

UNIQUENESS AND CREATIVENESS:

The School's Role

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THROUGHOUT the history of education, in a diversity of ways men have asked, "Should the school assume more responsibility than it now does for the identification and cultivation of uniqueness and creativeness in and among its pupils?" Usually, the answer has been a very definite "No." Creative individuals have almost always had serious difficulty in surviving in the schools of their day.

Many rationalizations have been offered for the negative answer. Some people say, "There is no way of identifying a creative individual." Others say, "It is not possible to cultivate creativity in a person; if a child has a spark of creativity, it will come out no matter what you do." Still others argue, "We already have too many creative individuals; we need obedient, disciplined people who can follow orders and be loyal citizens." These very same people have, of course, held to the dream of an educational system that would help each person in our society develop his potentialities.

One could almost dichotomize learning theories, educational methods, and

teaching procedures into those that emphasize the receptiveness of the human mind and those that emphasize the self-acting, creative nature of the human mind. A failure to recognize that there are vast individual differences in receptive and self-acting tendencies has generally resulted in confusion when the validity of these two opposing views (as represented by learning theories, teaching methods, etc.) has been subjected to experimental tests. In actual practice, methods emphasizing the receptiveness of the human mind have generally "won out."

To many educators these methods are appealing because they do not seem to require continued creative energy to apply them. The results are fairly predictable, promising the educator greater control of the behavior of children and young people. Such methods are thus less threatening to the educator. Some advocates of these methods for all children recognize a body of knowledge that shows that different children have different ways or styles of learning. They argue that we cannot afford financially to apply

such knowledge, that it would accentuate individual differences, and that this would be dangerous.

One of the tragic consequences of this point of view is that certain types of children and young people simply do not learn when taught according to the stimulus-response psychology that emphasizes the receptivity of the mind. Forcing them to learn in ways unnatural for them and incompatible with their best abilities and preferred ways of learning robs them of much of their human dignity and a chance to achieve their potentialities.

Some observers have concluded quite erroneously that there has been a "creativity boom" in American education. I have simply been unable to see any of the evidences of such a "boom." I know of no rigorous observational study of classroom behavior that gives much evidence of attempts to identify and acknowledge creative potentialities or to facilitate creative functioning and development. In workshops and institutes on creative ways of teaching, I have found many of the essential skills absent from the behavior repertoire of teachers at all levels.

However, I have encountered thousands of teachers who are trying to develop some of these skills and are experimenting successfully with creative ways of teaching. I have encountered several hundred principals and supervisors who want to help teachers acquire the requisite skills. I am asked what the research efforts of the past ten years have contributed to help them in this task. Most briefly, I shall list what I regard as some of the most important implications of this research for educational practice.

1. "Creativity" Not Mystical

For ages, educators have been preoccupied with the personal-mystery concept of the creative process. The development of instruments to assess the mental abilities involved in creative thinking and the personal qualities required for creative achievement¹; the designing of sequences of guided learning experiences² and the production of instructional materials to facilitate creative development and functioning in the classroom^{3,4}; and experimentation with teaching methods designed to facilitate creative development and functioning⁵ have done much to take "creativity" out of the realm of the mystical. Whenever any aspect of human behavior is removed from the realm of mystery, educational practice is affected.

2. A Definition Operationalized

In my research and developmental work, I have maintained that creative

¹ E. P. Torrance. *Torrance Tests of Creative Thinking: Norms-Technical Manual (Research Edition)*. Princeton, N.J.; Personnel Press, 1966.

² E. P. Torrance and R. Gupta. *Development and Evaluation of Recorded Programmed Experiences in Creative Thinking in the Fourth Grade*. Minneapolis: Bureau of Educational Research, University of Minnesota, 1964.

³ B. F. Cunningham and E. P. Torrance. *Imagi/Craft Materials* (10 albums and teacher guides). Boston: Ginn and Co., 1965.

⁴ R. E. Myers and E. P. Torrance. *Can You Imagine?; Invitations to Thinking and Doing; Invitations to Speaking and Writing Creatively* (Pupil ideabooks and teacher guides). Boston: Ginn and Co., 1965.

⁵ E. P. Torrance. *Rewarding Creative Behavior: Experiments in Classroom Creativity*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1965.

thinking occurs when a person responds constructively to a situation that calls for non-habitual behavior, solutions for which the behavior has no learned response. I have been concerned primarily with creativity among school children, in classrooms, and among teachers. I have chosen, therefore, to define creativity as a process whereby one becomes aware of problems, difficulties, gaps in information, and disharmonies for which he has no learned solution; searches for clues in the situation and existing knowledge, formulates hypotheses, tests them, modifies and retests them; and communicates the results.

If one accepts this definition, he can then ask what mental abilities or kinds of mental functioning are brought into play in the process; what personal qualities facilitate the process; what kinds of teaching methods, classroom procedures, and instructional materials will facilitate the process. The definition can also be used to guide evaluations of the products that result from the process. The process can be replicated in classrooms at all levels of education. Since any skill must be practiced to be developed, it seems reasonable that classroom activities that replicate the process will contribute to creative development.

3. Assessment Instruments

A variety of assessment instruments attempting to operationalize the above definition have been developed. After nine years of development one achievement in this area is the publication of a research edition of alternate forms of both verbal and figural batteries of tests of creative thinking. The techni-

cal-norms manual for these batteries offers a variety of test-retest reliability, interscorer reliability, and validity information.

Progress has also been made on the development of measures of creative motivation, preferences for learning in creative ways, and procedures for helping teachers identify creative potentialities.

Whatever the limitations of these tests might be, they can help educators become aware of potentialities that might otherwise go unnoticed. These instruments may also provide models for developing measures of subject matter achievement, and sequences of learning experiences that provide experience in creative thinking.

4. Not Necessary To Leave to Chance

The work of my associates and me, Crutchfield and his associates⁶ and dozens of others has demonstrated that creative functioning and development among school children can be facilitated by deliberate methods, sequences of guided experiences. Instructional materials developed through these projects give classroom teachers some ready-made helps which, if used intelligently, contribute to creative development. This, of course, is in keeping with a general conclusion of Alfred Binet⁷ in 1909 that intelligence consists of all of the little functions of discrimination, observation, retention, imagination, and

⁶ R. S. Crutchfield. "Creative Thinking in Children: Its Teaching and Testing." In O. G. Brim, Jr., R. S. Crutchfield, and W. H. Holtzman. *Intelligence: Perspectives 1965*. New York: Harcourt, Brace & World, Inc., 1966, p. 33-64.

⁷ A. Binet. *Les Idées Modernes sur les Enfants*. Paris: E. Flammarion, 1909.

the like and that all of these functions are susceptible to development through education.

5. Continuity of Development

For many years, investigators have found that drops in creative functioning and participation in creative activities occur at about age five, the fourth grade, and seventh grade. It was generally assumed that these drops or discontinuities were inevitable and healthy aspects of development. My associates and I have been unwilling to accept this assumption.

In a series of studies, we have shown that these discontinuities do not occur under teachers who deliberately build upon skills already acquired and make use of activities that give opportunities for the practice of the creative thinking abilities and creative personality characteristics. Comparative developmental curves in several different cultures have shown that the shape of the developmental curves differs from country to country and that drops tend not to occur in cultures that have been described as continuous. We have also shown that intelligent use of well-prepared instructional materials makes the influence of the school strong enough to offset the effects of cultural discontinuities.⁸

6. Children Learn in Different Ways


To me, the most exciting insight that has come from creativity research is that different kinds of children learn best when given a chance to learn in ways best suited to their motivations and abilities. Whenever teachers change their ways of teaching in significant ways, a different group of learners be-

⁸ E. P. Torrance and R. Gupta. *op. cit.*

come the stars or high achievers. In another source, I have summarized some of the evidence for this conclusion.⁹ This conclusion has far-reaching implications for educating a larger number of people to a higher level and for achieving a higher level of human dignity and mental health in our society.

In conclusion, many critics have equated creative ways of learning with progressive education, permissiveness and lack of discipline. A careful examination of the methods and materials that have been developed and evaluated reveals that such a conclusion is grossly in error.

The most sensitive and alert kind of guidance and direction is required. Although there are moments of play, the most rigorous kinds of discipline are required. Learning in creative ways requires expensive energies and emphasizes the self-acting rather than the receptive nature of the mind. The importance of the informed mind and the acquisition of authentic information are central themes.

The creative mind wants to know, digs deeper, gets into deep water, and encounters closed doors. It makes and corrects mistakes, builds sand castles, cuts holes to see through, "sings in its own key," and "has a ball." To fail to recognize this complexity reflects a misunderstanding of the creative process and the educational practices necessary to identify, acknowledge and develop creative potentialities through education. 

⁹ E. P. Torrance. "Different Ways of Learning for Different Kinds of Children." In E. P. Torrance and R. D. Strom, editors. *Mental Health and Achievement*. New York: John Wiley & Sons, Inc., 1965. p. 253-62.

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