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CREATIVE TEACHING

TO INCREASE STUDENTS' LEARNING AND ACHIEVEMENT
THE CASE OF ENGLISH TEACHERS - UNIVERSITY OF
CONSTANTINE

Dissertation submitted in partial fulfillment for the requirements of the Master of Arts Degree in Language Sciences.

Presented by: Supervised by:

Mr. BELKADDAS Mohamed Zineddine Dr. Laarbi Koli

Board of Examiners

President: Dr.LABED Nacif Dr. Mentouri University - Constantine

Supervisor: Dr. Laarbi Koli Dr. Mentouri University - Constantine

DEDICATION

* To my dear parents and all my friends.

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ABSTRACT

It is easy to consider the essential role of creativity in bringing joy and

meaning to the human condition. Without creativity we have no art, no literature, no science, no innovation, no problem solving, no progress. It is, perhaps, less obvious that creativity has an equally essential role in education. The processes of creativity parallel those of learning. Recent calls for authentic activities, teaching for understanding, and real-world problem solving all require engaging students with content in flexible and innovative ways. Students who use content in creative ways learn the content well. They also learn strategies for identifying problems, making decisions, and finding solutions both in and out of school. Classrooms organized to develop creativity become places of both learning and wonder. In order to investigate this feature, we conduct a questionnaire with ten English teachers at the Department of Foreign Languages, University of Constantine.

The present dissertation aims at helping teachers at Mentouri University incorporate important aspects of creativity in the daily activities of teaching life. For this reason we hypothesize that if teachers understand the creative process; they can choose content, plan lessons, organize materials, and even grade assignments in ways that help students develop essential skills and attitudes for creativity.

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CHAPETR ONE

The Nature of Creativity

Introduction

This part of the research provides the theoretical framework for the whole research. It is intended to help us think through the basic questions: What is creativity? What does it look like? How will I recognize it? Where does it come from? We will be introduced to the controversies and mysteries faced by researchers and theorists alike. This theoretical background will allow us to look at the teaching processes and make professional decisions based on the ideas that make the most sense for us. Along the way we will consider other important questions. How might this operate in young people? How might it vary in different subjects? What might that mean for the students in my charge? Can I teach for creativity while also teaching my essential content? I believe the answer to the last question is, "Yes, absolutely, and they'll learn more than ever."

1. Teaching Creatively

A journey of a thousand miles begins with the first step, says a Chinese proverb. To teach creatively, begin by recognizing that you have hidden creativity, that you want to explore it, and that you want to help young people do likewise. Creative teaching is a complex skill and cannot be learned in a short time. There are three steps to teaching creatively as indicated by Copley(2001):

Step 1: Understand the nature of creativity.

Step 2: Practice your own creativity.

Step 3: Use teaching strategies that nurture creativity in your students.

Of course, it goes without saying that creative teaching (or any other teaching methodology) is no substitute for knowledge in a subject area. Being an expert in a subject area does not automatically make you a good teacher; on the other hand, you can't be an effective teacher unless you are knowledgeable in your subject area. Creative teaching allows you realize your full potential as a teacher, but only if you have mastered that subject area yourself.

2. Why creative teaching?

I want to encourage creativity in schools is because I believe we are responsible to create places in which students learn to think, and places in which thinking can be joyful. Few critics would argue that schools should teach students to think critically and understand deeply. There is abundant evidence to suggest that the strategies that support creativity: solving problems, exploring multiple options, and learning inquiry, also support depth of understanding. But in addition, joy matters. I don't believe that any good teacher can limit his or her responsibility to the transmission of content. "We want our students to have zest for life and hope in their capacity and we want them to have those things in school" (Csikszentmihalyi, 1996). It is no coincidence that in an article titled, "Joy in School" Steven Walk (2008) cited "Let students create things" and "Take time to tinker" among the key elements of a joyful school life.Lerman further illustrate by saying:" In schools, we aren't punching out widgets; we are nurturing young people" (2000). In my view, an essential part of preparing students for life is helping them

see that life is interesting and filled with the potential for joy. One way we do that is to help them experience creativity.

It would seem if we want our young people to be successful in the world they will inhabit, they will need more than the knowledge we can measure on traditional tests. They will need the skills, attitudes, and habits required for solving problems unimaginable today. They will need to see varied viewpoints and understand people across the globe. They will need to think flexibly and with imagination. They will need to be creative.

3. Definition of Creativity

There are many definitions of creativity (e.g., Sternberg, 1995; Russ 2003). Some definitions focus on characteristics of individuals whose work is determined to be creative (What is a creative person like?), whereas others consider the work itself (What makes this creative?). In either case, most definitions have two major criteria for judging creativity: novelty and appropriateness. For example, Petrowski (2000) defined creativity as follows: "(a) a creative result is a result both original and appropriate. (b) A creative person—a person with creativity—is a person who fairly routinely produces creative results" (p. 311). Although Petrowskis' propositions are broad, they tie together the concepts of creative people and creative activities in a neat practical package. Even so, each aspect of this simple definition poses questions. Novelty and originality may be the characteristics most immediately associated with creativity. Works of literature that imitate those before them or scientific discoveries that are merely a rehash of earlier work are seldom considered creative. To be creative, an idea or product must be new.

To a degree, creativity is a natural part of everyone's mental process, though creativity differs, of course, in type and amount from person to person (Crutchfield 1973). There is

no such thing, however, as a totally uncreative person. Any act of producing something new, even something as simple as a sentence that has never been spoken before, is an act

of creation.

The answer to the question what is creativity? Should be broad enough to include both spontaneous expressiveness and original thinking as manifestations of creativity. Here is a working definition: Creativity is the process of producing a new whole out of existing

elements by arranging them into a new configuration.

This definition is broad enough to include discovery, imagination, invention of all kinds and theories: political, religious, scientific, and psychological as well as literary works, sculpture, painting, and great performances so often associated with creativity. Creativity can be subdivided into several categories according to Stark:

1-Artistic creativity

2-Inventive creativity

3-Theatrical creativity

4-Constructive creativity

5-Interpersonal creativity

4. Creativity's Many Faces

Learning to use all aspects of one's creativity is part of becoming a fully functioning person. Because creativity is a normal part of everyone's feeling, expression, and thinking, making creativity the centerpiece of an instructional model is totally appropriate. Creative teaching involves all five types of creativity:

4.1. Artistic Creativity

Teachers with a special talent in one of the arts, such as photography, music, writing, acting, drawing, or painting, can usually employ this talent in their teaching. At the very least, sharing these talents helps build rapport. Yet, as far as teaching is concerned, artistic talent is the least useful form of creativity because it places the students automatically in the role of audience. No matter how great the artistic talent of the teacher, it should not be allowed to reduce students' opportunities to develop *their* talents and skills. Although observing a teacher's gift may inspire some students, it may also inhibit students and stir feelings of inadequacy as indicated by Kaiser (1974). Special talents or creativity in the arts certainly have a place in the school, but this form of creativity is less useful than the other four types.

4.2. Inventive Creativity

Bower delves into this concept of inventive creativity when he said that meeting the demands of an increasingly complex and rapidly changing society requires flexibility. People and societies that can adapt readily to changing conditions survive and prosper while those that cannot fall by the way side (2000). Inventive creativity results from divergent thinking, which can be enhanced, as research has shown, through practice. To teach adaptability is to teach inventive creativity and creative problem solving. Because no one can predict the future even 10 years in advance, creative problem solving and designing can and should be taught in school, in addition to factual content.

4.3. Theatrical Creativity

A teacher who skillfully employs theatrical devices will capture and hold the students' attention better than the same teacher using plain vanilla methods (Lazurus, 1991). Students' attitudes and task commitment improve when their assignments allow for some degree of self-expression. Otherwise, schooling is an unnatural, distasteful affair that turns students off to future learning and dissuades them from pursuing a subject on their own. Theatrical creativity introduces levity, a sense of fun, compassion, and a deeper contact with emotions. A high school literature teacher who puts on a colonial costume and reads a sermon of Jonathan Edwards in dramatic style turns potentially dry material into an event. A history teacher who can tell, indeed, enact history's important moments will help students make connections, especially emotional ones, where, before, there were none. A science teacher who illustrates the recipe for making a planet by having students wear large names tags identifying them as quarks, protons, and atoms and bunching them together in different groups will leave a more lasting impression of the structure of matter in the students' minds than the transparency-flipping stooge who drones on and on. There is an inherent joy to the creative process that does not exist in rote learning. Classrooms should be humane and engaging centers of learning rather than the drudge shops we call classrooms in many schools.

4.4. Constructive Creativity

True learning, as opposed to mere training or mimicry, requires the construction of meaning and inherently involves an act of creation. Creativity is required for any type of synthesis because a unified whole must be constructed where none existed before. Students cannot make copies of the teacher's knowledge; they must build up their own understanding brick by brick, concept by concept. Students need activities that evoke a response and engage their whole capacity: heart, hands, and head. The result of true

learning is a sturdy but flexible mental scheme, a large cognitive-affective framework that organizes and links knowledge, motives, and feelings into a meaningful whole. Creative activities such as reconstructive writing, flowcharts, invention grids, scripts, choice mapping, and interviews require a greater degree of constructive thinking than mere memorization.

Teachers today face a challenging task in motivating students to do their best work. This task is made easier when the lessons provided are interesting and meaningful. Creativity, if used effectively, enhances students' motivation to learn because they have the opportunity to achieve a synthesis where none existed before. The result? A deeply satisfying, personally meaningful learning experience. True learning satisfies the inner longing of the human being to discover meaning and make sense out of information and experience.

4.5. Interpersonal Creativity

Learning and teaching involve a high level of interpersonal interaction. Building a rapport, sensing the students' feelings about a lesson or assignment, and solving discipline problems without leaving a residue of bitter feeling are valuable skills some people naturally have in abundance. Any creative endeavor in the classroom requires both the inborn talent possessed by the teacher and techniques understood and practiced over time. Interpersonal creativity comes into play in engaging students one to one and in reading the mood of the day. Sensitivity to other's feelings not only prevents emotional blocks in students, but contributes to making learning an enjoyable process. Starko (2000) noted that the best classroom climate is one that inclines a student toward wanting to learn more about the subject rather than less. Emotional climate is a big part of achieving this goal.

5. What Makes a Person Creative?

Creativity is not an isolated characteristic, found in some people and absent in others, but a constellation of traits that all come to bear at once. Though creativity cannot be reduced to a single equation, a variety of writers and researchers frequently identify the same handful of factors that contribute to creative acts as widely diverse as writing poetry and devising mechanical inventions (Abram 1988; Amiable and Hennessey 1988; Tardif and Sternberg 1988). Creativity involeves:

a gift for associating thoughts and feelings in unusual combinations;

an attitude of playfulness, openness, and flexibility;

knowledge of how the creative process works;

skill in using the tools of the trade;

persistent effort to keep trying until the result is satisfactory; and

A *favorable setting* in which creativity can find free expression.

6. Teaching for Creativity versus Creative Teaching

Structuring teaching for creativity can be an easy goal to achieve. Smith mentioned that a teaching activity that produces an enjoyable, or even creative, outcome does not necessarily enhance creativity unless the students have the opportunity for creative thinking (2000). However, creative teaching (the teacher is creative) is not the same as teaching to develop creativity. In some cases, the illustrations are adorable and the activities unusual, but the input from students is fairly routine. O'Keefe gives some examples about the so called creativity books, like for example a color-by-number dragon filled with addition problems may have been an original creation for the illustrator, but

completing the addition problems and coloring as directed provide no opportunities for originality among the students. A crossword puzzle in the shape of a spiral was an original idea for its creator, but it still requires students only to give accurate responses to the clues and fill in the correct spaces (1988). In these cases, those who created the materials had the opportunity to be creative. The students do not. In other cases, university teachers may use enormous personal creativity in developing activities that allow few opportunities for students to be original. Teaching to enhance creativity has a different focus. The essential creativity is on the part of the students. If the students develop a new form of crossword puzzle, they have the opportunity to exercise creative thinking. Creativity also can be developed as students devise their own science experiments, Stenberg gave a great example about discuss Elizabethan England from the point of view of a woman at court or a farm woman, or rewrite "Snow White" as it might be told by the step mother (1995). When teaching to enhance creativity, we may well be creative as teachers, but we also provide students the knowledge, skills, and surroundings necessary for their own creativity to emerge. The results may not be as flashy as those in the parachute story, but they include real problem finding, problem solving, and communication by students.

CHAPTER TWO

Skills and Tools for Creative Teaching

Introduction

Can Anyone Who Wants to Teach Creatively, Do So?

As Garden indicates, like needlepoint or archery, teaching creatively depends on natural ability, self-perception, and commitment to practice (1993). Of course, not everyone has the ability and the keen eye it takes to become an expert at needlepoint or archery. But needlepoint and archery are only two of the many ways the creative process manifests itself. Detectives, architects, and government policymakers, too, exhibit the kind of divergent thinking that is central to the capacity to come up with something new. As we have already seen in chapter one, creativity is not rare. The average person possesses hidden or suppressed creative abilities, which makes everyone capable when given the right setting, training, and encouragement. Virtually any teacher already possesses sufficient creativity to do quite a good job of creative teaching.

In becoming good at something, it is often necessary to become "not bad" at it first. In other words, the first and immediate goal for improving performance is to avoid the pitfalls that subtract from performance. As political pollsters say, to have "low negatives" is positive.

2. Creative Teaching Aspects

- The six resources of Sternberg's investment theory of creativity:

In a broad sense, there is considerable overlapping between "instructional innovation" and "creative teaching", only that the former stresses more on the use of new instructional concepts, methods or devices that others have developed while the latter focusing more on teachers' developing and use of new instructional methods of their own. The difference between teaching of/for creativity and creative teaching is more straightforward. Starko (2000) referred to the former as teaching implemented for the purpose of cultivating students' creativity while the latter as applying creative instructional methods to achieve the teaching goals. ERIC (1966) Thesaurus also made a specific remark when defining the concept of creative teaching: "Creative teaching refers to teaching that results from the teacher's creativity, not to teaching that is intended to develop the learner's creativity." In this study, we refer to creative teaching as teachers utilizing their own creativity to design systematic teaching solutions, adopt appropriate teaching techniques, and change teaching methods or arrange reasonable and effective teaching activities while teaching.

For successful implementation of creative teaching, the environmental factors that need to be taken into consideration include expectations and interactions as well as teachers' teaching experience and beliefs (Hart, 2000; King, 2001). Alderman (1999) pointed out those teachers' self-beliefs are the single biggest influential factor of students' learning effects. Despite constant changes in student-teacher interaction and continuous innovations in teaching methods, some obstacles remain for the implementation of creative teaching. Tiberius (1999) for instance, named six major problems relating to creative teaching. From the perspective of per formative learning, O'Keeffe (1988) offered the following five guidelines. Csikszentmihalyi (1996) also pointed out that the provision

of a congenial environment by teachers and parents is of great importance to students' learning, and that the environment should not be built for the cultivation of highly creative geniuses but rather to allow every individual leaner to generate some ideas. In other words, in this new era of creative teaching, teachers too must adjust their knowledge and attitude toward teaching (Copley, 2001).

Weiss & Raphael (1996) studied the U.S. NSF (National Science Foundation) Presidential Awardees in Excellences in Math and Science Teaching and identified the following influential factors as having practical implications on teachers' teaching: 1) Teacher's professional development; 2) Attitude toward the curriculum and teaching; 3) Utilization of teaching strategies; 4) Teacher's decisions; and 5) Professional development activities. Petro ski (2000) once commented after reviewing a number of research studies on creativity that most of the creative people are basically self-motivated. For instance, a person who does not enjoy teaching is unlikely to generate any creative ideas in the field of teaching. Therefore, it is clear that a further understanding of the educational background, teaching styles, teaching beliefs and professional activities of teachers will facilitate the design and development of teachers' professional growth courses. It is also clear that in the process of role change between students and teachers during creative teaching, it is necessary to develop a supervisory plan according to the respective school development objectives, class or group learning progresses, and individual learning abilities and motivations. This plan should serve as a guiding principal for the implementation of various teaching tasks, and the teaching tasks should then be based upon for the conducting of learning activities to help build students' problem discovering and solving abilities. Throughout the process of the learning activity, teachers and students must examine whether their capabilities match the activity requirements, such as their language ability, to make sure that the learners can grow and

Improve their problem discovering and solving skills through the process, and that a value of learning can be created for students. It is only then will the effectiveness of creative teaching be truly enhanced. Some researchers surveyed the behaviors of masters in order to understand the nature of creativity (Csikszentmihalyi, 1996; Gardner, 1993). Sternberg & Lobar (1995) on the other hand embraced the masses and used ordinary people as research subjects. They believed creativity is like wisdom, which is an ability that every human being is born with and can be developed to a certain extent. Sternberg & Lobar (1995) argued that creativity is the product of the six resources that everyone possesses in them, namely, intelligence, knowledge, thinking style preferences, personality, motivation, and environmental context. In addition, individual creators buy low and sell high in the market of creativity. Good creators are like good investors who buy low and sell high in the stock market. And this is the only way to ensure successful creative performance.

2. The creative teacher at work

2.1. Some Things Poor Teachers Do That Good Teachers Don't

According to student surveys provided by Torrance and Paul (1967), teachers are not good when they:

Lose their temper; are cross, crabby, or grouchy; never smile; nag; use sarcasm;do not provide help with schoolwork; do not explain lessons and assignments clearly;Plan task sequences poorly; Exhibit partiality; have "pets" and pick on others;Maintain an air of superiority; are "snooty," overbearing; "do not know you outside of class»; exhibit

futility, impatience, and frustration, and verbalize this frustration in such ways as "Aren't you ever going to learn this?" and "No, wrong again!" (Hamachi 1968, 9-10)

There's no secret to being a "not bad" teacher: Simply don't be impatient, aloof, sarcastic, disorganized, unhelpful, or condescending, and you'll be a "not bad" teacher.

2.2. What Good Teachers Do That Poor Teachers Don't

Being a "not bad" teacher is a gigantic first step for a novice teacher, but it is clearly not enough. To become a good teacher, one must adopt gradually, through feedback and practice, new behaviors, skills, and attitudes. Having a pleasant appearance, a kindly nature, and a good deal of patience are personal prerequisites to good teaching, but these are not part of the craft of teaching. The craft of teaching focuses on teaching behavior, which is something a willing person, can change if necessary. Research has identified some of the behavior patterns present in good teachers but lacking in poor teachers (Hart 2000, 10). Good teachers:exercise flexibility; see the world from students' viewpoint; personalize teaching; engender willingness to experiment, try out new things; ask questions skillfully; possess a broad knowledge of the subject; exhibit skill in definite, regular assessments; provide study helps; act in a manner appropriate to the situation, both on a verbal and nonverbal level; employ a conversational manner and a relaxed, informal attitude; maintain the belief that everyone can learn this subject; are genuinely concerned about the students' growth; use constructive, not critical feedback.

3. Stages of Creative Instruction

Creative teaching is not really spontaneous though skilled teachers such as Pamela make it appear so as indicated in the Alderman book Motivation for achievement. The creative teacher establishes an environment where creativity is a normal part of learning. Units of study unfold at a brisk pace with a great variety of learning activities designed to

produce a higher level of understanding and personal appreciation of the topic (1999). Generally, the organization of the instruction for a unit proceeds in four stages:

- 1. Designing the Unit of Instruction
- 2. Immersion
- 3. Construction of Knowledge
- 4. Culmination

3.1. Stage 1: Designing the Unit of Instruction

The teacher lays out a unified block of instruction that will last about three weeks or so. The teacher's goal is to engage every student fully in meaningful learning for the whole unit. This is accomplished by examining the material to be studied, identifying curiosities and interesting questions, and formulating a central problem to work on. In teaching the material, the teacher will employ a variety of formats such as role-playing, games, dramatic readings, fictional narratives, case studies, seminars, scripts and story writing, and performances by individuals, small groups, or the teacher. The tasks selected require that students use various forms of creativity: artistic, constructive, theatrical, inventive, and interpersonal.

A unit should be designed with the understanding that learning does not occur instantaneously. True learning occurs only when the student has constructed a meaningful network that ties together facts and ideas with personal interests and concerns of the student. A model called the Learning Cycle, proposed by Russ (2003) and Sandra (2003) divides learning into three repeating stages: exploration, invention, and application. During a unit of study, the teacher should provide activities and materials

that guide students through the three stages of the Learning Cycle, first on a simple, observational level, then on a more detailed and abstract level.

The atmosphere of the creative teacher's classroom is one of positive energy and success, of people respected for their individuality, yet able to work together for the common good. Tension is absent. The mood is light; if fun isn't happening right then, it may break out at any moment. Students enjoy their relationships with the teacher and each other. Learning is a joyful enterprise. The feeling is that students are eager to share what they've created because they believe that it will be respected. Students know what is expected of them and willingly produce a tangible product containing their own serf-expression or original thinking, which is appreciated and encouraged.

It is a technique which most of researchers focused on, and considered it an essential one that must be used by readers to achieve comprehension when reading. Smith (1988) is one of those researchers who stressed the importance of predicting a claimed that it is the core of reading comprehension.

Prediction takes one common notion among researchers as well as psychologists. They almost agree that prediction refers to the use of prior knowledge about a topic and combine it with the new material in the text i.e.; readers use what they know before and relate it to the material at hand. In their words, (Sternberg, R. J., & Lubart, 1995 p: 3) assumed that "before reading a passage, we usually sub-consciously ask ourselves what we know about the subject matter. This makes it easier to see what information you already know about as you read the passage". Therefore, predicting is very effective technique to promote readers' activation of their prior knowledge, which plays a very important role in reading process.

2.4. Stages of the Writing Process

Probably the model of writing widely accepted by EFL learners is the original planning-writing-reviewing framework established by Flower and Hart (2000). According to Torrance (1967: 11), this model sees writing as a "non-linear, exploratory, and generative process whereby writers discover and reformulate their ideas as they attempt to approximate meaning." Hart (2000:11) explains that these stages do not occur in a linear sequence; they are recursive, interactive, and potentially simultaneous; i.e. all the work can be reviewed, evaluated and revised, even before any text has been produced at all.

3.2. Stage 2: Immersion

Immersion puts students in direct contact with exploration, the first and most often neglected stage of the Learning Cycle. The immersion phase may last a quarter hour to several days. The students are exposed to the central problem via a demonstration, a mystery, an observation, a photograph, a case study, a poem, or some other means of piquing students' interest. (This stage goes way beyond Madeline Hunter's anticipatory set because it is interactive and raises more questions than it can answer at that time. Also, the anticipatory set is a brief interlude in a teacher-driven process, whereas the immersion phase of the creative teaching process draws students into a topic to explore, investigate, analyze, and link to other knowledge.) The immersion stage presents the central question, mystery, or major issue that will serve to anchor the entire unit. The point of the immersion phase is to arouse curiosity, anticipation, and the personal need to know, and to provide a focus for primary data to be analyzed and extended later. If the immersion phase does its job, it will leave the students wanting to know more about the topic presented and eager to pursue solutions to the central problem.

Students must be given time to develop an interest in the material, not have it handed to them. The immersion phase of creative instruction ignites the creative process, which begins by sensing dissonance or a felt need. Without a discrepancy to resolve or a personal felt need, motivation will be less than 100 percent. Immersion also initiates the pooling stage. No conclusions are drawn; no overview is given yet.

3.3. Stage 3: Construction of Knowledge

Construction of knowledge is the heart of the learning process. This phase begins with the identification of learning goals and lesson objectives. Initially, these objectives may be chosen by the teacher, but after several units, students will participate in determining some of them. Once the learning goals and lesson objectives are determined and presented, an approximate timetable is established and notice is given in writing of the unit's written and reading assignments.

A well-defined structure in a classroom focusing on creativity. After all, isn't creativity connected to freedom? Maybe so, but creative work demands a lot of concentration. The purpose of having a study guide containing the unit goals and lesson objectives is to free the students' minds from "housekeeping" chores and reduce one of the main sources of background anxiety: worry over "What am I supposed to do?" Maria Montessori found that when the structure of learning is managed efficiently by the teacher, the total energy of the students can be used for creative tasks. In Montessori's words, it is the perfect organization of work, permitting the possibility of self-development and giving outlet for the energies, which procures for each child the beneficial and calming satisfaction. And it is under such conditions of work that liberty leads to a perfecting of the activities, and to the attainment of a fine discipline which is in itself the result of that new quality of calmness that has been developed in the child (Montessori [1915] 1965, 187). The creative

teacher uses a broad selection of activities and assessments of learning on a continuous basis. Students are asked to reflect on their own learning and perhaps periodically record self-observations of their level of cooperation and contribution to the class's climate and progress. During the construction of knowledge phase of the learning process, the creative teacher uses three overlapping and concurrent classroom skills: questioning on many levels, presenting tasks and material, and running activities.

Questioning

A creative teacher is most easily recognized by the manner in which he or she asks questions. The creative teacher asks more questions than a traditional teacher;inquires about students' suppositions and previous knowledge;follows through by asking students to elaborate on their reasoning after both correct and incorrect answers;asks open-ended questions such as "What is music? »

Asks students to link one bit of knowledge to another; asks more higher-order questions such as classify, analyze, design, and rearrange rather than just who, what, when, where; and Inquires about students' feelings and calls for individual reactions to what is presented.

Presenting

The creative teacher's presentation of new material is clear and lively, maintaining a balance on the work-play continuum. Students and the teacher laugh occasionally, and between laughs, the mood is one of levity, the readiness to laugh. Laughter is never at anyone's expense unless the humor is self-deprecating. Tasks are presented clearly with sufficient instructions so there are few procedural questions. Tasks to be assessed or scored are explained clearly with written guidelines to refer to as the project proceeds.

Sufficient guided and independent practice is provided before any scored assignment, graded test, or performance in front of the class. Students expect to be held accountable for all work they've done and realize that some type of assessment is part of all learning.

Running Activities

The creative teacher runs activities smoothly, always with an end purpose in mind. Rather than developing a capacity to parrot what the teacher or textbook says, activities should deepen the child's understanding, make connections to what is already known, identify suppositions and misconceptions, present the material from another viewpoint, and allow students to appreciate wonder and beauty contained in what is studied and build a meaningful personal understanding of the material.

Relating to Students

While interacting with students, the creative teacher's caring way of relating to them is evident. The teacher openly values individual uniqueness, makes eye contact generously and democratically, jokes with students, encourages and assures students, praises their efforts (not products) lavishly, and smiles a lot. When speaking to a student one to one, the teacher positions himself or herself at or below the student's eye level, listens attentively, and may call for a clarification of the question before giving an answer. The teacher might touch students lightly in the neutral zone from wrist to shoulder as he or she interacts with them.

The creative teacher uses a wide variety of work formats: large group, team, pair, and solo. The teacher engages students in dialogues about their learning and their feelings. To keep students on task, the creative teacher keeps an alert eye on the whole group and does not "write off" any student. Sometimes the creative teacher acts more like a

shepherd or a coach, keeping the group working on the task at hand. When discipline is necessary, the creative teacher intervenes early. The interaction is private, calm, and corrective rather than punitive and judgmental. The teacher asks the student to reflect on the problem behavior as it affects the other students and him or herself. The focus stays on behavior that needs to change and not on the many side issues in which the unwanted behavior is embedded.

3.4. Stage 4: Culmination

With the teacher's help, students in the culmination phase of learning will unify, consolidate, and reflect on the learning that has taken place. Students will

Review the central problem and list and compare the solutions found;

Look back over the unit to identify themes and large ideas it contained;

Review concepts and vocabulary; Produce a tangible product to demonstrate that learning has taken place; reflect on what and how they learned.

CHAPETR THREE

The Field Work

Introduction

The development of students' creativity has been a subject that the education sector always neglected in Algeria. Students need to be provided with relevant learning experiences and opportunities in order to learn to observe the world from a variety of angles and to analyze, categorize, and really delve into the problems they encounter in learning as well as in lives. In addition to using a microscopic view to analyze the characteristics of students' memory representations, educators should also adopt the macroscopic perspective to help build a creative learning environment and to advocate the importance of the development of higher-order cognition in students (Smith, 2000). Not only do students need to participate in activities in order to understand the diverse nature of knowledge, but they need a diverse range of activities to help stimulate their general and critical thinking abilities.

Around the world, relevant creative thinking research has been predominantly student-oriented, and sometimes student-teacher interaction or teaching related. But rarely were teachers the subject of these research efforts. Even in the few studies that did cover teachers' creative teaching activities, the majority was done on teachers' creative personality or factor analysis Sternberg, R. J., & Lubart, T. I. (1995). As to the influential aspects of teachers' creative teaching, no such studies have been published so far. Hence, the understanding of the influential aspects of teachers' creative teaching should provide us a better insight into how to further improve the effectiveness of creative teaching.

3.1. Administration of the Questionnaire

The Creative Teaching Aspects Questionnaire (see appendix N°1) was handed out to thirteen English teachers at the Department of foreign languages, university of Constantine(only ten questionnaires were given back) with a total of 13 copies of the questionnaire handed out to teachers, 10 of which were returned.

The finalized questionnaire contains 39 questions. The questionnaire is divided into six main parts; they're entitled as follows:

- 1- Motivation
- 2-Intellectual ability
- 3- Knowledge
- 4- Thinking style
- 5- Personality
- 6- Environment

3.2. Description of the Questionnaire

The theoretical framework of this study is based on relevant foreign research as well as the six resources of Sternberg's investment theory of creativity. In order to gain a deeper insight into the influential aspects of creative teaching for teachers, this study conducted an in-depth questionnaire with the selected "creative teachers", which later was handed out to thirteen English teachers at the Department of foreign languages, university of Constantine(only ten questionnaires were given back).

3.3. Analysis of the Questionnaire

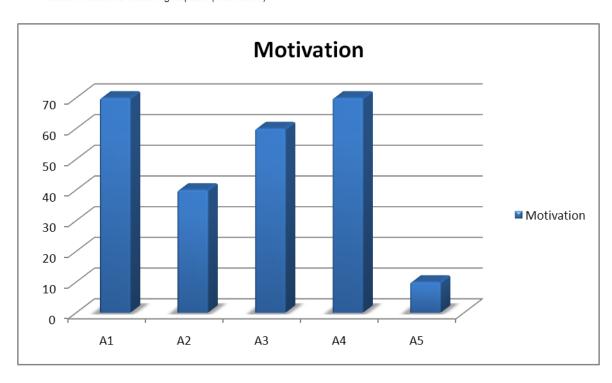
Data analysis:

The analysis of the data showed that there is a diverse pool of factors that are responsible for teachers' creative teaching behaviors, which can be grouped into the following six categories:

1-Motivation:

Aspect Name	Questions No./aspect	Aspect No.	No.	Question	answer %
Motivation	5	6	A1 A2 A3 A4 A5	-To help students learn effectively is what motivates me to implement creative teaching. - To help students learn happily is what motivates me to implement creative teaching. - I feel that teaching students well fulfills my sense of achievement. - I accept comments and suggestions about my creative teaching. - My language of teaching is widely considered as having a great sense of humor by students.	70 40 60 70 10

Table 1: creative Teaching Aspects (Motivation)



According the data in 'table 1', A1 and A4 had the biggest percentages 70% which means that teaching effectively, as well as having an open-minded thinking are the most important motivational aspects for the English teachers at Mentor University. Sense of achievement comes next with 60%. Therefore, a person can have all the knowledge ability, and style in the world, but he still has to be motivated to make something happen. Motivation in this case means making an investment. Buying low in the realm of ideas is an action, not a thought or a daydream (1974).

Also, the amount of motivation needed is important as well. The years that take to build up the necessary knowledge to make a major contribution in a field like high education, Is not spent in passive learning, but rather in constant experimentation, revising, discarding, playing, and "pulling one's hair out". Kaiser (1994). Edison for example learned 1,800 ways not to build a light bulb before he got it right.

However, almost all teachers agreed on the irrelevance of senses of humor at school (only 10%). Even though, people are generally creative only in pursuits they enjoy. If you don't enjoy an activity, you won't invest the often incredible amounts of time and energy necessary to succeed in it. Probably the single most important thing a teacher can do to encourage creativity while giving a lecture is to make it a fun experience for both himself and for the learner.

Morris Stein reminds us:" This playfulness is not such as to make the person whimsical and lacking in seriousness with regard to work. Rather it is a playfulness which enables the individual to play with ideas and mix things which they see before him/her so that new combinations form"(1998). If creativity is a goal, all of these pieces of advice make clear the importance of designing work to be more intrinsically satisfying Alderman (1999), that is, more fun.

As Matt Weinstein, author of *Managing to Have Fun* and founder Playfair, Inc., Said: «The Company that plays together stays together" (2000).

If all this fun games however, sounds too unprofessional or too similar to failure attempts to link job satisfaction and productivity for teachers, be comforted by some serious research by Barry stew and Signal Barrsade, who found that happier people were more effective at both managerial decision-making tasks and interpersonal negotiations than their so-called "sadder-but-wiser" colleagues (2001).

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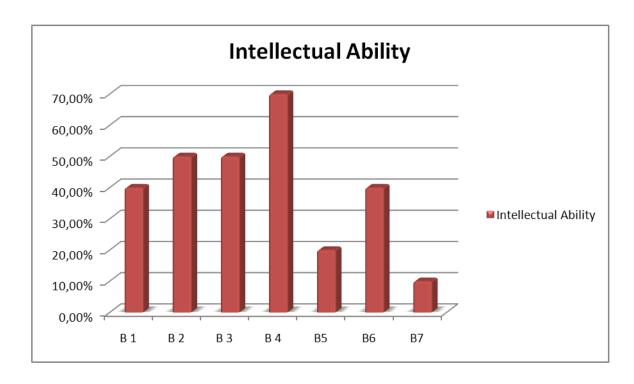
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Is not spent in passive learning, but rather in constant experimentation, revising, discarding, playing, and "pulling one's hair out". (Copley, 2001). Edison for example learned 1,800 ways not to build a light bulb before he got it right.

2- Intellectual ability

Aspect Name	Questions No./aspect	Aspect No.	No.	Question	answer %
Intellectual ability	7	2	B1 B2 B3 B4 B5 B6 B7	-Whenever I encountered a problem, I often asked myself "why" in order to get to the bottom of a phenomenonI pay attention to students' needs and provide appropriate assistanceIn the event of a situation, I often think about how to solve it firstI am confident of my own teaching and my ability in solving problemsI like new things and would try out new functions and usagesI found ordinary teaching materials not catered to my needs and therefore often develop materials by myselfI consider innovation and creation in the process of learning a happy experience.	40 50 50 70 20 40

Table 2: creative Teaching Aspects (Intellectual ability)



Creativity often involves making new connections seeing things in new ways and redefining problems. Although synthetic, analytical, and practical talents are

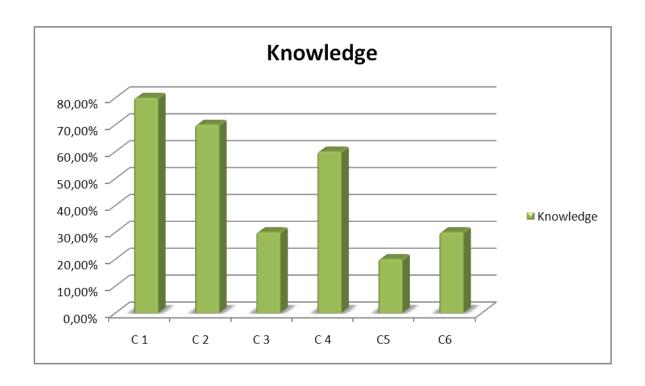
necessary for any creative teacher, the mix and weight of talents needed change over the life cycle of an idea. This is clear especially when analyzing the second set of data concerning intellectual ability, in which confidence appear to be the most important aspect of all other aspects for teachers at Mentor University with a percentage of 70%(B7).On the contrary, teachers seem to ignore innovation and creation in the teaching process which is surprising at this level. Half of the teachers seem to agree on the remaining questions.

However, a teacher with superior analytical ability can be damaging for the learners if he cannot turn off the criticism. At this stage, a teacher could replace or supplement some of the ideas he generated with the learners with high analytical ability, or specifically instruct the existing learners to bring this ability to the forefront. After a selection of the most promising ideas has been made, the teacher could introduce new members (students) to the team who have the high practical ability that required during the stage of teaching/learning.

3-Knowledge

Aspect Name	Questions No./aspect	Aspect No.	No.	Question	answer %
Knowledge	6	3	C1 C2 C3 C4 C5 C6	-I try to master the core knowledge in my primary area of teachingI try to explore all general knowledge related to my area of teachingI try to integrate all relevant fields in teaching to help students gain a better understanding of the content of the subject being taughtI often collect, manage, and apply information and dataI use non-formal ways to help myself grow professionally, such as reading and travelI usually spend more time and effort than others in developing teaching plans.	80 70 30 60 20 30

Table 3: Creative Teaching Aspects (Knowledge)



"To do original work, one need the basic knowledge of the field so as to go beyond the status quota goes beyond the Quinone has to know where the status quo is first." Stark (2000). If it takes ten years for a person to acquire expertise in a field, schools and universities have to adopt a long-term perspective and give the teacher that time to develop since the data proved that the majority of teachers (C1=80%) are trying to master the core area of their field.

However, the typical obsession with earnings in Algeria does not help develop creative talent. It is also important to be careful about not over-weighting the criticisms of the most experienced teachers when evaluating "the merits of a creative proposal" Csikszentmihalyi (1996), because too much knowledge can sometimes lead to rigidity in thinking ant intolerance of change (2003).

Knowledge is also necessary because creativity has been shown to be fairly domain specific, meaning that people are not generally creative in every field but rather in specific areas.

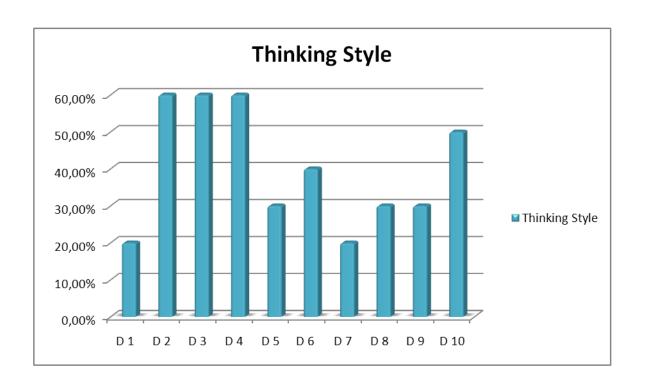
The other results indicate that:

While knowledge is important, there can be too much. Often creative ideas involve combining seemingly unrelated things. If a person is so knowledgeable about a specific area, he knows more and more about less and less until he knows everything about nothing (Copley, 2001). His mind is closed to making these "unrelated" connections. He thinks he "knows" that a given idea won't work.

4-Thinking style Preferences

Aspect Name	Questions No./aspect	Aspect No.	No.	Question	answer %
	10	4	D1	-I believe I can learn valuable lessons from others' experiences and therefore often study	20
\vdash			D2	benchmark cases for self-improvementI enjoy using different channels and sources	60
Γhinking style			D3	for learningI use formal ways to help myself grow professionally, such as attending seminars	60
			D4	and in-service training programsI enjoy learning through new technologies	60
ng			D5	and equipmentI often make multiple hypotheses and conduct tests for verification.	30
St			D6	-l am willing to teach classes that others won't.	40
yle			D7	-I would do whatever I can to convince parents and supervisors to let me conduct	20
			D8	creative teachingEven under resource (manpower, time, budget) constraints, I am still willing to	30
			D9	implement creative teachingI consider being creative my lifelong mission.	30
			D10	-I would adjust my teaching methods for different students even with the same subject matter.	50
				i.	

Table 4: creative Teaching Aspects (Thinking style)



Data in the fourth set of questions concerning thinking style yield some important findings:

People vary in the way they prefer to use their intellectual abilities. They have a certain style or characteristic way of acting. Some like to do things their own way. We call that an inventing style. Others who like to follow established ways of doing things could be said to have an implementing style. They prefer to implement the ideas of others rather than invent their own. Another group of people who prefer to sit back and observe others and analyze or criticize what those others do could be said to have an evaluating style. They typically act as critics or judges, rather than performers. Everyone possesses every style to some degree. What differs across individuals is the strength of preferences and kinds of tasks and situations that evoke various preferences.

Our research shows that creative people tend to prefer inventing style. However, most schools encourage an implementing style. Teachers often want students to do just what they are told. As a result, the best students selected who succeed in the end are often those with the style that the school has encouraged, that is, the implementing style. They are very good at following directions but may not be so good at inventing new ways to do things. Unfortunately, the people with a natural inventing style were long ago ignored for not fitting in and not doing what they were told.

To some extent, our thinking-style preferences follow the reward structure of our environment. We prefer the style that gets rewarded. We also try to adapt to the organizational culture and fit in. If we can't fit in we leave (Weiss & Raphael ,1996). If a teacher continually rewards a student for following instructions to the letter or finding flaws in other people's work, he/she is encouraging that student

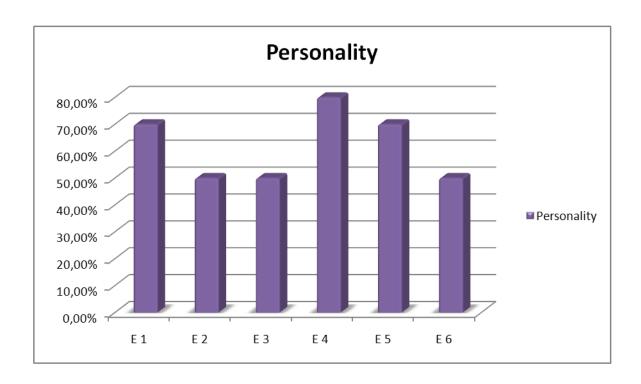
to use the implementing or evaluating thinking style. Letting someone do a work his own way (especially when that way is not the teacher's way) encourages him to use the creative inventing style. Seeing a colleague get rewarded for inviting style encourages the other students to try themselves. The best thing a teacher can do to encourage an inventing style is to serve as a role model and use that style himself.

Style preferences can also be understood as habits or practice with a particular intellectual ability. If a person habitually criticizes the ideas of others without practicing the generation of his own ideas, his analytical ability will become dull from lack of use.

5. Personality

Aspect Name	Questions No./aspect	Aspect No.	No.	Question	answer %
Personality	6	5 E1	-With or without moral encouragement (e.g. public commendation), I am still committed to the implementation of creative teaching.	70	
			E2	-With or without material encouragement (e.g. cash rewards), I am still committed to the implementation of creative teaching.	50
			E3	-I would tune myself to the best mental and physical conditions for teaching.	50
			E4	 -I always think about whether the teaching meets the students' needs and would seek improvement whenever I can. 	80
			E5	-The reason I'm implementing creative teaching is that I wish to pass on good	70
			E 6	knowledge to the next generation. -Whenever I found out that the creative	
				teaching had failed to bring out my intended results, I would try to improve it or make further innovations.	50

Table 5: creative Teaching Aspects (Personality)



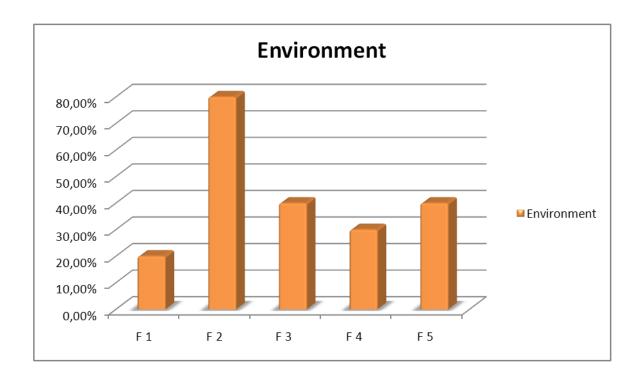
The only most apparent aspect according to the data analysis is the willingness to take risks by the English teachers at Mentor University.

Sternberg & Lobar further explain this concept by saying that creativity requires a risk-taking personality, someone who can take a stand and is a contrarian (1995). People who has their own way of thinking and doing things often appear strange to people who are more conventional. They often become outcasts. We need these outcasts because they are involved in a reality many of us don't see. Schools need to be concerned with keeping sufficient diversity inside the school. It is as if we all have a unique antenna that picks up a few channels of reality. If we have only people similar to ourselves in a school environment, we will all be tuned to the same channels and miss the rest of the world. So, we need those outcasts to provide those other channels we are missing.

6-Environment

Aspect Name	Questions No./aspect	Aspect No.	No.	Question	answer %
-	5	6	F1	-The community environment of the University of Mentouri has easy access to resources that facilitate creative teaching.	20
Environment			F2	-The University of Mentouri provides good administrative support (human, material, and financial resources) for creative teaching.	80
			F3	I feel that the University of Mentouri has provided me with enough room for creative	40
mme			F4	teaching My teaching colleagues at the University of Mentouri often share ideas and thoughts	30
ent			F5	about creative teaching with each other. - My family is open-minded and supportive of what I want to do.	40

Table 6: creative Teaching Aspects (Environment)



It is the environment that determines how large the risks appear to the creative teacher. Daniel Hahnemann and Amos Tversky,two well-known psyvhologists,found that people are risk-averse when choosing between potential gains and risk-seeking only when choosing between potential

losses. Also, according to the data analysis from table 1, teachers seem to be satisfied with the administrative support (human, material, and financial resources) (C2=80%), which is a very encouraging.

However, people fear change. Despite the fact that many people claim to value novel ideas, there is strong evidence that they don't like them. One of the most solid findings in psychology is the "mere-exposure effect»: People like most what is familiar to them. Thus, research indicates that although people may value creativity because it will bring progress, they are often uncomfortable with it and hence may initially react negatively to creative teaching or any creative work.

Because we cannot predict the future with much accuracy, both the schools and the creative individuals (teachers) need to manage the risk involved in playing with creative ideas. Schools should not invest their entire funds in one project or research.

Kantar(1995) points out that some kind of uncertainty may create opportunities. These somewhat chaotic environments are not easy to manage and may not work for all schools but they can enhance creativity and lead to successful outcomes.

Conclusion

This study first identified through the questionnaire nine dimensions that can affect teacher's creative teaching: personal quality, thinking style, family factor, education experience, teaching belief, personal effort, motivation, professional knowledge, and environment factor and that they are interrelated with each other.

General Conclusion:

The development of students' creativity has been a subject that the education sector always neglected in Algeria. Students need to be provided with relevant learning experiences and opportunities in order to learn to observe the world from a variety of angles and to analyze, categorize, and really delve into the problems they encounter in learning as well as in lives. In addition to using a microscopic view to analyze the characteristics of students' memory representations, educators should also adopt the macroscopic perspective to help build a creative learning environment and to advocate the importance of the development of higher-order cognition in students. Not only do students need to participate in activities in order to understand the diverse nature of knowledge, but they need a diverse range of activities to help stimulate their general and critical thinking abilities.

Teachers' professional growth is already a slow process that takes a long time and the obstacles preventing them from implementing creative teaching are even greater.

Therefore, it is of utmost importance to investigate and understand how creative teaching can be more widely adopted and effectively used by ordinary teachers in order to help promote the development of higher-order thinking skills in students, thereby giving them an edge for tomorrow's global competition.

In an overview of education research literature on teachers' beliefs, reflective implementation, teaching-related knowledge change, and teacher and social constructivism. For a long time now experimental research on creative thinking has been largely using students as subjects while teachers' creative teaching behaviors are rarely studied, and attributed this to the lack of a comprehensive construct or knowledge on teachers' creative teaching behaviors.

Therefore, understanding the aspects influencing teachers' creative teaching behaviors is not only necessary for the enhancement of creative teaching effectiveness, but also an essential issue that deserves the attention of every decision maker responsible for the promotion of creative teaching and of all creative teaching practitioners when designing learning activities. This is particularly true here in Algeria. If the curriculum is to be fully materialized and to make an impact, the implementation of creative teaching is requisite.

REFERENCES

- **Alderman, M. K.** (1999). *Motivation for achievement: Possibilities for teaching and learning*. London: Lawrence Erlbaum Associates.
- Abra, Jock. 1988. Assaulting Parnassus: Theoretical Views of Creativity. Lanham,MD: University Press of America.
- Amabile, Teresa, and Beth Hennessey. 1988. The Conditions of Creativity. In The Nature of Creativity: Contemporary Psychological Perspectives.
 Edited by Robert J. Sternberg. New York: Press Syndicate of the University of Cambridge.
- **Amabile, Teresa.** 1993. The Social Psychology of Creativity. New York: Springer-Verlag.
- **Barron, Frank.** 2002. The Psychology of the Creative Writer. In The Creative Process. Edited by B. Ghiselin. New York: New American Library.
- Bower, G. H. 2000. Mood and Memory. American Psychologist 36:129-48.
- **Copley, A. J.** (2001). Creativity in education & learning: A guide for teacher and educators. London: Koran Page.
- Crutchfield, Richard. 1973. The Creative Process. In Creativity: Theory and Research. Edited by Morton Bloomberg. New Haven, CT: College and University Press.Eisterhold, J. C. (1990).

Csikszentmihalyi, M. (1996). Creativity: Flow and the psychology of discovery and invention. NY: Harper Collins Publishers.

Csikszentmihalyi, M. 1990. Flow: The Psychology of Optimum Experience. Grand Rapids, MI: Harper & Row.

Davis, Gary A., and Margaret A. Thomas. 1989. Effective Schools and Effective Teachers. Boston: Allyn & Bacon.

Downing, J. P. (1997). Creative Teaching: Ideas to Boost Student Interest. Libraries Unlimited.

ERIC.(1966).http://www.ericfacility.net/extra/pub/thesfull.cfm?TERM=Creative%20
Teachin.

Gardner, H. (1993). Multiple intelligence: The theory in practice. NY: Basic Books.

Hart, S. (2000). Thinking through teaching: A framework for enhancing participation and learning. London: Davie Fulton.

Kaiser, H. F. (1974). An index of factorial simplicity. *Paychometrika*, 39, 31-36.

King, K. (2001). Science education in an urban elementary school: Case studies of teacher beliefs and classroom practices. *Science Education*, 85(2), 89-110.

Lazarus, R. 1991. Emotion and Adaptation. Oxford: Oxford University Press.

- **Leman, S.** (2000). A review of research of research perspectives on mathematics teacher eeducation. In L. Fou-Lai & C. Thomas (Eds.), *Making sense of mathematics teacher education*.
- **Lozanov, Gregorii.** 1999. Suggestology and Outlines of Suggestopedeia. New York:

 Gordon and Breach.
- O'Keeffe, B. (Ed.). (1988). Schools for tomorrow: building walls or building bridges. NY: Falmer Press.
- **Petrowski, M. J.** (2000). Creativity research: Implications for teaching, learning, and thinking. *Reference Services Review*, 28(4), 3.4-312.
- Russ, Sandra. 2003. Affect and Creativity: The Role of Affect and Play in the Creative Process. Hillsdale, NJ: Lawrence Erlbaum.
- **Smith, R. A.** (2000). Gardner on education: Destination and navigation. *Arts Education Policy Review*, 101(5),36-40.
- Starko, A. J. (Ed.). (2000). Creativity in the classroom: School in the curious delight.

 NJ: LEA.
- **Sternberg, R. J., & Lubart, T. I.** (1995). Defying the crowd: Cultivating creativity in a culture of conformity. NY:Free Press.
- **So, K.** (2000). Indexing creativity fostering teacher behavior: A preliminary validation study. *Journal of Creative Behavior*.

- **Taylor, I. A.** 1998. A Retrospective View of Creativity Investigation. In Perspectives in Creativity. Edited by I. A. Taylor and J. W. Getzels. Chicago: Aldine.
- **Torrance, E. Paul.** 1967. The Nurture of Creative Talents. In Explorations in Creativity. Edited by R. L. Mooney and T.A. Razil. New York: Harper & Row.
- **Tiberius, R. G.** (1999). Small group teaching: A trouble-shooting guide. London: Kogan Page.

Appendix 1: The Questionnaire of Creative Teaching Aspects

Teacher's Name:	
Date:	
Purpose:	
The purpose of this questionnaire study is to obtain some information about	
in the teaching process to identify the influential aspects of creative teaching	And the second
INSTRUCTIONS	
This questionnaire has six sections and consists of five pri	ited pages.
Please $$ the most appropriate responses in the following	
1 - Motivation:	
- To help students learn effectively is what motivates me to implement creative te	ching.
-To help students learn happily is what motivates me to implement creative teach	
-I feel that teaching students well fulfills my sense of achievement.	ng U
-I accept comments and suggestions about my creative teaching.	
-My language of teaching is widely considered as having a great sense of humor	y students.
2-Intellectual ability:	
-Whenever I encountered a problem, I often asked myself "why" in order to g	et to the
bottom of a phenomenon.	
I pay attention to students' needs and provide appropriate assistance.	
In the event of a situation, I often think about how to solve it first.	
I am confident of my own teaching and my ability in solving problems.	
I like new things and would try out new functions and usages.	
I found ordinary teaching materials not catered to my needs and therefore of	n
develop materials by myself.	
I consider innovation and creation in the process of learning a happy experier	ce.

3- Knowledge:	
-I try to master the core knowledge in my primary area of teaching.	
-I try to explore all general knowledge related to my area of teaching.	
-I try to integrate all relevant fields in teaching to help students gain a better	
understanding of the content of the subject being taught.	
-I often collect, manage, and apply information and data.	
-I use non-formal ways to help myself grow professionally, such as reading and travel.	
-I usually spend more time and effort than others in developing teaching plans.	
4- Thinking Style:	
- I believe I can learn valuable lessons from others' experiences and therefore often	
study benchmark cases for self-improvement.	
-I enjoy using different channels and sources for learning.	
-I use formal ways to help myself grow professionally, such as attending seminars and	
in-service training programs.	
-I enjoy learning through new technologies and equipment.	
-I often make multiple hypotheses and conduct tests for verification.	
-I am willing to teach classes that others won't.	
-I would do whatever I can to convince parents and supervisors to let me conduct	
creative teaching.	
-Even under resource (manpower, time, budget) constraints, I am still willing to	
implement creative teaching.	
-I consider being creative my lifelong mission.	
-I would adjust my teaching methods for different students even with the same subject	
matter.	

5- Personality:	
- With or without moral encouragement (e.g. public commendation), I am still	
committed to the implementation of creative teaching.	
-With or without material encouragement (e.g. cash rewards), I am still committed to	
the implementation of creative teaching.	
-I would tune myself to the best mental and physical conditions for teaching.	
-I always think about whether the teaching meets the students' needs and would seek	
improvement whenever I can.	
-The reason I'm implementing creative teaching is that I wish to pass on good	
knowledge to the next generation.	
-Whenever I found out that the creative teaching had failed to bring out my intended	
results, I would try to improve it or make further innovations.	
6- Environment:	
-The community environment at the University of Mentouri has easy access to resources	
that facilitate creative teaching.	
-The University of Mentouri provides good administrative support (human, material, and	
financial resources) for creative teaching.	
-I feel that the University of Mentouri has provided me with enough room for creative	
teaching.	
-My teaching colleagues at the University of Mentouri often share ideas and thoughts about	
creative teaching with each other.	
-My family is open-minded and supportive of what I want to do.	