), problem finding (Csikszentmihalyi & Getzels, 1970; Runco & Dow, 1999), problem solving (Puccio, Wheeler & Cassandro, 2004; Scott, Leritz & Mumford, 2004) and lateral thinking (DeBono, 1985) have all been recognized as significant processes correlated to creativity. Press is the latter of Rhodes' classifications and refers to the setting where creativity develops. Progressively, the environment has been emphasized as a significant aspect in nurturing creativity. It is now acknowledged that given the suitable experiences, creativity can be developed in every person (Amabile, 2013; Loveless, 2002; Sternberg, Jarvin & Grigorenko, 2009; Torrance, 1972). Other concepts such as big "C" and small "c" creativity (Craft, 2001; Kaufman & Beghetto, 2009; Fasko, 2006) and theories such as the Investment Theory (Sternberg & Lubart, 1995) and the Componential Theory (Amabile, 2013), discussed later, constitute other concepts and theories interrelated to the development of creativity.

Creativity has conventionally been connected with the expressive arts. In studies conducted in the area of the expressive arts, a positive correlation between (a) student achievement, (b) self-esteem, (c) motivation, (d) staying on task, and (e) problem solving has been found (Asbury, 2008; DeMoss & Morris; Catterall et al., 1999; Fiske; Ingram & Reidel, 2003; Nelson, 2001; Noblit, 2009). However, creativity is not just a feature of the expressive arts. Experts concur that creativity's spirit lies in the construction of something new or novel through contributing personal and environmental influences that bring about those products (Amabile, 1983, 2013; Flaherty, 2005; Mumford, 2003; Sternberg & Lubart, 1999; Solomon, Powell, & Gardner, 1999).

The purpose of this study was to define some of the contributing personal and environmental factors interconnected with creativity as observed in the natural context and environment of a first-grade class at Elementary School "V" located in the city of Targoviste, Dambovita County, Romania. Contextual personal and environmental factors associated to the creative experience also provide the pilings for the theoretical foundation of this study. The ante mentioned concepts

outlined the study and the observations but it has to be mentioned that educational lens are framing the present study. The educational theoretical lens of constructivism was used in this descriptive case study on creativity, focusing on Vygotsky's (1978) concept of mediation and Dewey's (1910, 1934, 1938) concept of reflection and the classroom as laboratory. While there is no overall accepted theory of creativity, many learning behaviors associated to creative learning such as reflection, the need for feedback for improvement, interactivity, contextual use, problem solving, and application of learning can be associated with the constructivist theory or constructivism (Truman, 2011). Piaget (1954) stressed on the importance of previous experience in the creation of new knowledge. Lev Vygotsky (1978) positioned human interaction and mediation in a dominant role in the construction of knowledge. Dewey emphasized on the need for reflection of the experience to construct knowledge (Dewey, 1910, 1934). Other concepts frequently connected with constructivism are the contextual nature of learning, personal, and social engagement in learning, and finding meaning in learning (Schunk, 2004). The consideration of activity, experience, mediation, reflection, and contextual nature is evident in the following study.

Statement of the Problem

Creativity has been recognized as a required skill for the 21st Century. The identification of this necessary skill goes yonder creativity's past associations with the expressive arts and ventures into its new association with new and novel products (Amabile, 1983, 2012; Flaherty, 2005; Mumford, 2003; Sternberg & Lubart, 1999; Solomon, Powell, & Gardner, 1999). The expanded meaning of creativity and the awareness of the requirement to be creative in new areas such as math, science and business, places pressure on all the educational systems to also focus on the implementation of creativity in all educational institutions, from elementary schools, to universities.

Nevertheless, few models exist where creativity is incorporated separately of the expressive arts. However, even when creativity is addressed within the expressive arts, economic considerations, and other academic concerns, often precipitate diminishing expressive arts programs. Consequently, the development of creativity as a recognized skill for the new era may fall upon other spheres of study and learning. It is not known currently how creativity, integrated and implemented as a process through a curriculum, but separately of the expressive arts, can impact learning behaviors and the construction of learning significant artifacts because insufficient models exist that attempt to completely assimilate creativity as a whole curriculum intervention separately of the expressive arts.

Rationale, Relevance, and Significance for the Study

Rationale for the Proposed Study

This case study described how one teacher from Elementary School "V" located in the city of Targoviste, Dambovita County, Romania, understands creativity and is able to train her students into it. In a time where creativity must find its way of integration into educational training, the description of how creativity is understood and incorporated at the moment into educational institutions is highly relevant.

Historically, creativity has been narrowly associated with the expressive arts but as a skill for the new century creativity is regarded not only as a mean of expression but as a method by which useful and novel products can develop (Amabile, 2012; Flaherty, 2005; Mumford, 2003; Sternberg & Lubart; Solomon et al.,1999). Furthermore, creativity allows innovation to flourish (Bilton, 2007; Bennett, 2006; Paulus & Horth, 2002; Ward, 2004). The necessity for creativity and innovative thinking is rapidly becoming a request of multiple arenas such as math and science (Lonergan, 2007).

One of the roles of education is to prepare scholars for the work place and future occupations. Regardless of the request for creative and innovative thinking in schools, few models exist which create a picture of how the use of creativity might be assimilated and represented in classrooms, mainly separately of the expressive arts. The current investigation and portrayal provided the context for the chance to create a model for integrating creativity into school prospectuses.

Relevance of the Proposed Study

Research on creativity in schools has become decidedly relevant. In addition to its identification as a required skill for the new era, creativity is being studied and examined in and out of schools in many nations (Robinson, 1999, Lin, 2011). Currently in the United States Massachusetts, California, and Oklahoma are considering creativity indexes for schools (Robelin, 2012). These factors contribute to the importance of creativity in education but in particular to instruction and curriculum as it is over the curriculum that education is made instrumental (Tanner & Tanner, 2007). Curriculum is also made active by the application of theory to practice. Both Dewey and Vygotsky have provided foundational thinking and practices that can surpass the creative experience into complete eloquent learning experiences. Any curricular practice related to creativity, mediation, reflection, or other constructs of knowledge exposed through this study will advance learning over-all. Furthermore, as the concept of enduring ideas (Wiggins &

McTighe, 2005) remains an integrated part of the curricular scenery, creativity may become one of the obligatory or desired enduring ideas.

Significance of the Proposed Study

The study of creativity has come principally from the field of psychology, and it has provided abundant and valuable concepts connected to creativity. In the expansion of these concepts, many studies have targeted specific aspects for research such as divergent thinking or domain specificity. Presently, however, there is some universal agreement that creativity cannot be studied in segregation since creativity's display is the result of many features or characteristics. There is a present trend that advocates for a componential (Amabile, 2012), a confluence approach (Sternberg, 2006) or a systems approach (Csikszentmihalyi, 1990), all which take into consideration the many sides and the complexity of creativity.

Studying creativity in education is even more multifaceted since the complexity of creativity is doubled by the complexity and the dynamic landscape of schools. Europe, the United States, and other countries can illustrate the merits of creativity and recognize the need for its integration in school arrangements, but the practice of creativity outside of the expressive arts is not as effortlessly found. Complexity can be best portrayed by qualitative studies since qualitative studies endeavor to develop a multifaceted picture of a subject or study topic (Creswell, 2009, p. 176).

2. Literature review

Introduction to the Literature Review

The concept of creativity has evolved from ancient associations of being inspired by the gods (Dacey, 1999) to its current association with the production of novel and useful products (Amabile, 1983, 2012; Flaherty, 2005; Mumford, 2003; Sternberg & Lubart, 1999; Solomon, Powell, & Gardner, 1999). As a topic for study, however, it has only been in the last century that creativity been dynamically researched. Most of that research has been led in the field of psychology (Craft, 2000; Fasko, 2001).

Past interest on creativity was manifested by European nations. In the year 2000, the European Council considered creativity's role when it challenged its member countries with a strategic goal to become the most competitive dynamic economy in the world (Ferrari, Mutka, & Punie, 2010). One of the consequences of the challenge from the European Council has been supplementary development and association of creativity with learning and thinking (Lin, 2011; Robinson, 1999). Association with creativity in schools is often restricted to the expressive arts (Frey, 2002; Ivcevic & Mayer, 2009; Sharp & Le Metais, 2000). Within the expressive arts, studies have confirmed that there is a positive association between student achievement, self-esteem, motivation, staying on task and problem solving (Asbury, 2008; Catterall et al., 1999; DeMoss & Morris, 2002; Fiske, 2009; Ingram & Reidel, 2003; Israel, 2009; Nelson, 2001; Noblit, 2009). The association between creativity, learning, and the arts is promising. Nevertheless, the challenge of creative thinking and learning is not only in relation to the arts but in its incorporation into other fields such as math and science (Lonergan, 2007; National Academy of Sciences, 2003; National Science Foundation, 2006). The need to assimilate creativity into other areas of learning is becoming a reality, making the study of creativity in schools or creative learning particularly relevant research.

Creativity has been recognized as complex because one characteristic or dimension cannot completely classify its potential or possibilities (Amabile, 1989; Csikszentmihalyi, 1990; Gardner, 1993; Gruber, 1988; Sternberg & Lubart, 1995). The purpose of this study was to define some of that complexity with a qualitative case study that defined the capacities of one elementary school teacher from Romania to integrate, stimulate, train and develop creativity. Additionally, two other teachers have been interviewed along with the observed one, during a period of one week. Complexity can be best depicted by qualitative studies since qualitative studies attempt to grow a complex picture of a matter or study subject (Creswell, 2009, p. 176). Adding to the depiction of complexity, a qualitative case study can cover that "the issue is not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomena to be revealed and understood" (Baxter & Jack, 2008, p. 544). Traditionally, case studies have been used in the study of creativity (Csikszentmihalyi, 1990; Gardner, 1993; Gruber. 1974). These studies have exposed many personal features and some social undercurrents connected to creativity. Group case studies linked to creativity are rare and classroom case studies are fewer still.

Creativity related to learning is an emergent ground and many of the notions connected to creative learning will need to borrow from the arena of psychology and combine with already known concepts, practices, and theories in education. The rise of concepts and ideas are a characteristic of qualitative research (Creswell, 2009). Because of this merger and emergence of concepts, a wide-ranging theoretical lens was essential to frame observations. The following literature review reflects the fusion of concepts and broadness of subjects from the field of psychology and education as well as the broad range of concepts needed for encompassing explanations in qualitative studies.

Review of the Research Literature and Methodological Literature

Early Concepts of Creativity

The concept of creativity has had a long history of definitions and redefinitions (Cropley, 1999; Dacey, 1999). In western culture, the idea of creativity shifted from the idea of being inspired by the gods in antique times to the idea of hereditary traits in the time of the Renaissance (Dacey, 1999). Later in the 20th century, definitions advanced into the likelihood of creativity as a result of biological, psychological and social forces. According to Dacey, Sir Francis Galton, an English eugenicist, meteorologist, evolutionist, geographer, anthropologist, and statistician, is credited with leading the earliest scientific work on creativity by examining and documenting his thoughts and his own creative process. In the 20th century ideas about creativity lifted from aesthetics, a discipline that "attempts to arrive at a broad and encompassing view of all the arts" (Dudek, 1999 p. 100) to the development of products (Cropley, 1999). The development of products soon gave way to seeing the novelty of those products that then progressed into seeing the practicality of those products (Cropley). Recent experts agree that creativity's core lies in the construction of something new or novel and useful (Amabile, 1983, 2012; Flaherty, 2005; S Mumford, 2003; Sternberg & Lubart, 1999; Solomon et al., 1999).

Studies on creativity have been widespread in the field of psychology. Guilford is credited by various with bringing creativity to the vanguard for research (Fasko, 2001; Kaufman & Beghetto, 2009; Sternberg, 1999), growth in interest and research on creativity (Hennessey & Amabile, 2010; Lemons, 2011; Zeng, Proctor & Salvendey, 2011). Guilford, sometimes considered the father of creativity (Johnson, 1999; Sternberg & Grigorenko, 2007), considered that creativity was an aspect of intelligence.

Guilford (1967) thought that **divergent thinking**, or divergent production, was the feature of the intellect most connected to creativity. Divergent thinking is "cognition that leads in various directions" (Runco, 1999, p. 577). Guilford developed a test for divergent thinking in 1967, which used a scoring mechanism grounded on four criteria:
(a) fluency, the amount of relevant ideas;
(b) flexibility, the amount of classes to which the ideas can be assigned;
(c) originality, the quantity of statistically uncommon answers; and

(d) elaboration, the amount of details in a response.

Guilford's association of creativity with divergent thinking has had a long-lasting influence. Divergent thinking tests continue to be used as a partial measurement for creative thinking and potential creative thinking (Baer, 2011; Batey & Furnham; 2008, Lemons, 2011; Runco, 2004). According to some studies divergent thinking can be developed as early as preschool and kindergarten through prompts and open ended questioning (Cliatt, Shaw, & Sherwood, 1980; Thomas & Halcomb, 1981). Divergent thinking is one of the processes promoted as practice by the class observed in this study and is a source of theoretical orientation in remarks of the same.

Testing for Creativity

If Guilford was considered the father of creativity in the United States, then Torrance (1962, 1965, 1972, 1988) was creativity's best and well known advocate. Torrance continued in Guilford's footpaths and profoundly devoted time in creating tests for creativity. Torrance developed the Torrance Test for Creative Thinking (TTCT), which continued to use Guilford's scoring mechanism of fluency, flexibility, and elaboration in its verbal and figural portions of the test. The TTCT is the best known and widely used tests for creativity (Almeida, Prieto, Ferrando, Oliviera, & Ferrandiz, 2008, Kaufman & Baer, 2006, Kim, 2006, Zeng et al., 2011). Torrance's original intention in creating the tests was to better understand (a) the functioning and development of the mind, (b) establish foundations for individualized instruction, (c) evaluate the effectiveness of educational programs, materials, and procedures, and (d) to provide a source of insight for psychotherapeutic programs (Kim, 2006). The tests are frequently linked with identifying gifted children (Kim, 2006). Although Torrance (1962, 1963) addressed some features of creative giftedness, his intention in creating the tests was not to use the results as attributable behaviors to individuals but to use them as profiles of strength to cultivate creativity (Kim, 2006; Zeng et al., 2011). Torrance himself specified that the tests were not indicators of creativity itself but the potential for creativity (Kim, 2006). The general acceptance of the TTCT's may be due to some measure of reliability (Herbert, Crammond & Neumeister, 2002, Lemons, 2011; Isaksen & Puccio, 1988; Zeng et al., 2011). Various studies using the TTCT reported that the TTCT is a good predictor of creative achievement (Herbert, 2002; Plucker, 1999; Torrance, 1981).

Regardless of its popularity, the TTCT has had its share of disapproval. Kim (2006a) delineated some of doubts to results related to the TTCT (p. 461). Most of the studies cited by Kim have determined that there are strong connections between one or all of dimensions of creativity in the TTCT and that possibly these might not be revealing of potential creativity at all. Villalba (2008) also postulated the possibility that the order in which items on the tests were conducted and the conditions in which the tests are managed could produce different outcomes. Moreover, the raters for the tests could differ in their discernment of performance and finally factor analysis. Amabile (1989) cautioned that tests for creativity are often led in test like surroundings making it stressful because students often view tests as having characteristically right and wrong

answers. While the present study is not relying on these tests, some of the notions related to the TTCT such as (a) fluency, (b) elaboration, (c) originality, and (d) abstract thinking have been included as observational and interview constructs.

Theoretical Frameworks of Creativity

Torrance's (1962, 1965, 1972, 1988) work on creativity was a lifelong effort. While his work on tests is well known he also worked in other zones interrelated with creativity. Torrance developed the Future Problem Solving Program that "stimulates critical and creative thinking skills, encourages students to develop a vision for the future, and prepares students for leadership roles" (FPSPI, n.d). **Problem solving** is nowadays considered one of the relevant processes related to creative learning (Mayer 1999; Weisberg, 2006).

Torrance is also recognized for the Incubation Model of Teaching (Herbert et al., 2002; Torrance, 1979, 1993; Torrance & Safter, 1990). **Incubation** was not a novel concept in the study of creativity and Torrance acknowledged Wallas (1926) as an early advocate of the idea of incubation (Torrance, 1993). Torrance's Incubation Model differs from Wallas's in that it is a practice and application model for educators to endorse creativity or to allow creativity to flourish. He delineated three stages. The first stage, also known as the warm up stage, heightened anticipation through giving determination, heighted expectations, and stimulated curiosity or produced the desire to know. The second stage comprised deepening expectations which could be accomplished by looking twice at problems, by means of sensorial information, infer, and modify or use other strategies to dig profounder. The third stage required moving the activity beyond the classroom and searching for different solutions. In the last stage participants are given the chance to explore alternatives.

Interest in creativity led by Guilford (1950) produced a surprising number of definitions of creativity. By 1960, 50 to 60 separate definitions of creativity existed (Repucci, 1960). An early struggle to unify some of the disparate definitions of creativity was made by Rhodes (1961). He outlined **person, process, product, and press, commonly known as the 4 Ps**, as components of the creative process. Person talked about identifiable features of the creative person; process associated to creativity studies that there may be processes that are more frequently used by creative individuals; product is a result of the creative process, and press is the environment's effect on creativity. Although not completely inclusive, Rhode's 4 Ps are ways in which many researchers still classify and observe research related to creativity (Kozbelt, Beghetti & Runco, 2010; Runco & Pagani, 2011).

PERSON

Rhode's first P "person" can classify some creativity research connected to observing creative individuals and what may be considered as types or personal qualities. Numerous of these studies have used case study as their method for research.

Howard Gardner (1993) used case studies of seven recognized creative geniuses to determine some commonalities. In examining the lives of many creative individuals, he determined that creative people are often marked by "an anomalous pattern of intelligences, by a tension between intellectual and personality style, and by a striking lack of fit between personality and domain, intelligence and field and biological constitution and choice of career" (1988, p. 320). This lack of fit among personality and domain, intelligence and field became the stimulus to move in a new direction.

Csikszentmihalyi (1990) also developed his concept of "flow" investigating cases related to creativity by interviewing creative people and their experiences. He determined that "flow" shaped a condition in which there was strong focused concentration, where the individual functioned at full capacity and there was an active equilibrium. The force of the experience, whether work or play related, often made the person involved ignorant of time and even needs such as eating or resting.

Other "person" traits are identified by other theorists. Amabile (1989) found that creative people exhibited common personality traits such as: (a) self-discipline, perseverance, (b) independence, (c) tolerance for unclear situations, (d) nonconformity to stereotypes, (e) ability to wait for rewards, (f) self-motivation, and (g) willingness to take risks (p. 49).

The mad genius concept (Durrenberger, 1999) found that the study of and protuberant creative people characters' traits or attributes can disclose some associations with mental illness. The dark side of creativity highpoints the unethical side of creativity (McLaren, 1999) where creativity is used to extinguish or develop destructive objects or practices.

PROCESS

Rhodes (1961) also considered process as one of his components of creativity. A process that has been most connected to creativity is **divergent thinking** (Baer, 2011; Batey & Furnham, 2008; Runco, 1999), introduced early in the study of creativity by Guilford. The divergent thinking process became so widespread that by 1980, as many as 70 separate studies related to associations between creativity and divergent thinking existed (Barron & Harrington, 1981, p. 10) Today, associations and studies related to divergent thinking are abundant (Baer, 2011; Batey & Furnham, 2008).

Problem finding is another process related to creativity (Runco & Dow, 1999). Problem finding was first presented by Guilford and Torrance as sensitivity to or sensing problems and precludes problem solving. Problem posing is an umbrella term that comprises and occasionally is swapped

with problem discovery, problem definition or problem construction (Runco & Dow, 1999). Some research has specified that problem finding can forecast creativity (Hu, Shi, Want, & Adey, 2010; Runco & Okuda, 1988; Wakefield, 1985). Moreover, Csikszentmihalyi and Getzels (1970) found that problem finding or discovery-oriented behaviors foresee originality in artwork. In a follow up to a 1970 problem finding study Csikszentmihalyi found that artists who were superior at problem finding in the original experiment proved equal productivity in the real world 18 years later (Csikszentmihaly, 1990). **Problem solving**, the logical development to problem finding, is also regarded as another process relevant to creativity (Mayer, 1999; Weisberg, 2006). Mayer (1999) defined problem solving as "cognitive processing aimed at figuring out how to move from a given state to a goal state when no obvious solution method is available to the problem solver" (Mayer, 1999, p. 437). Both Guilford (1977) and Torrance (1965, 1972) considered the aspect of problem solving in creativity. Torrance's creativity definition of "sensing difficulties, problems, gaps in information, missing elements; making guesses or formulating hypothesis about these deficiencies, testing these guesses and possibly revising and retesting them and communicating the results" (Torrance, 1965, p. 8) resembled a problem-solving process. Torrance's later work in the Future Problem Solving Program exposed his predisposition toward problem solving as an effective procedure for developing creativity. An early study concerning problem solving took place at Buffalo State College in New York (Noller & Parnes, 1972) which inspected the effect of creative problem solving of certain students for four semesters and compared the findings to a control group. The study revealed that the students in the studies outperformed others in the control group on measures of divergent thinking, convergent thinking and cognition. Creative problem solving is one of the areas most researched in creativity (Puccio, Wheeler, & Cassandro, 2004) and is viewed as the most effective method for improving creativity skills (Scott, Leritz & Mumford, 2004).

Other relevant creativity processes include Wallas's (1926) **incubation** model that comprises the above-mentioned four stages of preparation, incubation, illumination, and verification. DeBono (1985) proposed lateral thinking as a process connected to creativity. Lateral thinking is thinking that diverges from vertical thinking that is sometimes driven by sequential or rigid preconceptions frequently accepted in culture. Amabile (2013) proposed a componential model of identified domain and creative specific skills, motivation and a positive social setting as desirable aspects for the expansion of creativity.

PRODUCT

Product, in a wide sense is "expressed ideas as well as observable outcomes" (O'Quin & Besemer, 1999, p. 413). The notion of product and producing something as a result of creativity is a current premise of today's definition of creativity (Amabile, 1983, 2012; Flaherty, 2005; S Mumford, 2003; Sternberg & Lubart, 1999; Solomon et al., 1999; Powell & Gardner, 1999). While some tend to believe that creativity can hatch for a long period of time (Wallas; Torrance, 1990), it is difficult to assess if creativity is present without a product (Sternberg, 2006; Amabile, 1988; Runco, 1999). Amabile (2013) for example highlights it in her definition that "creativity is the production of a novel and appropriate response, product, or solution to an open-ended task" (p. 1). Sternberg (2006), like Amabile, thought that creativity must produce something and that product should be

proper, relevant or useful. Sternberg also stressed that creativity is in part connected not only to problem solving, but problem posing and therefore a created product should relate to the problem posed. The notion of novel and useful products is not without hesitations. Some argued that the concept of new is subject to who defines "new" and whose ruling determines the value of "useful" (Batey & Furnham, 2006). The worth of what is considered a useful product is also questioned (Weisberg, 2006). Also, the question of abstract ideas as products arises. Runco (2005) advised that the aspect of needing a product can sometimes weaken the acknowledgement of the occurrence of creativity because sometimes people lack knowledge and awareness to fully express ideas (p. 616).

PRESS

Press was the last of Rhodes classification of creativity. Press is "the **environment that facilitates creative process**" (Richards, 1999, p.741). It is presently accepted that creativity can be fostered and learned given the right environment and experiences (Amabile, 2012; Loveless, 2002; Sternberg, Jarvin & Grigorenko, 2009; Torrance, 1972). Correspondingly, creativity could be discouraged (Torrance, 1995, Sternberg & Lubart, 1995; Amabile, 1989, 2006). Amabile (1996) noted that creativity flourishes in environments where (a) freedom is given in deciding what to do and how to accomplish the task, (b) leadership communicates well, is enthusiastic and protects teams from distractions, (c) there is access to resources such as funds, equipment information and people, (d) there is encouragement for ideas, (e) evaluation is not part of the process, (f) creativity is acknowledged and rewarded, and (g) a there is a sense of internalized challenge.

Sternberg and Lubart (1995) also found that having **obstacles** is also sometimes favorable to creativity (p. 255-257). They also found that some studies while endorsing many of Amabile's stimulants to creativity similarly exposed the opposite (Sternberg & Lubart, p. 258- 261). For instance, studies related to the concept of no constraints or the freedom in deciding what to do and how to complete the task had both positive and negative results. Sternberg and Lubart proposed that the nature of the constraints and the relation of the people involved or even age may elucidate the differences. Environments are significant in the creative process and environments in schools also are becoming of increasing interest since creativity has been recognized as a needed 21st century skill and are perceived as potential drivers of creativity.

Runco (2004) acknowledged that the 4 Ps are not broad and inclusive enough to organize the wide-ranging research connected to creativity and many of the features of these theories overlay and defy 4P classification.

For example, Sternberg and Lubart developed the **Investment Theory of Creativity** (Sternberg & Lubart, 1995; Sternberg, 2006) grounded in part to economic theory, one alternate research category offered by Runco (2004). In respect to creativity, buying low means "actively pursuing ideas that are unknown or out of favor but have growth potential" (Sternberg & Lubart, 1995, p. 42), while selling high means "moving on to new projects when an idea or product becomes valued and yields a significant return" (p. 43). Creativity, according to Sternberg and Lubart

required a convergence of six resources: (a) intelligence, (b) knowledge, (c) thinking styles, (d) motivation, (e) personality, and (f) environment. Intelligence contributes to creativity in that it helps to (a) see a problem or redefine a problem, (b) discern when a new idea is also a good idea, and (c) to effectively present one's work to an audience. The second aspect is the requirement of knowledge in the area of interest. Thinking styles in the investment theory refers to how one utilizes their intelligence (p. 7). Personality refers to traits that frequently are present in creative individuals such as risk taking and knowing when to buy low and sell high. Creative people are also highly motivated and productive. Lastly the theory states that creativity necessitates a nurturing atmosphere.

The big "C" and the little "c" model of creativity may not be able to be categorized in the 4 P model also since it addresses both personality and processes that makes up creativity. Creative influences that have made a significant impact on the world are often considered as big or legendary "C" creativity (Craft; Kaufman and Beghetto, 2009). Nevertheless, since it is also recognized that many individuals demonstrate creative inclinations or outcomes but their contributions have not impacted the world at large but still possess creativity characteristics and processes, these are regarded as little or small "c" (Fasko, 2006). Some like Kaufman and Beghetto (2009) consider that other "c" need to be encompassed in the conceptualization of a "C" model related to creativity to accommodate variations in creative production. For example, they proposed a mini "c" as one connected to novel and meaningful understandings of creative experience within the individual. They highlighted that this variation may be weightier in classroom development of creativity.

The wideness of the research on creativity is obvious. This wideness was also confirmed by the **European Council in the Year of Creativity** (Ferrari et al., 2010). They found that there is still a massive amount of vagueness and diversity of conceptualizations and approaches to creativity, in due partly to its multidisciplinary character. They consecutively organized the research approaches related to creativity into five categories: (a) psychometric, (b) psychoanalytical, (c) self-expression and mystical, (d) end product, and (e) cognitive.

The psychometric approach approaches creativity as a quantifiable characteristic such as the tests developed by Guilford and Torrance. The psychoanalytical approach derived its thinking from Sigmund Freud who regarded creativity as an expression of the unconscious. The self-expressive and mystical approach is related to relations to expressions of that talent such as art or music. The end product approach highlights the outcome of the creative process in a product such mentioned formerly. Finally, the **cognitive approach** considers **creativity form the point of view of a thinking process or skill**. The self-expressive and mystical approach is a common association with creativity (Cropley, 1999; Dacey, 1999). Cognitive processes, the last category defined by the European Council, are an additional way to comprehend creativity. Cognitive processes are "processes of human thought and the architecture that holds these processes together" (Sternberg, 2003, p. 26). Cognitive factors associated with creativity are thought processes that lead to creative production (Barbot, Besancon, & Lubart, 2011). These processes include: (a) identifying, (b) defining and redefining the problem, (c) selective encoding, (d) divergent thinking, (e) evaluation of ideas, and (f) flexibility. Weisberg (2006) in his examination

of various theories related to cognition and creativity suggested that there is a close connection between creative thinking and cognition. He determined that creative thinking is not much dissimilar than ordinary thinking.

Learning

The architecture of thought related to cognition refers more specifically to cognitive roles or processes such as those proposed by Guilford. Cognition in this context is often defined as a process of "perceiving, recording, storing, organizing and using information" (Martinsen & Kaufmann, 1999, p. 273). Learning is "an enduring change in behavior, or in the capacity to behave in a given fashion, which results from practice or other forms of experience" (Schunk, 2004, p. 2).

Behaviorism was one of the initial understandings of how learning took place. Many of the behaviorist models of teaching and learning still exist as behavior modification models (Schunk) and are often emphasized as decidedly effective for training (Sulzer-Azaroff, 2004). Pavlov, Thorndike and Skinner were early and influential behaviorists (Ormrod, 2004). The essence of the theories was based on stimulus and response and reinforcement and rewards for the correct responses and behaviors. A student is 'taught' in the sense that he is persuaded to involve in new forms of behavior and in specific form upon specific junctures. "It is not purely a matter of teaching him what to do, as a concern for the probability that appropriate behavior indeed, appear at the proper time-an issue which would be classed conventionally under motivation" he continues "not about proving and disproving theories, but on discovering and controlling the variables of which learning is a function. (p. 970)

Theoretical Framework

Constructivism, Learning, and Cognition

There is a great diversity of definitions of constructivism. One definition of constructivism is "learning and cognitive theories that posit that knowledge is constructed, either individually or by groups" (Plucker & Runco, 1999, p. 669). An alternative definition is "a process of constructing meaning; it is how people make sense of their experience (Merriam, Caffarell, & Baumgartner, 2007, p. 291). The diversity and degree of definitions is one of the criticisms made of constructivism (Phillips, 1995, 2000). Nevertheless, there is some general agreement that constructivist methods are about distancing from prior transmission models of learning where the teacher communicated information and the student simply assimilated it (Duffy & Cunningham, 1996, p. 171). The emphasis of constructivism is in helping the scholar to construct knowledge.

Contemporary constructivist approaches in education can be traced back to Piaget (Brooks & Brooks, 2001; Phillips, 1995). Piaget developed a theory of intellectual development grounded on experiments that he had been conducted with children. Piaget's contribution consists in a few elementary premises connected to prior knowledge. Piaget's theory stated that influencing the environment and witnessing the outcomes of that manipulation were vital to learning. Furthermore, systems that are known as groupings of mental representations in the learner, served as paradigms with which one interacted with the setting and altered with human development. It was also stated that interactions with physical and social environments affected cognitive development over assimilation and accommodation. Assimilation means using existing schemes or using prior knowledge to make sense of an event; accommodation refers to the development of new schemes as one tries to understand a new event. When it comes to assimilation one adjusted one's perception of the setting to fit the scheme but when discussing accommodation, one adjusted the scheme to fit the setting. Equilibrium, the last of the four processes refers to making sense of the surrounding world and new events over mental restructuring. When one individual is able to make sense of the events in the environment through assimilation and accommodation, it can be said that that individual has achieved equilibrium. The process of reaching this equilibrium is in recurrent repetition as, during time, new knowledge is built and gains in complexity. Despite the fact that Piaget's theory emphasized the role of the environment in child and human development, he was mostly interested in how the individual developed. This is considered **individual constructivism** (Abdal-Haqq, 1998; Duffy & Cunningham, 1996).

Others such as Dewey (1910, 1934, 1938) and Vygotsky (1978), considered **social constructivists** (Phillips, 1995), positioned human interaction and experience in a preeminent place in the interaction of the process of education. Piaget emphasized the significance of prior experience, the notion of schema, and accommodation of new experiences. Dewey (1938) did not argue that

traditional schools lacked in knowledge but that this knowledge did not have a connection with further experience and that a useful experience required continuity with future experience. Even though all experience had some sort of continuity, important continuity was the one that stimulated curiosity, supported initiative, and set up needs and drives that were sufficiently strong to carry an individual over what he named dead places in the future. Experience, according to Dewey also required juncture and interaction with the social setting or theme material. Dewey believed that the opportunity for the experience provided by education should also have meaning derived from prior experience and hence he supported activities that were acquaint to the student as well as valuable, in order to enhance meaning for the scholar. One way that Dewey (1933) considered that experience could have a positive continuousness into further constructive experience was through the use of reflection. Reflection was defined by Dewey as "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends" (Dewey, 1933, p. 9). He thought that reflection required a state of perplexity, hesitation and doubt, as well as an active search or investigation (Dewey, 1910). He believed that thinking and reflection, as experience, should not be left to chance development by the educator if meaning and support connections with future experience are desired.

Another concept closely related with constructivism is the concept of mediation (Palmer, 2005; Phillips, 1995). Mediation is a process in which one elicits information from the learner and exchanges knowledge to form new meaning (Feuerstein, 1980, 2006; Vygotsky, 1978). The person most associated with constructivist mediation is Lev Vygotsky (1978). Vygotsky (1978) considered experience vital to the learning experience and vital for the construction of knowledge. Vygotsky thought that the interactional experience between adult and student or between peers was indispensable to increasing learning performance. He inspected the construction of knowledge through social mediation and language. Vygotsky's contention was that human interaction and language played an essential role in cognition and development (Vygotsky, 1978). Vygotsky (2004) thought that the display of creativity present in every aspect of social life was evident through imagination and that play was a significant and needed aspect of development of the imagination. He also believed that creativity was what made "the human being a creature oriented toward the future, creating the future and thus altering his own present" (Vygotsky, 2004, p. 9).

Constructivism and Cognition

While Dewey and Vygotsky thought that constructivism is framed within experience, language reflection and inquiry, constructivism also concerns the construction of knowledge though understanding cognition (Derry, 1996; Palmer, 2005; Phillips, 1995). Cognition is said to be "the process of perceiving, recording, storing, organizing and using information" (Martinsen & Kaufmann, 1999, p. 273).

Feuerstein (1980; Feuerstein, et al, 2006), advanced the theory of cognitive modifiability that necessitated mediated learning experience (MLE). Feuerstein recognized Piaget's description of change from direct exposure to stimuli as one modality of change (1980, p. 15) in learning while also designating mediation as an alternate modality. Like Vygotsky, he assumed that human interactions were vital to the construction of knowledge. In Feuerstein's theory of cognitive modifiability, he specified that three fundamentals were essential for a change in learning through mediation. These were (a) intentionality and reciprocation, (b) transcendence, and (c) meaning (Kozulin, Feuerstein, & Feuerstein, 2001). Intentionality presumed that the mediator has an objective in mind when mediating – that he tracks a precise direction. This objective drives the mediation with targeted questions or a specific course. Mutuality presume a degree of exchange and change in the facilitator to accommodate the scholar when new information ascends from either factual knowledge, knowledge errors or perceptions or the learner's prior experiences. To increase reciprocity, three things must be considered: (a) modifying oneself, (b) modifying the environment, (c) modifying the learner, or (d) all three. Meaning is the significance of the transcendent experience for the student (Kozulin, Feuerstein, & Feuerstein, 2001

Constructivism and Creative Learning

Constructivism and creativity have many processes in common. Truman (2011) recognized five resemblances between the process of learning and creativity within the constructivist framework. Mainly, both learning and the development of creativity have a social character and are influenced by the interactions between individuals and the immediate environment. Moreover, meaning in learning and meaning of the creative artefact is constructed over engagement with a particular field. Thirdly, both learning and creativity are contingent on a context, and are established within the culture and the domain. The fourth commonality is that time is indispensable for both reflection and constant reexamining of ideas and the fifth commonality lie in the fact that both learning and prior experiences are crucial for connecting the past to the new and producing new or multiple perspectives, Truman (2011).

The amplified attention on creativity and the contemplation of creativity and learning, constructivist or otherwise, may have triggered the rise of a new notion in education: the concept of creative learning. While means for fostering creativity in classrooms and education have been encouraged by early forerunners- Guilford and Torrance, creative learning does not appear to have been yet accurately organized as a theoretical construct. Lin (2011) believed that a creative pedagogy framework will necessitate the development of three elements, **(a) creative teaching, (b) teaching for creativity and (c) creative learning**. Creative teaching refers to "using imaginative approaches to make learning more interesting, exciting and effective" (Robinson, 1999, p.102). Teaching creatively requires developing resources that attract children's imagination while also requiring that teachers teach in a way that is able to train the children's own creative abilities or thinking (p. 103). For fostering creativity Robinson recommended:
(a) permitting both narrow and broad experimental actions,
(b) encouraging attitudes of enthusiasm toward imaginative actions,

(c) understanding that a period of time is required for generative thought before ideas are a topic of evaluation or critique,

(d) encouragement of self-expression,

(e) conveyance of appreciation of the time factors in creative development including taking time away from the ongoing process,

(f) support in developing awareness of diverse contexts and the role of subconscious mental processes as intuition, for example,

(g) encouragement and stimulate students in free play with the idea while at the same time providing critical evaluation of these ideas, and

(h) highlighting the use of imagination, curiosity, originality, questioning, and choice to facilitate creative ability.

Fostering creativity encourages self-confidence, independence of mind, allowing thinking for one self that has an inherent requirement of trust of both learner and teacher. Teaching for creativity also requires encouraging responsibility for learning, self-monitoring, reflecting on performance and progress and thinking about their own thinking (Robinson, p. 106).

Lin (2011) believed that creative learning is also a significant aspect of an educational creative framework. Learning by authority is the act of being told what must be learned and demanding its acceptance as an authority, similarly to the transmission model. This is unlike than what is considered creative learning through questioning, inquiring, searching, manipulating, experimenting, and even aimless play (Torrance, 1963, p. 47).

A rich picture of how creativity can be studied or practiced in schools is not yet available. What we know until now, is that creativity is complex and that its understanding is equally multifaceted necessitating a multidimensional approach to its study (Amabile, 2012; Csikszentmihalyi, 1990; Gardner, 1993; Gruber, 1988; Sternberg & Lubart,1995). Schools are correspondingly complex. Once again, a clear picture of the practical application of creativity in schools does not exist at the moment. It is believed that the complexity of creativity may involve a more holistic method to address it multidimensional nature in its practice and training in educational institutions.

The link between creativity, innovation and entrepreneurship

Drucker (1985) claimed that innovation is the tool of entrepreneurship. Moreover, both innovation and entrepreneurship demand creativity. Creativity is a process by which a representative field in the culture is transformed. New tunes, new thoughts, new machineries are what creativity is about, as Mihaly (1997) stated. Creativity is the aptitude to make or else bring into existences something new, may it be a new solution to a problematic issue, a new technique or device, or even a new artistic object. Wyckoff (1991) defines creativity as new and useful. Creativity is the act of observing things that everyone around us perceives while making associations that no one else has made. Creativity is moving from what is known to what is unknown. Culture influence a negative force on creativity according to Pearce (1974), even though, "were it not for creativity, culture itself would not be created."

No entrepreneur or enterprise, regardless is success or its size, however successful and big, cannot continue to occupy a leadership position on the market unless it understands that modern business industry functions in a world of galloping change which creates new difficulties, dangers and opportunities as well and for which they must activate the enterprise's capitals of all kind before changes make their influence felt. To do effectively, the entrepreneur and enterprise should know where they are going and how will they be able to get there. To have a clear image of the aforementioned directions, a clear definition of the company's business is required, this definition being designed to enable it to permanently adopt processes to the realities of the marketplace, the very vital element of survival and development.

Innovation is defined as adding something new to a present product or process. The key words are adding and existing. Consider that the product or the process have previously been created from scratch and until now, they have worked reasonably well. When it is altered in order to function better or to fulfill different needs, then there is innovation on something that is already existing- in other words, a successful exploitation of new ideas. It is important to note that innovation lies on the pilons of creative ideas, therefore to affirm that creativity is the cornerstone of innovation. It is also important to add that creativity might be necessary for innovation, but itself, it is not a sufficient condition for innovation.
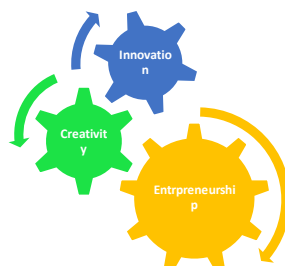
Creativity and creative thinking

Creativity can be defined by the ability to create, bring into reality, to invent into a new form, to produce through imaginative ability something that is new. Creativity does not refer to the ability to create something out of nothing, but the ability to produce new ideas by combining, changing, or reapplying ideas that are already existing. Some creative ideas are surprising and/or brilliant, while other creative ideas can be defined as simple, worthy practical ideas that no individual seems to have thought of yet (Harris, 1998).

Creativity is also an attitude, referring to the ability to accept and embrace change and newness, an inclination to play with concepts and multiple possibilities, an elasticity of attitude, the routine of appreciating the good, while seeing for ways to advance it.

Creativity can also be defined as a process. Creative persons are known to work hard and continually looking to improve ideas and solutions. They achieve these abilities by committing to make gradual alterations and refinements to their works. Antagonistic to the "mythology" adjacent to creativity, very few of the creative acts or/and products are produced as a result of a single hit of brilliance or in a frenzy of hasty action. There are multiple stories of businesses which were forced to take the invention away from its inventor in order to market it, mainly because the inventor would have kept on modifying it and fiddling with it, in his continuous attempt to make it a little better (Harris, 1998).

A product is creative when it is "novel" and "appropriate". A novel product is original, not predicable. The bigger the concept, and the more the product arouses additional work ideals, the more the product is creative (Stermbering and Lubart).

Creative thinking has various definitions Okpara (2000). In a dynamic and changing nowadays environment, the challenges that the man encounters are not motionless. They take on new shapes and demand a profound creative thinking approach. It is essential to engage our minds in imaginative thinking to create ideas and products that are able to stand the test of time. Every idea is an artefact of thinking and every product is the display of an idea. The ability of seeing problems as opportunities is therefore compulsory in this process.

In the attempt to make things better, the usual goals refer to improving productivity and efficiency, attain promptness, heightened comfort and convenience, and many more. While in the process of improving things, thinking can lead to various alternatives, resulting in an ability to improve existing artefacts, it can also produce various alternatives that are capable to lead to the development of an entirely new idea, novel production processes, or an overall departure from the conventional. Whatsoever the goal is, thinking is a crucial tool in the life of all effective entrepreneurs.

Individuals become more creative when they are motivated mainly by the curiosity, gratification, and challenge of the situation and not by exterior compressions; passion and curiosity – a person's inner desire to do something distinctive to show-case himself; the individual's sense of challenge, or a drive to find solutions to a problem that no one else has been able to crack.

Within every person, creativity is a function of three components:
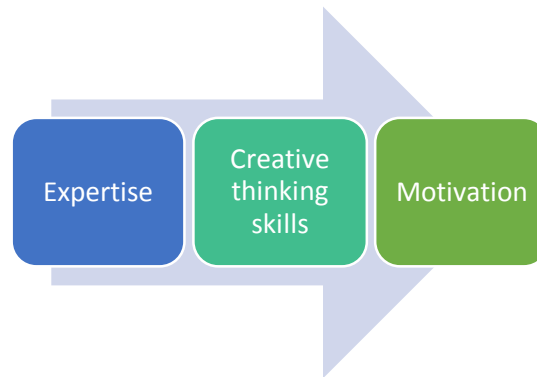
Expertise incorporates everything that a person knows and can do in the wide-ranging domain of his or her work- information and practical skills. Creative thinking denotes how an individual approaches difficulties and solutions- the capacity to put already present ideas together in new mixtures. The skill itself depends in a measure on the individual`s personality as well as on how a person reasons and works. Expertise and creative thinking are the entrepreneur's raw materials or natural capitals. Motivation is the ambition and need to do, an internal passion and curiosity. When individuals are fundamentally motivated, they involve in their work for the challenge and for the enjoyment of it. The work itself is inspiring. Individuals will be at their peak creative point when they feel motivated primarily by their inner curiosity, satisfaction and the challenge of the work itself- "the labor of love", love of the work- the satisfaction of seeing and searching for an outstanding answer – a break through.

Creativity, according to Robert Gahim, consists of anticipation and commitment. Anticipation implicates having a vision of something that will become significant in the future before anybody else has it. Commitment is the confidence that keeps one individual working to realize the vision in spite of uncertainty and opposition. The entrepreneur is mainly concerned with developing new artefacts, processes or markets, the ability to bring something new. Entrepreneurs are motivated to be more flexible and are prepared to consider a range of substitute approaches. They contest the status quo, which can occasionally bring them into struggles. They dismiss their detractors and are sometimes regarded as aloof, Stoner and Wankel (1986).

Creative consequences seldom emerge in an instant: a documented process is involved, even if it appears to be slightly chaotic. It commences with acknowledgement of a problem or expectancy of an opportunity, and then, through understanding the state and reflecting on the

problems, new connections are considered and potential new mixtures of components are aired. From this visible answers or possibilities emerges, that are lay open to evaluation. Entrepreneurs take bold creative steps but circumstances inspire creativity. Creativity is, though, enhanced when individuals have some autonomy, but not too much; high inner commitment to the task; but not too high a commitment; high proportion of strong rewards, but some extrinsic rewards as well; some competition but not winner take- all competition, Thompson (2001). Entrepreneurial action depends on the process of innovation that follows creativity, not solely on creativity.

Innovation and creativity

Creativity is at the epicenter of each innovative process. Innovation is the process of carrying the best ideas into reality, which triggers a creative idea, which produces a series of innovative events. Innovation is the construction of new value. Innovation is the route that transforms new notions into new value- turning an idea into value. You cannot innovate in the absence of creativity. Without innovation, an enterprise and what it delivers quickly becomes obsolete. The dictionary describes innovation as the introduction of something new or dissimilar. Innovation is the application of creative inspiration. Innovation is the foundation of all competition advantages, the methods of anticipating and meeting consumer's needs and the method of operating the technology.

Innovation is nurtured by information collected from new connections; from understandings gained by journeys into other disciplines or spaces; from dynamic, collegial networks and fluid open boundaries. Innovation rises from forming circles of exchange, where information is not just collected or stowed, but created. Innovation necessitates a renewed way of looking at things, an understanding of individuals, and an entrepreneurial readiness to take risks and to work hard. An idea does not become an innovation up until it is broadly accepted and assimilated into people's everyday routines. Most people repel change, so a main part of innovating is convincing other individuals that your idea is a worthy one – by soliciting their help, and, in doing so, by assisting them see the practicality of the idea.

The process of innovation is, from the point of view of Drucker (1994) a ``disciplined, systematic, organized and purposeful activity with its own relatively simple rules that offer a rational and repeatable way to convert an idea into an innovation''. The rate of deterioration of ideas during the phases of screening and evaluating is extremely high, making it important to have a wide range to begin with and the resources to ensure that an adequate flow of new ideas is preserved. Thus, the generation of ideas is a critical part of the innovation process and creativity is the process that supports generating these ideas. If creativity can be enhanced, then more

alternatives, fresh approaches or exceptional solutions are expected to emerge in response to a problem. Amabile (1996) cites the three main roots of creative performance as: task motivation, domain relevant skills and creativity relevant skills. She distinguishes between intrinsic and extrinsic motivation, proposing that the intrinsic motivation enhances creativity, but that the extrinsic motivation can hinder it. Amabile also categorizes specific environmental factors which affect a person's predisposition for creativity: group climate, freedom, autonomy, supervisor support and rewards. The notion that creativity necessities a supportive environment to prosper finds a reverberation in the writings of Kao (1996) who compares creativity to playing jazz and uses the metaphor to propose ways that we can arouse creativity, originate new ideas and advance them into realizable value. In his opinion, clearing the mind by fantasy and guided imaginings and generating a distinctive physical place for creativity are essential prerequisites. However, creativity is a slightly indefinable quarry and there are many methods that seek to arouse thinking and trainings that have the final intention to develop the ability. Majaro (1998) explains how a variety of techniques can be used to generate ideas: brainstorming, metaphorical analogy, trigger sessions, wildest ideas session, morphological analysis, scenario writing and suggestion schemes. The major problem of thinking is complexity that leads to misperception, according to de Bono (1986). He suggests that when an individual try to do to many things at the same time, this leads him to experience too many different thoughts linked to emotions, information, logic, hope and creativity. He proposes a simple concept, which permits a thinker to do one thing at a time, based on six different ``thinking hats'': a control, a creative, a negative, an optimistic, an emotional and a neutral hat. "Putting on" any one of these hats, describes a certain kind of thinking and offers simplicity and clarity; an additional purpose is that it enables a shift of thinking to arise. In other writings of his, he defines and introduces the now well-known concept of lateral thinking (De Bono, 1990), as a contrast with vertical logical thinking. He advocates the method as a means of enhancing creativity and problem solving (De Bono, 1990). In the process of lateral thinking it is needless to be right at every step, and the process permits a postponement in judgement to permit the interaction of ideas to ensue. The ``intermediate impossible'' is presented as a step between conventional thinking and novel insights that at first look appear to be based on wishful thinking. He stated that it happens quite often that unreasonable, or even ludicrous, ideas trigger the imagination of a group and stimulate them towards developing outstanding solutions. Mind mapping and fishbone diagrams are two more techniques with applications in creativity. Mind mapping has been pioneered by Buzan and Buzan (1993) and its radiating structure allows for the rapid growth and examination of ideas to occur. It is well suited to creative thinking because it utilizes all the skills commonly associated with it, especially imagination, association of ideas and flexibility, Buzan and Buzan (1993). The fishbone diagram was first developed by Ishikawa (1990) and the goal of the technique is to support a group to recognize and list all the conceivable sources of a problem. The problem, sub-problems and causes bear a resemblance to the bones of a fish when it is complete, and the entire process of examination and conversation can be a valuable trigger point for creative thinking as it focuses the attention fully on a problem.

Enterprises all over the world are being subjected to what can be reasonably labelled as a revolution: increasing energy and material costs, aggressive international competition, new technologies, increasing use of computerization. All these are capital challenges, which request an optimistic reply from the entrepreneur and from the administration if the enterprise is strongly focused on surviving and prosperity. At a time when finance is costly, the firm's liquidity is bordering on crisis, the necessity for creativity and innovation is more persistent than ever and as opponents fall by the way side, the recompenses for successful products and process are better. The encouragement of new growth is the duty of the enterprises themselves, which, through their own experience, are conscious of the problems created when commission innovative investments in an era of great uncertainty. Innovation demands special entrepreneurial and management expertise, the collaboration of a dedicated workforce, finance and a climate which will generate the optimal overall circumstances to boost success. Joseph Schumpeter (1934) considers that the concept of innovation, described as the use of an invention to create a new commercial product or service, is the main force in generating new demand and therefore new wealth. Innovation generates new demand and entrepreneurs carry the innovations to the market. This extinguishes the existing markets and forms new ones, which will in turn be demolished by even fresher products or services. Schumpeter calls this process "creative destructions."

A challenge to conservative wisdoms arises from work on an international study of 16 major commercial breakthroughs commenced by Nayak and Ketteringham (1987). They examined the creativity, ingenuity, determination, special skills, politics and perceptions that were essential to open the way for the new products and processes. Founded on their conclusions, they address and criticize the mythologies surrounding breakthrough innovations, for example that success is determined by on corporate culture, intra- or entrepreneurship, market pull, unsatisfied need and other such simple clarifications. As an alternative, they interpret the results to reveal a subtler process of success. While it was true that no breakthrough converted into a commercial reality unless the individuals driving it see a marketplace for it, in each case it was ``technology-push'' or more precisely the inquisitiveness within the initiating individual. Neither pecuniary need or market intelligence played a key role in these extraordinary innovations. (Østergaard, Bram Timmermansa, Kari Kristinssonb, 2010)

Forms of innovation

In a start-up, the entrepreneur is observed as the main actor in developing a business idea, arranging resources, and generating an enterprise to carry a new product or service to the marketplace. In a competitive business environment, the entrepreneur and the enterprise should continue to pursue now prospects and make the essential preparation to adapt them into new goods and services. Innovation should, consequently, impregnate the whole enterprise for the

formation and creation of competitive edge and relevancy in the marketplace place. Innovation can take a number of forms:

1) Innovation in processes. These contribute to rises in productivity, lowering cost and helping to increase demand.
2) Innovation in products or services. Although progressive innovation is leading, radical innovation has the capacity to open up new markets. It helps increasing investments and employment.
3) Innovation in management and work organization, and the exploitation of human resources.

Innovation centers on persons, culture, structure, process and technology. Innovation is the process through which the entrepreneur adapts market openings into practical, profitable, and vendible ideas. Innovation is an application of something creative that has a substantial impact on an organization, industry or society.

Characteristics and behaviors of innovative people

Characteristic	Attributes of innovative people
Need orientation	Inventors tend to be achievement oriented and lacking resources find it pays to develop with customer demand, approach potential customers early and adapt designs rapidly (Quinn, 1985)
Ambivert	A balance of extrovert and introvert, although tending toward introversion (Adair, 1990)
General interests	A wide range of interests (Adair, 1990)
Experts and fanatics	Initiators of companies tend to be pioneers in their technologies and fanatics at problem solving (Quinn, 1985)
Intelligence	Higher general intelligence, information storage, recall and analysis (Adair, 1990)
Independence	A high degree of independence and self-sufficiency (Adair, 1990)
Independent judgement	Autonomy of judgement and resilience to peer pressure on conformity in thinking (Adair, 1990)
Vivid representation	An ability to draw attention to the unrecognised or unobserved (Adair, 1990)
Achievement	A particular interest in achievement on problems where their own ability can be a deciding factor (Adair, 1990)
Curiosity	Prolonged curiosity, observation and listening abilities (Adair, 1990)
Intuitive and imaginative	An ability to tune into intuitive feelings and let fantasy in (Adair, 1990)
Conscientiousness	Dedicated, committed and hard-working (Adair, 1990)
Creative tension	Capable of holding many ideas together in creative tension without making a premature resolution of ambiguity and sometimes providing synthesis from disparate notions (Adair, 1990)
Long time horizons	The time horizons for radical innovation make them tend to underestimate the length of time for success (Quinn, 1985)
Low early costs	Innovators tend to work with low costs and try to decrease their early risks (Quinn, 1985)
Multiple approaches	The innovator can tolerate the unpredictable interactions between the discoverer and the outside world, and cope well with unencumbered and informal development (Quinn, 1985)
Flexibility and quickness	The inventor-entrepreneur can design, test and recycle speedily thus yielding timing and performance advantages over slow-moving competitors (Quinn, 1985)
Incentives	The inventor-entrepreneur can envisage tangible benefits and personal rewards if they are successful (Quinn, 1985)
Availability of capital	If entrepreneurs are turned down by one source, other sources are sought sometimes in creative combinations (Quinn, 1985)

Source: after Quinn (1985), and Adair (1990)

Entrepreneurship and the entrepreneur

Entrepreneurship is the continuing generation of innovation in response to perceived opportunities in the business environment. In this approach, entrepreneurship is therefore concerned with newness: new ideas, products, services or combinations of resources aimed at meeting the needs of consumers more efficiently. Entrepreneurship has been described in terms of the ability to create something from practically nothing. It is the knack for sensing opportunities where others see chaos, contradiction and confusion. It is the ability to build a "founding team" to complement your own skills and talents. It is known –how to find, marshal and control resources. Finally, it is a willingness to take calculated risk, Timmons (1989).

Entrepreneurial success in this century, depends on the seriousness with which innovative activities are undertaken by the enterprises in terms of indigenizing input sourcing and the development of new indigenous products. The society in general will benefit tremendously from the individual enterprises undertaking innovative activities rather than leaving such to government agencies. As Max Weber has observed "when innovation is channeled through autonomous competing enterprises, risk is encouraged and the social curse of unsuccessful innovation can be limited. Society can afford to have an enterprise failure, but society cannot afford to have government failure. Government economic planners proceeding by law or fiat have no flexible mechanism comparable to a market in which they can assess the probabilities of any given risk and measure its results". No enterprise, however diversified or big, can therefore, rest on its oars and past achievements. It becomes imperative for an enterprise to continuously challenge itself to finding new and better ways of doing the old things or in fact create new ways of doing new things. The new environment may therefore call for new product designs, new production techniques, composition and packaging which take cognizance of the dynamic business environment.

Success in business today demand constant innovation. Generating fresh solutions to problems and the ability to inherit new products or services for a changing market are part of the intellectual capital market that gives an enterprise its competitive edge. In a dynamic environment, success comes from looking for the next opportunity and having the ability to find hidden connections and insights into new products or services, desired by the customer. While brain-power is the most valuable resource, great ideas are in short supply. Successful entrepreneurs place high premium on attracting and keeping talent because wealth flows directly from innovation.

Creativity is the root of innovation. It is a process and a skill which can be developed and managed throughout the entire enterprise. One of the first steps in creating a culture of innovation is unleashing the creativity in yourself. The challenge is getting to see the is world with fresh ideas and to develop fresh solutions. Speed innovating is a proven approach for helping you develop

breakthrough solutions in the shortest possible time. Creative ideas are not enough for your business to survive. You need a process organization and culture that will help you maximize your creative assets. This is innovation capability that helps your pull together the best thinking within your business, enabling you to connect the organization dots. Shapiro argues that perpetual and pervasive innovation is the key to long –term sustainable success in the relentless competition for customers. To survive any competition, one must rapidly and repeatedly re-invent itself. The road map to reinvention starts by applying the seven R's:

1. Rethink your underlying assumptions.

2. Reconfigure how you carry out work.

3. Resequencing when work takes place

4. Relocate where work is done to cut down on handoffs and delays.

5. Reduce the frequency of carrying our specific activities.

6. Reassign who does the work by asking if anyone else could achieve the same result more effectively and efficiently.

7. Retool the technology that supports getting the work done.

An entrepreneur is the man or woman who is able to actualize his/her innate potentials and develop a character that is not dependent but independent. He/She is that person who undertakes the voyage of creating value by pulling together a unique package of resources to exploit an opportunity. He or she has the capacity and capability to build something from practically nothing – initiating, daring, doing, achieving, and building an enterprise. They genuinely believe they have something new and special to offer, either a product or a service. Entrepreneurs have been described as people who have the ability to see and evaluate business opportunities, gather the necessary resources to take advantage of them and initiate appropriate action to ensure success, Meredith et al (1991). He is a risk- taker, a man, or woman who bears uncertainty, strikes out on his or her own, and through natural wit, devotion to duty and singleness of purpose, somehow creates a business and industrial activity where none existed before. Entrepreneurs are achievement- oriented, like to take responsibility for decisions and dislike repetitive and routine work.

Although entrepreneurs and enterprising people will exercise their skills in different contexts and pursue different goals, it seems plausible that they will have similar attributes. Gibb (1987, p. 10) argues that entrepreneurial attributes such as initiative, flexibility, moderate risk-taking, creativity, achievement drive, and imagination "are displayed and developed by a wide variety of people working in many different circumstances" and that these are "enterprising" people who are skilled at setting up and running projects (Caird & Johnson,1988).

Creative entrepreneurs possess high levels of energy and great degrees of perseverance and inauguration, which combined with a willingness to take moderate, calculated risk, enable them to transform what began as a very simple ill- defined idea or hobby into something concrete. Entrepreneurs can instill highly contagious enthusiasms in an enterprise. They convey a sense of purpose and determination and by so doing, convince others they are where the action is. Whatever it is – seductiveness, competitiveness, or charisma –entrepreneurs knew how to lead an enterprise and give it momentum. The entrepreneur demonstrates a unique combination of energy, originality and shrewdness. He is the main driving force in the enterprise, a master of motivation and knows how to get the best out of people Manfred (1997). Most importantly, entrepreneurs are the driving force of any nation; they are value adders and represent the wealth of a nation and its potentials to generate employment. The entrepreneur may be a highly educated, trained, and skilled person or he/she may be an illiterate person possessing high business acumen, which others might be lacking. Nevertheless, he/she possesses the following qualities:

I. He/She is energetic, resourceful, and alert to new opportunities, able to adjust to changing conditions and willing to assume the risks in change and expansion.

II. He/She introduces technological changes and improves the quality of his/her product;

III. He/She expands the scale of operations and undertakes allied pursuits, and reinvests his/her profits.

Enterprising individuals develop new ideas, spot market opportunities, or combine existing ideas and resources in different ways to create additional value. These outcomes are unlikely to be achieved by "adherence to prescribed detailed procedures" (Biemans, 1992, p. 226). Experimentation, trial and error, lateral thinking, and creativity are required, and the entrepreneurial literature suggests that entrepreneurs have more creativity than others (Kuratko & Hodgetts, 1995; Long, 1983; Timmons, 1989; Whiting, 1988). Creativity is a process encompassing stages such as the accumulation of knowledge, reflection, developing, and evaluating an idea, and creative people tend to exhibit certain characteristics. They tend to think in non-conventional ways, challenge existing assumptions, and they are flexible and adaptable in their problem solving (Kirton, 1976; Solomon & Winslow, 1988).

The entrepreneur, therefore includes any person who establishes and manages a business enterprises, and each has a unique contribution to make in the development of the economy. The mix of creativity and irrationality is what makes entrepreneurs tick and accounts for many of their positive contributions. Their visionary abilities and leadership qualities stand them out as human colossus. From whatever perspective, the entrepreneur is the kingpin of any business enterprise, for without him or her the wheels of industry cannot move in the economy. As aptly

pointed out by Brozen (1962), "The private entrepreneurship is an indispensable ingredient in economic development over the long period."

Entrepreneurship means much more than starting a new business. It denotes the whole process whereby individuals become aware of the opportunities that exist to empower themselves, develop ideas, and take personal responsibility and initiative. In a broader sense, entrepreneurship helps young men and women develop new skills and experiences that can be applied to many other challenges in life.

Entrepreneurship is therefore a key priority area with the potential to stimulate job and wealth creation in an innovative and independent way. Entrepreneurship provides young people across the nation with valuable life skills and tools to empower them to build sustainable and prosperous futures for themselves and their communities. Entrepreneurship is the willingness and ability of an individual to seek out investment opportunities, establish, and run an enterprise successfully. The concept of entrepreneurship has been associated with several activities concerned with the establishment and operations of business enterprises.

Stevenson (1985) defines entrepreneurship as the process of creating value by putting together a unique package of resources to exploit an opportunity. Entrepreneurship is the ability to create and build something from practically nothing. It is initiating, doing, achieving, risk- taking, and building an enterprise. Entrepreneurship instills the enterprise culture into the individuals. Enterprise here is defined as resourcefulness, initiative, drive, imagination, enthusiasm, zest, dash, ambition, energy, vitality, boldness, daring, audacity, courage, get up, and go.

Entrepreneurship, therefore, encompasses all the productive functions that are not rewarded immediately by regular wages, interest and rent and non-routine human labor. It is also not investing capital funds along. It is actually the functions of seeking investment, production opportunity, organizing an enterprise to undertake new production process, raising capital, hiring labor, allocating resources, and creating new enterprises.

Porter (1985) argues that, while successful businesses will each employ their own strategy, they achieve completive advantage through acts of innovation. Learning and problem-solving are common activities in many working environments today, but some people believe that true entrepreneurship occurs when individuals ignore the established ways of thinking and acting and seek novel ideas and solutions that can meet customers' needs entrepreneurship is, therefore, the innovatory process involved in the creation of an economic enterprise based on a new product or service which differs significantly from products or services offered by other suppliers in content or in the way its production is organized nor in its marketing.. (Curran and Burroughs, 1986) It has been argued that small businesses have a greater proclivity to innovate than their large counterparts and are, therefore, crucial in helping a country respond to myriad changes in the economic, technological and social environment. (Acs and Gifford, 1996). For instance, the

OECD points out that small firms are innovative in different ways and are especially active in developing new' approaches to management and marketing. (OECD/DST/IND, 2000) To grow and prosper, most enterprises need to constantly improve their existing products and services through continuously innovating needed changes: and for survival of the enterprise, must also need to create new products and services to meet yet unfulfilled needs. Enterprises that rely exclusively on innovation will prosper until their products and services "ran out of gases and become obsolete and non-competitive. On the other hand, enterprise that are totally creative will have their new products and services ready to launch, but often too few current products sufficiently up-to-date and competitive to generate the cash needed to fund their creativity. Changes are that the very successful leaders of the future will be more likely to make creativity and innovation a strategic priority in their organization. In today's environment where competition requires business enterprises to be distinct and meet customer needs with better or never products and organization becomes in critical necessity Joseph Schumpeter views innovation as the source of success in the market economy, a view that is reinforced by today's changing and competitive environment. The organization that is not creative and innovative cannot survive in the market place. Thus, entrepreneurs and enterprises are continuously creative and innovative to remain relevant to the customers, which is the purpose of every business.

Conclusion

Successful entrepreneurs require an edge derived from some combination of a creative idea and a superior capacity for execution. The entrepreneur's creativity may involve an innovation product or a process that changes the existing order. Or the entrepreneur may have a unique insight about the course or consequence of an external change.

Entrepreneurship is the vehicle that drives creativity and innovation. Innovation creates new demand and entrepreneurship brings the innovation to the market. Innovation is the successful development of competitive edge and as such, is the key to entrepreneurship.

Creativity and Innovation are at the heart of the spirit of enterprise. It means striving to perform activities differently or to perform different activities to enable the entrepreneur deliver a unique mix of value. Thus, the value of creativity and innovation is to provide a gateway for astute entrepreneurship—actively searching for opportunities to do new things, to do existing things in extraordinary ways.

Creativity and Innovation therefore, trigger and propel first-rate entrepreneurship in steering organization activities in whatever new directions are dictated by market conditions and customer preferences, thereby delighting the customers to the benefit of the stakeholders. Innovation also means anticipating the needs of the market, offering additional quality or services, organization efficiently, mastering details, and keeping cost under control.

No doubt, the current economic environment is a volatile and violent one. The new environment demands renewed dynamism of approach. Creativity and innovation is the new name of the game. Only the discerning organizations can manage the changes inherent in the new environment. It is the duty of the entrepreneur to keep his/her organization lean, young, flexible, and eager for new things to continuously delight the customers, which is the purpose of every business.

Review of the Methodological Issues

Past Research on training creativity

Most studies connected to creativity belong to the field of psychology, the expressive arts and most of them are quantitative. In an analysis of seventy studies concerning creativity training with young people and adults alike, the value of specific creativity training was studied (Scott, Leritz, & Mumford, 2004). In examining the numerous studies, the writers struggled to determine if creativity training was effective and if any shared content or delivery system could be recognized in relation to success. The overwhelming result of the analysis was that creativity training was in fact effective and that this was attained across populations, settings and criteria. In attempting to identify the most effective approach, "it appears that the success of creativity training can be attributed to developing and providing guidance concerning the application of requisite cognitive capacities" (p. 382). According to the authors, this success may have been attributed to the provisions of specific strategies in the trainings.

In schools, the expressive arts are often linked with creativity (Frey, 2002; Ivcevic & Mayer;). Regardless of the perceived association between the arts and creativity, many of the studies in expressive arts and schools relate to general learning or transfer of learning rather than to creativity. Quantifiable measures cannot completely portray its complexity even if one concept connected to creativity is acknowledged as a given. The complexity of creativity along with the complexity of schools emphasizes that qualitative research balance what is known with what requests to be learned about creativity.

How creativity is viewed by psychology may or may not be the same as it is practiced in classrooms. Recent reconceptualization, as for example, the mini "c" of creativity (Kaufman & Beghetto, 2009) may be more pertinent to schools. While quantitative studies may be able to tease out and measure some features of creativity, it would never be able to portray creativity's complexity in ordinary trainings in schools. Therefore, the research demands a qualitative view on creativity in this context. Case studies are valuable, since they are led to provide in depth study of a phenomenon and within real life context (Gall, Gall, & Borg, 2007, p.447- 449).

Case Studies on creativity

Most case studies on creativity focused on individuals and used biographical data to develop theories. They have been an important contributor to the growth or validation of some of the other concepts related to creativity. Hayes, using biographical data, inspected the lives of prominent composers and recorded the time of the beginning of interest in their area of interest and when the first significant composition was produced. He similarly proceeded with painters and determined that there was a ten-year expertise prerequisite. Hayes inspected people related to the expressive arts while Gardner inspected the complexity of creativity of individuals related to different fields.

Csikszentmihalyi came up with his concept of "flow" after examining multiple case studies. When creative people are absorbed in their "flow" they seem to be is "a state in which people are so involved in an activity that nothing else seems to matter; the experience is so enjoyable that people will continue to do it even at great cost, for the sheer sake of doing it" (Csikszentmihalyi,1990, p.4).

Individual case studies have been valuable in determining the complexities of the creative process but also determining that separate components of creativity are not able to offer a precise depiction of its complexity. The acknowledgement of a necessity for a qualitative method is important since the complexity of the creative process requires a balance to the quantitative research existing on creativity. Identifying qualitative studies on creativity in education is problematic. One study was found; it was citing the complexity of creativity as an incentive for leading a one-year qualitative study on creative thinking and problem solving at a college campus: Hamza and Grifith (2006) found that factors that affected the complexity of creativity were:
(a) classroom climate,
(b) teachers' personality and attitude,
(c) classroom management,
(d) teacher knowledge,
(e) teacher and student interaction, and
(f) student attitudes.
Highly significant were the personal attributes of the teachers themselves which the authors state produced "miraculous results in the learning process that reflected in student responses and survey attitudes" (p. 8).

Synthesis of Research Findings

Even though there is a widespread research concerning creativity, much of it is questionable. For instance, in a meta-analysis comparison among the relationship of IQ to creativity and divergent thinking and creativity, it was revealed that divergent thinking was a higher indicator of creativity (Kim, 2008). However other studies indicate slight or no relationship between divergent thinking and creativity (Han & Marvin, 2002; Runco, 1993, 2008; Zeng et al., 2011). Some studies indicate that creativity necessitates or better functions within a sphere (Baer, 2005; Gardner, 1988; Sawyer, 2006) while other studies specified that creativity is area general (Milgram & Gorsky, 1995; Gabora, O'Connor & Ranjanm2012; Plucker, 2005). Weisberg (2006) and Sternberg and Lubart (1995) examined research conducted regarding specific aspects of creativity such as motivation and incubation and unraveled evidence for and in contradiction with their relationship to creativity.

In spite of this duality in research results, some other studies seem to point in a specific and similar direction. Conducting a meta-analysis of creativity training studies (Scott, Leritz, & Mumford, 2004) was crucial because it discovered a commonality through the inspection of numerous studies. It specified that creativity training is actually effective and that cognitive approaches were the most effective vehicle for their efficiency. Still, the authors did point out that particular strategies were taught and that in some way these were the predictable results in trainings. This is unlike than what may occur in a classroom but it does back up the idea that creativity and skills connected to creativity can be attained by everyone, underlining the value of the little "c" approach. Engagement was also a result of studies related to "flow" and creativity. What might be most substantial aspect about these studies is that the state of "flow" was attained through a diversity of approaches (Csikszentmihayi & Nakamura, 2002). This emphasize the fact that creativity can be attained through multiple venues.

3. **Methodology**

Statement of the Problem

Creativity has been acknowledged as a vital skill for the 21st Century. The identification of this needed skill goes beyond creativity's past associations with the expressive arts and ventures into its new association with varied and novel products (Amabile, 1983, 2013; Flaherty, 2005; Mumford, 2003; Sternberg & Lubart, 1999; Solomon, Powell, & Gardner, 1999). The extended definition of creativity and the awareness of the necessity to be creative in other spheres such as the sciences and business puts pressure on education to also increase its application of creativity in schools. Nevertheless, few representations exist where creativity is integrated beside the expressive arts. Consequently, the development of creativity as a recognized skill for the new era may fall upon other spheres of study and learning.

Purpose of the Study

The goal of this descriptive case study was to describe how teachers from three different schools from the same city- Targoviste, located in Dambovita County, Romania, understand creativity and are able to train their students into it.

Creativity in the classroom or in schools is commonly connected to its relationship with the expressive arts. All the three schools discussed in this project are not art schools, making the integrated element of creativity into curricular practice rather an ignored phenomenon. The portrayal of the way in which teachers actually understand and teach creativity can provide school employees and precisely teachers, with new views, visions and possibilities for better meeting the prospects of nurturing creativity as a required 21st Century skill.

Research Questions

Case studies are most appropriate for "how" and "why" research questions and in studies where the researcher has little or no control over the events (Yin, 2009). The limited research connected to creativity in schools outside of the expressive arts validates the necessity to pose "how" questions.

Answering a "how" question provided a basis for the rich picture needed to portray the complexity of creativity as integrated in the specific context of this study. Moreover, the investigator had no control over the events.

The following research questions led the study:

Research question: How teachers from three different elementary schools in Targoviste, Dambovita, Romania, understand and train creativity in their students?

Research sub question 1: How teachers from three different elementary schools in Targoviste, Dambovita, Romania, understand creativity related to their role?

Research sub question 2: How teachers from three different elementary schools in Targoviste, Dambovita, Romania, train creativity in their students?

Research sub question 3: How teachers from three different elementary schools in Targoviste, Dambovita, Romania perceive the schools 'boards attitude towards creativity?

Research Methodology

Qualitative research is selected as a methodology when a topic or issue needs to be explored (Creswell, 2012, p. 47). The decision to attempt to understand how teachers understand creativity related to their position and how are they able to train in in their students requires exploration. Exploration in research is undertaken in an effort to understand a phenomenon (Creswell, 2002, p.58). Creativity's complexity requires more than the study of individual aspects of creativity to understand its dynamics (Amabile, 1989; Csikszentmihalyi, 1990; Gardner, 1993; Gruber, 1988; Sternberg & Lubart, 1995). Most research existing on creativity is mainly from the ground of psychology and is, in great part, quantitative. This is demonstrated by the number of tests that have been settled to measure creativity such as the (a) Torrance Test for Creative Thinking (TTCT), (b) the Wallach–Kogan Creativity Test (WKCT), (c) the Remote Association Test (RAT), (d) the Creativity Assessment Packet (CAP), (e) the Khatena–Torrance Creative Perceptions Inventory (KTCPI), (f) the Creativity Checklist (CCh), (g) Scales for Rating the Behavioral Characteristics of Superior Students (SRBCSS), (h) the Creative Product Analysis Matrix (CPAM), and (I) Student Product Assessment Form (SPAF). Quantitative procedures, while valuable, do not take into account the contextual undercurrents of connections or the complexity that lie beneath creativity, making the understanding of creativity within dynamics problematic.

Qualitative studies allow for development of a complex picture of an issue or study topic (Creswell, 2009, p. 176) and are best suited in settings that are dynamic, unique, and complex (Hatch, 2002). Qualitative studies of creativity within the complex settings of schools are very limited and are typically presented as case studies. The lack of qualitative studies that demonstrate both the complexity of creativity and school environments determined the choice of qualitative inquiry in the present study.

Opportunities for new insights to a phenomenon and a foundation for future research are often reasons qualitative research is chosen as a method for investigation (Yin, 2009). While research on creativity has been primarily conducted in the field of psychology, creativity is emerging as a field of practice in education (Lin, 2011; Robinson, 1999; Sefton-Greene, 2008).

The exploration of qualitative research relies on rich description or narrations that do not conform well to numerical statistics (Bogdan & Biklen, 2007; King, O. Keohane, & Verba, 1994). In contrast, quantitative research relies on statistics and "on numerical measurements of specific aspects of phenomena; it abstracts from particular instances to seek general description or to test causal hypotheses; it seeks measurements and analyses that are easily replicable by other researchers" (King et al., 1994, p. 1).

Understanding a topic through qualitative research also requires exploring a topic in context or in its natural setting (Creswell, 2012; Hatch, 2002; Stake, 1995; Yin, 2009). A natural setting is the "site where participants experience the issue or problem under study" (Creswell, 2012, p. 45). The present study was conducted in the natural setting of the elementary school "V" located in Targoviste, Dambovita County, Romania. Lack of control over the events observed is another distinction of qualitative research (Yin, 2009). The researcher had little or no control over the events in the present study.

Research questions in qualitative research are open-ended, evolving, and nondirectional, allowing for the discovery, exploration and description of a processes or experiences (Creswell, 1998). This case study responded to the research question, "How teachers from three different elementary schools in Targoviste, Dambovita, Romania, understand and train creativity in their students? In the study's investigation of the key research question as well as its subsequent research sub questions of how teachers from three different elementary schools in Targoviste, Dambovita, Romania, understand creativity related to their role, how teachers from three different elementary schools in Targoviste, Dambovita, Romania, train creativity in their students? And how teachers from three different elementary schools in Targoviste, Dambovita, Romania perceive the schools 'boards attitude towards creativity, may provide new understandings within the complexity of both creativity and school environments. It can also

provide supplementary foundations for research, making qualitative research a suitable choice for the study.

Research Design

Case study outlined the design of the present qualitative study. While qualitative research examines a phenomenon, case studies provide a "particular instance of the phenomena" (Gall et al., 2007, p. 447). The particular instance of this study was how teachers from three different schools in Targoviste, Dambovita County, Romania, regard creativity as related to their role and how are they training it in their students. The instance of the phenomena provided an opportunity to offer a complete picture of what creativity is understood as and how it is trained in the school environment of the "V" Elementary school, located in Targoviste, Romania.

According to Gruber (1980), the complexity of the creative process required a systems approach in its analysis. He established an evolving systems approach to the study of creativity since he determined that creativity is a result of dynamic developmental processes that are influenced by many connections over time (Kozbelt, Beghetto, & Runco, 2010). Networks of (a) enterprise, (b) insights, (c) evolving belief systems, (d) cognitive, (e) social and (f) affective processes are part of the evolving systems related to creativity (Gruber, 1980; Wallace, 2001).

Howard Gardner (1993) also observed seven persons as case studies and further advanced a previous concept of domain specificity put forth by Hayes (1985). Field specificity argued that there was a ten-year prerequisite in skills, traits, or knowledge that underlies successful creative performance in a certain area of expertise. Domain specificity in creativity has added a dimension of study within the study of creativity and continues to be studied (Kaufman & Baer, 2005; Plucker & Beghetto, 2004).

"Flow" (Csikszentmihalyi,1999) is another concept that was developed through the examination of multiple case studies. "Flow" is an almost total immersion and absorption of thought and task. "Flow" has continued to be investigated as a level of engagement (Shernoff, Csikszentmihalyi, Schneider, & Shernoff 2003). Csikszentmihalyi (1999), Gardner (1993), and Gruber (1980), concluded that a systems approach was more apt for analyzing creativity. In all previously cited examples case studies was a foundation for extrapolating concepts and initiating further study. A holistic approach to the study of a phenomenon is an earmark of case studies (Stake, 1995; Yin, 2009).

Qualitative group case studies of creativity in schools have been conducted by the Creative Partnerships of the Arts Council of England conducted action research on schools that attempted nurturing young people's creativity (CCE, 2006). Although the research was conducted as action research, it took place "in real schools, in real time, in ordinary circumstances and for all the case study schools, ordinary circumstances are challenging" (CCE, 2006, p. 21), exemplifying the holistic environment required of qualitative case study research. A holistic approach was also commenced in the present study through observations made throughout the course of the natural school day, during a week period, and within the natural setting of the school.

Qualitative research asks the general question "what is happening" (Hatch, 2002), but case studies ask more specifically how or why research questions (Yin, 2009). The question of how teachers from three different elementary schools in Targoviste, Dambovita, Romania, understand and train creativity in their students was addressed in this study. The depiction of this phenomenon was made through description and further defined the study as a descriptive case study. In descriptive case studies Gall, Gall, and Borg (2007) indicated that researchers attempt to depict a phenomenon and conceptualize it using thick description to recreate situations in context (Gall et al., 2007, p. 451). As an emerging field, creativity in the educational field, can benefit from descriptions of how teachers are understanding it and teaching it to their students.

Yin (2009) considered that a strong theoretical framework aids the design, data collection, and generalization of case studies. A multiple case study in the United States (Lasky, 2012) involved five science teachers exploring how their beliefs and curricular choices impacted outcomes in students. The study enclosed its research around the theory of the small "c" creativity and examined (a) divergent thinking, (b) novel artifacts, (c) collaboration, (d) choices related to acceptable responses, and (e) lessons that enhanced, rather than restricted learning (Lasky, 2012). A theoretical framework is a solid component of the present study highlighting case study as a suitable choice for the study. Observations made during the study were encompassing both creativity and constructivist theorists. In psychology, Torrance (Torrance, 1988; Torrance & Safter, 1999) identified outcomes such (a) fluency, the ability to produce ideas; (b) elaboration, the ability to think in a detailed and reflective way; (c) abstract thinking; and (d) originality, the ability to produce unique and unusual ideas. Divergent thinking tests continue to be used as a partial measurement for creative thinking and potential creative thinking (Baer, 2011; Batey & Furnham; 2008, Lemons, 2011; Runco, 2004). Motivation has also been identified and correlated with creativity (Amabile, 1983; Runco, 2007; Torrance, 1981). Other studies revealed that there were personality traits that defined creative people (Barron & Harrington, 1981; Csikszentmihalyi, 1996). These aspects of creativity framed observations in the current study. Furthermore, the process of interaction called mediation (Vygotsky, 1978) and Dewey's (Dewey,

1910, 1934, 1968) concepts for reflection of prior experience and the use of relevant activity to construct knowledge, known as constructivism, framed the observations related to learning in the case study.

Target Population, Sampling Method, and Related Procedures

Target Population

According to Gall, Gall, and Borg (2007) a target population includes real or hypothetical sets of people, events or objects to which the designated study expects to generalize its results. The target populations for the present study are 30 elementary age students, 3 staff- teachers, and administration of the three schools' settings.

Sampling Method

Purposive and convenience sampling was used in this study. According to Yin (2011), the goal of purposive sampling is to have chosen the sample "that will yield the most relevant and plentiful data, given your topic of study" (p. 88). The theme for the present study was creativity. The three schools have been chosen as teachers from these three schools were eager to collaborate in this research, and also interested in the field of creativity, making purposive sampling the selected sampling method since the research could produce plentiful data concerning the understanding and incorporation of creativity in schools and more precisely classrooms.

The sample is also a convenience sampling. Convenience sampling implies that the sample of study is either geographically close to the researcher's home or place of employment (Gall et al., 2007). All of the three schools are located in the city of Targoviste, Dambovita County, Romania, the birthplace of the researcher, and also the workplaces of the three family members. These facts made it opportune as a unit of analysis for study.

The standards for inclusion for the proposed study was voluntary participation of staff and students. Teachers were first invited to participate. Teachers who declined to partake inevitably excluded their pupils and classes. Only parents of the children of teachers who agreed to join were contacted to have their children observed in the study.

Sample Size

According to Yin (2009) the units of analysis in case studies can be comprised of individuals, small groups, organizations or partnerships. In the current case study, the sample size was determined by the unit of analysis in the study, the three elementary schools involved. The unit of analysis for the study comprised consented participation from 3 adults and 30 students.

Setting

The setting for the proposed study was the natural environment of one elementary school located in Targoviste, an urban setting in Dambovita County, Romania. In this study the researcher had no control over the events; they were simply observed and noted. The classroom size was big- 30 students, and had one teacher in the classroom at a given time. The school observed is a public one. Access to education is free in Romania until 12th grade and over under various conditions.

Recruitment

Recruitment of staff and administration for the study was conducted through an informational assembly at a personnel meeting. During the informational assembly, staff and administration were provided with material regarding the purpose of the study, how the study would be led, information about the contributors' privacy and how the data would be protected. Informed consent was debated and was demanded prior to the study. The investigator's personal contact information was provided to permit for private enquiries regarding any questions and concerns potential contributors had concerning the study. Participants were informed that they were allowed to indicate that they did not want to contribute at any point in the study. Although the study did not include communication with students, parent consent was compulsory for observation of students. Parents of students were informed by the schools` staff of the detailed goal of the study, how the study would be led, and the allegations concerning their children's privacy.

Instrumentation and Sources of Data

The instruments for the present study comprised field notes of observations and interviews that followed an interview protocol. Consent was requested to record the interview.

Data Collection

Data concerning the behaviors, knowledge, competencies, experiences, that were detected in students and teachers by the researcher related to the understanding and use of creativity at the involved school was documented through field notes/observations at the school. Observations and interviews were the main foundation of data collection. Interviews with three teachers were led with pre-planned open ended questions allowing for follow up questions to discover relevant commentaries or remarks. The data was collected by the main and one investigator of the case study.

Timeline

The proposed research took place during the course of a week period. The study began in March, 2017.

Interviews and field notes/observations

The use of interviews as supplementary data gathering tool increases validity and consistency through triangulation (Creswell, 2009). Interviews with the three teachers were led with pre-planned, open ended questions permitting for follow up questions to explore pertinent comments or remarks.

According to Bogdan and Biklen (2007), the major data gathering technique for case study is participant observation supplemented with formal and/or informal interviews and reviews of documents. Observations in qualitative research revolve around three types: participant observer, non-participant observer and changing observational roles (Creswell, pp. 211-212). These are determined by the assortment of the researcher's role in the observations. The role of participant observation entails that the researcher dynamically take part in the activities being researched. A non-participant observer visits and documents but does not take an active part in the actions of the participant. The third role is that of changing observational roles which acclimatizes the role according to the development or the goals of the research. The role of the investigator in this research was that of nonparticipant observer.

According to Bogdan and Biklen (2007), field notes include at least two categories: descriptive and reflective notes (Bogdan & Biklen, 2007, pp.117-128). Descriptive field notes should include details about the (a) physical setting, (b) subjects, (c) significant events, and (d) behavior. In this study, the requirement of noting physical setting, subjects, significant events, and behavior also

served as the part of the observations. Reflective notes included impressions regarding more subjective notations such as feelings or impressions to the significance of certain words or gestures, (Bogdan & Biklen, 2007, pp.117-128).

Data Analysis Procedure

Yin (2009) asserted that the preferred strategy for analysis of data for a case study began with relying on strong theoretical propositions that led to the case study (p.130). A secondary strategy suggested by Yin (2009) was the development of a descriptive framework for the case study. The framework should be considered in the process of designing the study (p.131) and should assume that data related to each question has been collected. The descriptive framework for the present study relied on the direction of the study's research questions and was presented in that order. Within that order, typological analysis has been presented as described alongside descriptive narratives concerning the research questions presented in the ninth step of Hatch's (2002) recommended analysis.

Typological analysis (Hatch, 2002), the analysis procedure used in this study, entails the identification of themes and codes for analysis prior to the study. Because this study had a solid theoretical basis thematic codes were established prior to observations and the development of the interview. These codes were pre-determined by theories linking to creativity and learning. In addition to the identification of typologies Hatch (2002) recommended a specific process in typological analysis (pp. 152 -161). In the first three stages of analysis interpretation was postponed. In typological analysis, the first step supposed reading with the typologies in mind with partial interpretational examination. Then, data was read recurrently by typology. Thirdly, a summary sheet by typology was shaped. Interpretation was still restricted at this stage of analysis. Looking for sense and interpretation commenced with the fourth step of analysis in a search for patterns, themes and supplementary typologies. The fifth step of analysis was requiring coding and recoding of themes or patterns. The sixth step involved examination of codes and explanation of the data. In this step, the researcher determined if the data supported the groupings and if opposing or dissimilar data could add new understanding to what was observed and recorded. In continuing to the sixth step another search for relationship among patterns is required. The process continued to the eighth step which was requiring that the patterns be interpreted as generalizations. These generalizations directed into the ninth step which was requiring that excerpts, influential examples, and citations be used to illustrate the generalizations. In the existing study, thick descriptions and quotations were used.

Limitations of the Research Design

The statement of limitations allows other researchers to replicate a study as well as to judge if the findings can be generalized to other situations or people (Creswell, 2005). The subsequent limitations were present in this study:

1. The population of the school comes mainly from middle and upper middle class. Very little representation from low income scholars is present.

2. The size of the sample is quite small in contrast to the total population of elementary school children in the school that was selected for this study.

4. The timing for required observations took place over a period of one week.

5. The role of the researcher in this study was that of nonparticipant observer. The researcher considers herself a creative individual. This inclination caused an interest on the planned theme of creativity. This can create researcher bias. Researcher bias is acknowledged in studies (Gall et al., 2007). According to Gall, Gall, and Borg while "observations rarely are completely accurate, they usually are accurate enough for research purposes." (p. 19). An observation protocol tool provided the researcher with a tool for inspection for correctness and consistency.

Assumptions

The nature of qualitative research is that it can cause the "Heisenberg effect" where the observed may alter their response due to the observer (Bogdan & Bilken, 2007, p. 38-39). Care was taken to edge this response and assumes the following conventions that follow:

1. Teachers replied honestly to all questions in the interview and consequent follow up all through the data collection process.
2. Relations with students were not part of the study but students were conscious of the study and the investigator. It was presumed that students did not modify their comportment or projects when the investigator was present.
3. Changes and alterations of theme or practices were not made due to the company of the investigator.

Delimitations

The need for a case study to be bound by the case, the situation or time lends to its generalizability, reliability and validity (Merriam, 2009; Stake, 1995). Delimitations or limitations imposed by the researcher allow for feasibility of completing the study as well as more apt use of the findings by stakeholders (Merriam, 2009). The following delimitations were existing in this study:

1. The study has been conducted within a week. Case studies are most relevant when considerable time is spent at the site studied (Yin, 2009). Nevertheless, every day and full day daily observations of the same class and whole school involvement allowed for the collection of wide-ranging data in a very little period of time.

Internal Validity

According to Yin (2009) internal validity for case studies refers to making inferences beyond the scope of the data. Yin chosen various tests for legitimacy in a case study. He recommended that processes in the data analysis such as pattern matching amplified legitimacy. Pattern matching in the present study was performed within each data collection process and tool as well as across the data collection instruments. This is to say that both predetermined typological themes and emerging themes were acknowledged separately by the data in steps two through four recommended by Hatch (2002) in typological analysis.

Creswell (2003) also suggested that internal validity is endangered when instruments in the study have been compromised by altering the instruments. The identical interview and observation protocol was used when conducting all interviews and observations and these were not altered during the development of the study. Teachers could review their interview transcriptions. This checking is also considered a criterion for internal validity (Creswell & Miller, 2000).

External Validity

Whether a study's findings are generalizable to another population beyond the population studied is considered an element of external validity (Yin, 2009, p. 43). According to Yin a test for external validity for single case studies is in the research design and if the design contains theory.

In the present study theory was a solid component of the strategy and provided the groundwork for the typological themes and analysis that emerged.

Expected Findings

It was expected that this research would provide a description of how three teachers from three different schools in Targoviste, Dambovita County, Romania understand creativity in relation to their status as a teacher and are able to teach it, as well as to observe how one of them is actually transposing those things into practice. Observations for those descriptions were enclosed within concepts related to creativity. It was anticipated that the descriptions of how teachers understand and promote creativity within their job could offer a groundwork for further research.

Ethical Issues

The study was led with teachers from three different schools located in Targoviste, Dambovita County, Romania. The access to the school that was chosen for observation have been smoothed by the one of the interview respondents. All three interview respondents are relatives of the researcher. Since Romania is not regarded at a country that promotes transparency, I believe that having relatives to facilitate access was a big opportunity if not the only one to be able to conduct such a study. Ethical commitments and standards are required of any researcher (Creswell; Gall et al., 2007; Yin, 2009, 2011). The researcher believed her ethical standards permitted her to account her observations precisely.

4. The Romanian Educational System

Concept of the Educational System

"*A system is a group with at least one affect relation which has information.*"

(T. W. Frick, 1996)

"*... teacher, student, content, and context are taken as forming a system of education.*"

(Steiner, 1988)

Thus, the components or subsystems of an education system are teacher, student, content and context, and affect relations pertain to how these components are connected.
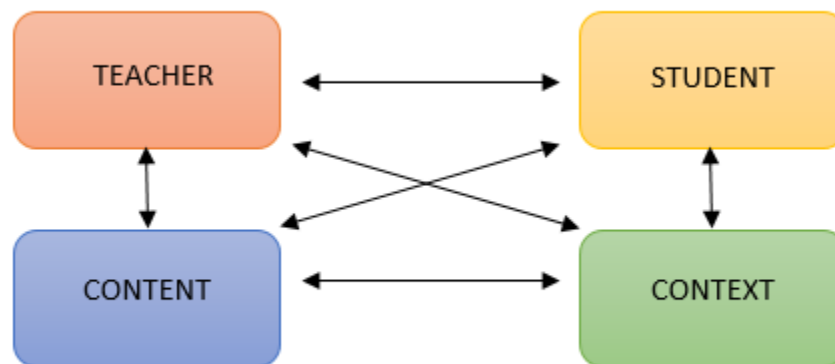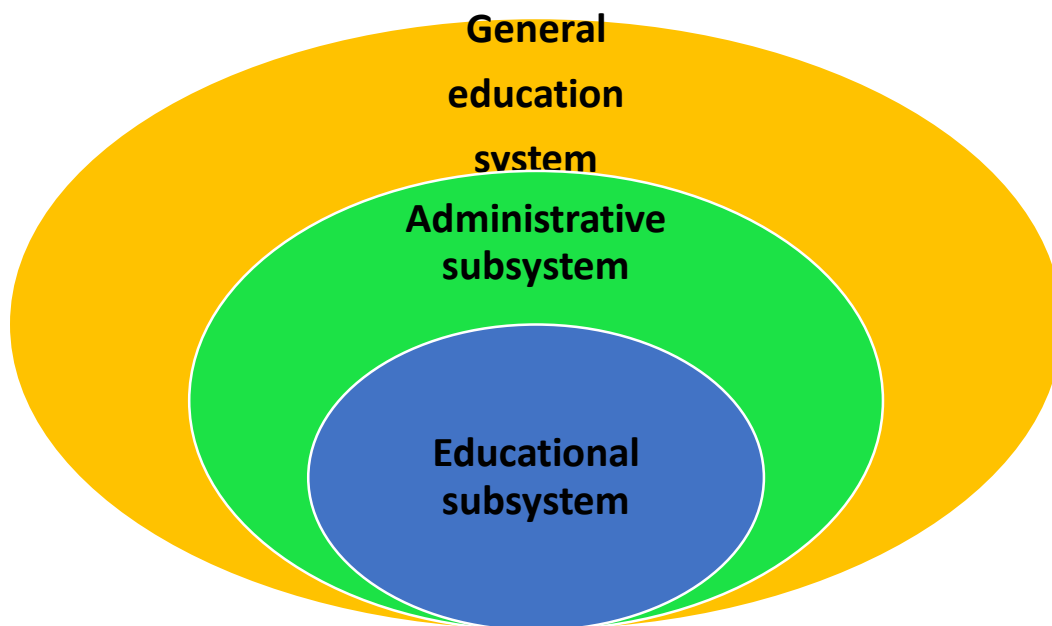

Figure 1- Components and relations in an educational system according to Steiner (1988)

A teacher is one who guides the learning of another. Teaching is a relationship between two persons, one of whom guides the other who follows.

A student is one who intends to learn through guidance from a teacher. In contrast, a learner is one who attempts to learn without guidance, e.g., by trial-and-error. *(Steiner, 1988)*

Content is that which is to be learned. It is desirable that students understand to value the content and to associate positive feelings with the objects of learning. At the same time, teachers should know the subject matter (and how to guide learning of subject matter, which is a further kind of understanding of content) and value it *(Steiner, 1988).*

Context is the setting in which guidance of learning occurs. Typical contexts of present-day, formal education systems include classrooms in school buildings, principals, janitors, local school boards, furniture, black/white boards, overhead projectors, computers, books, libraries, gymnasiums, school buses, cash, cafeterias, food, etc. Context could also comprise county departments of education, and national departments of education *(Steiner, 1988).* Broadly, the education system covers all institutions participating in the organization of school architecture. The general education system comprises of the administrative subsystem and the subsystem of education, which refers to the institutional organization of education *(Steiner, 1988).* The education subsystem reunites specialized institutions involved in education, research and culture, accountable for coordinating an organized, planned and methodic application of the educational objectives. Viewed from this perspective, the education system has an open character, including alongside formal educational institutions (schools, high schools, colleges, universities), institutions specialized in non-formal instruction, such as centers for professional training, clubs, holiday camps, programs for educational radio / television programs, on the one hand and on the other hand, various social agents that educational institutions establish contractual relations with (military schools, vocational schools, churches) or consensual (families, local communities). From a narrow perspective, the education system comprises in schools (primary school, secondary, vocational and higher education), organized on the levels, cycles and years of study. *(Steiner, 1988).*

General education system

Administrative subsystem

Educational subsystem

Structure of the Educational System in Romania

1
- PRESCHOOL
- 3-6 years and over

2
- PRIMARY EDUCATION
- 7-10 years
- I-IV grades

3
- SECONDARY EDUCATION
- 11-14 years
- V-VIII grades

4
- SPECIAL PRIMARY EDUCATION
- 7-10 years
- destined to special needs children

5
- HIGHER SECONDARY EDUCATION
- 15-18 years
- IX-XII / XIII grades

6
- PROFESSIONAL HIGHER SECONDARY EDUCATION
- 15-18 years
- IX-XII / XIII grades

7
- POST-SECONDARY EDUCATION
- 19-21 years
- duration of 2 years, professional training

8
- TERTIARY EDUCATION - UNIVERSITY
- 3-6 years

9
- POST TERTIARY EDUCATION

Figure 2- The 9 levels of the Romanian Educational System

History of the Romanian Educational System

The Soviet influence led to significant changes in the Romanian education system, turning it into a Stalinist one. During this period, important reforms were made.

Between 1949 and 1958, it was decided that the education system should be controlled by the ruling party so as to ensure public education in line with all the general principles promoted. Some universities were transformed into Technical Institutes and compulsory education was set at seven years. The private schools were eradicated and a number of previously taught subjects were replaced with new ones, reducing considerably the share of the social sciences.

Later, in the 80s, the compulsory education was set at 12 years. One of the most improved records of this period was the significant reduction of the illiteracy to just 10% of the population, which means that the labor force was better equipped, able to respond better to the needs of the labor market and to retrain when economic reality requires changes that mean new kinds of work, progress and innovations.

In December 1989, after 45 years under the Communist regime, Romania was making its first steps towards democracy. The communist president Nicolae Ceausescu was killed as a result of the Revolution, and the ex- Communist Republic was demanding fast and consistent change, now that the main obstacle has been removed. It was mostly teachers and students who supported the anti-regime manifestations, and they were also demanding freedom and western standards, especially in the education field.

December 1989, Bucharest- People demanding liberation from the communist regime

The close link between education and the labor market can be described in that: "all the transformations of the labor market that are not followed by adapting the education system create imbalances / inconsistencies of a different nature: imbalances / inconsistencies in the

level of education or the type of education: sub-education / over-education and under-qualification / over-qualification, skills above or below those required at the workplace, deficit / surplus of skills or loss of their time." (G.C. Dimian, 2012)

The 90s marked a major change on the labor market, and it was only natural that the educational system would follow the same path. After 1990, the educational system in Romania has undergone a series of transformations due both national and European regulations and demographic developments in Romania, which led to the reorganization of the entire education system.

After 1990, the Romanian education system was in a continuous reorganization process, aiming to better adapt the graduates to the labor market needs and to adapt the Romanian education system at the international one, particularly at the European system.

As a result of the new measures, the literacy rate has reached in 2004 at 97.3%, but it grew in the last years at 6%, according to a study made by the National Federation of NGOs for children statistics. They were established many universities, colleges and private schools and, in the public universities, were established many new faculties, designed to prepare the graduates according to the modern requirements of the internal and international labor market, on the newest and modem fields. Cornelia Nistorescu, a professor at the National Academy of Economic studies believes that the teaching methods and techniques were improved, and we can observe a clear trend of higher education's internationalization, as happened in most other countries, the economic side of the education becoming more and more important, (Cornelia Nistorescu, 2014).

University management means now to solve many problems increasingly complex in many areas related to the education. Internationalization means not only matters strictly related to learning, but also involves modernizing the type of funding so that universities respond better at the requirements coming from the activities of modern teaching and research, but also from those related to staff motivation and its stimulation to achieve a higher quality in the teaching process, in counseling and in the research area. Determining new financing methods and instruments has meant to attract foreign researchers and teachers from abroad, benefiting from their professional experience.

As positive aspects related to the internationalization, from the official data it results that "since 1990, an impressive number of Romanian students have studied and / or conducted research in universities abroad. This has led to the rapid renewal of the academic curricula for the existing programs and to the creation of new specializations. Meanwhile, university libraries have enriched the collection of evidence, and Romanian professors and researchers were given access to prestigious scientific journals." [1]

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[1] http://www.marketwatch.ro/articol/5774/Internationalizarea_invatamantului_superior_romanesc/

Another important step was the launch of academic programs in other languages. In the 90s, the Ministry of Education has created special academic programs in medicine, political science, public administration, engineering.

In the current system, the focus is on training, on lifelong learning, on the teaching career management, on improving the management and the quality of all the specializations.

At the Congress of Education in Bucharest from June 2013, are outlined the measures to be taken by the State in order to accelerate the process of the education internationalization, given that all the European universities consider internationalization as a strategic objective. Among the legislative measures there are the economic and financial measures, as described by the Educational Congress: "supplement grants and increase the amount of co-financing for mobility from national funds and / or universities funds; simplification of procedures to receive the scientific visa and the study visa and reducing those associated costs for at least the countries considered a priority for Romania".[2] Regarding funding instruments, at the same congress were decided: "Supporting the development of funding for the Romanian universities for projects designed to increase the number of co-tutelar programs".

The Executive Unit of the National Qualifications and Vocational Training of Adults conducted in 2011 a study on the inclusion of those who have completed a higher education institution. According to this study, higher education system does not provide all the necessary elements that the employers are looking to hire graduates. Most employers are not only interested in the specialization that was graduated, but also in professional experience that graduates have and in the training, they followed, along with the curriculum of the university. According to the result of this study, graduates say that more than a half of the knowledge and skills required at the workplace have been acquired even at that workplace, and only one third in college, while 14% have been acquired them in other circumstances. The same study showed that the current education system can provide the needed theoretical knowledge, but cannot develop practical skills needed by the graduates. For this reason, over 70% of graduates said they had followed training courses, and many employers were directly involved in the organization of these trainings.

An analysis restricted to countries in Eastern Europe and Central Asia (Sondergaard and Murthi, 2012) revealed for most of the countries from those areas a decrease of occupations requiring low skills and an increase of the skills required at the workplace. From a sectoral perspective, some trends were particularly visible: the sharp decline in the demand for qualifications in the agriculture determined also by the decreasing of the employment in the sector, the decrease of the demand for manual labor, qualified or non-qualified with the technological developments, increasing demand of qualifications for the services sector, which took over a large part of

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[2] http://www.congresuleducatiei.ro/

workers employed in other areas, a sharp increase of the demand for specialists with intellectual and scientific occupations.

The polarization of occupations has created challenges for the education system, which should ensure the right skills. The changes in the structure of economic activities and the occupations polarization determined increasingly more discuss on the labor market of generic skills or „soft" and of an" emotional activity." (G.C. Dimian, 2012)

A skilled workforce is a prerequisite for a green economy, and it may be necessary to focus education efforts on aligning skills with the needs of the labor market. This is particularly relevant for the so-called STEM (science, technology, engineering, and mathematics) disciplines. A number of jobs throughout the economy are expected to be transformed to respond to a more energy and resource efficient economy. A recent OECD study noted that" businesses will need to ensure that their managers are able to learn and understand the new skills needed to respond to the changes taking place with- in their realms of responsibility; to develop more green-oriented managerial capacities; as well as to make adequate use of the skills their staff has obtained" (OECD 201oc)." [3] This transition to the new jobs, including changing its management, requires cooperation between intergovernmental organizations and non-governmental enterprises, especially small and medium enterprises, and the State itself.

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[3] „Towards a Green Economy. Pathways to Sustainable Development and Poverty Eradication", www.unep.org/ greeneconomy, ISBN: 978-92-807-3143-9, Layout by UNEP/GRID-Arendal, www.grida.no, Version 02.11.2011, Copyright © United Nations Environment Programme, 2011

History`s implications on the creative ability of individuals

Culture and worldviews have an indirect influence on creativity by the way they shape the psychological make-up of each person (Ng, 2003). One way of viewing cultural influence is to examine the effect of individualistic and collectivist societies on individual character and behavior.

Nowadays, in Romania, there is a noticeable clash in between generations – those under 40 are more willing to use any kind of innovation in their daily work, are enthusiast about being part of change, seek improvements, while most of those over 30 (born and raised under communism) are reluctant to any type of change- as the past has proven that change is not always the best choice. To support my hypothesis, I lean on the results of a survey conducted in Pew Global Attitudes in 2009 regarding the post-communist generation in the former eastern bloc.

Satisfaction With Democracy

% Satisfied	Total %	18-39 %	40+ %	Youngest-oldest gap
Czech Rep.	49	60	42	+18
Poland	53	62	47	+15
Lithuania	35	43	29	+14
Russia	32	39	26	+13
Slovakia	50	55	46	+9
Bulgaria	21	27	18	+9
Ukraine	21	24	18	+6
Hungary	21	21	22	-1

"How satisfied are you with the way democracy is working in our country - very satisfied, somewhat satisfied, not too satisfied or not at all satisfied?"

Graphic presenting the result of the surveys undertaken by Pew Research Center[4]

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[4] http://www.pewglobal.org/2010/01/20/the-post-communist-generation-in-the-former-eastern-bloc/

As shown previously, there is still a significant difference in the way of thinking of the two generations: the younger generation is more individualistic and more likely to endorse a free market economy than are those who are age 40 or older.[5] The generation gap on attitudes about democracy and capitalism in Eastern Europe reflects a divide between the past, present and future. Both young and old express concerns about the way things are going in their country, especially with regard to the economic situation. But while the older generation looks back longingly, often saying that people were better off financially under communism, the younger generation expresses more confidence that democracy can solve their countries' problems. This is a hopeful sign for the future, as the post-communist generation becomes the next leaders and decision-makers in Eastern Europe.

Communism has left a scar on Romanian culture, one that still needs time to heal. According to various research papers, the implications of this kind of regime have the power to touch the individual`s creative capacity.

Research has identified differences between individualistic and collectivist societies. For example, living in an individualistic society (e.g. democratic) accentuates the psychological need for uniqueness and differentiation thus leading to individualistic behaviors. However, living in a collectivist society (e.g., Communism) accentuates the needs for validation and similarity within the social group, thus leading to conformist behavior. Conforming and group-dependent (collectivist) students showed a high need for nurturance, deference, order and control in contrast to group-independent students who showed a high need for achievement, autonomy, aggression, and creativity (Perkins, 1993).

The harmony of a collectivist society may lead to conventional and predictable behavior while individualistic cultures could well lead to more unconventional and creative behavior (Runco, 2007).

The emphasis on harmony may lead people in collectivist societies to look either upwards toward authority or toward the traditions of the past for guidance (Runco, 2007).

When the emphasis is on harmony, socialization is homogenizing and does not encourage one to extend the boundaries of thought and behave creatively (Cropley, 1973).

Research found that members of individualistic societies scored higher on tests of creative thinking in fluency than members of collectivist societies (Ripple, 1989).

Perkins' (1993) research identified two different student groups: group dependent and group independent. Conforming and group-dependent students showed a high need for nurturance, deference, order and control in contrast to group-independent students who showed a high need

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[5] http://www.pewglobal.org/2010/01/20/the-post-communist-generation-in-the-former-eastern-bloc/

for achievement, autonomy, aggression, and creativity. Living in a collectivist society (e.g., Communism) accentuates the needs for validation and similarity within the social group, which leads to conforming behavior. Living in an individualistic society (e.g. democratic) accentuates the psychological need for uniqueness and differentiation thus leading to individualistic behaviors. Research found that members of individualistic societies scored higher in fluency than members of collectivist societies (Ripple, 1989). This collectivist harmony may lead to conventional behavior while independence may lead to more unconventional and creative behavior (Runco, 2007).

Ng's (2003) research indicated that individualistic members with an independent self-construct find it easier to engage in creative behavior compared to collectivists. Culture has an indirect influence on creativity by the way it shapes the psychological make-up of each person and supports addressing the issue of culture when researching creativity (Ng, 2003).

As nowadays, Romania is cleaved between the two very different kind of perceiving modern times, a natural consequence would be a lack of inconsistence in educational laws and regulations' views concerning creativity, leading to failure in adapting to modern standards demanded by the market.

Characteristics of the nowadays Educational System

Democracy meant a continuous decrease of population for Romania- abortion was no longer illegal and new opportunities were now available for women, and this translated with a decrease of territorial educational units and implicit, fewer job positions.

Preschool education units

Elementary school education units
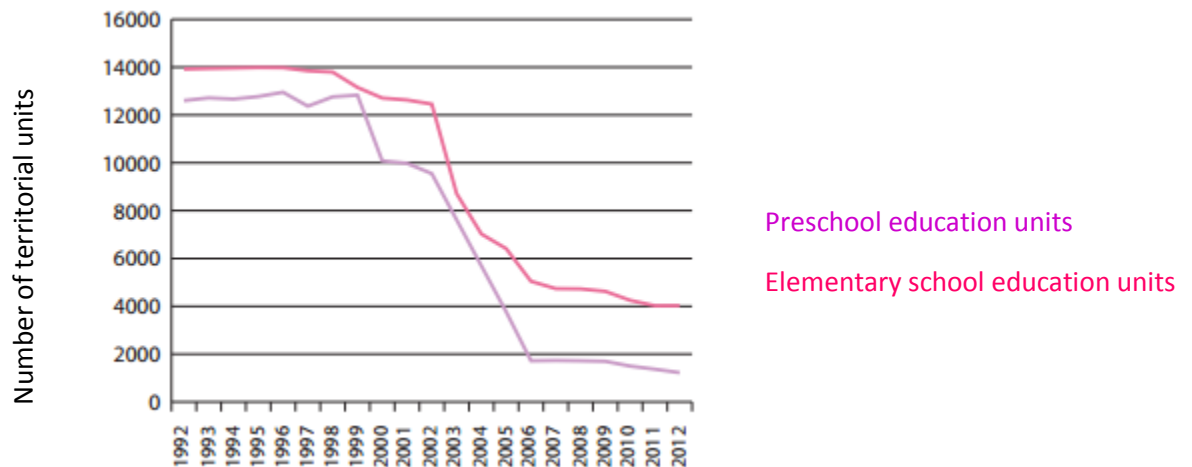
Graphic 1- The evolution of the preschool and elementary school education units between 1992 and 2012[6]
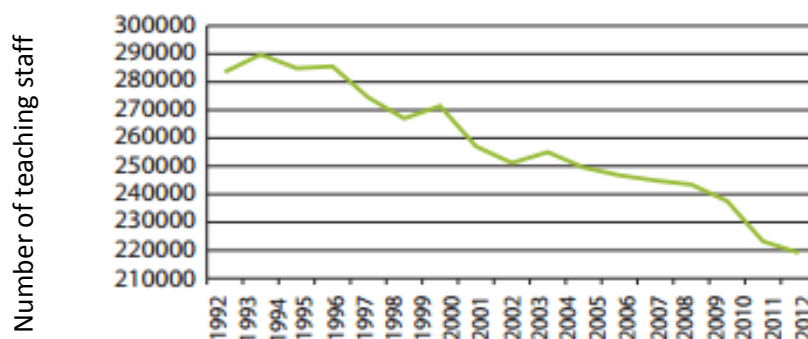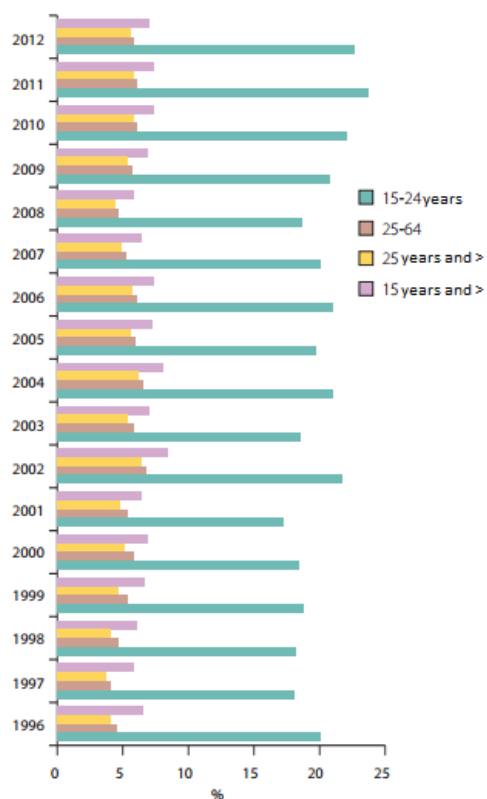
Graphic 2- The evolution of the elementary school teaching staff between 1992 and 2012[7]

[6] Education in Romania Anniversary report – The national institute of statistics, 2014, page 8
[7] Education in Romania Anniversary report – The national institute of statistics, 2014, page 10

As the demographic index went low, there was no great demand on the work force market for teaching staff. This led to a pronounced aging of the teaching staff:


Graphic 3- The evolution of the unemployment rate in Romania between 1992 and 2012[8]

Corroborating the fact that the teaching staff in Romania is aged and continues to age as we speak, with the topic discussed in the „History`s implication on the creative ability of individuals", namely the clash between generation, we can get to the conclusion that those who are supposed to teach and foster creative abilities in children are themselves less creative and therefore less suited to do so, as well as less likely to understand and promote these kind of activities.

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[8] Education in Romania Anniversary report – The national institute of statistics, 2014, page 10

Compared to the rest of the European countries, as per Teachers' and School Heads' Salaries and Allowances in Europe – 2014/ 15, a report prepared by the European Commission, in terms of salaries, Romania is situated as follows:
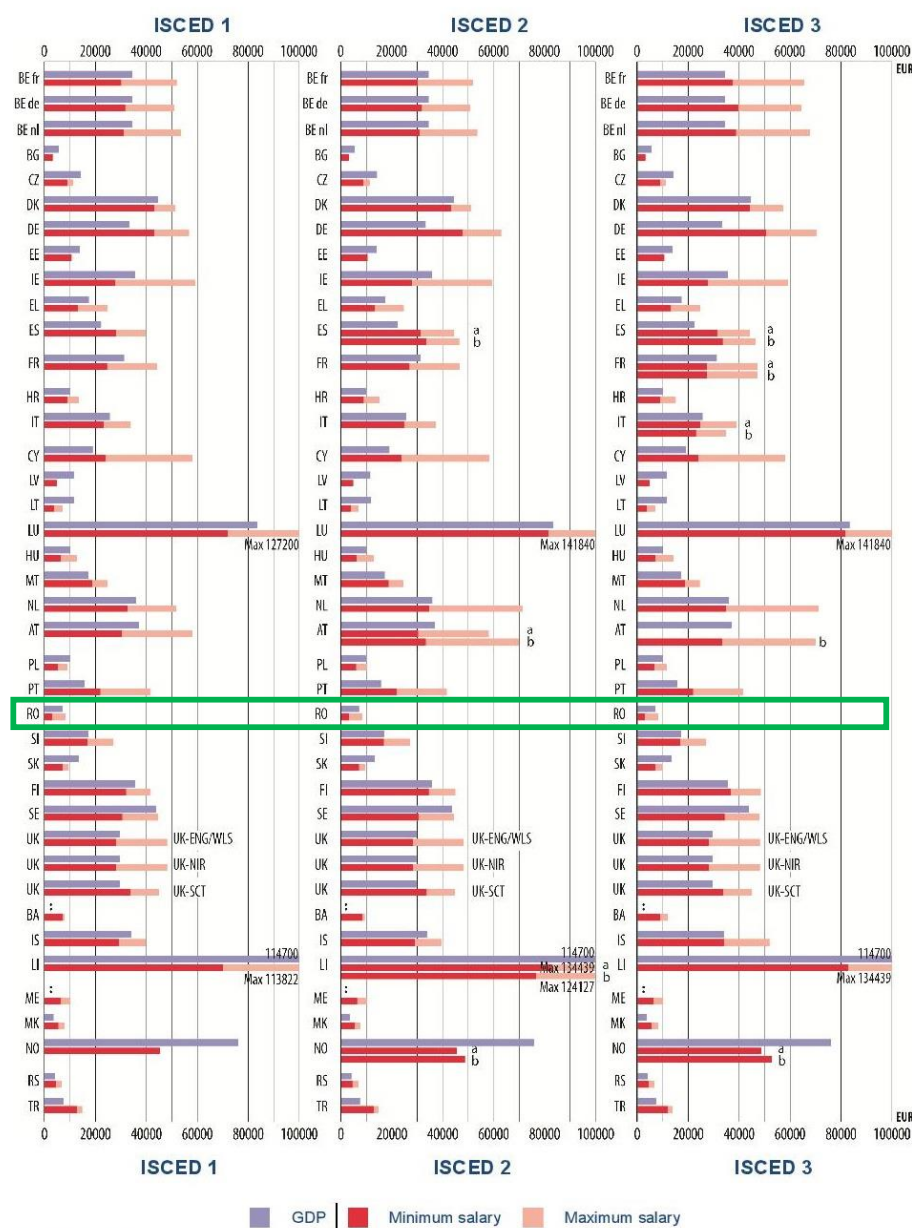
Graphic 4: Minimum and maximum annual basic gross statutory salaries for full time teachers in general education in public schools compared to per capita GDP at current prices, in EUR, (ISCED 1, 2 and 3), 2014/15[9]

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[9] Teachers' and School Heads' Salaries and Allowances in Europe – 2014/ 15, European Comission, 2015

The unattractive salaries play an important role in defining the quality of education in Romania. According to the Teachers' and School Heads' Salaries and Allowances in Europe – 2014/ 15, a report prepared by the European Commission, the average actual salary of the teaching staff ranges between 5.617 and 5.710 EUR per year.

Annual gross salaries of full time fully qualified teachers in public schools						
	Basic statutory salary				Average actual salary	
	Minimum		Maximum			
	RON	EUR	RON	EUR	RON	EUR
Pre-primary	13 154	2 934	37 194	8 297	25 178	5 617
Primary	13 154	2 934	37 194	8 297	25 178	5 617
Lower secondary	13 996	3 122	37 194	8 297	25 596	5 710
Upper secondary	13 996	3 122	37 194	8 297	25 596	5 710

*Image 1- Teachers' salaries – 2015-2016 in Romania[10]*

A quick analysis of the data published by the previous mentioned report leads to the conclusions that Romanian teachers are among the worst paid among Europe, as shown below:

Graphic 5- Average salaries compared- European countries

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[10] Teachers' and School Heads' Salaries and Allowances in Europe – 2014/ 15, European Comission, 2015

As the number of children down creased, the number of children in one class growth, as a natural consequence. Based on data gathered from the „The efficiency index"[11] report, Romania ranks as second in a top of most crowded classrooms in Europe.
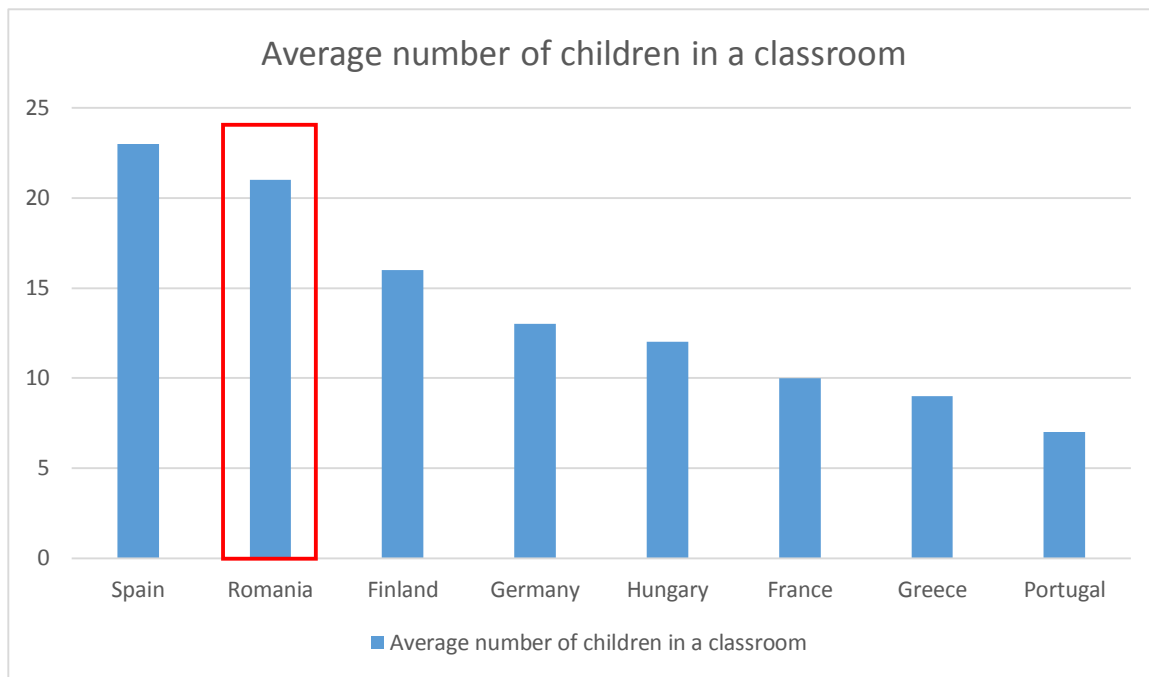
Graphic 6: Average number of children in a classroom compared- European countries

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[11] http://www.edefficiencyindex.com/

As referring to financing education, Romania ranks amongst the countries that invest the least in education, as based on data collected from European Statistics[12]
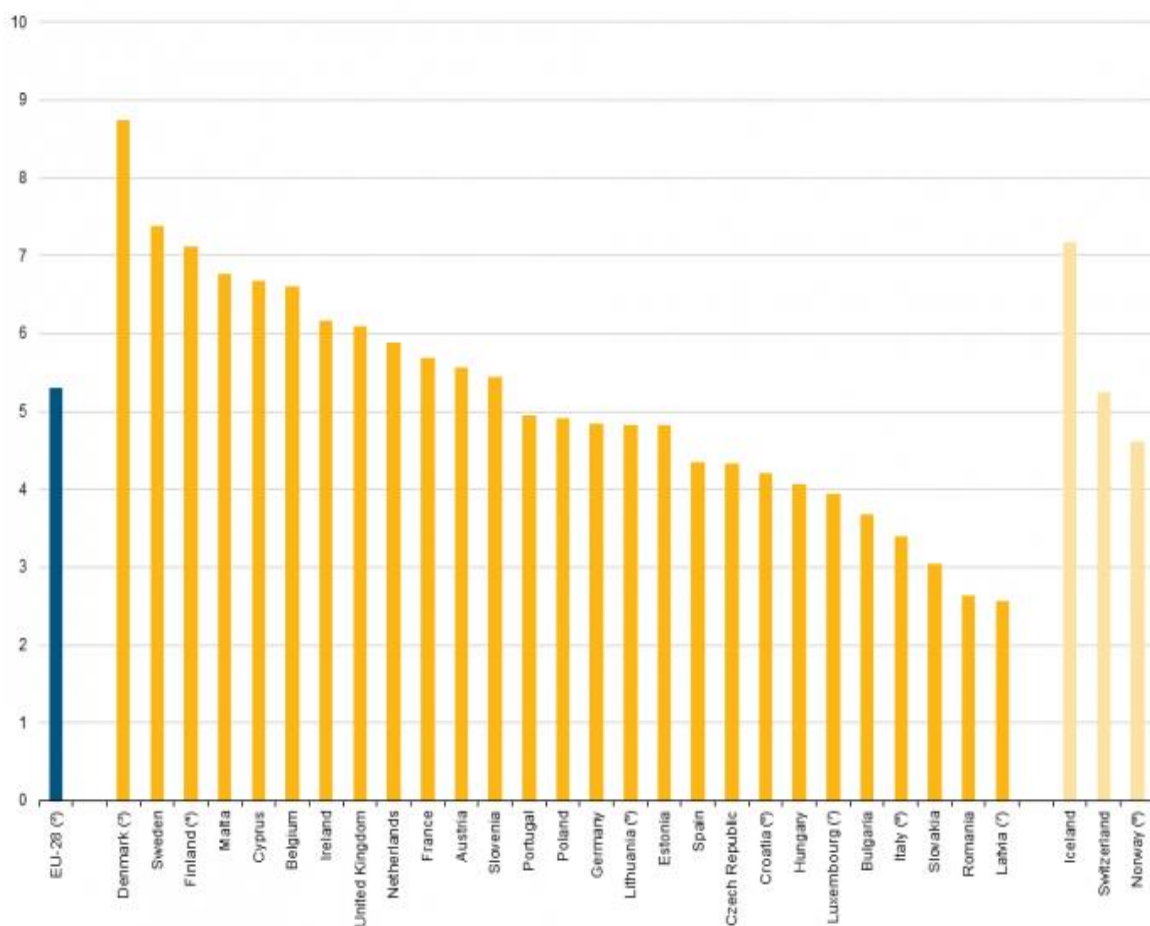
Graphic 7: Public expenditure on education (excluding early childhood educational development) as a share of GDP, 2012[13]

[12] http://ec.europa.eu/eurostat/statistics-explained/index.php/Main_Page
[13] http://ec.europa.eu/eurostat/statistics-explained/index.php/Main_Page

5. Data analysis and results

Summary of the Results

In answering the research questions, the investigator attempted to identify and describe practices used by three elementary school teachers, using interviews and direct observation. The schools managed to integrate creativity into the whole school environment mainly the willingness by individuals, by:
1. creating a mission that encompassed creativity,
2. improving and organizing its physical environment,
3. selection and flexible use of curricular materials and resources.

The researcher wanted to observe what practices that enhanced learning and creativity were used in the classroom. The Torrance Test for Creative Thinking (TTCT) is the best known and widely used test for creativity (Almeida, Prieto, Ferrando, Oliviera, & Ferrandiz, 2008; Kaufman & Baer, 2006; Kim, 2006; Zeng et al., 2011). The TTCT highlights fluency, elaboration, originality, and abstract thinking as four aspects related to creativity. These were used as predetermined typologies for the study. Of these, (a) fluency, (b) elaboration, and (c) abstract thinking were more preeminent in use and practice in the classroom. Originality, defined by Torrance (Torrance, 1988; Torrance & Safter, 1999) as the ability to produce unique and unusual ideas, was not as observed as either mediations or artifacts. Predetermined typologies related to learning included associations with mediation (Vygotsky, 1978; Feuerstein, 1980; Feuerstein, Falik, & Rand, 2006) and reflection (Dewey, 1933). Reflection as the use of earlier knowledge and mediation through questioning and other practices was decidedly evident in the observed class. Motivation, also considered important in relation to creativity (Amabile, 1996) was also considered a predetermined typology and was observed as planning for and attaining student disposition to stay on a given task.

Question 1

How teachers from three different elementary schools in Targoviste, Dambovita, Romania, understand creativity related to their role?

When asked how they understand creativity, more explicitly, to give a definition, two out of the three interviewed teachers linked it to one`s capacity to be simply himself. This led me to believe that they think that we are all genuinely creative - we just need the capacity to discover our own creative inner self. Cristina believed that "Creativity is the ability to discover, to express yourself in the light of this discovery, to feel good about yourself and what you do" and Mihai stated that: "Creativity is something that is hard to define, because it can manifest in different, various directions. I believe that creativity has to do with self-confidence, the ability to stand up for what you believe in and the courage to walk different paths- in short, to be yourself and to love it.". They described creativity as a capacity depending on our own way of being, thus, extremely different from one person to another. This way, they proved that they understand the deepness and the wideness of the matter, and that they support and promote diversity among their students. By stating that creativity relates to our self-esteem, they also proved that they understand the influence that external factors have among us, especially at young ages. Luminita depicts creativity as: "An intellectual capacity by which a person finds new solutions to old or emerging problems". She shed a different light on the concept: she believes that creativity is an intellectual capacity, not something that we are born with- she must then believe that we can also gain this capacity and learn to be creative. In conclusion, despite different views, all the three teachers believe that creativity is something that is accessible to all children, regardless if it is an innate capacity or one that can be attained through effort and dedication. They also agreed that there is a stringent need for creating a creativity friendly environment- one that allows the children to express themselves freely, one that recognize and celebrate their successes, one that helps them see their failures as stepping stones of their future successes.

What is creativity?

■ Innate capacity ■ Trained capacity
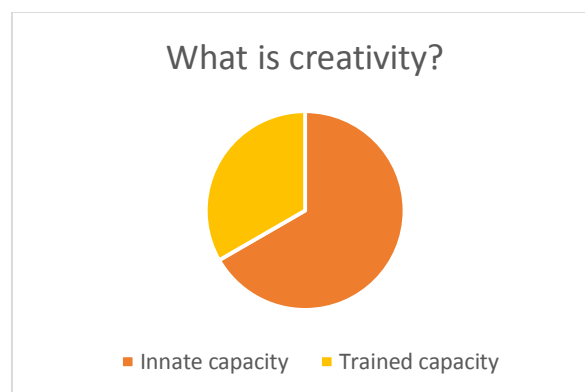
In the classroom, the observed teacher exposed a very open attitude towards students. They were encouraged to do things their way, they received advices and it they were surrendered by a very friendly atmosphere. The teacher proved that she can address differently, according to

each of the child`s needs, and to provide a solid support for them at the same time. Students were encouraged to express themselves, within the collective agreed rules of the classroom (a group of 10 rules democratically chosen by vote).

When it comes to identifying creativity in their students, teachers have specific methods. Luminita relies on "problem-solving method, brainstorming, clustering method or creation acts when it comes to visual arts discipline and practical skills, in particular". She examines the outcomes of her student`s work. Cristina, on the other hand, relies on more exact methods, such as questionnaires, as she describes: "I would like to think that I can identify creativity without any help, but usually things are not like this. Creativity and the direction in which it develops can be identified by applying specific questionnaires to detect the children`s learning style and multiple intelligences. It is true that the experience that I have sent me in the right direction, but I also rely on specialists." Both use products of the children to detect their present creative potential. Mihai has his own way, too: "After over 30 years of teaching, I spot them easily. There is no pattern- some are quiet, some are loud, and so on. I let every child to be who he is, and it is easier this way. Of course, there are those who must be "removed" from their shell, but this is not an impossible mission. It takes patience. It takes dedication." He uses the observation technique, he leaves the children to express themselves, and drags his conclusion from their behavior, but he is also aware of the fact that some children might be inhibited by external factors and might need help to get the courage to express themselves freely.

Spotting creativity
- Examining children`s behaviour
- Examining outcomes of children`s work
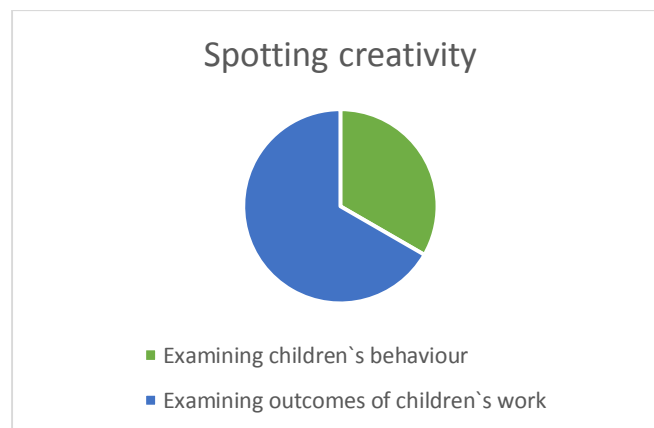
It was clear that the teacher has indeed used the methods to enhance creativity she stated in the interview, namely the problem-solving method, brainstorming, clustering method or creation acts when it comes to visual arts discipline and practical skills. I could notice the use of the methods on every class I have attended during the observation period. Problem solving was used, for example, in natural sciences class, when children were asked to develop a strategy for planting a tree. Brainstorming was used in literacy class, where children were asked to come up with different ending for a story the children have read. Clustering was noticed when kids were asked to group all the elements that they could see on the window into three groups: water, earth and sky, and then the same elements into other three categories: dark colors, light colors and in colorless. All the artefacts that the children produced were exposed on the walls. The

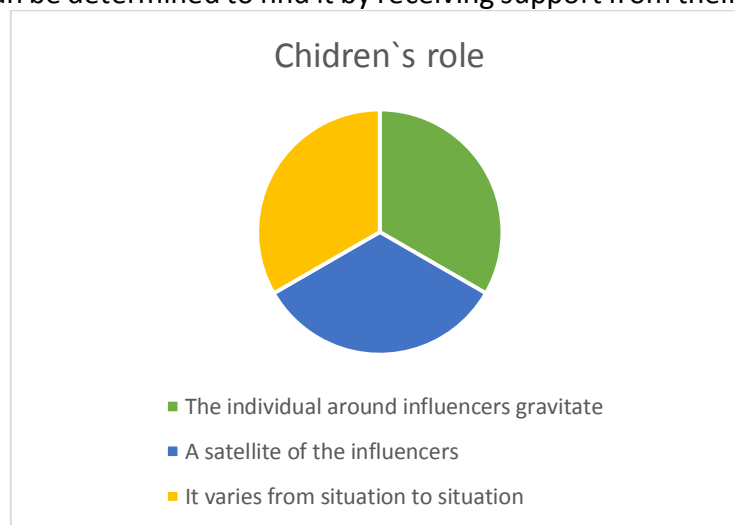exponents were changed frequently, and the parents were always welcomed to admire the mini-art gallery.

When discussing about how these teachers understand creativity, it is also important to understand how they see themselves in relation to it. It is important to know the role they assume to themselves in this matter, for assessing the degree they care about creativity. Luminita stated that "Theoretically, a good and dedicated teacher can reveal the best in its students. Preparing for enhancing creativity is a continuous process (it does not end the minute you get your diploma) and dedication comes from the belief that you can change, improve things", therefore implying that she believes that passion for her profession fires the desire to constantly improve yourself and implicitly, constantly following the latest trends in education. Creativity is one of them, for her, and, as she stated, she is continuously working towards finding better ways to improve her techniques of training it. Cristina has a different approach: "To say that you truly play a role in your students` life, it takes some years to grow along with them. Trust that you give them, will, in time, help them develop and become creative." She emphasized on the emotional bond between teachers and students. Mihai sees things in the same light:" I like to think that I play a very important role. Not as an example, but as a tool for their self-discovery. If I don`t work properly, they lose. I do my best to be, firstly, a good human being, and secondly, a good teacher. I think that qualitative human interaction will always weight more in self-development." He values more the emotional relationship with his students, believing that it is the best fundament for a good and fructuous teaching-learning experience.
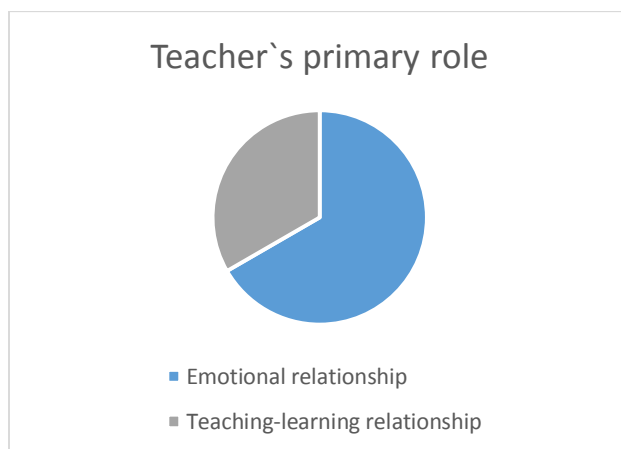
The teacher made an impression on me: she was very involved, but at the same time, she knew when she must take a step back and let the children to find the right path for them. She was supporting and she encouraged initiative. She exposed a friendly but firm attitude – she was able to communicate very well with the children. She also used a small corner of the class to establish a mini-library for the kid`s parents where she brought her own parenting techniques/children psychology/creativity themed books that could be borrowed by the students` parents. Some parents even brought their own books to the mini-library. The library is a success- granting access to information and assuring lower costs or no costs at all for those who cannot afford to buy such

books. I think that this reflects her implication- not only she tries to be a good teacher but she also thinks about enhancing their parents 'abilities.

First, we discussed about teachers' roles, but I believe that it is equally important to discuss the role that they assume to children related to creativity. I have therefore asked them about the children`s role in developing creativity. Luminita stated that they have "the biggest role: through their own effort, sustained and long lasting, can reach a large measure of creativity". Therefore, she believes that the individual can pursue his own dreams when he is determined in a great amount by himself, and that other people might not have the desired influence when self-involvement lacks. Cristina, on the other hand, disagrees: "Alone, it is little they can do, because of their age. They should be allowed and sustained to do so, to discover themselves. This is closely related to the teacher's teaching style. An authoritarian style of teaching inhibits the development of creativity." She believes that children`s interest towards own cultivation of creativity is in the first place a measure of the teacher`s involvement and that he can therefore influence, through his carefully chosen methods the children`s degree of creativity. We can notice two very different views: one that puts the individual at the center and one that sees the individual as a satellite of the teacher. Mihai has a more balanced opinion: "It depends on every individual. Nevertheless, both parents and teachers are responsible for the individual`s development- they must work in teams, they must understand the trajectory of the child`s interests, talents, and they must prepare the individual to be its own trainer, its own teacher, its own critic and its own supporter." He acknowledges the importance of influencers- such as teachers and parents but he also specifies that everyone has his own way of perceiving and acting so there is no universal recipe for assuming each party a definitive role. Sometimes, the children might be the ones that initiate processes, through their own age specific curiosity, and sometimes, they can be determined to find it by receiving support from their parents or teachers.

Chidren`s role

- The individual around influencers gravitate
- A satellite of the influencers
- It varies from situation to situation

The observed children exposed a high level of trust towards her students. She was making efforts to treat each child the way he needed, she was making efforts to getting to know them and their family- at the beginning of the semester, she scheduled visits and went to each child home to spend two hours with him and his family. She thinks that, even though this technique is a remnant

of the communist regime, it proves its effectiveness until today. She thinks that the child`s role in developing his creativity is the most important, and she assumes that she has the role to understand how he functions so she can help him in this respect. Her visits allow her to understand the environment in which the child was brought up, the way in which his parents relate to him. Sometimes, the visits are ways to notice abusive behavior- and to report it further, this way assuring that the child`s development will not be affected by violence, whether it is physical or psychological.

When answering this first research question, is important to understand the perception of the role of reflection, on both sides: teacher and students. I believe that this is crucially important in determining the way teachers understand creativity related to their role. Cristina answered: "Surely. I always do it. Therefore, although I have 20 years of experience, I like to be always connected to all the novelty that arises in the teaching area and to apply it in the classroom." I deducted from her answer that he is aware of the importance of constant improvement of the teacher, as a determinant of the constant improvement of the children. She is not only relying on her experience, and this is a very good sign. It is important for teachers to know their limits and try to expand them and they can only do so by constantly being genuinely interested in their profession. Luminita also stated: "I always seek new ways of doing things- even if they involve the same methods. I sometimes discover good ways to stimulate their creativity, according to the requirements of the specific class. A positive status of the teacher is a very important condition for fostering creativity. The appeal to different emotions is sometimes essential. Involvement in their work gives them confidence to continue. Praise, encouragement and recognition clearly have their merits, but you got to keep a balance and decency in giving them, in order to avoid belittlement." She points towards the importance of keeping an eye on also developing a good inter-human relationship with the students while also discussing the importance of keeping yourself constantly updated to the novelties that arise in the field. Mihai`s opinion was similar: "Of course. I know how important (reflection, a.n.) this is. I was one of the children who went to school when creativity was not even a pronounced word in schools. I know how not understanding and not discovering yourself at the right time can change your life course for the worst. I make efforts to inspire my children to find their own trajectory, their own way to be creative so they can understand themselves. It is one of the most important things in life." He explained his motivation for his constant reflection. He believes that it is a crucial role of the teacher to be able to discover the accurate image of a child`s interests and abilities, and therefore he always keeps himself informed and trained in this direction.

The teacher cultivated the ante-mentioned "Library for the parents", and this way, she demonstrated that she is actively involved in developing her abilities. She is a positive and optimistic person by nature, inspiring those around her to act the same way. She established a rule that supposed that everyone who said a negative comment would immediately add up a positive one about the same thing. The teacher believes that this way, she is not discouraging critical thinking, but she is emphasizing on a very important aspect of life- that everything is relative.

Discussing the role that the teachers attribute to children 'reflection, Luminita stated: "This is very dependent of the inner structure of the child, then follows, in importance, the situations to which the child is exposed. Regarding creativity, it matters more than the desire for knowledge, inclination to search and solve." She believes that children `reflection it is of great importance but it can also be influenced by external factors such as previous experience and internal factors such as his own inner structure. Contrary to her opinion, Cristina answered: "Very small. Families and schools need to support and help him, to encourage him to create. Is not this why the child is sent, from an early age, to school?". She inclines to believe that the child is not able to produce valuable reflection at early ages and that he needs to follow the path indicated by his influencers- such as teachers and parents. "Sure, it does. But his efforts must be encouraged and sustained by family and teachers. Students always have their own reflections- sometimes, they surface, sometimes, you must grab a soft "claw" and extract them. This claw means understanding, support, gained confidence and knowledge" answered Mihai, when asked if student reflection play any role in creativity. He has a more balanced opinion, somewhere between Luminita`s and Cristina`s. He believes, as Luminita that the child is at the center of the matter but that he sometimes can be directed towards directions that fit him by the people who gravitate around him, such as teachers and parents.

The observed teacher was always seeking ways to capture the children 'attention. She would often appeal to sensitive subjects to children- such as parties, animals, candy, when she exemplified situations. She was involved in developing children`s curiosity- she would frequently organized museum visits, or she would ask interesting people to come in and discuss/play with the children- such as firemen, police officers and medical staff. She proved that she is actively involved in enriching the children cultural knowledge base and in stimulating their curiosity.

Question 2

How teachers from three different elementary schools in Targoviste, Dambovita, Romania, train creativity in their students?

Creative children might expose "unwanted" behavior- they can get easily bored, they can be disobedient. I asked teachers about their opinion on such students. Cristina answered: "As a teacher, I think that if a student is getting bored, the fault is mine, in the first place. About those who are disobedient, the problem may have roots in their own way to be, in their genetic baggage, but also in the attitude that I have towards them. So, if this problem concerns me, then I must be an interactive teacher, a good communicator and even a friend. Solving the problem also depends on them and it is a good idea to search for the reason that triggers their rebellion – it can be their way to attract attention to themselves, and this is a much deeper issue." Her statement reveals that she feels in charge of children`s behavior during her classes- she thinks that her way of teaching can influence children to behave in a good or in a bad way. She is open to solve this issues by becoming closer to her students, by establishing a relationship that allows qualitative communication with them. She acknowledges that there might also be additional factors that can influence children `behavior but her own way of being around them but she relies on communication and openness. Luminita states:" Children that get bored easily may fall victim to the excessive concern of their parents to entertain them, or to find activities for children's` progress. They do this as consequence of misunderstanding how education should be applied. Disobedient children are children who know that no unpleasant repercussions will follow their inappropriate actions (talking about mentally healthy children, not those with ADHD, for example.). Children's creativity can be impaired by "satellite parents ", those who continuously revolve around their children with their proposals, advices, explanations, offering help that was not asked from them." She has a different point of view: too much help from home can also bore children, and have disastrous consequences for the children. Trying to over-stimulate the child as a parent might result in his lack of finding joy in the chores that he must perform at school. When home offers the child a worry-free environment, when home becomes an amusement park, children often do not see the need to engage when it comes to his duties- he has already found something that is pleasing him enough. Parents must be then those who must be careful about the way they make fun understood to their children- if it comes too easy, then the child will make no effort to offer it to himself. If they offer unrequested help, then they cut the child`s wings and disconnect him from the beauty of discovery, and this might result in loss of interest. Mihai replies: "I must say that for any teacher, this cannot be pleasant. The school curriculum is built this way: children must listen to the educator. Well, sometimes, I give my children the chance to conduct different actions themselves, but unfortunately this is not a spread practice and most teachers do not believe in it. I treat disobedient children with patience, I am not easily annoyed and at the same time, I know that this has nothing to do with their abilities, with their intelligence. Unlike most teachers, I do not punish them with bad grades or with a non-positive attitude towards them. I try to discuss with them in private, I get them to understand that the situation affects me and the colleagues too, I ask for suggestions and I let them complain. You

can hear some interesting things this way- and thence, find solutions to problems that you didn`t even know existed." His answer drags attention to the obsolete school curricula. He states that this is built in a certain way: children must listen to the educator. The responsibility to change these traditional imposed roles is a necessity nowadays. Mihai is as well understanding with this kind of behavior, and he thinks that it might have roots in the way the educational system is build- it assumes only one role to children- the role of the listener. This is a very interesting perspective. Creativity must be communicated, heard out, so the traditional role of children in the Romanian educational system is not well designed to fit these needs.

While observing the classroom, the teacher encountered various situations in which she had to deal with disobedient behavior. She was not getting verbally aggressive in none of these cases. Instead, she proved a very proactive attitude: she would try to get the child involved- she would ask questions and if the child refused to cooperate she would ask him to give his answers his way (by drawing, by acting). Sometimes she would find them other activities to do, and continue the main one for the rest of the class- she motivates that some of the children have already learned the alphabet at home- mostly because of their overly involved parents- and that it is normal for them to feel boredom when the same lesson is taught. These extensions were still related to the subject, and they were presented this way to the child, so that he would not feel complete disconnected from his colleagues.

It is interesting how two similar question asked led to different answers. If in the last paragraph, I exposed the teacher`s points of view about disobedient and easily bored children, when I asked them about the importance of the children`s capacity of being focused all the time, the answers were more vehement than before. Luminita and Cristina had very similar answers. The first one stated: "It is very important that students are focused on learning, when they must- this is the only way to make a step further, to creativity. Of course, there are moments of relaxation during any lessons, teacher-driven moments." She admits that she finds focusing very important, but that she also keeps track of the balance between moments that require focusing and those designed for relaxations. Cristina answered: "Very important! I'm good for me, it is good for them, and it is good for their emotional attitude." She claims that focusing plays a very important role- it helps both the teacher and the student to reach their goals. It is also a key for consolidation of their knowledge foundation, leading to self-trust, which is very important for a positive emotional attitude. It is a healthy point of view, as positivity in relation to one self it is a very important ingredient for creativity. Asked the same question, Mihai replied: "Not very important. As long as they are able to perform their tasks and they do not disturb other children, they can detach. I understand that some kids are slower and some are faster and that is the way things will always be. So, if you needed 5 minutes to get something, you can rest while I will finish my work with the others. I see no point in boring the kids with unnecessary explanations." His point of view is more wide, he makes a distinction between different learning styles- he acknowledges that there are children that are able to absorb the information with more rapidity than the others and that the way in which the school curricula is build – with extensive recapitulations and multiple rehearsals may bore those. He therefore is capable to address each of these categories during his lessons. It is very important to understand diversity when it comes

to creativity- and how to control it for the best. Mihai seems to master more than anybody else this skill.

The observed teacher managed to hold very balanced classes- they were well structured so that children would be determined to accumulate the information. There were distinct and easy to identify: teacher moments, when children were asked to pay attention and absorb the information transmitted, children moments, when children must perform the task designed for them, and relaxation moments. I believe that children were already comfortable with this design- it was easy to identify for them which kind of moment it was because of the key words that indicate it. The teacher was very interested in maintaining the interest during her instructions- she would frequently refer to themes that appeal to children, she would often use hands-on methods, she would emphasize on real life demonstration- during the observed period, she brought a cat to the class during a natural science lesson.

The interviewed teachers have also been asked the about the way they feel about the instructions that they give to their students. How important is for them to be followed in a specific way? I wanted to find out, this way, how flexible are they, how predisposed to allow different trajectories do fully develop. Luminita answered:" During a teaching-learning process I consider very important that the students would closely follow the instructions provided by me. During hours of consolidation / refreshing, children can be creative, can use different ways of expression and can tackle problems from different angles." She can seem inflexible- by allowing the children to be "creative" when they are told to- but she must also follow the curriculum. If not backed up by it, it can be very difficult for the teachers to be able to do both things- do their job as professionals, being able to check everything that is asked from them in terms of teaching objectives and encourage at the same time the children`s creativity. Cristina`s answer to the same question was: "If I take on the role of the facilitator of learning, I prefer that my students follow my instructions closely, because these are always built so that they fit their learning style. I thus help them to discover and develop themselves. At the same time, I try to be flexible, malleable and to reinvent myself along with them." Her statement does not vary much from the previous, but she underlines the fact that she adapts her methods to the specific children`s needs; she also considers herself as a flexible teacher, as she involves herself in the children`s development, becoming a friend, a trusted ally. Mihai`s answer:" Not very. My instructions work as "skeletons". I explain to them that all people around the world have quite the same skeleton. But, when you look around, we are all so very different. We have different height, weights, colors, we like different stuff, we wear different clothes. So, I give them the skeleton and they can humanize it as they want. My instructions are important, but limited" shows a very different approach. I really appreciate his "skeleton" metaphor for instructions as being extremely relevant- it is both very deep and easy to be understand by everyone at the same time. He exposes a very fluid attitude towards instructions- he understand their importance, but he also acknowledges their limitations. I believe that he exposes the best teaching behavior in terms of correctly understanding and enhancing creativity. He takes his role seriously, he sees himself as a partner, more than a model, and this creates the right climate for creativity.

As I previously noted, the lessons observed were mostly balanced structured- with teacher, children and relaxation moments. This strategy keeps children away from boredom, among other things. It teaches them that there are times in life when we must do some things, that might differ from what we would like to do at the same time (which is an important life lesson) but that it is also possible to do these things in your own way- and get enthusiastic about it, too. The observed teacher proved this way that she is focusing on both enhancing children `s capacity of attention and their creativity.

Another question that the teachers have been asked was:" Do you think that children can become more creative if asked to work individually or in groups?" I was interested to see how they arrange for the enhancement of creativity. Are they considering the individual or do they follow a universal recipe? Luminita stated that: "Students are different people: some become creative in solitude, silence, calm, others (most) become creative in a group with compatible members." Luminita seems to consider the individual, so she arranges so that everyone can work the way it suits him. Cristina, on the other hand, stated: "In groups, clearly. Creativity does not only refer to their own actions, but also to the capacity to "learn to be with others", as stated by Jacques Delors and I may add to "learn to be yourself around others". It is also a good practice for later, when they will get to work along with other people." She is following a universal recipe, not focusing on the needs of each individual. She believes that individuals get more creative in groups, so she arranges her activities according to this belief. Mihai`s opinion proved once again to be the most balanced: "It depends on every individual. Still, for some tasks I insist on working in groups- it is the way society works and they must learn to deal with the dynamics of a group so that they can be prepared for their future life as professionals. I make sure that I explain this to them, so it won`t seem as I am forcing them to do something irrational. But there are also many occasions in which I let them choose whether to work in groups or on their own. I think it is also healthy to know whether you are a lonely wolf or a team player." Mihai also agrees with Luminita: they both consider the needs of the individual, but Mihai is also stressing on the importance of gaining the ability to be functional in a team as well, even if you are more of an independent person. This way, he prepares the children for their future but he also helps them discover their best style of work, so they can choose the future option that suits them best. I believe that this is very important, as self-confidence relies on a good understanding of oneself.

The observed teacher was most of the times allowing the children to work in their own chosen way- most of them preferred teams- while few some were keen on individual work. However, there were activities where everyone was asked to work in teams. The teacher motivates this by the increasing need for individuals who work better on their own to also master the skill of communication and cooperation. She stated that it is good to know which arrangements suits you, but it is also important to understand the power that the collective can add up to your own skills. Children exposed a very friendly attitude- even those who preferred working on their own could be seen during the breaks to actively getting involved with their colleagues- a sign that the teacher`s used method is indeed successful.

I have also asked the teachers what actions they think are the most productive in terms of enhancing creativity in their students. Mihai answered: "It also depends. I use various methods, since I have various personalities in my classes. The only thing I do the same with all is keep my openness towards their suggestions, keep an open mind. Creativity takes, firstly, courage, so it is only natural, that the most important thing for a teacher to do is grow the children self-esteem." He underlines the importance of applying personalized methods, and the importance of keeping an open mind towards suggestions, that can often come from the children, if stimulated to get involved. Luminita believes that "The way in which I present the problem matters the most: a beautiful, inspired "story", that is narrated on an encouraging tone stimulates, forms of support, creating a suitable atmosphere for the specific topic." She uses other techniques that she trusted as being able to address and appeal to all children. Cristina replied: "Solving this issue can lay in their early education, made right, focused on creative learning, based on stimulating the area of proximal development, on a personal development model. I mean that increasing students' creativity cannot be done today, it is the result of the interaction between educators, teachers, parents and children`s willingness. Each has his role and only together we can create...creativity", implying that she believes that the actions to enhance creativity are always collective actions of decisional and competent factors in children`s lives- teachers and parents.

The observed teacher exposed a high leaning on attractive thematic for children. Children would sometimes get tricked into getting involved. The teacher stated that she appeals on this technique because her classes conquer video games, television and internet- it is hard for the child to keep an open mind and to become involved when the traditional curricula is so obsolete. The classroom is equipped with a computer, with tablets, with a printing machine and with a video projector. The teacher went through great efforts to manage to get the necessary donations to afford the ante-mentioned equipment. No other classroom in the school dispose of such features, but the teacher is frequently borrowing those to other colleagues of hers.

Luminita beliefs that the processes that are the most productive in the creative process are "the ability to swing between different spheres, to make transfers of information, ideas", Cristina that "those where students, with the guidance of the teacher, form / develop skills. Competencies are skills and abilities are the result of creative processes" are the most relevant, while Mihai adds: "open discussions, directed to problem solving. I focus in solving our problems, before solving someone else's. This way, they are more involved, when things get personal. I also use our

everyday problems, to say so, to cast a light on other similar situations that we may encounter in different domains. I think that having a familiar starting point is the key to keeping them interested." It seems that all teachers emphasize on relevant processes in the creativity development, and even though they may have different approaches, and specific preferences, their words are testimony that they keep themselves informed regarding the needs of the creative processes and that they simply choose what suits their and their students` personality best.

I have observed that the teacher is actively mixing subjects while teaching. In the natural science class, she would present the birds, then add up the birds showed in a picture, then write the letters for "Duck". On a trip to the nearest zoo, the kids were spited into four groups: some were counting the animals, some were writing their names and draw them, and some would make up stories about the animals. This way, she is actively exemplifying the importance of being able to swing between different spheres, the many facets of the same thing, and the children are benefiting from her actions and learning by also having fun.

In relation to how teachers train creativity, I decided to focus on several indicators such as overall learning, divergent thinking, amount of ideas, abstract thinking, synthesis, elaboration of ideas, overall motivation and the use of past experiences.

I was interested in how teachers think that creativity is related to the overall learning. Luminita believes that: "as the student becomes aware of the fact that he truly wants to know (usually this moment occurs at ages over 10), he will become creative in many ways: when organizing his time, his way of searching for information, his choice of information and sources for confirmation" and therefore reveals that she indeed beliefs that there is a connection between creativity and the overall learning, and she believes that this relationship is one that is built in time, under the surveillance of teachers, parents, and that an indispensable ingredient it is the child`s desire. Cristina similarly believes that creativity and the overall learning "are in a linear relationship." She also stated that "creativity is developed by the desire to master multiple knowledge areas and this desire is fulfilled by creativity." Mihai shares their opinion: "A lot. It is easier to learn once you understand what you are learning for, once you have your personal way of doing things, after understanding yourself, the things you are good at. Learning and creativity are related- knowing more, makes you more creative, being more creative, makes you learn more." It seems that at this point, all teachers agree that learning plays an important role in development of creativity, and they also understand the importance of finding the path that best suits the individual, and this operation is both the teacher and the student`s mission.

The observed children were curious, as a characteristic of their young age. The teacher was making sure that they were receiving the best care in this respect. She would fuel their curiosity by asking them to search the internet for more information, by mentioning that they will study more on a particular subject in the following years, by inviting physics, chemistry professors for open lessons involving practical experiments. This way, she was opening up new perspectives for the children, demonstrating them, in a practical way, that learning is both important and fun. She believes that true passions can be discovered at very young ages. This is why she is constantly

trying to expose the children to various experiences, in the hope that some of them would trigger something more in them.

Firstly, I have asked teachers if they can identify divergent thinking and if so how is that thinking used to foster creativity. Luminita answered "Yes. Divergent thinking clearly stimulates creativity. But we must be aware of the fact that in the process, ideas that can be valid or not can appear. A very important thing would be then, to be able to discern between what it truly valuable and what is not". Cristina`s response was: "I always use heuristic conversation in my classes. Thus, students gain autonomy in thinking, emotional independence, courage to have ideas, and I have the role to discover this and grow their trust in themselves." Mihai replied: "I can. I have read a lot about creativity- maybe this inspired my daughter to do so too. Divergent thinking is clearly linked to creativity. I see divergent thinking as a spider web. Once the child is able to produce and disperse the web, just as a spider, he surely is more creative- he gains flexibility, ability to build ideas, to jump around his own conclusions, to "catch" the "best pray"". From their responses, I can deduct that teachers can correctly identify divergent thinking and all of them are well aware of the importance of identifying and training it. They have also made the right connection between divergent thinking and creativity- I liked how Mihai used the spider web metaphor- it certainly appeals to children and adults at the same time and it is a very interesting way to describe divergent thinking.
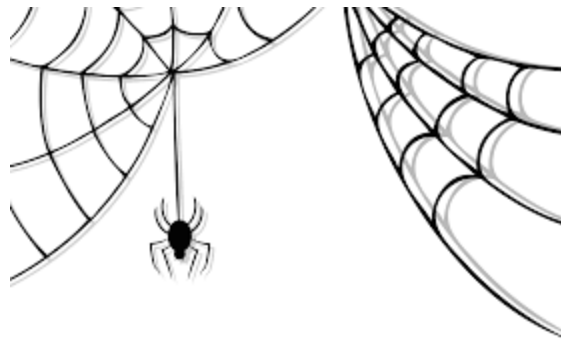
It was clear that there was a culture of tolerance in the class, doubled by a culture of value. Children were always encouraged but also helped when they needed. Divergent thinking, as important as it is, can also become a trap if not directed accordingly. The teacher was a promoter and a trainer of divergent thinking- she would ask them to come up with proposals for the 10th rule of the class- then, she would ask them to criticize them, then to change, then to question change, as for example one child initially stated: 'We should be polite with everyone around us". Most children agreed to the rule. When time had come for criticism, they were quiet- the teacher asked: "But what about the case when you are being polite with someone and they are not?". The children reacted immediately: 'Then we should not be polite anymore!", but one said: "We should give them a good example anyway". Some were against setting a good example. The teacher said: "If we follow this rule- an eye for an eye, wouldn`t all of us be blind by now?" The children meditated and then agreed that they indeed should be polite in any case. She was provoking the kids to develop multiple scenarios, and for the next rules, they were able to come up with those by themselves.

When asked about the way they believe the amount of ideas is related to fostering creativity, teachers did not seem to agree. While Luminita believes that is not necessarily related- she believes that a child can come up with a single valuable idea, referencing that it depends on the working style of one child; Cristina vehemently affirmed that creativity is related to the amount of ideas. In her opinion, "Creativity is at the basis of the ideas that any individual can have. As a teacher I place a high value on this. An idea, a given topic may become a starting point in the development of any individual, facilitating him to express an opinion correctly and in an ample argued manner." She believes that it is always the spin off between many ideas that generate creativity, and she is right-in order to be creative, we must be able to discern between ideas, and it takes many tries to get to the final shape of an idea/object. Mihai has a more balanced opinion: "It can be, when associated with a good ability to discern between valuable and non-valuable ideas. Being able to "confect" many ideas, to choose a good one, to improve that with characteristics from those who were not chosen, is to be creative. But not everyone functions like this. Some kids are able to juggle with their own mind, and some prefer to carefully work on one idea, to perfect a masterpiece." His answer reunites Cristina`s and Luminita`s ideas- it is up to every child to choose how they work, but there will always be a need for a good capacity of generating ideas- enough to fuel the engine of creativity.

The observed kids were encouraged to expose their ideas- the teacher had an open and friendly attitude. No child seemed to feel ignored, they seem confident about themselves. The teacher said that they are all usually like this while at this young age, and that makes things a lot easier for her. The hard part falls on 5th to 8th professors- the observed teacher stated that they have a tendency of being more centered on their job than on the kids- which is a very wrong thing, in her opinion- she stated that the school is about kids, not about classes. She recalled one moment few years ago when a little girl came to her and said that she as so many ideas that she has no space to draw it all on only one piece of paper. The teacher gave her a flipchart page and she was happy. For some kids, filling out a flipchart page might seem like a very unpleasant and hard task- for her, it was a necessity. The teacher also stated that kids have different ways of having many ideas- and that she is supporting them- some would like to answer a math exercises in two or three ways- and be fascinated about this, some would like to draw- "I identify their skills and I focus on those, not neglecting the other subjects, of course, but bringing out the best in what the child has to offer to this world."

Cristina believes that abstract thinking is not entirely related to creativity. She argues: "Creativity can occur at an early age, natively, as a talent, as the dominant intelligence of an individual. On the other hand, abstract thinking requires some cognitive development which can facilitate the development of creativity. In conclusion, it can determine it and develop it, but it is not a necessarily condition for creative expression." Luminita stated the opposite: "Yes, abstract thought requires a high level of information processing. At elementary school ages, it is related to concrete thinking and many of the actions are based on teacher working directly with teaching material. The absence of this material requires abstract thinking stimulation. The child may find in this way of thinking a different course for the completion of requirements" and her opinion is also shared by Mihai: "Yes. Being able to abstract things means you are able to see the "skeleton" of those things, like I earlier explained. Once you are able to see it, you can transform it in

whatever you like; you can use its parts and create something new. So abstract thinking is connected to creativity. It provides special "glasses", through which children can scan an idea, see its basis and explore their options further on." It was important to find out if the teachers consider abstract thinking as an important skill for the development and the enhancement of creativity. Their view on the subject is linked with their used methods for training abstract thinking- the more importance they assume to the issue, the more focused they would be to incorporate it in their teaching techniques, this leading to an increased capacity of training creativity. When asked about the incorporation of abstract thinking in their teaching objectives, all of them provided a strong base- Cristina stated that "according to Piaget's theory of cognitive development stages, students can work with abstract ideas, can think hypothetically and can use analogy with previous experiences. Thus, I use every experience of life that my students had to lay the foundation for new knowledge." She is using a very appealing method for enhancing abstract thinking, as well as Luminita, who shares some of them: "heuristic conversation, questioning, role-playing, simulation, observation and composition of texts". Mihai stated: "I focus on making children master this operation. I always make them curious about what is truly beneath it all, I use a lot of metaphors to beautifully wrap this process- the backstage, the skeleton, the underground, and they seem to work very good with those- children like being detectives." I liked the way Mihai found a way to link lots of the major issues that compose the discussed creativity skill- through the skeleton metaphor. In conclusion, the teacher`s concern with developing abstract thinking is noticeable and it is done the proper way.

In literature class, children often organize ad-hoc small theatre plays. I have asked the teacher about this method and she stated: "At younger ages, children find it hard reading stories and extracting the essential- they often feel lost in details. Theatre plays helps them to actually "see" what it is going on in a text. Preparing for the play determines them to extract the important facts. I think it is the best way to develop abstract thinking, at this age". I may add that it also is a very enjoyable and fun activity for the children. They would often take the model and organize their own theatre plays in the breaks.

I was also interested in how teachers perceive the connection between creativity and synthesis. Luminita stated that: "In the development of every lesson there are designated times for both analysis and synthesis. Synthesis gathers information in a whole, from the beginning. Sometimes it is possible to organize the parts, the components in a different way and have a different product as an outcome. Such situations delight children and stimulate them to seek new problems. A thing, an object, a being can take different forms; it depends on the viewing angle, the place where I sit, of my reference point. So, I believe that flexible thinking is closely related to synthesis and therefore to creativity", making a good point of why creativity is related to synthesis. Cristina saw synthesis as an expression of creativity: "Creativity also means the ability to express yourself while synthesizing and analyzing. It is another way to express yourself in a creatively and originally manner." Mihai added: "Making connections is a powerful way to develop new ideas. There are lots of instances when two processes or two concepts were brought together – or synthesized – to create a new one. It is related to creativity- it allows our intellect to discern the similarities and the differences between two things and to be able to re-assemble them in new and proper ways". It seems that all teachers value the synthesis capacity a lot;

therefore, it is not a surprise that they foster synthesis in the process of fostering creativity. Cristina said that she tries to use "as much the teaching / learning / assessment / methods that stimulate critical thinking and reach values and attitudes of the curriculum material", while Mihai relies on "examples to make the children understand its importance. I try to let children assume roles- what would I do if I were my mother and what would I do myself? Then I ask them to find the middle way. They are very responsive to practical examples are early ages." Interviewed teachers provided very detailed and well pointed answers, proving once again that they are indeed focusing on developing the synthesis capacity in their students, therefore on training their creativity.

I have observed that the teacher is actively mixing subjects while teaching. In the natural science class, she would present the birds, then add up the birds showed in a picture, then write the letters for "Duck". On a trip to the nearest zoo, the kids were spited into four groups: some were counting the animals, some were writing their names and draw them, and some would make up stories about the animals. This way, she is actively exemplifying the importance of being able to swing between different spheres, the many facets of the same thing, and the children are benefiting from her actions and learning by also having fun. The teacher is actively providing an example for the students. They would assume it- they were asking unrelated questions many times. In math class, one student asked: "Teacher, one elephant plus one elephant is two?" and the others follow: "What about three crows plus three owls?".

Not all of the interviewed teaches believe that the elaboration of ideas is linked to the creative capacity. Luminita exposed a positive attitude towards this relation: "The ideas that children find are closely related to their informational luggage, mainly represented by their experiences, but among those, new ideas can occur, and because of their mostly age related curiosity, the children will try out, to see whether they can be of any use of not- discovering what is working and what is not, they understand different mechanisms. This process requires elaboration and it is closely connected with creativity." Mihai shared Luminita`s opinion. He stated that one individual must be able to properly "dress" his ideas. It is not enough to have them, details and applicability are also very important -they must also be creative, and fitted. Cristina disagreed, explaining that the elaboration of ideas is primarily linked to cognitive processed and less to creativity. Despite observing two different opinions towards the link between creativity and elaboration, teachers proved that they closely follow the path of training the elaboration capacity through "encouraging them to develop logical mathematical thinking, so, for early ages, I use graphic organizers. They help children to "see" what they think. Then I encourage the development of the ideas so pointed." (Cristina), through "tactfully reject inappropriate ideas, or find something good in every form, so that children will not be disappointed" (Luminita). Mihai compared elaboration to serving food: "When children expose their point of view, I try to ask them details (how exactly would it work? Would your parents agree?). Some of them have thought about them in detail, but some haven`t. This way, I prove them that they must not only "cook" a meal but also to place it into plates." I liked his way of understanding and presenting the issue because it appeals to everyday mental images, easy to understand for children, facilitating them to deeply understand the functionality and usefulness of elaboration.

The observed children were accustomed with the trial and error process. They were many times asked to "explore all options". Whenever something was not going right, and they would ask the teacher for help, she would ask them: "Have you explored all your options?" and "Show me how you tried?" – she was facing a very unstable paper house- she asked the child "What material is much harder than paper?" and the child answered "Concrete". She would reply: "Yes, but can we use concrete right now?", "No" the child said. The teacher then said: "What do you have on your desk that is harder than paper?" And he would say "Toothpicks!". She was training them to be pro-active, to make the best of what they had, and most of all to learn the right steps for doing it on their own.

Last but not least, teachers were asked to give their opinion on overall motivation and how this is linked with creativity. It is a very important issue, since motivation determines the intensity of creation, and finally, the very existence of it. Luminita believes that "motivation for learning is very hard to find, for the child. This is mainly because he has not been able to see things in perspective. It depends on the teacher`s tact, intelligence and understanding to provide the child with targets to motivate him on short term. If successful, the child's desire to learn / to know will be doubled by the desire to do. This process will occur through perseverance, self-study, commitment, creativity." Cristian also understands the importance that overall motivation plays in the creative process: "Curiosity and the interaction with others is the most powerful motivation for my students, so I use these attractive access points and teamwork." Mihai stated that: "Children learn to be creative, too, so this motivation should also exist. The more they accumulate in terms of knowledge, the more they will become more curious, the more connections they will be able to make. But accumulating knowledge must not have a universal implication- some children might never like chemistry- they like literature instead- here, I agree that the child shouldn`t be forced to accumulate undesired knowledge. We all have our affinities, and we all have to accept, embrace them and use them for our best. I still believe that in order to say that you do not like something, you first have to get a taste of it...." I believe that it is very important that teachers also focused on enhancing their student's overall motivation. Early ages dictate the future pattern of motivation and what triggers it.

Teachers all agreed upon that their previous experiences are useful in relation to fostering creativity. Luminita pointed out that one teacher`s rich experience is superior to his studies, this also meaning that a good knowledge of the nature of the children occurs in time. Children are different, and generations change in many respects, but gained experience makes you more flexible, more creative, innovative, more patient, more clearly in demand. Cristina stated that students` creativity is supported and reinforced by the teacher in front of them. Therefore, she believes that the experience that she has helped her to observe and develop it. Mihai is convinced of the very close nature of the relationship between previous experiences and creativity. He argues: "I have travelled a lot; I have been lucky enough to get a taste of different cultures. Even in today`s Europe, the East is still scarred by its communist past- we are in a recovery process- communism has messed around with our understanding of the world around us and with our values. Travelling is a different experience for an East-European than it is for a West-European- we get to see new colors of the world."

Teachers believe that their students previous experiences are also very important in relation to their creative capacity. Luminita argues that without rich experience and feelings of many kinds, the child does not have dilemma, questions, nor can he fabricate new ways, different answers. Parents and school should put them in different situations and create a good framework for them to act according to their interests and needs. Cristina states that students` creativity depends largely on their previous experiences and their pervious knowledge acquisitions. Mihai claimed that he encourages the parents to take the children on holidays, to let them explore- even they might not understand the whole picture, but for sure they`ll get a taste. He also encourages parents to involve their kids in different activities- it doesn't matter what activities, as long as they get the kids out of the house, away from the computer`s screen. I see a lot of kids who have already got a routine- school, TV, computer, sleep and an identic next day. "It makes me sad to see so much time, so many opportunities wasted" he ended his statement.

The observed teacher was evidently focused on developing motivation. Children were always receiving little prizes- not only material, but also psychological- they were receiving "verbal rewards" very often- so they would feel appreciated and that they would also feel that their work is important. She is also offering prizes in the form of mini-trips or camps during the summer. The teacher also stated "It is hard to say that camps are prizes- mostly because every generations has two or three children that cannot afford to go- but I have always managed to get funding for their trips too- I prefer having all the children or not organizing the trip at all- it is a devastating experience for a child to not being able to participate in an event because of the lack of money". The children`s work is always exposed, so that they and the others can enjoy and appreciate it. The teacher is wearing the jewelry made by the kids in the plastic art classes. Her behavior indicates a lot of preoccupation for maintaining motivation and increasing the children knowledgebase- because previous experience plays a big role in getting motivated.

The last interview question related to my second research question was what strategies teachers are using when aiming at enhancing creativity in their students. Luminita stated that she is "always seeking for new ways- even if they involve the same methods. I sometimes discover good ways to stimulate their creativity, according to the requirements of the specific class. A positive status of the teacher is a very important condition for fostering creativity. The appeal to different emotions is sometimes essential. Involvement in their work gives them confidence to continue. Praise, encouragement and recognition clearly have their merits, but you got to keep a balance and decency in giving them, in order to avoid belittlement." Cristina exposed a simpler but similar vision: "I encourage them to express themselves freely, as their friend, but in an assertive way" and so does Mihai: "I make myself an ally. It is the best strategy. I try to get to know them- I talk to them, to their families, and to their colleagues about them. I then make sure that I use the right techniques. Children are different and are very sensitive- I make sure I am not hurting them on purpose. I listen, I understand and I work along with them. I make sure they are self-confident. This is the crucial element in fostering creativity- children must feel free and safe at the same time." It is the first issue that all teachers agreed on completely. They all see friendliness as the most important thing a teacher could do when he aims for enhancing creativity in his students. I liked how all teachers were keen on training one of the most important components of creativity in their students, even though sometimes they did not even know that their actions were actually

pointed towards the final scope of creativity. It makes me generate the potential hypothesis that there is something more in true, veritable and dedicated teachers than just knowledge.

The observed teacher proved to be very well prepared in terms of developing and supporting creativity. Her most important ally in this process was her passion and devotement. It is clear that she is making lots of efforts and that many times she goes beyond the curriculum. She is clearly taken her role seriously and clearly enjoying doing so. She believes that she is developing herself along with the children, she is close to them- they do things together- they were all making the "Hands tree" and getting their hands in paint of all colors, they are all dancing on the "Penguin song" – this makes the children feel comfortable, understood and therefore creating the perfect climate for creativity.

In responding to this question, what constitute the observed behavior, was the attempt of the teacher through a tool or a practice to elicit a response in students that is related to creativity as defined by some theorists as well as some observed and noted themes by the researcher.

Predetermined typologies related to theory were identified while emerged theories related to questioning and higher order thinking are also discussed and exemplified.

Mediation itself was any act, invitation, affirmation, tool, or use of a tool that prompted the individual indicator. The mediational strategy most extensively used for all indicators was the use of questioning.

An indicator of reflection was anything that prompted thinking about or the use of past experience.

The indicators for fluency was the invitation to produce many ideas.

Indicators of elaboration were the requirement, invitation or affirmation to provide more details or provide planning or structure to something.

Indicators of originality were the requirement, invitation or affirmation of producing something not the same as the others in the group.

Indications of abstract thinking were the requirement, invitation or affirmation of having the student move from concrete objects to mental pictures or processes.

Indications of motivation were invitations or affirmations of staying on task or allowance to initiate, return or complete a task or project.

Fluency or the generation of multiple ideas was observed in all classes, mostly by using and allowing brainstorming that included ideas generated from each other. Brainstorming was often done at the beginning of a lesson as a whole group and mediated through questioning. Student discussion with each other was sometimes observed as organized in pairs or in groups. In first

grade for example, pairing was observed prevalent. The teacher felt that this was more productive than group work where they could get too involved with the group. Sometimes, however when the teacher noticed that one student had an idea or experience related to another student's idea she would suggest to the student to discuss it with that particular student even though the student was not at their table. For example, when discussing about cartoons, at the "Practical abilities" lesson, one student that mentioned Disney characters was immediately put in contact with another student, who had been lucky enough to visit Disneyland the previous year. Teacher mentioned that this way, they both would benefit from each other`s experience and therefore enrich each other`s vision. She motivated that the one who never been to Disneyland had his expectations and his way of imagining what the place looked like, and that could inspire the one who had been to think about differences in their idea about the same place. The imagination of the enthusiastic one may spark new ideas in the one that had actually visit the place and the experience of the one who had visited, might influence the one who wish he had into developing his imagination further.

Elaboration or the amount of details was mediated through allowing students to share, having students map their thoughts or ideas, and questioning. In the Romanian language class, I witnessed how the teacher asked the students to generate different endings for the same text. As students generated ideas, graphic organizers such as lists, maps and charts were used to plan for writing and to add more details and elaborate. The teacher mediated all these. The teacher gathered six different endings for the story, wrote them down in one key word on the flipchart and then asked students to choose one and decorate it the way they wanted- this way, generating even more different endings. Questioning was also used to mediate for additional details. When one child was not cooperating into developing his idea, the teacher successfully managed to open up the path for him by asking questions, questions that often appeal to the student`s previous experience- the boy could not find a name for one character, and the teacher asked the names of his friends: "Would you write a story about one of your friends?".

According to Torrance originality was the ability to produce unique and unusual ideas (Torrance, 1933; Torrance & Safter, 1999). Although some originality was noted in student's artifacts, it was not observed mediated as extensively as other aspects of creativity. The previous example of flip books where students were allowed to create different stories was an example of attempting having students create something original but the emphasis was on elaboration. What was observed was that within group projects there was allowance for individuality and imagination. Students were allowed to express themselves and teacher's judgments seemed to be suspended in regard to what students made. The teacher stated, "They are never told that what they do is wrong- I always encourage them to do more of it, this way helping them to find new paths from whom they can choose again." The researcher never heard any judgments on student work as worst, poor, etc. All work was accepted and built upon. The allowance for this individuality and variation was across grades but observed more in literacy than in other subjects and was also observed in student artifacts.

Abstract thinking or intentional moving from the concrete to more abstract or to higher generalizations was also observed. Some of the products designed by the students revealed

abstract thinking and are exemplified in more detail in describing those. When the teacher asked students to create traditional decorations- folkloric artefacts, it was a definite movement from the concrete to abstract since students had to extrapolate from what they knew about decorations and folklore to imagine the traditional decorations. Abstract thinking was also observed in math. The students were adding both single and double digit. The success of adding double digit was grounded in the students' success in adding single digits. The teacher achieved this by teaching the students to more strategically use their fingers to add. The math problem was visually set up as a normal adding column problem on the board with one number above another. Then she would ask the students to find the largest number in the problem. She would tell them to put that number in their head and physically made a motion to her head which the students repeated. Once that number was in their head, she would tell them to start counting from that point. For example, if the problem was 8+7, she would have them identify the larger number, in this case 8. Then she would ask them to put that number in their head as she pointed to her head and would have them use their fingers to count starting from that number. Students started with the number 8 and then they counted 9, 10, and so forth until they had added seven additional numbers with their fingers to reach the number 15. It was obvious to the researcher that the students had already been exposed to this strategy and it was witnessed a few times.

Another way to train abstract thinking was when, under the assistance of the teacher, small groups were directed to access the internet to search for ideas. With the topic in mind, the teacher would ask "What word should we use to search?", this way directing children to reduce their idea to a single word.

Motivation was observed in the willingness of students to stay on task. The mediation of motivation seemed to be grounded in the provision of fun and exciting activities and giving the students choice. Providing many varied and exciting activities by the teachers was repeatedly observed. In literacy, ad-hoc theatre plays were made to exemplify sequence of events, cooking activities were added to some of the Romanian language classes- I witnessed when students were given apples when studying about letter "Z"- the teacher told them that by eating apples, they are also eating healthy sugar, in Romanian sugar is "zahar", and the teacher was also recalling when they were asked to prepare small sandwiches for the "W letter" lesson, because no word in Romanian starts with "w", she found the most appealing word that contained the letter, and she claims that the lesson was a big success- students were asking if they can learn again about letter 'W". As a result of the "Letter K" lesson success, as part of a math lesson, students were asked to build clocks from food. All lessons observed had "hands on" activities where the students practiced and applied some of what was taught in class.

Allowing the students to make choices based on their interests seemed to impact on motivation. It was observed repeatedly that students were given many opportunities for choosing either a topic or given choice within an activity. For example, for independent reading the students chose books that were of their personal interest, not necessarily what was read in class and not even necessarily their level. All classrooms had books that were at grade level and above grade level. This provided the opportunity for students to feel comfortable choosing what was most appropriate and comfortable for them. Some students chose to read at tables, others chose to

sit down on the floor or on a pillow. In situations where students did not engage with a book, the teacher took the student aside and either had the student read to the teacher or the teacher read to the student.

The teacher highlighted the importance of using prior experience with students and also shared how they used it for both relating and motivating students. The teacher actively plans facilitating planning for association with prior knowledge. They often attempt having students to make connections with either home experience, previous knowledge from class, or from other subjects. As an example, I witnessed how when taught a lesson about letter "Z", kids were asked to stick a note on the board with everything in their household that contained that letter.

Questioning was also another way teachers used to make personal connections as well as to motivate. Teacher use this technique in association with topics that appeal to children. They use questions about candy, birthday parties, because they know that these topics have the power of creating a general interest, therefore these associations were used not only to relate but also to motivate.

Questioning was used so extensively and consistently. The teacher stated that in her opinion, this was the most important strategy in promoting creativity. Examples of the use of questioning as a strategy in conjunction with other strategies have been described in previous mediations. Questioning was always conducted as an inquiry, not ever in a tone of exasperation or frustration. The questions were not critical or taken in the spirit of criticism. They were merely accepted and stated as ways to clarify, understand or go deeper. Even instructions were observed in the form of questions. For example, the teacher was reminding the students the rules for independent reading. First she stated that they would be reading and then filling out a Venn diagram. After she stated this she went on to ask, "Should you be doing the graphic organizer as you read?" The students stated that they should do it at the end. The teacher continued, "What should you do if you don't understand the story?" The students responded by stating that they should do it again. She went on, "What if after you have read it and still don't understand?" Some students repeated that they should read it again." The teacher smiled and then said, "Yes…but what else can you do?" Someone said "get help." She asked them from whom should they ask for help. The students stated that it should be from the teacher or from a classmate who had already read the story. After the last comment the teacher let the students start their independent reading.

Question 3

> **How teachers from three different elementary schools in Targoviste, Dambovita, Romania perceive the schools 'boards attitude towards creativity?**

INTERVIEWS ANALYSIS:

The efforts of the individuals, namely teachers, have been discussed in the previous research questions. Since they all need one dome under whom all can be reunited and reinforced, it was only the next step to try and see the whole functioning of this so-called "dome", since coordinated and sustained efforts are very important in the process of fostering and training creativity.

I have asked teachers how they organize, in terms of physical environment, for the enhancement of creativity. Luminita is in favor of letting the children to "choose their place, position (on mats on the floor, sometimes under their desks, curtains pulled down- for creating a shadow effect, silence), and coworkers. Sometimes we go to the park in front of the school and I let the children to work on benches or on the grass in front of the lake (of course, I need enough attendants)." Cristina is more practical but flexible as well: "In general, I do things that are at hand: I prefer arranging furniture so as to favor the students, I care to expose artifacts our previous activities, so students can be always reminded of their usefulness." Mihai exposes the same attitude towards the physical arrangement of the classroom: "I let the kids choose their place. I hate to see them stuck in a desk for so many hours. They`ll get to that when they will be older. For now, I give them the opportunity to express themselves even by choosing their place. I was often criticized for this, but I think it is best for the children. They should understand the importance of a healthy lifestyle- and this has nothing in common with sitting on a very uncomfortable chair for 5 hours or so. Leaving the place to their choice also gives me the opportunity to understand things about them- their position reveals a lot. This way, I also improve my teaching methods according to their personality traits. It also gives them freedom and it creates a cozy environment, which is a very important ingredient for creativity." I believe that all three teachers exposed a very flexible view regarding the physical environment, one that is not in acquiescence with the Romanian traditional educational system.

The observed teacher held her classes in the park, in the school yard. Most of the times, while they were in the classroom, the children were allowed to choose their own position. They knew exactly what spots they prefer for an activity, which indicates that the teacher has been acting like this for a long period of time.

When asked about the role of the school, as an institution, in the enhancement of creativity, teachers had a lot to say- thus, expressing their disapproval towards it. Luminita claims: "The school institution should play the role of a nursery for any of the country needs. Romanian education system does not operate by this principle. This is why this role is mainly an individual

one. The nowadays education system is a "Procrustean bed", claiming to frame all the individuals in a specific and outdated pattern. This is why it, solely, does not have the capacity to produce creative, independent minds." In her opinion, creativity is solely sustained by the individual- namely teachers. She feels like her work is not supported by the system she is a part of. Cristina shares the same view: "Theoretically, the school must have the most important role in the development of creativity. Practically, the Romanian school system does not do this. It still relies more on cognitive development, while ignoring their personality development." Mihai was the same, concerned with the lack of interest towards growing creativity of the Educational System: "School should play an important role in developing and fostering creativity. I cannot say that the greatest. It depends on every individual- some are more influenced by their family climate and some by the school climate. But the school must be prepared for both situations. At the moment, this role is mainly supported by teachers- by those who understand the needs of this new millennium, which are very few."

In the observed school, the atmosphere was one of segregation- most of the teachers seemed to strictly stick to the curriculum, not paying much attention to the actual children `needs. Most of them were avoiding the observer, or having a very detained attitude towards me. Some of them were friendly and inviting, interested in the research and actively getting involved- they would invite me to see their classrooms and they express interest in participating in the current research (even though initially they were not). However, these teachers represent a small group. The researcher has been banned from entering some laboratories, while she was documenting the physical environment. The physical environment of the school is a very obsolete one. Apart from few classes, most of them are in a very bad condition; the exhibits on the wall were dated by the children with "2016". This show a low level of preoccupation of the other teachers.

Math class- Children enjoying choosing their own place

The teachers also exposed their views on the current physical environment of the classes/school as an institution. They all have suggestions towards improving it. Luminita feels the need of green areas or small spaces for creative groups, soundproofed "houses" that give the feeling of personal space, outdoor spaces designed for small groups. Mihai underlined the fact that nothing has changed for more than 40 years in the way of designing the school`s interiors. He believes that it is a real need to diversify what school can offer in terms of physical environment- he is as well suggesting green areas, gardens, facile access to water and resting places. Cristina pointed out that is all comes down to the school's financial capacity. Theoretically, this can be improved through sponsorships, donations, and by developing entrepreneurial skills of students. But none of this gets really done.

The school has not integrated and implemented creativity as a whole school process. There is no common directive or policy designed to foster and develop creativity. Still, through the physical environment and the selection and flexible use of curricular materials and resources, mainly supported independently by some of the teachers, including the one that was observed during the observation period, creativity is fostered and developed.

The observed teacher has developed her own vision for her class. Her mission was to provide engaging learning experiences that would allow the discovery and development of talent through visual, auditory, kinesthetic, and tactile stimulation. To do so, she focused on making use of fresh new ideas or enhance old ones, making learning fun through motivation and making learning as real as possible.

Dumitru felt that he would perform better if he would take his shoes down

The whole school's physical environment is common and does not aim at fostering creativity- as one of the interviewed teacher stated, nothing has been changed in most of the Romanian schools in almost 40 years, in terms of physical environment. Still, I have always noticed clean and shining floors, clearly indicated that the school was kept impeccably clean and the school was well lit. The lighting was very good in all the classes. The teacher mentioned repeatedly the importance of the physical environment as a vital requirement for the well-functioning and advancing creativity within the classroom. I have noticed that there were differences between

the desks of the 0 and 1ˢᵗ classes and those designed for older students. I have noticed that different classrooms had different ways of arranging the furniture- some classes had desks arranged in a U-form, some followed the classic arrangement. In most of the classes, student's work was exhibited everywhere, inside and outside classrooms.

The observed classroom physical environment

The administrative structure was the same as in all the schools. The school had a principal and a deputy director. They also had an administrator who managed the day to day operation of the school. Since technology is an integral part of the school, an information technology staff person

was also hired to guarantee both hardware and software technical support for the school. None of the principals were interested in the current research, so they were unavailable for questioning or observing. They were mostly preoccupied with the school`s image, with promoting it in the local media. They were involved in lots of extracurricular activities, but it seemed as they would do it all for the image, and not the quality of the activity itself. I witnessed a school outside party where as soon as the camera man left, the party begun to slowly end.

In considering the selection of curricular products, the observed teacher considered what products would align better with her goals, would require less preparation and are easier for her to use, provide more data and more information, and provided more hands-on activities. The observed teacher stated that it is easier for primary school teachers to be flexible in the curriculum's use. She explained that there is a much rigorous path in higher grades, because the pressure that the national evaluation tests puts on both teacher and students.

Technology was a separate but important part of the selection of resources. The classroom was equipped with a laptop, a tablet, and a video projector, as well as providing the teacher with instant access to the internet to integrate technology and additional information into lessons.

Teachers at the observed school are theoretically required to spend an extra time each day at the end of the school day to prepare for lessons. I have not observed this thing happening. There is no support for staff development whatsoever. Instead, I have noticed the teachers were to use time when their students were at their physical education, foreign languages or religion class as preparation time.

Unfortunately, there seems to be no consistency in the view over creativity across classrooms. The school has unfortunately not attempted to guarantee consistent processes throughout the classrooms. This fact can be easily observed through the fact that most teachers were not interested in being a part of the observed population, in the fact that both principals were not interested in participating as well, and in their lack of interest towards the results of the present research.

6. Conclusions and discussion

Introduction

Creativity and innovation have been identified as skills considered critical to 21st century careers and workforce (Jerald, 2009; The Partnership for 21st Century Schools, n.d; Kay, 2010; National Center on Education and the Economy, 2007; President's Committee on the Arts and Humanities, 2011). Both have been placed on many nations agenda for future progress in both the economy and education (Brazell, 2009; Cordell, 2012, National Center on Education and the Economy, 2007; Tucker, 2011). Creativity, however, is on the decline in schools in Romania, compared to other similar states, like Serbia or Slovak Republic.

THE GLOBAL CREATIVITY INDEX					
Rank	Country	Technology	Talent	Tolerance	Global Creativity Index
51	Lithuania	65	12	105	0.490
52	Philippines	54	65	53	0.487
54	Slovak Republic	69	42	66	0.484
54	Serbia	70	45	58	0.484
54	Greece	39	43	101	0.484
56	Panama	70	67	34	0.482
57	Iran	—	71	72	0.481
58	Croatia	60	39	81	0.481
59	Mauritius	—	76	68	0.477
60	Venezuela	40	83	61	0.466
61	Botswana	—	73	75	0.462
62	China	14	87	96	0.462
63	Malaysia	24	69	101	0.455
64	Guatemala	102	37	44	0.449
64	Georgia	35	82	78	0.449
66	Cyprus	96	44	45	0.446
67	Trinidad and Tobago	111	52	28	0.433
68	Romania	65	60	76	0.425
69	Peru	62	79	60	0.418
70	Kenya	82	—	52	0.417

Romania has a 0.425 Creativity Index in 2015[14]

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[14] http://martinprosperity.org/media/Global-Creativity-Index-2015.pdf

While the arena of psychology has studied creativity widely and has unraveled many concepts and theories in its investigation, schools are now being asked to contemplate the incorporation of creativity. A new pedagogy for creativity in schools is emerging (Lin, 2011; Robinson, 1999). Despite this appearance and the call for creative and innovative thinking in schools, few models are present which create a picture of how the use of creativity can be integrated and represented in classrooms, particularly separately of the expressive arts area. Research is incomplete, this fact stressing on the necessity for additional study. This descriptive case study answered to the need for additional research on creativity in schools. The study portrayed the real life actual integration of creativity in real practice in one classroom of a public school and observed this effort through several theoretical lenses. In supplying this description, it provided a needed sample or model of the incorporation of creativity into curricular practice and adds to the narrow research available on the subject. It can also help the improvement of knowledge on the practice of creativity in classrooms and offers a foundation for additional research of creativity in curriculum and education as a whole.

Discussion of the results

The school and teachers involved in this study were not familiar with theories related to creativity. The school had not created any framework for enhancing creativity. Still, the interviewed teachers and the observed one exposed a contradictory image- they were integrating and implementing their own definition of creativity, which seems highly successful, evidenced by the fact that the children are not losing their creativity potential during their elementary school years. To prove my statement, I have conducted an experiment- one class of 1st graders and one class of 4th graders were asked to fill in the Guilford Alternative Uses Task test.
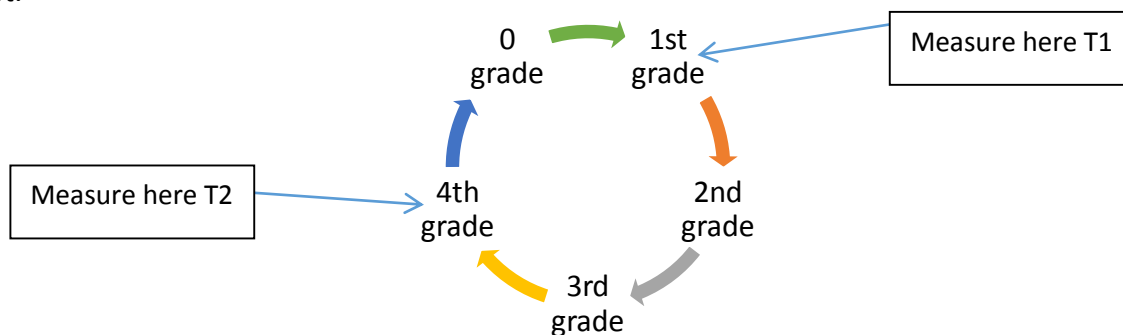

In the applied Guilford's Alternative Uses Task (1967) the examinees were asked to draw as many possible scenarios to fill in a circle. They receive a paper sheet containing five empty circles. The drawings of the children were rated considering four factors:
1. Originality (each response it compared to the total amount of responses from all of the people that have taken the test. Reponses that were given by only 5% of your group are unusual, responses that were given by only 1% of your group are unique)
2. Fluency (the multitude of responses)
3. Flexibility (different categories)
4. Elaboration (amount of detail)

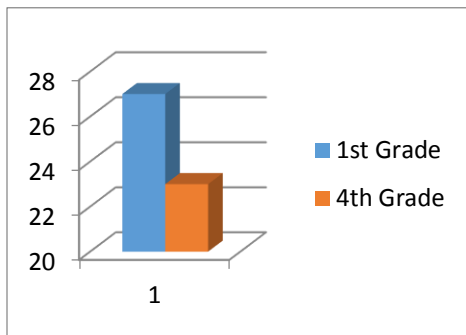The two classes that have participated in the experiment scored the following results:
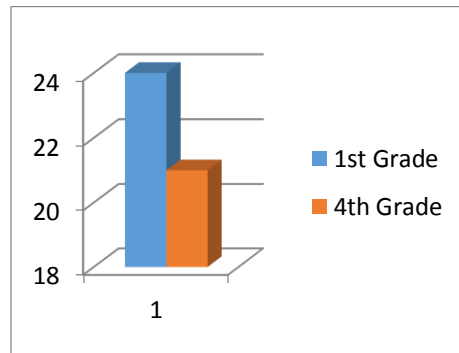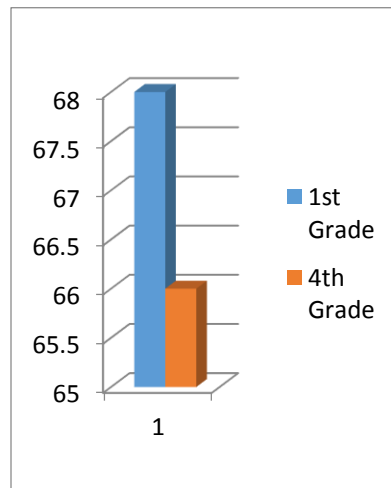
ORIGINALITY
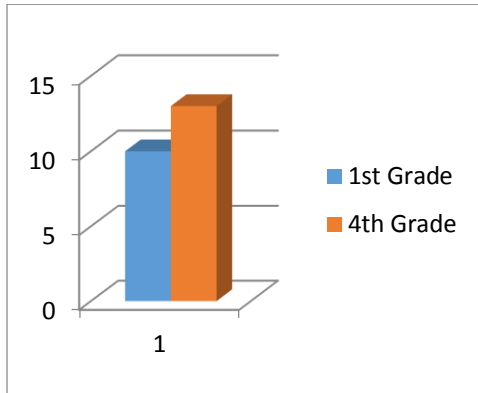
FLEXIBILITY
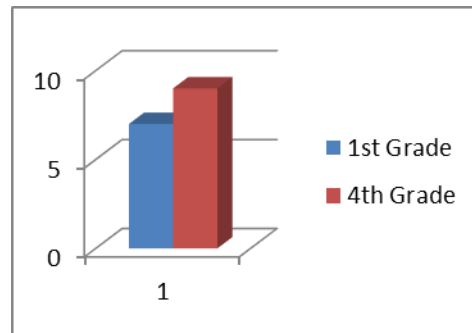
FLUENCY

ELABORATION

GRAND TOTAL

With an overall difference of 2 points out of 100 shows that, concerning elementary school, the current school arrangement, even mostly individual-driven, is functioning in a positive direction.

However, the purpose of this study was not only to describe how a school is integrating creativity but to describe the effort through the lenses of both creativity and educational concepts and theories. In response to describing the integration of creativity within educational and creativity theories the following research questions were posed.

Research question: How teachers from three different elementary schools in Targoviste, Dambovita, Romania, understand and train creativity in their students?
Research sub question 1: How teachers from three different elementary schools in Targoviste, Dambovita, Romania, understand creativity related to their role?
Research sub question 2: How teachers from three different elementary schools in Targoviste, Dambovita, Romania, train creativity in their students?
Research sub question 3: How teachers from three different elementary schools in Targoviste, Dambovita, Romania perceive the schools 'boards attitude towards creativity?

The answers to these questions are reunited, summarized and discussed below:

The school integrated creativity into its whole school environment (both the physical environment and culture of the school) mainly through the willingness by individuals, by creating a mission that included creativity, enhancing and organizing its physical environment, and the selection and flexible use of curricular materials and resources.

The mediational practice most prevalent throughout the classroom for aspects of both creativity and learning was the use of questioning as a teaching strategy. In regard to creativity theory, the concepts of (a) fluency, (b) elaboration, (c) originality, and (d) abstract thinking of the Torrance Test for Creative Thinking (TTCT) were used as predetermined typologies for the study. Of these, the mediation of (a) fluency, (b) elaboration, and (c) abstract thinking were more evident in practice in the classroom. Originality defined by Torrance (1994) as the ability to produce unique and unusual ideas, was mostly observed in artifacts. Individuality in tasks and products was also witnessed.

Both the use of reflection in the use of prior knowledge and mediation over questioning and other methods was frequently occurring throughout the observed class. Motivation, also considered substantial in relation to creativity (Amabile, 1996) was also an encoded typology and was detected as planning for and realizing student disposition to stay on a given task. Students were witnessed involved at all times throughout the observations of the study, demonstrating that planning for engagement through numerous practices such as organizing fun activities and offering opportunities for choices appeared to prove fruitful.

In observing different creativity features in students' artifacts the researcher wanted to detect if any learning behaviors were apparent in students. Behaviors evident were (a) engagement or willingness to stay on task and (b) curiosity. Curiosity was the most evident characteristic. There seemed to be a close connection between the task and the artifact. This connection appeared to be fired by a range of instruments and practices such as focusing on the use of hands on activities and a careful selection of the given curriculum.

Divergent thinking tests are still used as a partial measurement for creative thinking and potential for creative thinking (Baer, 2011; Batey & Furnham; 2008, Lemons, 2011; Runco, 2004). According to some studies, divergent thinking can be established as early as preschool and kindergarten through prompts and open ended questioning (Cliatt, Shaw, & Sherwood, 1980; Thomas & Halcomb, 1981). While the observed teacher was not conscious of theoretical aspects of creativity and divergent thinking, she mediated unknowingly through questioning and other tactics.

Brainstorming was frequently used as an exercise that allowed for fluency. Students frequently illustrated their writing. The representations regularly exposed more details of their thinking that were further used by the educator to ask questions and nurture elaboration. Abstract thinking was practiced and evidently achieved. Originality, the creation of entirely new and exceptional artefacts of all kinds by students was also noticed. What was detected supports that divergent thinking can be developed as early as 1st grade. It is also now acknowledged that creativity can be fostered and learned given the right environment and experiences (Amabile, 2013; Loveless, 2002; Sternberg, Jarvin, & Grigorenko, 2009; Torrance, 1972). The correct environment for originality and other aspects of creativity were existing in the observed classroom, despite budget limitations, proving that creativity was also present in the observed teacher. Amabile (1996) stated that the environment for creativity was critical for its growth and existence. She believed that creativity flourished in environments where (a) freedom is given in deciding what to do and how to accomplish the task, (b) leadership communicates well, is enthusiastic and protects teams from distractions, (c) there is access to resources such as funds, equipment information and people, (d) there is encouragement for ideas, (e) evaluation is not part of the process, (f) creativity is acknowledged and rewarded, and (g) there is a sense of internalized challenge, Amabile (1996). Numerous of the above-mentioned aspects for the existence of creativity were apparent in the observed class's environment. The students were given the opportunity for choice in numerous features of an assignment. There was always encouragement for uniqueness in objects. Additionally, the teacher challenged herself to come up with new ideas for creativity instruction, mostly as a result of an inner drive, and not as a result of a directive or as an intentional path. Sternberg (2006) and Amabile (2013) also thought that creativity must produce something and that product should be appropriate, relevant or useful. While most of the student's artifacts would not have been considered "original", as that would be almost impossible to achieve, given that we are discussing 1st graders, having established a solid connection among objective and object also offered a strong basis to further develop the connection between completely original products with an envisioned objective.

In respect to learning, the effective use of the mediational practice of questioning was extraordinary. The study descriptively affirms Vygotsky's (1978) and Feuerstein's (Feuerstein, 1980; Feuerstein, Falik, & Rand, 2006) statement that the quality and quantity of mediation directly has an influence on the outcome. A high amount of mediation was noticed in the repetitive practice of questioning in numerous topic areas. It must also be noted that these techniques were not used in a confrontational style, but with the objective of digging deeper, while not assessing or arbitrating. This practice can grow in the student what Vygotsky called "self-talk", a metacognitive process that scholars can repeat internally even when no educator is present- the teacher was also encouraging the use of the technique- asking the students questions like: "Do you remember what I always say? Can you repeat that in your mind?" and using role play- a game where children got the chance to be the teacher for five glorious minutes.

Dewey's (1931, 1933, 1938) statement that reflection, use of prior knowledge and the addition of relevant experiences also improves the process of learning was also obvious. Mediated by questioning and supplementary approaches, the teacher was capable to motivate students as well as to promote a general understanding atmosphere. Students made links to previous knowledge or/and to their own life experiences, and proved to be able to relate, compare and make extrapolations efficiently. This study may also support the conclusions of Scott, Leritz, and Mumford (2004) that specified that creativity training was operational and that cognitive methods were the furthermost effective vehicle for their efficiency.

Children can be brilliant or trained to be brilliant. If teachers would firstly be willing to cultivate their own ability to become creative in their development process, and then focus on the same goals regarding the development children`s creativity the main benefit is that they would both become better: they develop confidence, persevere in solving problems because they know that they are able to find solutions, feel useful in the community and become responsible for themselves and for the others. Stimulating creativity at school can form the student`s personality, causing him to be commended for the courage to speak, for the originality of the solutions and the ability to adapt to the context in which will operate as an adult. Talking about the Romanian education system, there is a big difference between theory and practice. The problem, however, is not completely linked to the system, but also to the teachers who are found in it. Obsolete teaching techniques are unfortunately still "alive", the accent is still placed on developing the cognitive dimension, ignoring the emotional-affective one, and the transfer of theoretical knowledge in real life is completely forgotten. I had the impression that I witnessed a generation of students different than mine, when students expected things to change but they did not know how to ask for it- the new generation has the power to ask for what they deserve. It seems to me that I witnessed a teacher who is able to prepare children for life, and not only for school.

As a final point, this study adds to the small number of findings of case studies on creativity that indicate that the use of creativity in classrooms was effective in engaging all students in learning, even those who seemed to have been coerced in the past (Hamza & Grifith, 2006; McLellan, Galton, Steward, & Page, 2012). In this study scholars were observed as involved in the activities in all instances, without feeling pressured or stressed. That is, it was not witnessed that scholars proven discontent or hesitancy towards the allocated tasks or reluctance to become involved or

complete the tasks. Whether this was a consequence of the practice of using entertaining and attractive activities, students given numerous occasions to make their own choices or these and other features combined, it is not clear from the amount of observation. Still, this finding is promising since student commitment in learning was and still is an important concern for educators.

Limitations of the Results

Some of the outcomes of the conclusions in this study may not be replicable in all schools and all classrooms. As a public school, the school in this study cannot change to make adjustments and alter course quickly- it depends on so many levels on other institutions, who are also dependent on the political and social environment of the country. It was also obvious that there were no extended monetary resources, as in most of the public schools in Romania: they depend mostly on donations. Public schools have to wait on school board decisions or approval of funds, if funds are even allocated. Class sizes were average, compared to other schools in the area. Elasticity in respect to time frames and deviating from the prearranged curriculum is not always allowed in public schools- the fact that an elementary school was studied in this thesis is also important- use of more softened or sharpened (depending on the context) highlights in the curricula is easier in elementary schools, provisioning that at the end of the fourth grade, the students are not required to take any exams. Similarly, preparation at the end of the school day is not at all times and in all institutions of this kind a possibility- due to the low salaries, the teachers often get a second job or there are also cases when the school is overcrowded, as the same building is used by the elementary school pupils and the secondary school ones. The Ministry of Education have already approved the design of lesson plans and consequently teachers cannot diverge much from the allocated template or produce a school generated template. These facets may obstruct replication of what emerged in this study.

Implications of the Results for Practice

Despite the limitations of the present study outcomes, there were many facets exposed in the study that are replicable for practice. For instance, preparation for some of the classroom practices or methods can be replicated, mainly if a classroom is recently established or is under reform. Creativity can be added as fragment of a mission report. Although the Ministry of education does not allow much deviancy from approved curriculums, permitting educators to add alternative fun activities to what previously has been recommended could improve commitment. If permitting this level of elasticity is not possible, possibly schools could start to dig deeper and find other "spaces" within the school assembly. Many schools in Romania now have after school programs. After school programs could organize activities so they could reflect features of curricular content and augment creativity features as well. By accumulation regular or sporadic open ended activities where scholars were given a choice of manifestation in the

construction of artifacts and permitting students to project criteria for assessment of the project a more comprehensive practice of creativity can grow.

Recommendations for Further Research

One of the most important aspects of the present study`s findings was that what was realized was not with pupils labelled as exceptional, talented or gifted. Additional study necessities to be led with pupils to search the prospects of attaining more creativity and commitment in schools that identify their pupils as regular/average or even beneath average. The subsequent studies are recommended for further research in archetypal schoolrooms.

1)   A mixed research design study linking levels of commitment of two assemblies of students, one that has been delivered alternative fun and appealing activities linked to content and a control group that does not involve in the alternate actions. Ranks of engagement in students can be operationalized statistically to deliver a quantitative depiction of engagement while descriptions of commitment can moreover check the accuracy of the quantitative findings.

2)   A mixed research design where a Torrance Test for Creative Thinking (TTCT) was led at the beginning and at the end of the school year. One group would be involved in practices relating to the improvement of creativity while a control group would not involve in these practices. The study could link the result from the two groups, this way revealing if the interference of practices related to creativity truly rise the measurement of creativity.

3)   A mixed research design where a Torrance Test for Creative Thinking (TTCT) was led at the beginning and at the end of the school year, using students who participated in an afterschool program that integrated creativity into its routines. The study could associate levels of engagement, TTCT outcomes, or other creativity related concepts with a control group of scholars that have not joined in the afterschool program.

Conclusion

The school integrated creativity mainly through the willingness of individuals, into its school environment by (a) creating a mission that encompassed creativity, (b) improving and shaping the school's physical environment, (c) permitting flexible use of curricular resources and means. The mediation of the divergent thinking aspects of creativity, (a) fluency, (b) elaboration, and (c) abstract thinking were detected. Originality and mediation of individuality were also observed. Students were witnessed interested to join in all the class's activities and to complete the tasks that they were given.

While the resolution and conclusion of this study was to clarify how creativity is nowadays integrated within the classroom, what was most revealing was what was perceived in regard to learning overall. In making creativity part of her mission, the observed teacher unconsciously also tripped upon ways to growth motivation and improve higher order thinking abilities. The observed school was not a school for exceptional or gifted students and not any of the students were acknowledged as exceptional- yet, many were operational at a level beyond their grade.

The environment for creativity to propagate and flourish was thriving. In creating that surroundings, the teacher also shaped an astonishing level of commitment in the students. Students were witnessed constantly involved and absorbed in what was being communicated in courses. The teacher was equally invested in the ideas and all of her pupils' growth. The study was led towards the end of the academic year when interest in participation may naturally diminish.

In a developing country like Romania, it is a necessity to invest in education – and to invest in a proper educational system, that is in accordance with the actual requirements of the today`s society. Some teachers may have the abilities to outperform the actual educational system, but this happens rarely. The observed teacher was definitely prone to support the new era demands, but the fact that it was the only one interested in this study from a whole school, means that she represents an isolated case. However, the teachers are not the first to blame. Taken into consideration their incomes (about 500 Euros a month, for 20 years experienced teacher), it can be understood that they are not sufficiently motivated to engage more and to be more proactive in their job. This suggests that any change in the curriculum and the whole educational system should also be backed up by a raise of the salaries. Most teachers nowadays are struggling to increase their incomes by offering their services as private tutors after their primary job hours. This leads to exhaustion and capping, in most of the cases.

This research points towards the fact that with continuous and cumulated effort, preparation, growth and an openness to change, the potential for superior growth of creativity augmented student commitment, and the opportunity to also adjust the waning of creativity that exist nowadays in most schools. What still needs to be gathered as final ingredients, are the bravery, the incentives and the commitment to do so.