Creativity is a concept surrounded by a number of beliefs and misconceptions. People believe it is limited to only a few; it declines seriously with age; and it is associated primarily with uniqueness or innovation or "artists" (Adams-Price 1998; McCormick and Plugge 1997; Runco 1996). However, research shows that creative thinking is a universal ability that can help adults manage satisfying lives and that is increasingly in demand in the workplace. This Digest reviews some of this research in order to identify ways to help adults discover and fulfill their creative potential.
NATURE OR NURTURE?

What is creativity? Torrance's definition is often cited: sensitivity to problems, deficiencies, and gaps in information; making guesses, formulating hypotheses; evaluating and testing; and communicating results (McCracken 1998). Creativity is a complex of traits, skills, and capacities, including the ability to work autonomously, curiosity, unconventional thinking, openness to experience, and tolerance of ambiguity (Adams-Price 1998; Albert 1996). Highly creative adults exhibit deep knowledge of and a strong bond with their subject matter, as well as intrinsic motivation (Amabile 1996; Keegan 1996).

Creativity research has focused on personality traits of creative individuals (Amabile 1996). This emphasis has led to the assumptions that creativity is largely innate or immutable and creative people are distinct from noncreative people. Recently, more attention is being paid to social and environmental factors that influence creativity. Newer definitions describe creativity as the confluence of cognitive processes, knowledge, thinking style, personality, motivation, and environment over the life span (Adams-Price 1998; Sasser-Coen 1993). It is also associated with the creation of meaning and the drive for psychic wholeness ("Creativity in Later Life" 1991), a way to address and resolve dissatisfactions and improve the quality of life (Adams-Price 1998), and a "profound response to the limits and uncertainties of existence" ("Creativity in Later Life" 1991, p. 9). For some people, creativity is an adaptive, innovative response to environmental sources of distress such as early death of a parent or other family problems, misfortunes, or conflicts (Adams-Price 1998; Albert 1996), whereas in other people the coping mechanisms might be substance abuse, depression, or withdrawal (McCormick and Plugge 1997).

A growing body of research is examining how environmental factors affect the creativity of men and women in different ways. For many women, creative expression is limited by their education and training, cultural standards, lack of social support, and traditional gender expectations. Pohlman (1996) finds that, for men, creative identity is balanced by the experience of parenthood; for women, the two roles conflict. As parents, men preserve a creative space or "room of their own"; women cede this space to family demands. Women inventors (McCracken 1998) cite gender discrimination as a hindrance to creative activity. Women artists describe difficult family-related choices they had to make that diverted them from their art, although such obstacles as lack of support, money, or child care contributed to the creative process and their identity as artists (Kirschenbaum and Reis 1997).

Although the artist suffering in solitude is a common image, creative activity is correlated with psychological and physical well-being, arising from detached reflection on difficult experiences and transformation of them ("Creativity in Later Life" 1991). Social environment, role models, and cultural values, attitudes, and practices also inhibit or nurture creative impulses (Powell 1994). In school and work environments, creativity "killers" include working under surveillance; restricting choices; working for inappropriate
extrinsic rewards; fearing failure, judgment, or appearing foolish; having to find the "right answer"; being evaluated; working under time pressure; and competing (Amabile 1996; Grupas 1990).

CREATIVITY, ADULT DEVELOPMENT, AND AGING

Environmental influences may explain in part why childhood creativity seems to be a poor predictor of adult creativity (Albert 1996). Although most young children are very creative, it is estimated that creativity diminishes by 40% between the ages of 5 and 7 (Grupas 1990; McCormick and Plugge 1997). At these ages, formal schooling begins, and there is some agreement that education inhibits the transformation of early talent into adult creativity (Albert 1996; Amabile 1996). It may be that schooling and/or stage of cognitive development at that age emphasizes logical rather than divergent thinking, or that schools (and families) value conventional behavior, well-defined problems, and good grades (Albert 1996).

Albert maintains that "the creativity found among some adolescents and adults shows a minimal degree of continuity from childhood" and that creativity that "does not go past puberty is basically different from that of those children who are creative in adolescence and adulthood" (ibid., p. 45). Keegan (1996) disagrees, finding an essential continuity between creative child and creative adult. He considers the differences a matter of degree, not kind, asserting that creative adults exhibit an accumulation of knowledge, sense of purpose, and love of their work, traits that can be approximated by children and adolescents. It is the acquisition of expert knowledge that brings adults to higher levels of creative thinking.

Research on adult creativity typically depicts a bell curve, with a peak in the 30s and 40s and a noticeable drop afterward, leading to stereotypes of decline and deterioration in later life. However, Simonton (Adams-Price 1998; "Creativity in Later Life" 1991) puts several qualifiers on this notion of decline:

--The curve is merely a statistical average with numerous exceptions.

--The trajectory varies greatly across disciplines.

--Quantity of creative output may decline, but not quality.
--Substantial individual differences in creative potential outweigh age differences.

--"Late bloomers" attain creative peaks at later ages.

--A secondary peak or resurgence often occurs after the late 60s.

Bronte’s (1997) Long Career Study supports these assertions. Among the 150 adults studied, over half started their most creative period around age 50, some after retirement. Bronte suggests that recent increases in life expectancy and the slowing of physical aging are changing observed developmental patterns. She also notes that "youth is the most creative period of life only in a short lifetime" (p. 11). Both Bronte and Kastenbaum ("Creativity in Later Life" 1991) suggest that healthy adults may not experience creative declines, but for others cognitive, sensory, or physical impairments may hinder creative expression. However, musicians aged 65-94 (Kahn 1998) largely described themselves as healthy or well despite arthritis, hearing loss, and other impairments. Kahn concludes that regular participation in creative activity contributes to self-perceptions of well-being. Lindauer (in Adams-Price 1998) concurs: the substantial number of artists who remained creative into old age suggests that involvement in creative activity has a positive, therapeutic effect.

Older adults do seem to experience a decrease in divergent thinking, the ability to generate a quantity of novel ideas. However, taking a life-span developmental approach, Sasser-Coen (1993) considers this not a decline but a qualitative change in the creative process, because with age comes an increase in crystallized intelligence and integrative or convergent thinking. Later life may afford more time for reflection and creative pursuits aimed at the construction of one's life story, the filling-in of those gaps and discontinuities referred to earlier. Adams-Price (1998) concludes that the association of creativity with novelty and innovation is appropriate for the characteristics of youthful thinking, but late-life creativity reflects aspects of late-life thinking: synthesis, reflection, and wisdom.

**ENHANCING ADULTS' CREATIVE POTENTIAL**

In summary, creativity is a confluence of personality traits, ways of thinking and knowing, and social and environmental influences. It is a universal ability that does not decline with age but changes qualitatively with cognitive development and the accumulation of life experience and expert knowledge. Formal schooling may hinder rather than foster creative thinking. In fact, some research implies that creativity training
does not directly improve creativity, although it may enhance academic achievement (Albert 1996) or develop skills relevant to creative performance (Amabile 1996). What can educators do to help people develop their creative potential, to lead more enriched and rewarding lives, and to make productive and meaningful contributions in the workplace, community, and civil society? There is consensus that the environment in work and educational institutions is a great influence. The organizational climate should encourage assertion of ideas, not rely on order and tradition, and not make people afraid to fail. Other environmental factors include the following (Amabile 1996; Edelson in press; Powell 1994): providing time and resources; developing expertise; giving positive, constructive feedback that is work or task focused; encouraging a spirit of play and experimentation; providing a mix of styles and backgrounds with opportunities for group interaction; making a safe place for risk taking; allowing free choice in task engagement; offering rewards that recognize achievement or enable additional performance but maintain intrinsic motivation rather than controlling behavior. Surveillance and evaluation are detrimental, as are stress and pressure unrelated to the project (Amabile 1996).

Amabile suggests the use of creativity heuristics that guide problem solving and invention: rearranging/juxtaposing elements of a problem; brainstorming—less concern with the validity of an idea than with its value in generating further ideas; making the familiar strange and the strange familiar; and generating hypotheses by using analogies, accounting for exceptions, and investigating paradoxes.

Edelson (1996) describes an innovative method for teaching creativity and leadership to adults in a corporate setting who wished to overcome fear of failure and the inhibiting influences of stress within their industry. Using a technique called "lizard therapy," each participant cut out and colored a lizard they then placed on a picture of a stone wall in areas of their choosing. The participants created a colony and then talked about life as a reptile and why each lizard inhabited a specific location on the wall. The exercise highlighted the importance of modifying the corporate culture through collective individual behavior so that the environment could become more hospitable to creative behavior. It demonstrated that having fun at work and acting creatively were compatible with being professional and productive.

Personal, social, and environmental barriers to creativity might be overcome if the popular conception of it as mysterious inspiration or genius yields to Powell's (1994) cross-cultural definition: finding and shaping one's life perception and telling one's experiences through creative expression.

REFERENCES

Albert, R. S. "Some Reasons Why Childhood Creativity Often Fails to Make It Past


Edelson, P. J. "Creativity, the Individual and Society." Paper presented at the Department of Philosophy and Education, Aristotle University, Thessaloniki, Greece, March 21, 1996. (ED 392 948)


Pohlman, L. "Creativity, Gender and the Family." JOURNAL OF CREATIVE BEHAVIOR


This project has been funded at least in part with Federal funds from the U.S. Department of Education under Contract No. ED-99-CO-0013. The content of this publication does not necessarily reflect the views or policies of the U.S. Department of Education nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government. Digests may be freely reproduced and are available at <http://ericacve.org/fulltext.asp>.

__Title:__ Creativity in Adulthood. ERIC Digest No. 204.
__Document Type:__ Information Analyses---ERIC Information Analysis Products (IAPs) (071); Information Analyses---ERIC Digests (Selected) in Full Text (073);
__Available From:__ Web site: http://ericacve.org/digests.asp
__Descriptors:__ Adult Development, Adult Education, Adult Educators, Adult Learning, Aging (Individuals), Creativity, Creativity Research, Lifelong Learning, Teaching Methods
__Identifiers:__ ERIC Digests

###

---

[Return to ERIC Digest Search Page]