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SOCIAL AND EMOTIONAL DEVELOPMENT OF STUDENTS WITH GIFTS AND TALENTS

by
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Every gift contains a danger. Whatever gift we have we are compelled to express. And if the expression of that gift is blocked, distorted, or merely allowed to languish, then the gift turns against us, and we suffer.

—L. Johnson

INTRODUCTION

The research base on the social and emotional development of students with gifts and talents has increased quite significantly over the past 25 years. In addition to the increase in the number of studies conducted, articles published, and literature reviews produced, the nature of the questions asked reflect a healthy broadening of the concepts used, making the current research increasingly more sophisticated in both its theoretical foundations and statistical analyses. This chapter provides a review of the research on this psychological construct.

Contemporary research in gifted studies includes two relatively distinct conceptions of the social and emotional development of students with gifts and talents: (1) a characteristics-based perspective, and (2) the interaction of characteristics and context perspective. The perspectives represent two larger conceptions of giftedness that have helped guide

the field of gifted studies over the past 20 years or so: giftedness as *being* and giftedness as *doing*. Other similar descriptions include giftedness as an entity, something that exists (being), and giftedness as an incrementally developed outcome (doing). From the giftedness as being conception arises the assumption that students with gifts and talents exist and therefore we should study their endogenous characteristics (characteristics of the person). From the giftedness as doing conception arises the assumption that we should study the development of talent within specific contexts. This is more of an exogenous notion of giftedness.

Two exemplary theories of intelligence have guided our thinking about giftedness in general and social and emotional development more specifically. In his classic book *Frames of Mind*, Gardner (1983) described seven types of intelligences (interpersonal, intrapersonal, spatial, bodily kinesthetic, logical-mathematical, linguistic, musical) as unique domains. He has since added to the list of intelligences. He proposed that abilities can exist in these domains and are developed over time. Sternberg (1985) offered a triarchic conception of intelligence in which people possess three (practical, analytic, synthetic) largely distinct abilities that can be developed into heightened intelligences. These two theories encourage researchers to frame their questions in ways that are different from the past. Moreover, many professionals have treated social and emotional issues and development as one construct. Gardner's work, along with a host of others, has influenced us to study each type of intelligence on its own. Goleman (1995) built on Gardner's work, creating great interest in the construct of emotional intelligence. As a consequence, several new "intelligences" are now being pursued. Inherent to these major theories and the associated ones that have followed is that giftedness needs to be considered within a developmental framework and within varying contexts.

Approximately 25 years ago, the most common phrase used to discuss this topic was the *social/emotional needs* of gifted students. The term was created after the suicide of a gifted student in 1981 that garnered considerable attention (Neihart, 1999). The phrasing situates the thinking of the day, revealing that we conflated the two topics and thought of them in very practical terms. Moreover, we assumed students with gifts and talents actually have unique needs. Much of the research done at the time on this topic explored the self-concept of gifted students. Twenty-five years later, we speak more regularly in terms of development and with social and emotional domains representing related but distinct constructs.

To offer the broadest, most encompassing lens on students with gifts and talents, we prefer the term *gifted studies* rather than gifted education. Much of the important research that has been and remains to be conducted does not necessarily have application to curriculum or even pedagogy. The social/emotional needs construct circa 1983 typically had assumptions related to instruction. For example, a need/issue of adolescent students with gifts and talents may lie in college guidance matters. Although the actual issue at hand emerges out of the desire to transition into a college placement from high school, the true need may derive from an issue that may or may not have legitimate psychological ramifications. From this perspective, essential aspects of this need are contextual, school-related,

and somewhat culturally limited. How to advise these students is based in part on educational needs rather than psychological characteristics—psychological characteristics situated within a context. Recent research has largely broken free from such assumptions.

CONTEMPORARY RESEARCH

To characterize contemporary research on the topic of the social and emotional development of students with gifts and talents, we will use an overarching category of the “psychology” of students with gifts and talents. To that end, we will characterize three bodies of research that answer important questions about the psychology of these students. They are: (1a) What are common psychological characteristics of students with gifts and talents? (1b) Are they the same as or different from the general population? (2a) What are the personalities of students with gifts and talents like? (2b) Are the personalities of students with gifts and talents the same as or different from the general population? (3) Are students with gifts and talents psychologically more or less healthy than the general population? The second part of this chapter will provide a detailed overview of new directions in research on the topic of the psychology of students with gifts and talents.

What are common psychological characteristics of students with gifts and talents? Are they the same as or different from the general population?

A considerable body of research exists on self-concept among students with gifts and talents, much of it conducted in the early 1980s through the late 1990s. Virtually all of this research was conducted with intellectually or academically gifted students. Many of the studies used convenience samples from which to gather data. By today’s standard of sensitivity to diversity, much of the research would be criticized for loading heavily with middle- and upper class Caucasian students. The results of these studies are mixed, with some studies indicating no substantial differences of the self-concepts of students with gifts and talents and the general population (e.g., Bracken, 1980; Tong & Yewchuk, 1996) and other studies that did find some differences. Among those studies reporting differences, it was generally revealed that the self-concept of students with gifts and talents are more positive than in the general population (e.g., Ablard, 1997; Janos, Fung, & Robinson, 1985). Other studies found that the self-concept scores of students with gifts and talents are lower than that of the general population (e.g., Lea-Wood & Clunies-Ross, 1995). More recent research has investigated the relationship of contexts on self-concept of students with gifts and talents. These studies generally have found that schools that bring highly able students together may influence self-concept scores, causing them to decline slightly (e.g., Cross, Adams, Dixon, & Holland, 2004; Marsh & Hau, 2003). The results of these types of studies are too limited to draw conclusions at this time.

Perfectionism is another topic in which considerable interest has been shown. It can be defined as a tendency to set unreasonable expectations for oneself. More recent conceptions have delineated that perfectionism actually is multidimensional with three or more types, including self-oriented, socially oriented, and other (Hewitt & Flett, 1991). This line of research has led many to conclude that students with gifts and talents manifest a greater propensity for perfectionism than the general population (Cross, 1997). The most recent research (e.g., Dixon, Lapsley, & Hanchon, 2004; Speirs Neumeister, Williams, & Cross, 2007) is attempting to assess this construct using multidimensional instruments such as the Multidimensional Perfectionism Scale (Hewitt & Flett, 1991).

Another important psychological characteristic that is more common among students with gifts and talents than in the general population has been labeled *asynchronous development* (AD; Silverman, 1997). AD describes the difference between an extraordinary area of ability and other developmental areas. For example, the 7-year-old child who has a measured IQ of 150 and social skills on par with an average student exhibits AD. Such dramatic differences can create many difficulties for the child, especially as she navigates school situations that tend to be rigidly age-specific environments. Some believe that asynchronous development is actually a definition for giftedness because it is so common (Morelock, 1992).

*What are the personalities of students with gifts and talents like?
Are the personalities of students with gifts and talents the same
as or different from the general population?*

Some important research about students with gifts and talents of an endogenous nature has investigated questions about personality. To that end, a popular instrument—the Myers–Briggs Type Indicator (MBTI; Myers, 1980)—has been used many times. The MBTI identifies four dichotomous dimensions of personality: Extraversion/Introversion, Sensing/Intuitive (perception of one’s surroundings is either taken in through the senses or intuited from a more holistic perspective), Thinking/Feeling (a preference for one over the other in making judgments), and Judging/Perceiving (organized, systematic or spontaneous, receptive; Sak, 2004). Some consistencies have been found that show signs of difference between students with gifts and talents and the general population of same-age children and adolescents. For example, although the general population has demonstrated approximately 73% to be extraverted and 27% introverted, research has shown that students with gifts and talents consistently demonstrate a 50/50 split on extraversion and introversion (Cross, Speirs Neumeister, & Cassady, 2007; Sak, 2004). This means that about twice the percentage of students with gifts and talents are more introverted than the general population. Some gender differences also have been found. More gifted girls tend to be Extraverts (rather than Introverts), Intuitive rather than Sensing (slightly); more are Thinking rather than Feeling, and more often gifted girls are Perceiving rather than Judging when compared to the general population.

Are students with gifts and talents more or less psychologically healthy than the general population?

Our attempts to address this question have credible data going back to the Terman (1925) studies, wherein he found that gifted students of the day were at least as healthy and strong on psychological and physical indicators as the general population. Current research has explored specific areas within the domain of mental health with findings consistent with Terman's claims (Coleman & Cross, 2005; Cross et al., 2004; Neihart, 1999). Although there have been a small number of exceptions, research has consistently demonstrated that students with gifts and talents are not less mentally healthy than their nongifted peers.

Depression is a very common condition of Western societies, regularly demonstrating numerous worrisome associations with other maladies. For example, depression is considered the most important correlate of suicidal behavior of people in general. Research to date has not established a meaningful correlation between IQ and depression in children and adolescents (Mash & Barkley, 1996). Moreover, research about levels of depression between students with gifts and talents and the general population have found that gifted students' levels tend to be the same as or lower than their comparison group (Baker, 1995; Bartell & Reynolds, 1986; Cross et al., 2004). Although there is reasonable evidence that risk of suicidal behavior and depression is no greater among students with gifts and talents than in the general population, other lenses offer different perspectives. In the area of suicidal behavior, research over the past 12 years has consistently revealed that there is little to no actual research suggesting that students with gifts and talents are engaging in suicidal behavior at a different rate than the general population (Cassady & Cross, 2006; Cross, Cassady, Dixon, & Adams, 2008; Dixon & Schekel, 1996; Gust & Cross, 1999). Moreover, this research on students with gifts and talents has revealed that the level of suicide ideation of students with gifts and talents is within a normal range, with no significant difference from the general population.

Researchers also have explored the hypothesis that rates of depression and anxiety are higher among students with gifts and talents. In studies comparing rates of depression between students with gifts and talents and their peers in the general population, the gifted have not been found to have a higher incidence (Baker, 1995; Berndt, Kaiser, & van Aalst, 1982; Neihart, 1991). Although most studies of young students with gifts and talents report lower measures of anxiety compared to the general population (Neihart, 1991; Reynolds & Bradley, 1983; Scholwinski & Reynolds, 1985), Tong and Yewchuk's (1996) high school sample found the opposite, suggesting a possible developmental relationship between giftedness and anxiety.

LIVED EXPERIENCE AND SOCIAL COPING

When characterizing the lived experience of students with gifts and talents, researchers have found that they often feel different from other students (Coleman

& Cross, 1988; Cross, Coleman & Terhaar-Yonkers, 1991). Extending the perceived differences based on the lived experiences of the students with gifts and talents is a body of research on their social coping behavior. Several studies have identified these behaviors (e.g., Coleman, 1985; Coleman & Cross, 1988; Cross, Coleman, & Stewart, 1993; Cross & Swiatek, in press; Swiatek, 1995). Swiatek (2001; Swiatek & Dorr, 1998) developed the Social Coping Questionnaire that has become widely used over the last decade to investigate the social coping of students with gifts and talents. These students may have more positive social coping skills than their counterparts in the general population (Barnett & Fiscella, 1985; Dauber & Benbow, 1990), but giftedness is not necessarily predictive of positive adjustment. Some evidence exists that students who are verbally gifted experience greater difficulty in adjustment and social acceptance than do students who are mathematically gifted (Cross et al., 1993; Swiatek, 1995).

NEW RESEARCH DIRECTIONS

As research continues utilizing traditional methods, the advent of brain imaging technologies has opened the door to new and potentially groundbreaking research on the biological bases of giftedness. On the horizon are studies that focus on the anatomy and neurological functioning of the brains of students with gifts and talents. Although a small number of such studies have been conducted, the scientific winds of change are shifting in this direction. Techniques used to examine or estimate neurological functioning tend to fall into two categories, direct and indirect measurement.

Perhaps the most common methodology for indirect measurement of neurological functioning involves neuropsychological and neurobehavioral testing. These approaches provide for an indirect measurement of neural activity by observing elicited or involuntary behavior. The clinician then extrapolates an estimate of neurological status, either in regard to specific areas of the central nervous system or functional output. Typically conducted by neurologists and neuropsychologists, this approach offers the advantage of being relatively inexpensive and noninvasive, with a rich empirical history. The second approach utilizes medical technology and allows for direct measurement of in-vivo real-time neural processing. These techniques include functional Magnetic Resonance Imaging (*fMRI*), Positron Emission Tomography (PET), and electroencephalography (EEG). These three techniques offer an advantage to older medical technology such as Computed Tomography (CT) and Magnetic Resonance Imaging (MRI), which limited examination to the *structure* of the brain. In essence, these older techniques provide static pictures of neural areas that allows for the investigation of lesions, tumors, and other anomalies. The newer techniques of *fMRI*, PET, and EEG actually show *functional* activity of the brain, as opposed to simple structure, allowing clinicians to directly observe neural processing.

There is a debate in the literature regarding the relative contribution of morphological brain differences and environmental factors to giftedness. Traditional psychological and neuropsychological nondirect measurement techniques are inherently flawed in addressing this issue because they measure behavioral/functional performance without regard for the etiology of the child's performance. This has led to recent research that combines the techniques of direct measurement techniques, such as EEG, with behavioral assessment measures. The combination of neuropsychological assessment and EEG increasingly is being used to provide evidence of construct validity for the neuropsychological tests and to examine if assessment approaches are yielding the same functional clinical data for different populations (Banaschewski & Brandeis, 2007). Such exploration could provide valuable comparisons between students with gifts and talents and their peers in the general population.

EEG also is being used to investigate the relationship between neurocognitive processing and neural activity. For example, van der Hiele et al. (2007) demonstrated that measures of EEG were related to neuropsychological test performance and may be useful in the measurement of cognitive decline and dementia. Most neuroscience research focuses on the measurement and interpretation of deficits, as this has direct clinical application to neurologists and neuropsychologists. The literature is less extensive in regard to examining neurological functioning in superior performing adults and children, such as those children identified with gifts or talents.

Some research has emerged linking EEG measures and neurocognitive functioning in gifted children, which is not surprising given that several studies have linked intelligence and faster nerve conduction (Henderson & Ebner, 1997). Jin, Kwon, Jeong, Kwon, and Shin (2007) compared the EEG results of 25 students with gifts and talents to 25 age-matched controls. They used a scientific hypothesis generation task, which could be considered a measure of mental flexibility, an important component of executive functions. They determined that, consistent with improved performance on the task, the students with gifts and talents were more able to effectively utilize cognitive resources. Although this is an important finding, it also demonstrates some of the methodological problems with previous studies exploring the results of EEG and neurocognitive processing in students with gifts and talents. Two of the problems pervasive in the literature are small sample size and inadequate cognitive processing tasks in regard to psychometric properties. In another study, Staudt and Neubauer (2006) split 31 adolescent students into four groups based on high and low intelligence and achievement. They determined that the level of intelligence and achievement resulted in different levels and locations of cortical achievement. Again, although this is an important finding, the small sample size in each group limits generalization. Additionally, the authors used psychometrically troubled instruments, starting with the fact that they were from the 1960s and 1970s, a significant problem given the well-documented rise in cognitive abilities over time.

In sum, the idea that neurocognitive processing can be assessed by EEG is well documented. What is less clear is the connection between measures of behavioral neurocognitive processing and EEG in special populations. This is more than an academic question. There are significant implications for practitioners and researchers as far as this relationship is concerned, including implications for early intervention, improving the identification of gifted children, and determining treatment and intervention efficacy. The different approaches required for treatment and interventions benefiting students with gifts and talents can be explored as physiological differences (or the lack thereof) between students with gifts and talents and their peers in the general population are identified through these advanced technologies.

CONCLUSION

Since Terman's classic study revealing important characteristics of students with gifts and talents almost 85 years ago, the field of gifted studies has gained momentum in its research. Terms have evolved with increasingly sophisticated conceptions guiding contemporary research. Those interested in the various aspects of the psychology of students with gifts and talents have evolved from describing basic qualities of the person, to intense study of the students within a myriad of contexts. More recently, although considerable overlap of these types coexist with the newer brain-based research, clearly, the baton is being handed to those who conduct neurophysiological research. The field of neuroscience has witnessed a movement from measuring matters indirectly with paper-and-pencil inventories, to much more direct measures using EEG and fMRI technologies. The next 25 years of research on the psychology of students with gifts and talents will contribute significant insight about the neurological functioning of these students that will help us serve them in ways not yet fully understood.

The history of research on the social and emotional development of students with gifts and talents traces a pattern of increasing refinement and sophistication of constructs and methodologies. From education to psychology, the social and emotional needs of this special population are being identified and addressed. A leader in the field of gifted education, a truly gifted individual herself, Dr. Joyce VanTassel-Baska (2007) has noted the importance of understanding the social and emotional needs of students with gifts and talents in developing the learning communities they will inhabit. Her substantial work in affective curriculum has put into practice the findings of research on the social and emotional development of students, a testament to her dedication and the model she provides for generations of future researchers and educators.

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