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Why It's Essential That We Identify and Support Creativity in Gifted Children

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Modern definitions of intelligence and giftedness all include creativity. Yet, in our education system, we virtually ignore creativity in all ways—in teaching practices, assessments, and in qualifying for gifted programs. This is a disservice to all children but most especially to children whose thinking processes can only be accurately understood through this lens.

Many gifted students seem to “get along” just fine in a fast-paced, highly academic environment that incorporates neither creative learning nor learning about creativity. However, this does not necessarily mean that the deepest level of thinking is taking place. Nor is it healthy in the long run, especially in light of rising stress, anxiety, and mental health issues among young people. This article will show that creativity is an essential dimension of every student’s intelligence; that it has a positive effect on well-being; and why and how to incorporate it into the everyday learning of gifted students.

Definitions of Intelligence and Giftedness Include Creativity

Expanding Theories of Intelligence

Intelligence theory has continued to evolve since Binet invented the IQ test in the early 1900s. In earlier times the primary conception of intelligence was limited to a composite score from an IQ test, whereas now psychologists and educators emphasize a more expansive view. Guilford developed the Structure of Intellect Model (1956; 1977), Gardner proposed Multiple Intelligence Theory (1983), and Sternberg put forth his Triarchic Theory of Human Intelligence (1985). All of these include dimensions of creativity. Torrance and Safter maintained that “. . . the intuitive, creative thinking processes represent mankind’s highest thinking ability” (Torrance and Safter, 1990, p. 7). Most recently, Bloom’s taxonomy was revised to reflect this assertion (Krathwohl, 2002).

Such evolving ideas on intelligence have moved us toward an expanding concept of “giftedness,” and this concept necessarily includes creativity in the official definitions of the word (see 1978 U.S. Office of Education definition of “gifts and talents” in Marland, 1972 and Renzulli’s Three-Ring Definition in Renzulli and Reis, 2003).

Three Essential Points in Creativity Science

As intelligence theories were evolving, researchers and practitioners in the field of creativity have empirically demonstrated two essential points:

1. Every human being is to some degree creative (Guilford, 1950; Richards, 2010; Richards, Kinney, Benet, & Merzel, 1988), and
2. Creativity can be developed and improved (Parnes, 1987; Scott, Leritz, & Mumford, 2004).

If we combine these two points with Torrance and Safter’s statement of creativity as the highest thinking ability, as confirmed by Bloom and others, we can see that all humans are capable of this highest form of intelligence, and that this inherent intelligence can be nurtured and strengthened.

Though everyone is creative, it is important to note that people manifest this creativity in different degrees. Guilford (1950) said, “Whatever the nature of creative talent may be, those persons who are recognized as creative merely have more of what all of us have” (p. 446). In other words, while everyone is inherently creative, some individuals practice and express creativity with more intensity than others.

Creativity is Essential to Well-being and Genuine Growth

Because of the way the culture of testing is set up, with the virtual exclusion of creativity assessments, and because of the inherent bias in education against creative characteristics (Beghetto, 2010), highly creative children are at a severe disadvantage in school.

For highly creative or creatively gifted students, exercising, applying, and understanding their intensity of creative thinking is essential to their health, happiness, self-concept, and growth. But again, each of us is creative to some degree, so creativity is essential to all of us for the same reasons (Richards, 2010). In fact, research and experience have shown that creativity is highly correlated with self-actualization, which is Maslow’s term for fulfilling one’s potential (Davis, 2004). Davis states, “Living creatively is developing your talents, learning to use your abilities, and striving to become what you are capable of becoming. Being creative is exploring new ideas, new places, and new activities. Being creative is developing sensitivity to problems of others and problems of humankind” (p. 6). One study showed that high school students who were both creative and intelligent had the highest levels of self-actualization (Damm, 1970; Davis, 2004).

Despite the Evidence, Educational Assessment Tends to Ignore Creativity

Unfortunately, even as intelligence theory has advanced to include creativity, by and large psychologists and educators still identify people's intelligence by way of IQ testing or academic achievement, which is in a similar vein. Even though psychology has acknowledged for decades that creativity is the highest form of intelligence, our education and psychological testing system continues to use primarily IQ-type testing. In an early and seminal study, Wallach and Kogan (1965) made the emphatic conclusion that if we are going to measure IQ, it is essential that creativity be measured as well because children need to be understood and supported through the lens of both domains. Torrance and Sisk pointed out that experts have been developing assessments to measure creativity since 1898, yet these are rarely used (Torrance & Sisk, 1997). Though there is debate among academics as to how to truly assess creativity, some would argue that the tests that we do have, such as the Torrance Tests of Creativity Thinking (Torrance, 1974) which has solid longitudinal records of use (Runco, Millar, Acar, & Cramond, 2010), are better than ignoring creativity altogether.

Defining Creativity

What is Creativity, Exactly?

Since creativity is an expansive, multifaceted concept, it is essential to define the term in the way that we are referring to it. This author has found much practical value is using the lens of a "process definition" of creativity in tandem with an awareness and understanding of the creative characteristics of the person.

Creativity as a problem solving process. Torrance's process definition states that creativity is: "The process of sensing difficulties, problems, gaps in information, missing elements, something askew: making guesses and formulating hypotheses about these deficiencies; evaluating and testing these guesses and hypotheses; possibly revising and retesting them and finally communicating the results" (Torrance, 1988, p. 47). In other words, creativity in essence is a problem solving process that makes use of the mental functions Torrance described.

Creativity as the characteristics of a person. Davis (2004) has done comprehensive work in the area of creative characteristics, which we like to call creative strengths. He undertook a literature review to collect all descriptors that had been used to denote creative personality traits. Finding over 200 adjectives, he distilled these into 16 categories (see accompanying chart) to "summarize the main, recurrent traits of creative people found in the literature" (Davis, 2004, p. 84). Though these characteristics are presented as true of "creative people," since we know that everybody is creative, we all have them to some degree. Each person has a constellation of creative strengths and intellectual strengths (Haydon & Harvey, 2015). Some children are naturally inclined to exercise these creative strengths in a manner that is intense, all-encompassing, and that can't be "turned off." Some are less inclined toward creative thinking and prefer a straight academic approach to learning. Regardless, we believe that all learners—including intense, gifted learners—should have access to strategies and activities that help develop their creative thinking capacities, which supports their overall learning, engagement, growth, and self-knowledge.

Davis Categories of Recurrent Personality Traits of Creative People

1. Aware of creativeness
2. Original
3. Independent
4. Risk-taking
5. High Energy
6. Curious
7. Sense of humor
8. Capacity for fantasy
9. Attracted to complexity, ambiguity
10. Artistic
11. Open minded
12. Thorough
13. Needs alone time
14. Perceptive

15. Emotional

16. Ethical

Source: Davis, G. A. (2004). *Creativity is forever*. Dubuque, IA: Kendall/Hunt Publishing, p. 84.

How to Support Creativity in Gifted Students

To truly support creativity in the most effective manner, we can take a three-pronged approach. In practice, and in this frenetic world with little time for anything but preparing for tests, even just a little goes a long way.

Step 1: Awareness

Guilford (1977) wrote, “Knowing the nature of your abilities, you will be able to turn them on when you need them and you will learn how to exercise them in order to strengthen them” (p. 12). Guilford’s statement describes *creative self-efficacy* (Beghetto, 2010), or knowledge of one’s creative capabilities. This is important for all students—in fact, all people. It is essential for gifted students to understand the nature of their creative thinking because of the intensity with which life hits them, and because that intensity often manifests as sensitivity that intensifies the creative strengths. This intensity is often misunderstood as a deficit, and can be quickly diagnosed as psychometric problems by professionals who do not have a robust understanding of giftedness (Webb et al., 2005). When students understand their creative characteristics, they can work to apply them as strengths and advocate for learning approaches that support their deepest learning.

This author co-wrote a book entitled *Creativity for Everybody* (Haydon & Harvey, 2015) to provide an enjoyable, beginner resource on the science of creativity. In a fun and visual manner, the book highlights important points related to the framework of creativity, points that can be life-changing for readers. While it is not written for children, upper-level elementary students and older have provided positive feedback. This is also an excellent resource for a parent or teacher to read, to then be able to support and communicate a clear understanding of creativity and creative strengths to students.

Step 2: Application

The second step in supporting students’ creativity is pointing out how they already apply their creative strengths in real life. For example, take Nathan’s story:

Nathan is a highly creative student who also tested high on IQ tests, but in elementary school was not considered a high-achieving student. Though he was an avid reader, he had a hard time with writing and therefore was constantly pressured to improve his writing at the expense of all else. Nathan’s true strengths were in problem solving, especially in coming up with new and novel ideas as related to math and science. However, he was under the impression that he was not particularly adept at these subjects because he didn’t always arrive at the “right” answer. Though his thinking was always correct, it was unique and sometimes too advanced for the teacher. Until his creativity as applied to math and science were pointed out by a teacher specializing in creative learning, he was unaware of these strengths and, indeed, felt inadequate in the mainstream school setting. After he became aware of his strengths, his self-concept and ability to adapt to school improved. Ultimately, Nathan was accepted into one of the most selective boarding high schools in the United States.

And then there’s Jacob:

What about average-IQ, highly creative Jacob? He had tested at a young age fairly average on intelligence tests. But he had a high degree of creativity brewing inside, manifested in extreme empathy and the ability to sense gaps and spot problems that frustrated others. This creativity had no channel or pathway for expression; its inability to be expressed was bottled up inside, making him appear to be distracted and hyperactive. Consistently in school he was placed in special education programs, and was under the impression that he was inherently quite a poor learner. This combination of high creativity unidentified and unexpressed is lethal to a student, and it was with great gratitude that as a sophomore in high school Jacob learned about his creative strengths. He eagerly and quite naturally understood creative problem solving, and almost immediately gained confidence to express his fertile imagination by writing a screenplay and recording some of his useful inventions to solve real-world problems. Knowing his creative strengths, Jacob has been able to apply these for greater success in traditional school subjects in high school. His parents have moved beyond a feeling of despair to one of hope and delight in his life prospects.

Step 3: Opportunity

The final step in supporting gifted students' creativity, which really is a life-long journey, is to find plenty of opportunities for them to exercise creative strengths, at home and outside of school as well as in school, integrated with content. In an ideal world, all teachers would teach in accord with models such as the Torrance Incubation Model of Teaching (Torrance, 1979; Torrance & Safter, 1990). This model integrates the development of creative thinking skills with the teaching of academic content. It is a way to teach creativity skills while teaching creatively. It is a simple model to follow, and can be implemented at many experience levels. The Torrance Incubation Model provides scaffolding for a teacher to beautifully marry content and higher-level, creative thinking, which naturally deepens learning and increases student engagement. (For more on this topic, please see the first issue of the *Torrance Journal for Applied Creativity*, scheduled for publication in December 2015).

The story below illustrates how the integration of content and creativity set high-achieving Beth up for lifelong self-expression, growth, and self-knowledge, even in periods of low-creativity school work.

Beth is a high-IQ, highly creative child. She mastered her academic work in grade school, but always felt frustrated and bored with the material. The challenge work her teachers gave her was always more of the same convergent-type thinking, and definitely didn't exercise her percolating creativity. The only opportunities she had to apply her creativity seemed to get her in trouble, such as whispering jokes and puns in class, and passing notes.

In fourth grade, Beth attended an enrichment program that introduced her to creative writing, which ignited a life-long pathway for self-expression and application of her insights. She thrived in this setting that approached traditional subjects like math and science in a creative, hands-on manner. Her number one strength was her creativity, and in these classes she was able to dig deep and achieve truly meaningful learning where she felt like she was applying her whole mind. This experience saved her from total disgruntlement with learning, as she could look back on it and keep up her writing on the side as the years went on. However, as she moved on through school, she often longed for those learning experiences that were uplifting and allowed her to think deeply as she applied her original thinking.

Beth had some experiences in English courses where her own insights and creative thinking were required, and in these she thrived. She made straight A's and A+'s and attended an elite university, but almost always felt that something was missing and certainly felt inadequate to those of her classmates that seemed to effortlessly learn math and take multiple choice tests without reading too far into them. Upon graduating from college, it took her years to realize that creativity had been her strength all along. When she realized this, she was able to reflect on her experiences, understand her frustrations, and provide plenty of ways to nurture and apply her creative thinking as an adult.

Creative Learning Knows no Bounds

Though we have discussed various types of gifted students in this article, creative learning can be applied with equally positive results to children of all types of intelligence, degrees of creativity, socio-economic status, and levels of speaking the dominant language. In many ways, creativity—and creative learning—is the great equalizer in education. Since everyone has a unique constellation of creative strengths, when presented with the opportunity to express them, all students have the ability to apply them. When structured authentically, there is no ceiling on a creative thinking and learning. There are many dimensions to creative thinking, and each individual can contribute what he or she has to contribute, versus, for example, a multiple choice problem where there is one right answer and your "intelligence" is reflected by your ability to arrive at a certain answer or memorize facts. This is why Torrance (1995) was able to early on apply his models for teaching creativity and teaching creatively to many misunderstood groups of students, including deviant boys sent away to boarding school and underrepresented minorities. Torrance and Sisk (2001) wrote, "[The Incubation Model of teaching] is ideally suited not only for gifted and talented children but for all of the other children in the regular classroom. All children are curious and want to know" (p. 90). Smutny, Haydon, Boloños, and Estrada Danley (2012) applied Torrance's work on creativity to educate teachers on how to discover and support the creativity of Spanish-speaking students, even in the face of language barriers.

Conclusion

With the focus on grit (Duckworth et al., 2007) in the education narrative these days, many have adopted a mistaken understanding of what challenging learning experiences really are. Deep, meaningful learning does not have to be a stressful and frustrating

experience. In fact, learning that incorporates creative thinking skills is often the most rejuvenating for a person, because it comes hand in hand with self-knowledge and “fit” between one’s learning and one’s capabilities. Motivation increases when a student is asked to be truly original and inventive, even in the context of traditional subject matter such as math, science, or history. Students tend to work harder and longer, thus demonstrating the “grit” that can be joyful and absent the teeth-clenching discomfort that the word tends to evoke. Undoubtedly, creative work is hard, but it is hard in a different way than other work that is neither meaningful to the student, nor creative. When students have the opportunity to engage in learning that is truly meaningful, they have the opportunity to discover their motivations and interests, and therefore are fueled to pursue interests or goals long-term.

On the other hand, if creative learning is absent a student’s experience, she doesn’t fully develop her depth and range of intelligence. Even if a student has a high IQ, this doesn’t mean that he is at home in academic work. As that work involves more and more of the same type of thinking, without the opportunity to explore, invent, imagine, come up with new theories, and apply learning in personally meaningful ways, the value of learning and school decreases. The child may begin to question his or her identity, his or her intelligence, or search for satisfaction in unhealthy places. Highly creative students are even more at risk. If intense creative strengths are not understood and developed productively, they can become overwhelming and confusing to the student, manifest in unproductive ways, and be mistaken for psychological or cognitive disorders.

Though models to define and assess giftedness include creativity, we as educators must do a better job following through to support this essential dimension. We can more fully support the students in our classrooms and homes by taking three steps to nurture their creativity:

1. Help them to become aware of their creative strengths.
2. Show how they already apply these creative strengths.
3. Provide opportunities at home, outside school, and at school for creative strengths to be exercised, especially integrated with content.

As we move toward giving creativity the place it deserves in our schools to match the place it has in intelligence theory, more students will thrive in deeper, meaningful learning and personal growth.

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