Center for Gifted Education
College of William and Mary

Creativity as an Elusive Factor in Giftedness

Joyce VanTassel-Baska , Ed.D.
College of William and Mary

Creativity is an elusive factor in its relationship to giftedness. Many writers have alluded to the necessary but insufficient component of high intelligence to activate creativity and the reality that many high IQ people are not creative. So what is creativity and how do we foster it in children and young adults? Views of creativity have evolved through several decades of research and application of creative thinking strategies. Psychological views of creativity have centered on the Freudian which espouses that creativity emerges from suppressed desires, to the Maslovian which equates creativity with the state of self-actualization, to the Rogerian which views creativity as the capacity to relate to others in nonjudgmental ways. Other views of creativity, most notably Ariete's (1976), see it as a social construction operating in open and permissive societies. Specific research in creativity has tended to focus on trait theories that define the creative personality as the basis for creative action. Characteristics like independence, risk-taking behavior, freedom from social conventions all make up the traits of such a personality. Other research has examined the processes through which individuals function creatively. These processes include the Torrance components of fluency, flexibility, elaboration, and originality as well as various iterations of creative problem-solving models that purport to move students through various skills in order to develop a creative product.

More recent research has focused on creativity as best judged by products of individuals and groups that are both original and relevant to one's culture at a given point in time. Even when products may not be accepted at a given point in time, their originality may emerge and be appreciated by new generations of consumers.

Carlyle once said that history is the essence of innumerable biographies. As a culture, as a human society, we define ourselves by the contributions of those who create. Examples of this approach abound--we have named Einstein as the man of the millenium with Edison, Roosevelt, and Ghandi as runners-up. Such behavior is interesting in that it reveals our sustaining belief in the contribution of the individual, not the the institutions nor the families that allowed the individual to develop and perform in their arena of expertise. Moreover, we typically award acclaim after a period of time has passed, since we cannot really understand creative contributions in the moment and especially their import and implications.

The educational philosopher Smith (1990) has observed that thought proceeds in privacy and that it is only through human artifacts that we can come to know what thought does. This point is apt when thinking about how we have come to study creativity as an analysis of its products. We know that someone has been creative when their product is judged of high quality and original within a given domain. Simonton (1999) suggests that the products must be prolific if an individual's work is to be judged creative over time. Csikszenmihalyi (1996) further suggests that the creative product has to be valued by the culture and field that produces it,

Creativity as an Elusive Factor in Giftedness

Joyce VanTassel-Baska , Ed.D.
College of William and Mary

implying that creative individuals must also be good marketers of their work or find other agents who will do it for them.

Traditionally, creativity has been viewed as an easy process, something that people with certain traits were able to do while others without those traits could not. As our views of creativity have become more informed, we have come to appreciate the role of hard work and revision in the process. Osche's work (1993) is instructive in this regard. After reviewing all of the literature on creativity, she decided the single criterion that mattered the most was the willingness of creative people to work hard and put in the extra time necessary to turn out a quality product in a given domain. Ericsson's (1996) work on chess players and athletes further supports this contention. His stance, based on a number of studies, is that practice, not innate talent, is what separates creative producers from merely competent technicians. And Simonton's (1999) contention that quantity alone predicts quality adds to the understanding of the process as anything but magical.

In the area of education, we are frequently stymied by the need to make judgments about student evidence of creativity and many times feel the need not to judge but rather to accept any product as an example of creative response. This dilemma raises the issue of thinking about creativity at several levels and rendering judgments accordingly, the issue of big C versus little c.

Research on good teaching suggests that feedback is crucial to student improvement, yet at least one researcher on creativity argues against evaluative judgment. Collins and Amabile (1999) have noted the problems with providing both positive and negative feedback to potential creators on their products as it may interfere with their internal capacity to move the product and other manifestations of their work forward to a new level. Perhaps educators might take the middle ground by providing feedback on the processes that underlie the work while still not judging the overall product. For example, to assess a student's research project, one might comment on the process for selecting the problem, the use of search tools to review the literature, and the instrumentation selected to study the problem. Such feedback should serve to assist the student in deepening an awareness of the research process itself, while still acknowledging the integrity of what the student has done.

So creativity is elusive precisely because like intelligence it has many different manifestations, conceptions, and interpretations. For example, some people see only individuals who shift paradigms within fields and disciplines as creative while others see everyone as creative. We appear to be successful only in judging it by products that frequently reach us retrospectively. Finally, predicting who will be creative in adulthood from childhood traits and even behaviors has proved difficult, even in our studies of prodigies which provide the best snapshot into the issue at early ages.

Creativity as an Elusive Factor in Giftedness

Joyce VanTassel-Baska , Ed.D.
College of William and Mary

The trait view

While the trait view of creativity is less accepted as a way to judge who is creative than the product orientation just discussed, it still has salience in studying the lives of individuals retrospectively. Studies of eminence, for example, support the presence of the following characteristics in the personality of people who have made major contributions to their society. These individuals typically possess:

- An array of interests. These individuals have a broad information base established through personal interest that then allows them to make connections across areas of knowledge to a greater extent than their peers.
- Open to novel, complex, and ambiguous stimuli. Creative individuals remain child-like in their perceptions of the world, genuinely curious, and willing to explore new and different avenues of investigation.
- Capable of defocused attention. This characteristic relates to the ability of creative individuals to scan the environment for data or stimuli that might fit with their work. This ability may be analogous to the synectics process in creative thinking where students are encouraged to describe relationships between two seemingly disparate objects like a doorknob and a plate.
- Flexible in respect to cognition and behavior. Creative individuals remain playful with ideas and their manifestations rather than rigidly locking in on a line of thought.
- Introverted. These individuals enjoy solitary pursuits, working alone many times because their energy comes from inside, not from other people.
- Independent, autonomous, unconventional, and iconoclastic. This quality speaks to their lack of being easily swayed by majority opinion or outside views and allows them to take unpopular stances on issues or unconventional views.

Creativity-relevant Skills

While the role of traits in creative individuals may be only partially explanatory for their successful products, skills can be taught to aid individuals in their quest to be more creative in a given area (VanTassel-Baska, 1998). Some of these are stages in the creative process, while others truly do constitute specific areas of worthwhile application on a regular basis.

The early work of Wallas (1926) was instructive about the stages of the creative process. He noted that preparation was a critical first stage. This corresponds to research on the talent development process in any field which suggests learning as much as possible about a field, including the tools, processes, and attitudes associated with it. The second stage is referred to as the incubation stage where the individual is engaged in solid work on a problem but needs unconscious help in moving to solution. This stage frequently involves getting away from a

Creativity as an Elusive Factor in Giftedness

Joyce VanTassel-Baska , Ed.D.
College of William and Mary

problem and having it continue to sit at the periphery of consciousness. The third stage of the process is illumination where the individual creator suddenly realizes the right solution or the elegant way to resolve a dilemma, sometimes referred to as the eureka syndrome. Finally, there is a need for the verification stage. Is the answer really plausible? Does it hold up to the cold light of reasoned judgment? This final stage must also be negotiated by the creative person, and appropriate adjustments and refinements made. These stages have been studied the most in the lives of creative scientists, and it is easy to see the analogue to the classic process that is employed in such work. However, the process in general appears to be highly applicable to other areas of endeavor as well.

Other ways of casting the skills involved in creativity revolve around those that comprise the creative problem-solving model. Articulated first by Osborne in 1963, it is a model that involves the constant interplay of creative open-ended thinking with convergent, or narrowed to one-answer, thinking. Typically the model employs several stages and usually includes an initial problem-finding stage that seeks to brainstorm all the different things a problem might be, then to provide illustrations and examples of each option, and finally to come out with a strong problem definition statement. This stage is followed by a period of fact-finding in which the problem is explored through relevant search tactics to uncover more information about how it has been studied, what current findings are, and where the gaps appear to be in crafting a proposed new solution. The third stage of the process typically involves solution-finding. Again the creative strategy of brainstorming is helpful as there is a need to generate many ideas about potential solutions. Such an approach is quickly followed, however, by now trying to create a comprehensive synthesis of the best ideas posed. The last stage in this process involves the creation of an action plan or some other document that serves as a blueprint for making the problem resolution a part of the real world, of moving the ideas into the cultural mainstream.

The knowledge of these skills and the ability to evoke them with a degree of automaticity appears to be helpful to spawning creativity in several fields. Yet the caution remains that, as some studies suggest, these skills must be modified to fit specific problems within specific domains, and therefore must only be seen as a broad heuristic within which creative people might adapt their own idiosyncratic versions of the process.

Environmental influences

The creativity literature has explored the home environments of eminent people as well as prodigies in an attempt to understand the role that early environments and parenting play in the process. In general there appear to be strong advantages accruing from exposure to enriched home environments where intellectual pursuits are valued and early talent development may take place. Yet for high creatives, the home environments appear to be more emotionally detached (Albert, 1980).

Creativity as an Elusive Factor in Giftedness

Joyce VanTassel-Baska , Ed.D.
College of William and Mary

A second environmental factor that appears to undergird creativity is the presence of some kind of adversity in the individual's background. In the lives of many eminent individuals, that adversity is represented by early parental loss, death of siblings in childhood, disabling physical conditions, and early deprivation. It appears that such circumstances, while causing permanent distress to many, for creative people become the fuel for creative work in that the trauma is worked out in a creative expressive way.

The role of education in the lives of creative people is an interesting area of environmental support. It appears that just the right amount of education is facilitative but that too much may prove to be detrimental. This seeming contradiction to knowing a lot about your field stems from a concern for too much conventional learning in an area where the ideas of others become so crystallized as to block innovative thinking in the domain. Simonton's (1999) work, for example, suggests a curvilinear relationship between education and creativity. There is also evidence that much of the learning of high creatives is obtained independently of traditional schooling. Autodidacticism may be the norm among this group where the impetus, nature, and extent of learning is self-governed.

Another environmental influence worthy of citing is that of marginality. It is not coincidental that many of America's best writers, poets, actors, and scientists come from the margins of the society, places where the perspectives may be unconventional to begin with and where the vision may be more creatively shaped. Women and minorities are two marginal groups whose contributions in the last 25 years to many fields have been astounding. If we carefully assess the contributions of immigrants to this country, we see another marginalized group that has produced at very high levels. While being an outsider may be psychologically difficult, it can provide the material necessary to advance the thinking in a field and to keep traditions at bay.

Definition

Based on our understanding of the traits, processes, and environmental conditions that support creativity, what is a reasonable definition of the phenomenon? I would suggest that it is the capacity to develop original, high-quality products in a domain that are judged so by the relevant peer group in that field at a given point in time. Yet creativity, with a big C, requires the test of time to assess the overall contribution of any given product.

The Development of Creativity

Given our understanding of the phenomenon, what can parents and schools do to promote creative capacities in students? There are six goals which we may focus on to promote such behaviors. They include the following:

1. To develop intellectual risk-taking through expression and valuing of differences and through selecting activities of interest from a list of alternative ideas and perspectives;

Creativity as an Elusive Factor in Giftedness

Joyce VanTassel-Baska , Ed.D.
College of William and Mary

2. To develop high level convergent and divergent skills through employing educational models like CPS and problem-based learning that require and promote such skills;
3. To develop deep knowledge in a domain by exposing students to major areas of thought and encouraging deep learning in those for which there is both interest and aptitude;
4. To develop strong communication skills in written and oral contexts by requiring student work in both modalities and providing feedback on the effectiveness of the work for communication to an audience;
5. To develop personal motivation and passion by broad exposure to the culture and following up and supporting expressions of strong interest linked to values and occupational predispositions in and out of school contexts;
6. To nurture creative habits of mind by broad-based reading, perspective-taking, and the introduction of novelty.

In the educational realm there are a number of models available to help develop these skills and dispositions. They would include the CPS model already cited along with newer approaches, such as the use of concept mapping, problem-based learning, reasoning and thinking models, research models, and guidelines for meaningful project work. The goals suggested should be systematically applied to each area of learning in the schools to maximize student engagement and learning as well as be applied to current world issues, problems, and ideas encountered in real life and best modulated through the home environment.

Conclusion

The idea of creativity is more exotic than its reality which requires a harmonious confluence of variables in order to support its development. Yet it represents an important ideal for both how to work effectively and how to live well. In work, it is useful, to paraphrase Henry Moore, the sculptor, to have something you bring every insight to every day and know that you can't quite get it right, even as you devote your life to the enterprise. In life, it is useful, as Steven Covey suggests, to find those activities that help us center ourselves, that help us learn, and that help us develop our humanity and its potential. Understanding creativity, it would appear, can assist with both of these tasks if we approach it with an attitude of commitment, curiosity, and caring.

Bibliography

Albert, R. (1980). Family positions and attachment of eminence: A study of special family positions and special family experiences. *Gifted Child Quarterly, 24* (2), 87-95.
Arieti, (1976). *Creativity: The magic synthesis*. New York: Basic Books
Collins, M. A. & Amabile, T. (1999). Motivation and creativity. In R. J. Sternberg (Ed.) *Handbook of Creativity* (p. 297-312). New York: Cambridge University Press.

Creativity as an Elusive Factor in Giftedness

Joyce VanTassel-Baska , Ed.D.
College of William and Mary

Csikszenmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention.*
New York: Harper Collins.

Ericsson, K. A. & Lehman, A. C. (1996). Expert and exceptional performance: Evidence of
maximal adaptation to task constraints. *Annual Review of Psychology,47*, p373-305.

Osborne, A. (1963). *Applied Imagination.* New York: Scribners.

Osche, R. (1990). *Before the gates of excellence: The determinants of creative genius*.
Cambridge, MA: Cambridge University Press.

Simonton (1999). *Origins of genius*. New York: Cambridge Press.

Smith, F. (1990). *To Think.* New York: Teachers College Press.

VanTassel-Baska, J. (Ed.).(1998). *Excellence in educating gifted and talented learners* (3rd ed.).
Denver, CO: Love.

Wallas, G. (1926). *The art of thought*. New York: Harcourt Brace-Jovanovich.