In most schools in America little attention is paid to the nurture of students' creative potential, with emphasis too often placed instead on rote, repetitive learning. The literature contains many suggestions for enhancing creativity in the classroom setting, such as refraining from discounting odd or unusual questions from students, finding something positive in all ideas, systematically rewarding creativity, demanding creativity of students, giving credit for creativity in grading, and modeling creative behaviors. The translation of theories of creativity into practice, however, is hindered by: (1) reliance on true-false, multiple-choice, and fill-in-the-blank tests; (2) an ideology which suggests that there is one right answer; (3) the increasing specialization of teachers, which results in a focus on subject matter and a neglect of students' talents; (4) teacher reliance on only one technique, such as brainstorming, to enhance creativity; (5) teacher overload; and (6) students' tendencies to underachieve and to pursue little outside reading. Overcoming these barriers requires an open and supportive classroom environment, where creative thinking is accepted and encouraged, dissent is tolerated, and students are encouraged to trust their own judgment. Teachers can do much to nurture creativity in the classroom, but they need guidance, training in behavioral management, and institutional support as well. Creativity and inventiveness must first become important to society to be important in educational institutions. Contains 13 references.
The Supportive Educational Environment for Creativity

Michael F. Shaughnessy
Eastern New Mexico University
Psychology Department
Portales, New Mexico 88130

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Michael F. Shaughnessy
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."
In most schools in America, and in other parts of the world, little attention is paid to the nurturance of one’s creative potential. All too often, emphasis is on rote repetitive knowledge, such as facts, data and names and very basic skills. There are some courses wherein problem solving strategies are taught—such as math and science, by very good teachers, but such instruction is generally lacking and motivational teachers are few and far between. However, in some select schools there is good pedagogy and competent professionals who endeavor to assist in the development of their students potential. These teachers are highly or unusually sensitive to the talents and skills and abilities of their students and work hard to make sure that their students are aware of those gifts and that parents endeavor to develop the potential of these children. These gifts may be in varied fields—writing, science, critical thinking, problem solving, memory, art, music, drama and public speaking. Or, a teacher may simply feel that a student is "bright" but he or she may simply not have a "handle" on the specific skills that the child possesses. Nevertheless, they are concerned about the maximization of that child’s potential and do what they can to assist in that growth.

In some instances, it may mean consultation with a supervisor or outside professional. It could mean discussing the child with another more experienced teacher. Further, independent reading on giftedness, creativity and
talent may be forthcoming. Israel seems to be one country that is genuinely concerned about fostering the creativity of it’s students. Peled ( in Ignas and Corsini, 1981 ) has written about "creative expression " and describes how educational creativeness is incorporated into the school systems in Israel.

In the United States, no one has done more to assist in the development of creative potential than Dr. E. Paul Torrance. Although Dr. Torrance is now retired, he continues to write as relentlessly now as he did during his teaching days at the University of Georgia. Of exceptional note is his work toward both assessing creative potential and talent, and his work toward nurturing creative talent. John A. Glover’s Handbook of Creativity is another excellent source regarding the research and enhancement of creativity. Glover and Bruning ( 1987 ) offer six suggestions for the enhancement of creativity in the classroom setting and environment. They are:
1) Strange, unusual and odd questions from students should not be discounted.
2) Try to find something positive in all ideas.
3) Make it a point to systematically reward creativity in your students.
4) Expect and demand creativity from your students.
5) In terms of grading, creativity ought to be an extra.
6) Model creative behaviors. ( pp 269-261 )
Glover also has a book from a behavioral perspective on the enhancement of creativity. His posture is that creativity is a behavior which should be subject to the same behavioral principles as other behaviors. Therefore, he attempts to reinforce behaviors that are or could be construed as "fluency, flexibility, and originality."

This author (Shaughnessy, 1983) has approached the realm of creativity from more of a cognitive perspective and has reviewed the literature regarding cognition and creativity. Paul Torrance (1977) has a book entitled Creativity in the Classroom which is an excellent text for teachers wishing to enhance student's creative potential in the classroom.

Torrance offers the following suggestions for teachers to follow both before, during and after a lesson:

"Before a lesson:

1) Confrontation with ambiguities and uncertainties
2) Heightened anticipation and expectation
3) Familiar made strange and strange made familiar
4) Looking at something from several different psychological, sociological, physical, emotional points of view
5) Provocative questions to establish set for examining information in new ways
6) Predictions from limited information required
7) Tasks structured only enough to give clues and direction
8) Encouragement to take next step beyond what is known.

During a lesson:

1) Continued heightening of anticipation and expectation
2) Encouragement of creative and constructive rather than cynical acceptance of limitations
3) Awareness of and concern about problem heightened
4) Exploration of missing elements and possibilities made systematic and deliberate
5) Juxtaposition of apparently unrelated elements
6) Mysteries and puzzles explored and examined
7) Ongoing predictions as new data are acquired
8) Surprises heightened and deliberately used
9) Visualization of events, places etc. encouraged

After a lesson:
1) Ambiguities and uncertainties played with
2) Constructive responses encouraged
3) Going beyond the obvious encouraged
4) Elaborating some element through drawings, dramatics, imaginative stories etc
5) Search for elegant (better) solutions
6) Experimentation and testing of ideas encouraged
7) Future projection encouraged
8) Improbabilities entertained
9) Multiple hypotheses encouraged
10) Reorganization and reconceptualization of the information that is required."

Torrance also suggests (1965):
1) Treat questions with respect.
2) Treat imaginative ideas with respect
3) Show your pupils that their ideas have value.
4) Occasionally have pupils do something "for practice" without the threat of evaluation.
5) Tie in evaluation with causes and consequences. (p. 319)

Runco and Albert (1990) have edited an excellent text on various theories of creativity, but they have not addressed the issue of how to enhance creativity in the public school system.

Theory into Practice

Sadly, little is done on an ongoing basic in the schools to enhance creativity, except perhaps in very specialized classes—eq. public speaking, theatre arts, and the like. There is even much theory and research to show that those students who were once creative have"

"lost" that creative potential that they once had. What
are the causes of this?

1) Too many true-false, multiple choice, fill in the blank matching column type tests.

2) Over-reliance on the "one single correct right answer" ideology

3) Too much t.v., MTV, video games, at home and too little creative activities outside of the school.

4) Mainstreaming- Since P.L. 94-142, teachers have been inundated with paperwork, bureaucracy, poorly prepared students and inappropriately placed students and "I.E.P.'s" that consume gargantuan collasall amounts of time and leave little time for enhancing the gifts of the creatively gifted.

5) The increase in the single parent family and the resultant problems.

6) Increasing specialization- Many teachers consider themselves to be highly subject specific teachers- they teach physical education, science, math, and music or art. They have become over-focused on their subject matter to the exclusion of the dormant talents skills and abilities of students.

7) Over reliance on "techniques". There are some good teachers who are determined to help develop the creative thinking skills of children. Sadly, they often rely on certain specific techniques such as brainstorming and do not have any other methods for enhancing creativity.

8) Teacher Overload - Many teachers are teaching, then going off to coach basketball, track, cross country or working on the school yearbook, the school newspaper or sponsor the cheerleading team. Very simply, they are overwhelmed with the amount of duties and responsibilities they now have and have very little energy left to give to creative students.

9) Underachievement on the part of the students often causes the teacher to feel that the student does not have any creative potential or gifted potential. The student may not have found an area that excites or interests him or her. Shaughnessy (1991) has written on the underachieving child and how to help him or her reach their potential- creative- cognitive or academic.

10) Minimal outside reading. Although there is no empirical data to support this contention, this author firmly believes that reading for pleasure has much to do with creative development.
Sadly, we have become a passive "couch potato society" and spend our time watching endless mindless movies and moronic situation comedies.

Woolfolk and McCune-Nicolich (1980) have offered the following suggestions:

1) Accept and encourage creative thinking
   > During class discussion, ask: "Can anyone suggest a different way of looking at this question?"
   > Reinforce attempts at unusual solutions to problems, even if the final product is not perfect.

2) Tolerate dissent
   > Ask students to support dissenting opinions
   > Make sure nonconforming students have an equal chance to be granted classroom privileges

3) Encourage students to trust their own judgments
   > When students ask questions you think they can answer, rephrase or clarify the questions and direct them back to the students.
   > Give ungraded assignments from time to time.

4) Emphasize that everyone is capable of creativity in some form.
   > Avoid describing the feats of great artists or inventors as if they were superhuman accomplishments.
   > Recognize creative efforts in each student's work

5) Be a stimulus for creative thinking
   > Use a class brainstorming session whenever possible
   > Model creative problem solving by suggesting unusual solutions for class problems. (p. 147)

Costa (1984) recommends the following twelve strategies for increasing "meta cognition". There may be some relationship between meta cognition and creativity, thus it seems appropriate to review these relevant suggestions here: 1) Planning strategy 2) Generating questions 3) Choosing conscientiously 4) Evaluating multiple criteria 5) Taking credit 6) Outlawing "I can't" 7) Paraphrasing or reflecting student's ideas 8) Labeling student's behaviors 9) Clarifying student's terminology 10) Role playing and simulations
11) Journal keeping
12) Modeling

The Classroom Environment

The climate of the school and the environment of the classroom are apparently significant factors to be considered when attempting to encourage creativity in the classroom setting. The climate for creativity may encompass:

1) Communication
2) Consensus
3) Consistency
4) Clarity
5) Coherence
6) Consideration
7) Community
8) Cohesiveness
9) Commitment
10) Concern
11) Care
12) Cooperation

Obviously, there are other variables (such as teacher morale, student morale and the characteristics of both the faculty and the student body) that can effect learning and creativity. While there is some research on school climate, there is little on the specific effects of school climate on creativity and divergent thinking per se.

Glover (1979, 1980) has written on the ways in which creativity can be enhanced. His books offer a straightforward approach to fostering creativity.

Mentoring as an Aid to Creativity Development

Again, Paul Torrance has written on the use of mentors to enhance creative potential. His books, Mentor Relationships (1984) and Mentor’s Guide and Protege’s Handbook (Goff and Torrance, 1991) have done much to renew interest in the process of mentoring. A number of articles have also revived interest in mentoring as a viable option for enhancing creativity (Shaughnessy, 1989, Cordova, Shaughnessy, & Neely, 1990). Mentoring has been seen to be critically important in the growth and development of prodigies as seen by Feldman and Goldsmith (1986).

Personality variables are becoming increasingly important in one’s awareness of the mentoring process. Shaughnessy and Neely (1993 in press) have discussed the role of personological variables in mentoring. Shaughnessy and Manz (1991) have reviewed this elements regarding certain specific creative domains.
Odom and Shaughnessy (1989) and Ham and Shaughnessy (1991) have investigated outstanding personality traits and aspects in both precocious math and science students respectively. Much mentoring obviously goes on outside of the classroom environment. It is becoming increasingly apparent that education is more than just the five day a week eight to three routine. Homework, outside assignments, field trips and other educational experiences may do much to enhance creativity. Plays, public performances, art shows, concerts, recitals, and other demonstrations of creative talent need to be utilized to help the enhancement of creativity. Opportunities need to be utilized— the local museum, a bookstore, the humane society, and even the local waste water treatment plant can give students a view of the real world and the role that creativity plays in it. Parental involvement is obviously also of critical importance.

What can the schools do and how can they change?

Schools are institutions with certain priorities set by the leaders and governing bodies. Creativity, inventiveness and divergent thinking must become important to the society. If we do not value creativity, it will not be encouraged. Sadly, schools are becoming very short term oriented— the next group testing scores— the next evaluation— the next test— There is such emphasis on "accountability" that many teachers "teach to the test" and neglect higher order thinking skills and creativity and divergent thinking. Also sad is the fact that there are many "token programs" set up to satisfy a parent group or concerned group of citizens. These "token" programs often feature uncertified teachers, independent study projects and busy work.

Summary and Conclusions: This paper has attempted to address some of the current salient issues in creativity in the educational system in America and review germaine elements regarding the nurturance of creativity. Teachers can do much to help creativity evolve but they need guidance, training and classroom management as well as behavioral management skills.

REFERENCES


