

The Relationship between Placement and Social Skills in Gifted Students

by

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ABSTRACT

This study investigated the relationship between social emotional competency (SEC) and academic placement in gifted students. Data were collected on children between the ages of 5 and 12 years old (n=206) in three academic placement types - self-contained, cluster and content replacement. Social emotional skills were assessed by teacher report using the Devereux Student Strengths Assessment. Regardless of placements, the gifted students in this study were rated as having higher social emotional competencies than the standardization group of the DESSA. Gifted students in the cluster and self-contained settings demonstrated significantly higher scores in the area of Self-Awareness, which measures students' capacity to understand their personal strengths and weaknesses. When analyzed by gender, no significant differences were discovered between males; however, girls demonstrated significantly higher scores in the areas of Optimism and Self-Awareness in the self-contained and cluster settings. The results of the study have import for the development of gifted programs, especially for gifted girls.

DEDICATION

To my grandmother

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CHAPTER 1

INTRODUCTION AND LITERATURE REVIEW

Introduction and Literature Review

Research on the social skills of gifted children has yielded varied results. Certain studies have indicated that gifted children have fewer social and emotional problems and others have suggested that these children may experience more socio-emotional difficulties than typical children. Part of the disagreement may be due to differences in methodology and disagreement about what constitutes giftedness. Findings may also be influenced by the educational environment of these children. While a number of studies have been conducted to determine the effect of placement on academics, there have been few studies into the relationship between academic placement and social-emotional functioning for students identified as gifted.

History of Gifted Theories

The origin of identification of gifted students in the United States can be traced to Lewis Terman (1925). Terman believed that high intelligence was a trait which, like personality, affected the overall interaction between individuals and their world. His view of the construct of intelligence was consistent with Spearman's (1927), who asserted that a broad factor - "g"-underlies intelligence. Other researchers have taken varying views.

Raymond Cattell (1941) developed a theory of intelligence in response to the work of Spearman. Cattell believed that intelligence had two main factors, crystallized intelligence (Gc), defined as access to acquired knowledge, and the ability to store new knowledge, and fluid intelligence (Gf), the ability to adapt to novel situations through reasoning (1941). Twenty-five years later, Cattell and his student, John Horn broadened

the number of abilities to five, adding visualization, retrieval capacity, and cognitive speed (1966). By 1981, Horn reported that evidence supported the existence of nine factors: fluid intelligence (Gf), crystallized intelligence (Gc), short-term acquisition and retrieval (Gsm), visual intelligence (Gv), John. Carroll (1993) proposed a model of intelligence that was hierarchical and had three levels or strata. He believed that intelligence contained an overarching general ability, akin to Spearman's "g", but had eight or more broad-ability factors and up to 65 narrow abilities. In 2001, the theories were combined into the Cattell-Horn-Carroll (CHC) theory of cognitive abilities (McGrew, 2005). The Cattell-Horn Carroll (CHC) concept of intelligence reiterated Terman's emphasis on giftedness primarily in the area of intelligence; however, it broadened Terman's concept of intelligence from a unitary to a multifactor concept, in which *g* is supported by domain specific factors (Worrell & Erwin, 2011).

Howard Gardner further popularized the concept of intelligence as constituting diverse abilities, when he published his multifactor theory of intelligence (1983). Gardner believed that giftedness could be found in any of seven areas of ability, which he later outlined in his seminal book, *Frames of Mind: Theories of Multiple Intelligence* (1983, updated in 2011). These are: linguistic, logical mathematical, spatial, musical, bodily-kinesthetic, interpersonal, intrapersonal, and naturalistic intelligence. Gardner believed that if potential in any one of these areas were nurtured, then it could develop into demonstrable achievement. While Gardner viewed giftedness as multi-factored, Renzulli (2002, 2011, & 2012) viewed it as more interactive. He asserted that giftedness involved the interaction of intellectual potential, and personality traits such as creativity and

commitment to task completion. According to Renzulli, education for gifted students should be based in theory and be qualitatively different from general education.

Francoys Gagne (2007) proposed another construct of giftedness. His Differentiated Model of Giftedness and Talent distinguished giftedness, or innate potential from achievement, which involved development of that potential. He emphasized the concept as developmental, or in comparison to same age peers, and noted that giftedness in young students did not always predict giftedness as students mature.

What moves these theories beyond philosophical discussion is that conceptions of what constitutes giftedness can affect how gifted students are identified, as well as how curricula and instruction for gifted students are developed. As outlined later, outcomes for gifted students vary, and determining how best to meet their social-emotional, as well as academic needs may affect academic achievement.

Definitions of Gifted Students

Many researchers trace the modern concern regarding gifted education to the launching of Sputnik by the Soviet Union in 1957. With this evidence of the Soviets surpassing the United States, the American government became concerned with student performance in the fields of math and science, and funded educational initiatives to support excellence in these fields.

Much of the current concern about what constitutes giftedness in the modern field of education involves which students qualify for services based on the label of gifted. Current definitions of giftedness in education can be traced back to the Marland report, a 1972 paper written by then Commissioner of Education, Sydney Marland. The Marland report defined giftedness as excelling in one or more of the following areas: “general

intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual or performing arts, or psychomotor ability (p. 8, 1972). Commissioner Marland encouraged states to identify a minimum of 3-5% of their students as gifted in order to provide them with services (1972). McClain and Pfeiffer (2012) report that despite the fact that this statement was intended to be a minimum number to prevent districts from claiming that they had no gifted students, many state education policymakers instead took the statistic as an upper limit.

The U.S. Department of Education Office of Educational Research and Improvement defines giftedness as follows:

Children and youth with outstanding talent perform or show the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience, or environment. These children and youth exhibit high performance capability in intellectual, creative, and/or artistic areas, possess an unusual leadership capacity, or excel in specific academic fields. They require services or activities not ordinarily provided by the schools. Outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor (1993, p. 26).

The No Child Left Behind Act (2001) defines giftedness in students as the capability to excel in areas of “ intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services or activities not ordinarily provided by the school in order to fully develop those capabilities” [part A, section 9101 (22)].

Worrell and Erwin (2011) posited that as conceptualization of what constitutes giftedness expands, the field is moving beyond dichotomous definitions of children as gifted or not gifted. They asserted that giftedness may encompass more than a single domain and may change over developmental periods. They also asserted that the goal of gifted programs should be to serve the maximum number of students possible. Worrell

and Erwin also emphasized that districts should not ignore psychosocial factors when identifying students for placement within gifted programs. Not only do traditional measures of identification neglect the factors such as motivation that have been shown to predict success, but they are also more sensitive to the economic and environmental disparities that have perpetuated the gap of achievement between the wealthier sections of the population and the underprivileged. Including measures that take into account traits such as motivation and teacher reports of student behavior can better define the attributes of students who may not have had opportunity to fulfill their potential.

Outcomes for Gifted Students

According to Winner (2000), research seems to support the concept that academic achievement is the result of the interaction between genetic predisposition and environmental factors. Winner reported that gifted children naturally excel in certain domains, and because of this innate ability, they show a greater tendency to explore these areas in more detail, thus enhancing their natural abilities with practice and training. Winner reported that gifted children also have higher intrinsic levels of motivation.

By high school, gifted students who demonstrate high potential and exceptional motivation tend to excel academically. However, factors other than high IQ predict later positive outcomes in gifted students, including: deliberate practice, hard work, delay of gratification, and self-discipline (Pfeiffer, 2009). Factors that have been associated with better academic outcomes among gifted students include domain-specific skills, high motivation, and passion for a subject matter, commitment, persistence, self-confidence, and opportunity (McClain & Pfeiffer, 2012).

Gifted Students and Socio-Emotional Skills

LeBuffe, Shapiro, and Naglieri (2009) defined socio-emotional skills as “the ability of children to successfully interact with other children and adults in a way that demonstrates an awareness of, and ability to manage, emotions in an age- and context-appropriate manner” (p. 5). While researchers (e.g., Robinson, 2008; Bain & Bell, 2004) have reported that gifted students may be more socially and emotionally mature than typical peers, research on self-concept has varied with certain researchers finding lower self-concepts (e.g., Lea-Wood & Clunies-Ross, 1995) and others finding higher self-concepts, self-worth and self-confidence (e.g., Chan, 1988).

Terman conducted the first well-documented longitudinal study of gifted students (Terman & Oden, 1947). Terman’s study of gifted students was intended to dispel popular ideas about gifted students as poorly adjusted emotionally (Winner, 2000). In his initial 1925 study, Terman used teacher checklists to support his position that gifted students excel in all areas, including social emotional; however, critics have asserted that teachers may have been subject to a halo effect, perceiving the students as superior in all areas due to their superior academic ability (Winner, 2000).

Terman’s protégée, Melita Oden then tracked the outcomes of 1500 highly gifted students. The follow-up to his original study, published in 1968 asserted that the gifted individuals in his study were physically and emotionally healthier than their peers and they also displayed better developed morality (Oden, 1968). The students in Terman’s study all had IQ scores above 140; however, the vast majority of the students came from upper class families, and social class may have been a factor in the outcomes. Further research has supported Terman’s assertion of an association between giftedness and sense

of moral responsibility. Chovan and Freeman (1993) found that gifted students exhibited better developed moral reasoning skills, including empathy and compassion than their typical peers. Gifted girls demonstrated significantly higher scores than gifted boys (Chovan & Freeman).

Several recent studies have found that giftedness has negative social implications for students. Janos and Robinson (1985) stated that 20 to 25 % of gifted children experienced social and/or emotional difficulties at a rate that is about twice that of non-gifted students. Peterson and Ray (2006) reported that in elementary school, gifted students frequently experience teasing about their intelligence or academic prowess beginning in kindergarten and peaking in sixth grade. However, they also found intelligence to be a protective factor in the students' subjective experience of bullying. Gifted students reported a better ability to make sense of the bullying and are more successful in stopping it (Peterson & Ray).

Other studies have found no significant difference between gifted and non-gifted children in rates of depression, anxiety, suicidal ideation, neuroticism, behavior problems, and difficulty with peer relationships. Neihart, Reis, Robinson, and Moon (2002) concluded that there was “no evidence that gifted children or youth—as a group—are inherently any more vulnerable or flawed in adjustment than any other group” (p. 268). In a more recent study, Wellisch, et al. (2011) studied 80 families in New Zealand and Australia and found that parents did not report any significant difference in internalizing or externalizing behavior problems between children with IQs at or over 120 and children with IQs below 120.

Terman's work helped dispel some of the association between intelligence and mental illness, and the adults in his study were less likely to experience mental or emotional difficulties than the general population (Oden, 1968). Since that time, intelligence has been posited as a protective factor, and an inverse relationship between childhood cognitive ability and adult mental health problems, including Post-Traumatic Stress Disorder (PTSD) has been demonstrated (Martin, Burns, & Schonlau, 2010). Additionally, students in early grades have been demonstrated to have better adaptive skills and higher social emotional competencies than their typical peers (Bracken & Brown, 2008).

Martin, Burns, and Schonlau (2010) conducted a meta-analysis of established literature and directly compared the rates of mental health diagnoses between gifted and non-gifted youth. They found that overall, gifted youth had lower rates of depression, anxiety and suicidal ideation than their non-gifted counterparts (Martin, Burns, & Schonlau). However, gifted females had slightly higher levels of clinical anxiety disorders than their typical peers (Martin, Burns, & Schonlau). While no studies directly compared the diagnoses of Attention Deficit Hyperactivity Disorder (ADHD) in gifted and non-gifted students, gifted students demonstrated better ability on a test of sustained attention (Martin, Burns, & Schonlau).

Leta Hollingsworth asserted that children with exceptionally high IQs, which she defined as above 180, have a unique set of social and emotional difficulties (Hollingsworth, 1942). Some research has supported this view. A 1985 study indicated that profoundly gifted children have twice as many social emotional difficulties as their typical peers, including social isolation, depression, low self-esteem and physical

symptoms. Adolescent girls seemed to struggle more than boys, although the measurement of these difficulties was unclear (Winner, 2000).

In personality structure, gifted students are more likely than typical peers to be introverted and they have difficulties finding other children who share their interests (Winner, 2000). The fact that their unique ability levels often isolate them is one of the arguments for ability grouping of gifted students (Winner). These programs not only enhance academic achievement, but also allow students to interact with others with whom they can relate, boosting their self-esteem (Winner). Students with higher self-confidence also tend to demonstrate better grades in school, which can be predictive of their inclusion in and continuation within accelerated academic programming (Boekaerts, 1991).

Social Emotional Skills and Gender

On studies of typical students, girls have demonstrated stronger social emotional competencies than boys, and similar findings have also been demonstrated in studies of gifted populations. D'Ilio and Karnes (1987) found that gifted girls enrolled in gifted programming engaged in more prosocial and fewer negative behaviors than gifted boys. Conversely, gifted girls have exhibited lower scores than gifted boys on measures of adjustment, including self-esteem, social isolation, alienation, anxiety and locus of control (Kwan, 1992). In Kwan's study (1992), gifted girls were also less likely than their typical female peers to have high indices for self-esteem, alienation, anxiety and locus of control. Other studies have reported similar findings. Lea-Wood and Clunies-Ross found that gifted girls reported lower total, as well as social self-concept, than their nongifted female counterparts (1995), and the difference between the two increased toward

adolescence. Analysis of gifted populations has also suggested that gifted females have slightly higher levels of clinical anxiety disorders than their typical peers (Martin, Burns, & Schonlau, 2010).

Academically gifted girls, as well as typical girls tend to demonstrate more motivation to complete homework tasks than boys (Hong, Wang, & Peng, 2011). However, high achieving girls are also less likely than boys to pursue education at selective colleges, and their career aspirations more frequently included lower paying occupations (York, 2008).

Gifted girls differ from their typical peers in their perception of how decisions are influenced by values (Nelson & Buchholz, 2003). In a comparison between girls at a self-contained gifted program and those at a lower achieving school, gifted girls were more likely to attribute choices to act morally or “good” to altruistic values, or a desire to help others. They were also more likely to attribute their decisions to a desire to achieve academically. The girls at the lower achieving high school were more likely to behave in a manner they defined as “good” in order to achieve material gain (Nelson & Buchholz, 2003).

When describing acts that they had done that were “bad,” the typical girls were more likely to have done so in response to emotional triggers, such as anger, while the gifted girls were more likely to have committed “bad” acts to defy rules and expectations of adults, and they were more likely to describe their feelings during these acts as ones of fun and excitement (Nelson & Buchholz, 2003). When describing the worst part of committing “bad” acts, gifted girls were more likely to relate internal attributes, such as

guilt and shame, while the typical girls were more concerned with external factors such as punishment.

While a few studies have emphasized the differences between gifted girls and boys, Kerr and colleagues report that gifted boys and girls have fewer differences with one another than they do with their typical peers (2012). They tend to share interests in academic topics that are developmentally more mature than their typical peers. These developmental differences have been associated with some of the social conflicts that gifted children have demonstrated with typical children. Gifted girls are less represented than gifted boys in areas of science and technology; however, they are cognitively similar, which leads Kerr and colleagues to hypothesize that the differences in career choices may be responses to societal and cultural demands rather than intrinsic differences.

Social Emotional Assessment

While there are several measures of social emotional skills, most measures that focus on students' weaknesses (e.g., Social Skills Improvement System: Gresham & Elliott, 2008). However, the Devereux Student Strengths Assessment assesses social emotional strengths. It also can be used to aid in targeted interventions for students and to track the effect of these interventions (LeBuffe, Shapiro, & Naglieri, 2009). The DESSA measures adaptive rather than maladaptive skills. This measure was selected for the present study because the authors concentrated particularly on traits that have been associated with resiliency. These traits have been identified as protective factors. The DESSA operationalizes social-emotional competency as being composed of the following areas: personal responsibility, optimistic thinking, goal-directed behavior,

social awareness, decision-making, relationship skills, self-awareness, and self-management (LeBuffe, Shapiro, & Naglieri, 2009). High scores on the DESSA have previously been shown to be associated with resilience in children with typical intelligence (Naglieri, Goldstein & LeBuffe, 2010). The DESSA has previously been used in research with gifted students. A previous study using the same sample as this study found that high scores in the areas of Optimistic Thinking, Self-Awareness and Relationship Skills were better predictors of academic achievement than intelligence for gifted students (Kong, 2014). These areas, along with related gifted research will be further explained in the following sections.

Gifted Students and Personal Responsibility

The authors of the DESSA define personal responsibility as the “child’s tendency to be careful and reliable in her/his actions and in contributing to group efforts.” (LeBuffe, Shapiro, & Naglieri, 2009, p. 8). Analysis of the women with whom Terman worked, indicated that many of them who went on to become well respected researchers and innovators in their own respect, succeeded because of their strong sense of personal responsibility as well as their innate gifts (Rogers, 1999).

Thomas Bratter, who created a therapeutic school aimed at intervening with gifted but self-destructive individuals, wrote that “gifted, creative, alienated, and angry adolescents respond positively to a confrontational, cognitive, and existential therapeutic orientation with high expectations for improved behavior” (2006, p.10). He asserted that they demonstrate better reactions when asked to take responsibility for their actions, and that this helps them feel more in control of their outcome. He noted that because of their

higher intellectual capacity, they require challenging academic and personal goals in order to achieve to their capability.

Gifted Students and Optimistic Thinking

The authors of the DESSA define optimistic thinking as “a child’s attitude of confidence, hopefulness, and positive thinking, regarding herself/himself and her/his life situations in the past, present, and future” (LeBuffe, Shapiro, & Naglieri, 2009, p. 8). Some have argued that gifted students have fundamentally different views of the future from their typical peers, which can be affected by their educational environment (Torrance & Reynolds, 1978). To support this hypothesis, Torrance and Reynolds administered an assessment of adolescent alienation to 200 high achieving gifted students. The authors found that the rates of alienation among these students were significantly lower than among typical high school students. Those whose vision of the future tended to be negative were more likely to envision atypical careers for themselves, and express concern about the environment and natural resources. Optimistic views of the future were correlated with strong conflict resolution and problem solving skills (Torrance & Reynolds).

Torrance and Reynolds assert that optimistic thinking in gifted students can be nurtured through educational techniques such as sociodrama, in which students envision conflicts and act out strategies through which to solve those problems (1978). These skills can benefit students by allowing them to understand their own control over their academic outcomes.

Gifted Students and Goal-Directed Behavior

The authors of the DESSA define goal-directed behavior as the “child’s initiation of, and persistence in completing, tasks of varying difficulty” (LeBuffe, Shapiro, & Naglieri, 2009, p. 8). Despite their high ability level, not all gifted students perform well academically. In fact, Seeley (1993) found that 15-40% of gifted students do not perform to potential.

In general, gifted students are more likely to succeed when they feel they have a modicum of control over and choice about their academic outcomes (Figg, Rogers, McCormick & Low, 2012). They desire and respond to academic challenges and react better to teachers they believe care about them and are invested in their success (Figg, et al.).

Figg, et al. (2012) go on to distinguish three types of gifted students: achieving, underachieving and selective consumers. While achieving students excel academically, conventional underachieving gifted students frequently do not perform to their potential due to anxious and perfectionist personality traits. They would like to succeed, but doubt their own abilities. Selective consumers, in contrast, do not suffer from these types of insecurities. Instead, they are confident in themselves and their abilities, but choose to put forth their full effort only for subjects and projects that interest them and that they consider worthwhile. Figg and colleagues emphasized that this group is motivated to learn, and is less concerned about grades than the knowledge they gain.

Figg and colleagues employed the School Attitude Assessment Survey–Revised (SAAS-R; McCoach, 2002) in their research. This scale measures five different factors: “(a) academic self-perception, (b) attitudes toward teachers, (c) attitudes toward school,

(d) goal valuation, and (e) motivation/self-regulation” (Figg, et al, 2012, p.63). They found that high achievers had the highest scores in all factors, while underachievers had the lowest scores on academic self-perception, attitude toward teachers and school and motivation/self-regulation. Both underachievers and selective consumers had low scores on goal valuation. “Selective consuming students had higher academic self-perception, better teacher and class attitude, higher motivation and self-regulation, but a lower attitude toward school than underachievers” (Figg, et al, p. 64). While they showed a trend toward higher academic self-perception, the differences between the selective consumers and underachievers was not significant; however the achievers had significantly higher academic self-perception than the underachievers.

Figg et al. (2012) asserted that the type of student should be considered when determining appropriate class placements and teacher selection. Selective underachievers tend to prefer more independent types of learning environments, with less structure and teacher directed instruction. They also respond better to teachers who are more flexible in their approach and who are open to varying viewpoints. To maximize achievement for this type of gifted student, they recommend considering “the five Cs: control, choice, challenge, complexity, and caring” (Figg, et al, p. 57). In order to be successful, these students need to feel that they have some control over their educational careers, and have some choice over their subject matter. They also require more challenge and complexity of curriculum, and will work harder for teachers whom they believe care about them as people (Figg, et al.). In Figg and colleagues’ review of studies of underachieving gifted students they found that they all “showed that learning environments consistent with such nonflexible, teacher-driven and prescriptive processes resulted in selective consuming

students disengaging from the curriculum, resulting in low academic performance” (Figg, et al., p.60).

Students’ belief that achievement results from hard work, rather than innate talent or ability, can influence them to persist in the pursuit of their goals, despite obstacles (Wu, 2008). According to Murphy and Dweck (2010), those who believe that intelligence is malleable are more likely to persist despite obstacles than those who believe that intelligence is a fixed entity. Independent beliefs and behavior can also be affected by institutional values, as people wish to behave in a way that is congruent with the views of those around them. This indicates that a program in which the underlying mores reflect a belief in the malleability of intelligence can influence students to persist in their pursuits despite obstacles (Murphy & Dweck). Conversely, students with higher levels of goal directed behavior tend to perform better academically, which is necessary for continuation in some types of gifted programming (Boekaerts, 1991).

Gifted Students and Social Awareness

The authors of the DESSA define social awareness as the child’s “capacity to interact with others in a way that shows respect for their ideas and behaviors, recognizes her/his impact on them, and uses cooperation and tolerance in social situations” (LeBuffe, Shapiro, & Naglieri, 2009, p. 7). Social awareness can affect students’ interactions with other students, and may be affected by placement type. Matthews and Kitchen (2007) report that when gifted students are housed on the campus of regular education buildings, their social interactions with peers may be affected by the perception that they are elitist, leading to bullying by typical peers. Gifted students within special programs have difficulties as adolescents, as their interests and behaviors differ from those of typical

teenagers (Matthews & Kitchen). Specific arguments against self-contained gifted programming include assertions that it can foster this isolation and sense of difference between gifted students and their typical peers.

Research has indicated that gifted students respond well to service learning models that emphasize social awareness within the community. Lee, Olszewski-Kubilius, Donahue and Weimholt (2008) reported that gifted students frequently demonstrate a “more highly developed sense of social justice, fairness, moral judgment, concern for others, and interest in global issues than their non-gifted counterparts” (p. 276). They are often more aware of current political issues facing their communities. Because of these qualities, they respond well to service learning curricula, and Lee, et al. report that other skills can also enhance academic achievement, including public speaking skills, writing, math and computer skills (2008). The students’ sense of self-efficacy and personal responsibility also increase as they see tangible effects of their efforts.

Gifted Students and Decision Making

The authors of the DESSA define decision making as the child’s “approach to problem solving that involves learning from others and from her/his own previous experiences, using values to guide action, and accepting responsibility for decisions (LeBuffe, Shapiro, & Naglieri, 2009, p. 8). Chung, Yun, Kim, Jang, and Jeong (2011) analyzed problem solving strategies of gifted and non-gifted students in a Public Goods game, which is based on social interaction. When devising strategies, the gifted students were less sensitive to loss and more sensitive to gain. The game is based on hypothetical financial gain and loss based on individual and group behavior. The gifted students in the study wound up earning more financially on average. They were more likely to act in a

way that benefitted them personally without regard to the effects on the other subjects in the study. The gifted students displayed more risk taking behavior when devising their strategies, and were less likely to make decisions based on emotional input. When analyzing the behaviors that the students used to succeed at the game, Chung, et al. found that gifted students were better at anticipating what moves other subjects would make in the game, and at devising strategies to match. These findings may support the studies that indicate conflict between gifted students and their typical peers due to perceptions of elitism (Matthew & Kitchen, 2007).

Gifted Students and Relationship Skills

The authors of the DESSA define relationship skills as “consistent performance of socially acceptable actions that promote and maintain positive connections with others” (LeBuffe, Shapiro, & Naglieri, 2009, p. 8). As gifted students have shown a higher sensitivity to interpersonal stress, some have concluded that their high intelligence could lead to more difficult interactions with their peers (Martin, Burns, & Schonlau, 2010). Morawska and Sanders (2009) assert that gifted students do not have higher rates of mental illness, but their development in many cognitive areas is more advanced than that of typical children, which can sometimes increase their difficulty to interact with same age peers (Morawska, & Sanders). They may also experience high expectations from parents and teachers to succeed academically, which can increase their internal stress (Morawska, & Sanders).

Gifted students also show a strong desire to have good relationships with their peers, but as adolescents, they experience pressure to succeed and a feeling of difference from their peers that sometimes makes it difficult for them to relate (Chan, 2003). To

cope with these differences, gifted students may engage in behaviors such as denying or minimizing their intelligence in order to fit in or conform, and getting involved in activities to help with social interactions. Conversely, they may cope by minimizing the importance of social relationships (Chan). The strategies chosen may relate to students' emotional intelligence (Chan). Gifted students with higher levels of emotional intelligence were more likely to cope with their giftedness by becoming involved in activities and valuing peers' acceptance, and less likely to avoid interactions with their peers. Those who had more difficulty controlling their emotional reactions were more likely to avoid peer interactions (Chan).

Gifted students who struggle with interpersonal interactions have demonstrated positive responses to intervention programs (Hay, Byrne, & Butler, 2000). In one study of gifted students, the authors found that an intervention program originally designed for typical girls was successful in aiding both gifted girls and boys in social interactions (Hay, et al.). The program employed problem solving and conflict resolution techniques designed to improve social interactions. The researchers found that after completing the program the students made significant gains in "general self-concept, physical appearance, self-concept, and total self-concept" (Hay, et al., p. 101).

Gifted Students and Self-Awareness

The authors of the DESSA define self-awareness as the child's "realistic understanding of her/his strengths and limitations and consistent desire for self-improvement" (LeBuffe, Shapiro, & Naglieri, 2009, p. 7). There has been some research supporting the concept that gifted students are more effective at maintaining meta-cognitive strategies to aid achievement, and that they have higher levels of self-

awareness, at least in their areas of academic strength (Snyder, Nietfeld, & Linnenbrink-Garcia, 2011). Gifted students have also demonstrated a better ability than their typical peers to gauge their performance on academic tests after completion; however, they were not better able to predict how they would perform on the test before they took it (Snyder, Nietfeld, & Linnenbrink-Garcia).

Gifted students have also demonstrated a tendency to have learning preferences that align with their perception of personal strengths (Chan, 2005). In one study, gifted students who rated themselves as more adept in verbal-linguistic skills were more likely to prefer discussion as a classroom activity (Chan). Park, Park and Choe (2005) found that gifted students rated themselves higher in all areas of scientific ability on a self-report measure, including scientific accomplishment, leadership, creativity, morality, motivation, and cognitive experimentalism.

Gifted populations can also be harmed by underestimating their potential. Children who have an external locus of control, attributing success to external factors that they have no power to change are less likely to exhibit the feeling of control that Figg, et al. (2012) reported was key to gifted students success (Ambrose, 2003). These external traits may be reflected in lower social-emotional competencies, especially as they rate their own abilities.

Not only accurate estimation of ability, but also attribution styles can affect gifted children's success in mathematics. Nokelainen, Tirri and Merenti-Valimaki (2007) assessed the attribution styles of children classified as mildly, moderately and highly gifted students. The highly and moderately gifted tended to see innate talent as more important to success, while the mildly gifted tended to attribute success to hard work and

effort. Students with a more internal locus of control tend to have higher scores on the social-emotional competencies of the DESSA.

Gifted students have been shown to have greater insight into their own motivation and that of others (Heng, 2000). Heng found that gifted students showed similar problem solving skills in real-life situations to their typical peers, which is contrary to the stereotype that gifted student lack common sense skills.

Gifted Students and Self-Management

The authors of the DESSA define self-management as a student's "success in controlling his or her emotions and behaviors, to complete a task or succeed in a new or challenging situation. (LeBuffe, Shapiro, & Naglieri, 2009, p. 7). Gagne also describes self-management as one of the key interpersonal characteristics that can aid gifted students in developing their talents to the fullest degree (2004). According to Gagne, parents of gifted children frequently report that their children have high levels of self-management (2004). Feldhusen (2004) sees self-efficacy, motivation and self-regulated learning as important factors in talent development. Yun (2004) argues that motivation and determination may be more important than innate ability to be successful in academics.

An important aspect of self-management is regulating stress to the degree that one can accomplish his/her goals. Shaunessey and Suido (2010) compared the coping strategies of gifted and non-gifted students in an International Baccalaureate (IB) program. Both gifted and non-gifted students in the program experienced similar levels of stress about the academic demands of the school, and maintained similar use of coping strategies such as avoidance, social and family support and time management. However,

the gifted students were slightly more likely to become angry when stressed, and they were more likely to lessen stress levels by avoiding the stressful activity and engaging in activities they enjoyed, enacting a plan to complete their work, seeking social support by friends not in the program and renegotiating deadlines with teachers.

Their self-management strategies were effective in helping gifted students to cope with the increased amount of academic demand as compared to typical peers. Some of the success that gifted students demonstrate in self-management may be a result of the higher demands of the programs in which they are enrolled. Bembenutty (2011) found that students who have more homework tend to learn better self-regulation skills, including delay of gratification, self-efficacy and a sense of personal responsibility for their own learning. However, students benefit most from homework that has personal meaning for them (Bembenutty, 2011). Gifted students, especially the selective consumers previously described by Figg, et al (2012), are highly sensitive to the meaning that homework holds for them. They are willing to work hard when they believe in the importance of their work. Chan (2007) found that gifted students who scored higher on measurements of self-management and self-regulation ability, as well as verbal ability, were more likely to demonstrate strong qualities of leadership, encompassing self-efficacy, flexibility and goal orientation. It has been suggested that a mismatch between gifted children and their educational environment may contribute to any social and emotional difficulties they may experience (Robinson, 2008). This type of finding may add to the importance of determining which academic setting is associated with higher overall social-emotional competencies. Winner (2000) asserted that in order for gifted children to succeed as adults, schools need to meet their emotional as well as educational

needs. She stated that gifted students require curriculum that provides a sufficient challenge to prevent boredom.

Placement Types

Gifted students are more successful when given instruction that shares certain features. According to Ysseldyke, Tardew, Betts, Thill and Hannigan (2004), academic outcomes are enhanced when:

Instruction is matched appropriately to the skill development of individual learners; there is a positive and efficiently managed classroom environment; motivational strategies are appropriate for the individual student; and students get plenty of relevant practice, informed feedback, and academically engaged time (p. 294).

Different models of gifted education programming have been developed including full-time gifted programs, grouping for curriculum acceleration, and cluster grouping within heterogeneous classrooms. Students have also shown higher academic gains across all placement types compared to students receiving no differentiated programs (Delcourt, Cornell, & Goldberg, 2007). Delcourt and colleagues compared academic achievement, self-perception and motivation in 460 second and third grade gifted students across fourteen school districts in ten states prior to enrolling in one of four different types of gifted programs – within-class programs, content replacement programs, separate class programs and special school programs, and then again after two years of enrollment within the program. They also compared these students' results with a nongifted group and a group of high achieving students in districts that had no gifted programs at the designated grade levels. Students enrolled in all four types of gifted programs demonstrated significant academic gains after two years in their respective programs as compared to their typical peers and those who received no gifted

programming. The researchers found that students in the self-contained settings (separate class and separate school) reported lower self-perception of scholastic competence after the two year period, compared to the other grouping types. However, they did not find significant differences in the students' self-perception of social acceptance. They found no differences in intrinsic motivation across the different groups, but they did find that the students in the within-class and special school settings had significantly higher scores on a measure of the students' self-report of decision making and organization skills.

Self-contained

Ability grouping can be defined as any method of curriculum that places students in different academic groups based on their performance (Vogl & Preckel, 2014). The precise methodology may range from differentiated instruction within the classroom to separate classrooms. In a self-contained, or full-time ability grouping setting, students who have been identified as gifted spend the majority of the educational day in in a class with other gifted students.

One of the arguments for ability grouping is the social interaction that gifted students have with others with whom they can relate. Another is that they can teach one another due to their high ability level. Torrance and Reynolds (1978), who developed summer honors programs for gifted students, asserted that the students' self-reports indicate that the interaction with other similar students was the most positive part of their experiences. Many of the students in the program maintained contact with each other after the program ended. Additionally, they taught their classmates skills in their field of interest, and reported that the other students had a greater impact on their progress than did the teachers in the program. Moreover, many gifted students reported that they taught

the instructors skills as well. Overall, the research into the effects of full time ability grouping on social self-concept has yielded varied results. While there has been substantiation for a temporary rise in self-esteem in students in primary grades who are placed in self-contained classes, other research has not demonstrated that these gains are maintained in secondary schools or when students return to a general setting (Vogl & Preckel, 2014).

Matthews and Kitchen (2007) reported that gifted students demonstrate significant academic gains when grouped together for a majority of the day. When housed on an integrated campus, the typical students did not demonstrate comparable gains by their proximity to the gifted population (Matthew & Kitchen). Matthews and Kitchen conducted a survey of 530 students and teachers in three different “school within a school” programs, those programs in which gifted students are in self-contained settings on the campus of regular education schools. They found that while a majority of the students and teachers reported positive academic experiences, they also reported difficulties with interactions with the other students housed in the same school.

The self-contained setting has the advantage of placing the student with similar peers with whom they can identify. Gifted students often choose to socialize with other academically minded peers as they age (Vogl & Preckel, 2014). Some gifted students, especially girls express a preference for these types of settings (Kao, 2011). Teachers in these settings report a greater ability to differentiate instruction and respond to the academic needs of their students (Linn-Cohen & Herzog, 2007).

Not all students, however, respond well to the self-contained setting. Students who are used to being at the top of their academic classes report significant worry and

stress about the increased workload and a decrease in their academic self-concept, as they described feeling just “regular” as compared to their peers in the self-contained setting (Moon, Swift, & Shallenberger, 2002). After conducting a two year longitudinal study of gifted students in a variety of placement types, Delcourt, Cornell, and Goldberg (2007) found that while students in the self-contained setting had the highest academic achievement, they had the lowest perception of academic competence, and least perception of acceptance by peers, as well as a preference for less challenging activities as compared to students who received content replacement services or received gifted services within the classroom.

In contrast, Kulik and Kulik (1992) conducted a meta-analysis comparing gifted educational programs. Within that analysis, twenty-two of twenty-five studies reported higher levels of academic achievement for students in gifted programs. Five of the studies investigated the effect of the programs on self-concept. Four out of five studies reported that self-concepts were more favorable in students placed in self-contained settings as compared to content replacement settings or non-gifted placements; however the differences were not significant in any study.

Content Replacement

The content replacement model, also known as an accelerated curriculum model refers to students who are placed with typical peers for the majority of their education, but who are removed from their classes for a portion of the week for special classes with other gifted peers (Delcourt, Cornell, & Goldberg, 2007). The amount of time that students spend in specialized programming may vary from a few hours a week to a day or more. The classes may entail curriculum tailored to the areas in which the students excel

specifically, such as math or reading, or may involve enrichment curricula. The content replacement model is one of the less widely used models due to cost considerations. As students receive content replacement in specific areas, this model requires the hiring of a separate gifted teacher for these subjects.

This model, however, does have the advantage of yielding academic gains. In a two year study of academic and affective outcomes of gifted programming, students in content replacement, and self-contained classes showed significantly higher academic outcomes than their peers not receiving special programming (Delcourt, Cornell, & Goldberg, 2007). The gifted students showed no differences in academic self-concept (Delcourt, Cornell, & Goldberg, 2007). They also rated themselves higher in their report of their academic abilities. In Kulik and Kulik's meta-analysis (1992), students in the curriculum acceleration model, or content replacement model demonstrated substantial achievement gains over their non-gifted peers.

Mainstream.

The advantage of maintaining gifted students in regular education classes is that they have social interactions with typical peers. However, designing curriculum to meet their needs can be challenging within the regular education context, and consequently, many gifted students in this placement type do not fulfill their academic potential (Ysseldyke, et al, 2004). Frequently, gifted students in the regular education environment are given the same assignments as their typical peers. Teachers report as much difficulty incorporating gifted students into classroom instruction as they have with students with skill deficits (Ysseldyke, et al, 2004). Ysseldyke and colleagues (2010) compared gifted students within the general education setting with those given access to a computer

program that differentiated instruction to allow them to work at their own accelerated pace for math, and found that the gifted group who received the differentiated instruction demonstrated significantly higher gains for math, reinforcing the need for individualized instruction for gifted students. However, teachers' attitude toward gifted students tends to be better than their attitude toward students with emotional, behavioral or learning difficulties (Monsen, Ewing, & Kwoka, 2014).

Cluster Grouping.

In the cluster grouping model, the highest scoring five to ten gifted children in a particular grade level are placed in a multi-ability classroom with a trained gifted teacher. In addition to training in gifted education, the teachers in this model receive added training on differentiating instruction (Brulles, Saunders, & Cohn, 2010). Differentiating instruction is particularly important as gifted students in classes that do not meet their academic needs often experience frustration associated with behavioral and academic difficulties (Brulles, Saunders, & Cohn). In a comparative study of gifted students in cluster and non-cluster settings, Brulles, et al. found that gifted students in a cluster model demonstrated greater gains on district math assessments than their gifted peers in a non-clustered setting. A comparison of their scores on standardized math tests from the beginning of the year to the end of the year indicated that students in the cluster setting made significantly more gains than their peers who received no gifted programming. Considerable academic gains across all academic areas were also reported for this option (Kulik & Kulik, 1992).

Placement Type and Social-Emotional Functioning

Little research has been conducted on the relationship between social emotional skills and different academic placements for gifted students (Rogers, 1993). Kulik and Kulik (1992) found that for gifted learners placed in full-time special programs, no differences in self-esteem could be established across the studies they reviewed. Vaughn, Feldhusen, & Asher (1991) who conducted a meta-analysis of experimentally designed research studies on the effect of content- replacement programs, concluded that gifted students' self-concepts were not affected by program placement. Rogers (1993) reported a small decline in self-esteem for subject acceleration, but no differences for esteem could be established across the studies they reviewed. Acceleration involves providing students with curriculum above the typical grade level to meet their educational needs (Rogers, 1993). Vaughn, Feldhusen, & Asher (1991) who conducted a meta-analysis of experimentally designed research studies on the effect of content replacement programs, concluded that gifted students' self-concepts were not affected by program placement.

Other researchers (e.g., Marsh & Hau, 2003) have found that gifted students in accelerated classes may have lower academic self-concepts and perceived competence than those enrolled in part-time gifted educational situations. Preckel and Brull (2008) found a drop in academic self-concept for students after one year of enrollment in an accelerated secondary school program. The girls in the study reported the greatest dip in academic self-concept. The girls made up 33% of the sample, and the authors posited that some of their difficulties may have been due to being outnumbered by the boys. Moon, Swift, and Shallanberger (2002) reported that, in general, gifted students in self-contained classes were mature and self-directed and showed good behavior; however, they were

also worried and concerned. Positive results were reported by parents for less than half of the students and only a quarter of the students themselves. Several also felt pressured and stressed. Teachers, administrators and parents felt that the self-contained program helped the students to develop social skills, while the opinions of the students varied, with some, but not all, students acknowledging that they had made more friends. Thus, it appears that more research is needed into the relationship between educational placements and the social skills of gifted students.

Statement of the Problem

While many studies focusing on the functioning of gifted students have been conducted, there have been fewer studies that compare social-emotional competencies of gifted students in different placement types. By understanding how students differ in social-emotional competencies in different placements, schools can design interventions that compensate for or ameliorate these deficits.

Purpose of the Study

This study compares the social-emotional competencies of gifted students in three different placement types: self-contained, cluster, and content replacement. The purpose of this study is to determine differences in social emotional competencies between gifted students in different placement types. This information can aid in the design of interventions that target students' intra-individual strengths and weaknesses.

Research Questions

Research Questions 1. Do gifted students differ in overall social-emotional competencies from their typical peers, as measured by the normative sample of the Devereux Student Strengths Assessment (DESSA)?

Hypothesis 1. It is hypothesized that the gifted students will demonstrate stronger overall social-emotional competencies.

Research Question 2. Do gifted students in different placement types differ in overall social-emotional competencies, as measured by the Devereux Student Strengths Assessment (DESSA)?

Hypothesis 2. It is hypothesized that there will be no significant differences in overall social-emotional competencies among the different placement types.

Research Question 3. Do gifted students in different placement types differ in Personal Responsibility as measured by the Devereux Student Strengths Assessment (DESSA)?

Hypothesis 3. It is hypothesized that students in the self-contained setting will demonstrate higher scale scores in Personal Responsibility.

Research Question 4. Do gifted students in different placement types differ in Optimistic Thinking, as measured by the Devereux Student Strengths Assessment (DESSA)?

Hypothesis 4. It is hypothesized that there will be no significant differences between students in Optimistic Thinking.

Research Question 5. Do gifted students in different placement types differ in Goal-Directed Behavior as measured by the Devereux Student Strengths Assessment (DESSA)?

Hypothesis 5. It is hypothesized that students in the self-contained setting will demonstrate higher scale scores in Goal-Directed Behavior.

Research Question 6. Do gifted students in different placement types differ in

Social Awareness as measured by the Devereux Student Strengths Assessment (DESSA)?

Hypothesis 6. It is hypothesized that students in the cluster and content replacement settings will demonstrate higher scale scores in Social Awareness.

Research Question 7. Do gifted students in different placement types differ in Decision Making as measured by the Devereux Student Strengths Assessment (DESSA)?

Hypothesis 7. It is hypothesized that students in the self-contained setting will demonstrate higher scaled scores in Decision Making.

Research Question 8. Do gifted students in different placement types differ in Relationship Skills as measured by the Devereux Student Strengths Assessment (DESSA)?

Hypothesis 8. It is hypothesized that students in the cluster and content replacement settings will demonstrate higher scaled scores in Relationship Skills.

Research Question 9. Do gifted students in different placement types differ in Self-Awareness as measured by the Devereux Student Strengths Assessment (DESSA)?

Hypothesis 9. It is hypothesized that students in the cluster setting will demonstrate higher scaled scores in Self-Awareness.

Research Question 10. Do gifted students in different placement types differ in Self-Management as measured by the Devereux Student Strengths Assessment (DESSA)?

Hypothesis 10. It is hypothesized that the students in the self-contained settings will demonstrate higher scale scores in Self-Management.

Research Question 11. Are there significant differences between males and females in the different settings (self-contained, cluster, and content replacement)?

Hypothesis 11. It is hypothesized that the girls in the self-contained setting will demonstrate higher scale scores than the girls in the content replacement settings.

CHAPTER 2

METHOD

Participants

A total of 206 students from a large (approximately 33,000) K-12 public school district in the Southwest United States were rated by their teachers and participated in this study. Six students classified as twice-exceptional were not included in the comparison of placement types, as the sample was considered too small for meaningful analysis. These students were, however, included in the comparison to the national sample. The students in the study were classified as gifted based on a standard score of at least 130 on the CogAT, Form 6 (Lohman & Hagen, 2001), a measure of cognitive ability. The CogAt has a standard score of 100 and a standard deviation of 16. All students demonstrated cognitive scores at or above the 97th percentile on a verbal, quantitative and/or nonverbal cognitive measure. Students in the self-contained setting demonstrated cognitive scores at or above the 97th percentile in two areas on the cognitive measure as well as cognitive scores at or above the 90th percentile in the third area. The other two settings (i.e., cluster and content replacement) only require one area at or above the 97th percentile. Students must also complete an application process for the self-contained setting. Students ranged from kindergarten to eighth grade, and the number of students from each placement type (self-contained, content replacement, cluster) was proportional to the number served within the district. These students were rated by their gifted teachers using a norm-referenced behavior rating scale.

Measures

The teacher version of the Devereux Student Strengths Assessment (DESSA: LeBuffe, Shapiro, & Naglieri, 2009) was used to rate all students. The DESSA is a standardized 72 item norm-referenced behavior rating scale designed to assess social-emotional competencies in children from kindergarten through eighth grade. The factors measured have been found to contribute to resiliency in children (LeBuffe, et al.). The assessment is strength-based, and measures adaptive rather than maladaptive behavior. The rating form is designed to be completed by adults working with children, including teachers, parents, and school staff, as well as pediatricians and mental health agencies.

The DESSA yields a composite score, as well as scale scores in eight areas of social emotional competences: Personal Responsibility (tendency to be careful and reliable in action and contribute to group effort), Optimistic Thinking (confidence, hopefulness and positive thinking about self in past, present and future), Goal-Directed Behavior (initiation of and persistence to complete tasks), Social Awareness (ability to interact with others with respect, cooperation and tolerance), Decision-Making Relationship Skills (performance of socially acceptable actions to promote and maintain connection with others), Self-Awareness (realistic understanding of strengths and limitations and desire for self-improvement), and Self-Management (ability to control emotion and behavior to complete tasks).

Each DESSA item begins with the same statement (“During the past four weeks, how often did the child...”) and is followed by questions about the child’s strength-based behavior (e.g., “keep trying when unsuccessful” or “speak about positive things.”) Each item was rated using a 5-point Likert scale ranging from 0 to 4 (Never = 0, Rarely = 1,

Occasionally = 2, Frequently = 3, Very Frequently = 4). The DESSA provides a total *T*-score ($M = 50$, $SD = 10$), as well as *T*-scores for eight social–emotional competence subscales; *T*-scores above 60 are considered strengths, and scores below 40 are considered areas in need of improvement. Percentile ranks are also reported. The eight scales combined form a composite score called the Social-Emotional Composite (SEC, sometimes called the Total Protective factor), which provides an overall indication of the strength of the child’s social–emotional competence related to resilience.

The DESSA was normed on 2,494 children from throughout the United States. The norm sample was selected to be representative of the overall population on the measures of gender, race, ethnicity, region and socioeconomic status according to the 2008 census (LeBuffe, et al., 2009). The ethnic breakdown of the norm sample for the DESSA was 72% White, 22.3% African American, 3.0% Asian, 18.0 % Hispanic and 1.9% Native American.

The internal consistency of the DESSA Composite score, as estimated by alpha coefficients, is .99 for teacher/staff responders; the alpha coefficients of the scale scores range from .89 to .94 for teacher/staff responders. Furthermore, the test-retest reliability is good; with alpha coefficients ranging from .86 to .94 for teachers/staff, and the inter-rater reliability correlation coefficients for the scales is .735 for teachers/staff. The validity of DESSA interpretation has been supported empirically as well. Sources of validity evidence include criterion validity, as well as convergent and divergent validity (LeBuffe, Shapiro, & Naglieri, 2009).

The DESSA has good discriminative validity, and has been shown to effectively differentiate between typical students and those with behavioral and emotional

difficulties (LeBuffe, et al. 2009). When compared to typical peers, students identified with emotional or behavioral difficulties demonstrated significant differences on mean scores ($p < .01$). The DESSA was able to correctly identify 70% of students with behavioral difficulties and 76% of typical students. Higher mean scores on the scale scores were associated with fewer behavioral difficulties.

Procedure

The district Director of Gifted Education assigned the gifted teachers the task of rating their students using the DESSA as part of a district internal educational investigation. The teachers from each of the three types of gifted programs (self-contained, content replacement, and cluster), serving students in kindergarten through eighth grade rated a randomly selected group of their students using the DESSA. The anonymous archival data was provided to the investigator for use in this study, and all data was confidential. Archival information also included demographics as to age, gender, years in gifted program, as well as cognitive assessment scores. The study was approved by the Arizona State University IRB as exempt.

CHAPTER 3

RESULTS

The DESSA yields T-scores for each of the scale scores (Personal Responsibility, Optimistic Thinking, Goal-Directed Behavior, Social Awareness, Decision-Making, Relationship Skills Self-Awareness, and Self-Management) as well as a social emotional composite score. The means and standard deviations were computed for gifted students in each placement type.

A multivariate analysis of variance (MANOVA) was conducted on the subscale scores of Personal Responsibility, Optimistic Thinking, Goal-Directed Behavior, Social-Awareness, Decision-Making, Relationship Skills, Self-Awareness, and Self-Management. The independent variable was the placement type, while the dependent variables were the subscale scaled scores. Mean differences between the scales in the three placement types were analyzed. Follow-up analyses of variances (ANOVA) on each dependent variable were conducted to analyze significant differences between scale scores in different placement settings. The data file was then split into male and female and identical tests run to determine gender differences in the sample. An alpha level of .05 was used for all statistical tests.

Descriptive statistics, and multivariate analysis of variances (MANOVAs), were discussed in regards to the current study's variable measures: placement types and socioemotional competence. Statistical results were conducted using SPSS version 22.

Socioemotional competence (SEC) was operationalized as the DESSA Total Protective Factor score as well as the eight subscale scaled scores: Self-Awareness,

Social Awareness, Self-Management, Goal-Directed Behavior, Relationship Skills, Personal Responsibility, Decision Making, and Optimistic Thinking.

Descriptive Information

The study sample consisted of 206 students ages 5-14. Of those, 200 were included in the comparison of academic settings. The six students not included were part of the twice-exceptional program which catered to gifted students with educational disabilities. They were not included in the comparison as their number was too small for meaningful comparison. The gender breakdown of the 200 included in the comparison of academic settings was 43% male and 57% female. The ethnicity of the sample was 56% Caucasian, 12% Asian, 11% Hispanic, 2% African American, 1% Native American/Pacific Islander, and 15% multi-ethnic. According to the most recent census, the racial/ethnic population of the United States is 72% White, 16% Hispanic, 13% African American, 5% Asian, 1% Native American/Pacific Islander, and 3% multiethnic (United States Census Bureau, 2010). For the United States Census, the total adds to more than 100%. Hispanic is considered an ethnicity, and those who self-identify as Hispanic may also be represented in another category. Students classified as gifted qualified for the district's gifted program based on cognitive assessment scores of at least 130 on the CogAT, Form 6 (Lohman & Hagen, 2001).

Devereux Student Strengths Assessment. The Devereux Student Strengths Assessment (DESSA; LeBuffe, Shapiro, & Naglieri, 2009), a 72-item norm-referenced behavior rating scale, was used to collect information regarding.

As shown in Table 2, for the DESSA, the mean scores for the composite was 55 (T-score) and 54 or 55 for all subscales. The mean of the norm group for the DESSA total

score and for each subscale is 50 (LeBuffe, Shapiro, & Naglieri, 2009). One-sample *t* tests were conducted on the DESSA composite scores and subscale scores to evaluate whether the means for the gifted group were significantly different from the norm group. The obtained composite score mean for the gifted sample was significantly higher than the mean of the norm group. With regards to the DESSA composite score, the sample mean of 54.67 (SD = 9.89) was significantly different from 50 $t(205) = 6.76, p > .01$. The effect size *d* of .47 indicates a medium effect. This supports the hypothesis that students identified as gifted have moderately higher ratings of social emotional competence than typical students.

Means and standard deviations for the study variables are reported in Table 2. A one-way multivariate analysis of variance (MANOVA) was conducted to determine the effect of placement type (self-contained, cluster and content replacement) on the DESSA Social-Emotional Composite and the scaled scores. Significant differences were found among the three placement types on the dependent measures (social emotional competencies), Wilk's $\Lambda = .84, F(18, 378) = 1.97, p > .01$. The multivariate η^2 based on Wilk's Λ was strong, indicating that placement had an effect on social emotional competencies as measured by the DESSA. .86.

Analyses of variances (ANOVA) on each dependent variable were conducted as follow-up tests to the MANOVA. Using the Bonferroni method, each ANOVA was tested at the .05 level. When differences were found, typically higher scores were found in the cluster setting. Table 3 lists the specific mean scores for each placement type. The file was then split and the results were analyzed by gender.

Relations between placement types and overall Social-Emotional competencies

The ANOVA on the social emotional composite was nonsignificant $F(2, 197) = 1.59, p = .210, \eta^2 = .02$. For boys, the ANOVA on the social emotional composite was nonsignificant $F(2, 81) = 1.59, p = .209, \eta^2 = .04$. For girls, the ANOVA on the social emotional composite was also nonsignificant $F(2, 113) = 2.13, p = .123, \eta^2 = .04$.

Relations between placement types and Personal Responsibility

The results of the ANOVA for the Personal Responsibility scale was nonsignificant $F(2, 197) = .45, p = .639, \eta^2 = .01$. For boys, the ANOVA on the Personal Responsibility scale was nonsignificant $F(2, 81) = .862, p = .426, \eta^2 = .02$. For girls, the ANOVA on the Personal Responsibility scale was also nonsignificant $F(2, 113) = .350, p = .705, \eta^2 = .01$.

Relations between placement types and Optimistic Thinking

The ANOVA on Optimistic Thinking scale was nonsignificant $F(2, 197) = 2.95, p = .055, \eta^2 = .03$. For boys, the ANOVA on the Optimistic Thinking scale was nonsignificant $F(2, 81) = 1.20, p = .307, \eta^2 = .03$, but for girls, the ANOVA on the Optimistic Thinking scale was significant $F(2, 113) = 3.24, p = .043, \eta^2 = .05$. Post hoc analysis for the univariate ANOVA for Optimistic Thinking for girls consisted of conducting pairwise comparisons between the placement types. Each pairwise comparison was tested at the .05 level. The mean scores for the cluster setting were significantly higher than those for the content replacement for optimistic thinking, although the effect size was small according to Cohen's (1998) guidelines. There were no

significant differences between the cluster and self-contained settings or between the self-contained and content replacement settings.

Relations between placement types and Goal-Directed Behavior

The ANOVA on the Goal Directed Behavior scale was nonsignificant $F(2, 197) = 1.88, p = .156, \eta^2 = .02$. For boys, the ANOVA on the Goal Directed Behavior scale was nonsignificant $F(2, 81) = 1.99, p = .144, \eta^2 = .05$ and for girls, the ANOVA on the Goal Directed Behavior scale was also nonsignificant $F(2, 113) = 1.86, p = .161, \eta^2 = .03$.

Relations between placement types and Social Awareness

The ANOVA on the Social Awareness scale was nonsignificant $F(2, 197) = .54, p = .586, \eta^2 = .01$. For boys, the ANOVA on the Social Awareness scale was nonsignificant $F(2, 81) = .293, p = .747, \eta^2 = .01$. For girls, the ANOVA on the Social Awareness scale was also nonsignificant $F(2, 113) = .524, p = .593, \eta^2 = .01$.

Relations between placement types and Decision-Making

The ANOVA on the Decision Making scale was nonsignificant $F(2, 197) = 2.71, p = .069, \eta^2 = .03$. For boys, the ANOVA on the Decision Making scale was nonsignificant $F(2, 81) = 1.80, p = .172, \eta^2 = .04$. For girls, the ANOVA on the Decision Making scale was also nonsignificant $F(2, 113) = .524, p = .593, \eta^2 = .04$.

Relations between placement types and Relationship Skills

The ANOVA on the Relationship Skills scale was nonsignificant $F(2, 197) = 1.70, p = .185, \eta^2 = .02$. For boys, the ANOVA on the Relationship Skills scale was nonsignificant $F(2, 81) = 1.56, p = .216, \eta^2 = .04$. For girls, the ANOVA on the Relationship Skills scale was also nonsignificant $F(2, 113) = 1.90, p = .087, \eta^2 = .03$.

Relations between placement types and Self-Awareness

The ANOVA on the Self-Awareness scale was significant $F(2, 197) = 6.36, p = .002, \eta^2 = .06$. Post hoc analysis for the univariate ANOVA for Self-Awareness consisted of conducting pairwise comparisons between the placement types. Each pairwise comparison was tested at the .05 level. The mean scores for the cluster and self-contained settings were significantly higher than those for the content replacement. There were no significant differences between the cluster and self-contained setting. For boys, the ANOVA on the Self-Awareness scale was nonsignificant $F(2, 81) = 2.13, p = .126, \eta^2 = .05$. However, for girls, the ANOVA on the Self-Awareness scale was significant $F(2, 113) = 5.83, p = .004, \eta^2 = .09$. Post hoc analysis for the univariate ANOVA for Self-Awareness consisted of conducting pairwise comparisons between the placement types. Each pairwise comparison was tested at the .05 level. The mean scores for the cluster and self-contained settings were significantly higher than those for the content replacement, and the effect size was moderate. There were no significant differences between the cluster and self-contained settings.

Relations between placement types and Self-Management

The ANOVA on the Self-Management scale was nonsignificant $F(2, 197) = 1.70, p = .186, \eta^2 = .02$. For boys, the ANOVA on the Self-Management scale was nonsignificant $F(2, 81) = 1.47, p = .236, \eta^2 = .04$. For girls, the ANOVA on Self-Management scale was also nonsignificant $F(2, 113) = .839, p = .435, \eta^2 = .02$.

CHAPTER 4

DISCUSSION

This study aimed to examine the relations between socioemotional competence and gifted program placement types in gifted children. Although three of the study's hypotheses were partially or fully supported (i.e, gifted students demonstrated stronger overall social emotional competencies than the norm sample, there were no significant overall differences between the placement types on overall levels of social-emotional competence, and gifted students in the cluster setting demonstrated significantly higher skills in self-awareness), some contrary findings were also observed.

As noted previously, the results of this study indicate that teachers of students in three different placement types (cluster, self-contained, and content replacement) rated their students as having significant overall differences in overall social-emotional competencies; however, further analysis attributed these differences to just two variables: optimism and self-awareness in gifted females. Under the DESSA ratings system, T-scores from 41-59 are considered to be within the "typical" range. Despite higher scale scores for the cluster and content replacement placements, the gifted students in this study had scores within the typical range for all social emotional scales, as well the Social Emotional composite.

When separated by gender, however, the gifted girls in the cluster setting demonstrated significant normative strengths in the areas of Self-Awareness and Optimistic Thinking. Additionally, the comparison of the sample to the DESSA norm group revealed higher means on all scales, as well as the composite regardless of setting. This supports previous research that indicates that gifted students generally have stronger

social-emotional skills than their typical peers (Vaughn, Feldhusen, & Asher, 1991; Rogers, 1993; Neihart, Reis, Robinson, & Moon, 2002).

That the students in the study had higher mean scale scores than their typical peers is less surprising given past research since all the students in the study were receiving programming catered to gifted students. Students identified as being gifted often have unique educational as well as emotional needs. When surveyed about what they enjoyed most about their gifted classes, many reported features related to emotional support (Betts & Neihart, 1985). For gifted students, having the social support of peers like them has been shown to be useful in helping them develop adequate interactions and esteem (Betts, 1986). Possibly the social emotional competencies of the students in this study have been enhanced by their inclusion in gifted programming and their interactions with similar peers. One of the best aspects of many gifted programs is their recognition of individual differences and high academic standards (Callahan, 1996). They tend to stress the metacognitive skills that have been found to correlate to high academic achievement in secondary and post-secondary education (Callahan, 1996). Students in this study demonstrated strong social emotional competencies which may be related to their academic setting, although they may have possessed stronger social emotional competencies prior to their current academic placements.

The results of the present study indicate that students in the cluster setting were reported by their teachers as having significantly better social emotional competencies in the area of self-awareness than students in the content replacement setting. According to the district information on this setting, the curriculum includes an emphasis on logical thinking, reasoning and critical thinking skills. The emphasis on these skills may be

associated with the students' higher performance in this area. Moreover, the inclusion of the non-gifted peers in cluster classes may have provided leadership opportunities for gifted students.

Additionally, the trend of the data seems to indicate that teachers rated the students in the cluster placement as having higher overall social-emotional scores on all scales than they did for the students in the self-contained setting, and both the cluster and self-contained settings yielded higher overall scores than for children in the content replacement setting. These findings seem to contradict Feldhusen and colleagues' (2002) research that gifted students demonstrate no differences between academic placements.

The trait of self-awareness is defined on the DESSA as a child's "realistic understanding of his/her strengths and limitations and consistent desire for self-improvement (LeBuffe, et al., 2009). The results of this study are heartening given the effect that social emotional competency can have on outcomes for gifted students. A recently published longitudinal study of gifted students has indicated that strong social emotional skills, including traits akin to the DESSA's self-awareness, were better indicators of adult success than high IQ (Freeman, 2015). In fact, the gifted students most likely to have successful outcomes were those who best understood themselves and how to work with their own abilities. They "were more aware of their personal learning styles and made efficient use of their learning strengths" (Freeman, 2015, p. 135). Similar findings have been reported for students in primary school settings. When Deary, et al. (2004) analyzed the data from the Scottish Mental Survey, they found that early academic success was more highly correlated with self-esteem than intelligence. While not

identical to self-esteem, traits such as self-awareness and optimism are necessary precursors.

Some of the findings of this study may be due to the association between higher social emotional skills and ability to perform on standardized measures. Students with higher self-confidence and a belief in internal locus of control tend to perform better on tests of intelligence and academic ability (Boekaerts, 1991). Thus, these findings may be correlational rather than causal; as it may be that the students' confidence is a result of their knowledge of higher abilities.

Further analysis of the sample indicated that the girls in the study demonstrated significantly higher social emotional competencies in the areas of optimistic thinking and self-awareness in the cluster and self-contained settings. These settings involve access to gifted peers for longer periods of the day than the content replacement setting, during which the students are pulled from their typical peers only for the subjects in which they excel academically as opposed to an all-day setting. Some of the differences may relate to the support these types of settings can provide for gifted girls. Some research has indicated that being gifted may be harder on girls than boys socially. Luftig and Nichols (1990) had students in grades four through eight rate their peers according to perceived popularity. Some of the students had been identified as gifted, while others were typical. They found that the gifted boys were rated most popular by their peers, while the gifted girls were rated least popular (Luftig & Nichols). The types of settings that allow for the gifted girls to find peers to which they can relate may have enhanced their optimism. Peer relations during early childhood and adolescence are an important aspect of children's social-emotional development (Kwan, 1992) and as gifted girls have revealed a

preference for these types of settings (Kao, 2011); their behaviors may reflect the support these settings provide, both from teachers and peers.

Conversely, gifted girls have exhibited lower scores than gifted boys on measures of adjustment, including self-esteem, social isolation, alienation, anxiety and locus of control (Kwan, 1992). The findings of the present study contradict Kwan's findings; however, Kwan's study was based on self-report while this study was based on teacher report. The differences may be due to the differences in perception between how girls perceive themselves rather than the skills they demonstrate. That the girls in this study demonstrated strong levels of optimistic thinking regardless of placement may indicate that their social emotional needs are being met by their current programming.

The results of the current study indicated that girls in the cluster and self-contained setting demonstrated significantly higher scale scores in the area of Optimistic thinking, while no significant differences were noted for boys between settings. Optimistic thinking has been correlated with positive self-concept, a construct associated with higher academic achievement (Hay, et al., 2000). Finding settings that nurture self-concept in girls may be particularly important to their academic success, as gifted girls have demonstrated lower academic ambitions than gifted boys in secondary and post-secondary careers (York, 2008). As the social stigma has demonstrated less significance for gifted boys at this age than for gifted girls (Luftig, 2008), they may benefit from a wider array of gifted programming. Additionally, traits such as optimistic thinking and social skills have been correlated with altruistic behavior in gifted girls (Prathevan, et al, 2012), as well as with strong conflict resolution and problem solving skills (Torrance & Reynold, 1978).

Limitations and Future Directions

It is important to note the limitations involved in the present study that may reduce its generalizability. The students selected for use in this study were identified by the district for gifted testing based on school wide screening, but also on parent or teacher nomination. To qualify for inclusion in the self-contained gifted program, students also needed to complete an application process. Given the association between higher social emotional competencies and academic success, students with higher social emotional competencies may have been more likely to have been identified as gifted. The sample therefore may suffer from selection bias. The ethnicity of the sample was not representative of the national population, which may also limit generalizability.

For this study, the report of social-emotional competencies was based only on teacher report, which may limit its validity. Future studies may have access to parent and self-report information, as well as observation or sociometric data.

Another limitation of the current study is that it only compared identified gifted students receiving services. Future research may focus on comparing the social emotional competencies between students receiving gifted services and those receiving no services. In addition, the current study was limited in its scope. Future studies may seek to investigate possible third factors that have been shown to influence both social emotional competencies and cognitive abilities, such as socioeconomic status.

This study only included gifted individuals. Future comparisons between gifted students and both typical peers as well as academically high-achieving, but not gifted children may give further insight into the unique traits of gifted students.

Finally, this study was based on one teacher rating at one single point in time. Future studies may include longitudinal measures to gauge the impact of gifted programming over time as well as multiple raters. Additional research into the social emotional competencies of gifted students, especially girls in different types of gifted programs as they reach adolescence may give further insight into the emotional development of gifted students.

Conclusions

Previous research into the social emotional skills of gifted students has yielded varied results. While some research has indicated that gifted students show better developed social emotional skills, others have concluded that gifted students may have difficulty with social emotional functioning. The results of this study seem to support the notion that gifted students have social emotional skills that are more highly developed as compared to their typical peers, regardless of their educational placement.

Previous research has also suggested that gifted students have a better sense of self-awareness than non-gifted students (Snyder, Nietfield & Linnenbrink-Garcia, 2011); however, none has yet compared how gifted students fare in different placement situations. The results of this study seem to indicate that students in cluster and self-contained setting show significantly better insight into their own thinking processes and abilities. The first two settings both are homeroom settings, which may allow for the students to build up greater trust with their teachers and foster their self-confidence and security. The results of this study may aid curriculum development for social emotional functioning of gifted students.

Further, the results of the study indicate that girls in the cluster setting demonstrate significantly higher scores in the areas of optimism and self-awareness than the girls in the content replacement setting. Aspects of self-awareness involve the ability to recognize and state one's feelings, while features of optimism are confidence in oneself. Qualities such as these are necessary for positive self-concept. Nurturing the self-concept of gifted girls at this young age may affect their academic performance in later school careers. Several studies have indicated lower academic self-concept in gifted girls in secondary school when compared to gifted boys or typical girls or boys (Schober, et al. 2004; Kerr, et al., 2012).

Also, the trend of the study indicated higher social emotional competencies in a number of specific areas in the cluster setting than the content replacement setting. This is positive considering the cost effectiveness of the cluster setting as opposed to the content replacement setting. It may however, reflect a difference in the sample as opposed to the effects of the placement.

Finding cost-effective means to meet the needs of the gifted population has become increasingly important for districts attempting to run programs with limited funds. When confronting the unique social emotional needs of gifted students, prevention has been emphasized as a more effective strategy than intervention (Kwan, 1992). That the students in this study demonstrated stronger social emotional competencies than the norm group for the DESSA may imply that their social emotional needs are being met through the programming designed for their benefit.

REFERENCES

- Ambrose, D. (2003). Barriers to aspiration development and self-fulfillment: Interdisciplinary insights for talent discovery. *Gifted Child Quarterly, 47*, 282-294.
- Bain, S.K., & Bell, S.M. (2004). Social self-concept, social attributions and peers relationships in fourth, fifth, and sixth graders who are gifted compared to high achievers. *Gifted Child Quarterly, 48*, 167-178.
- Bembenutty, H. (2011). Meaningful and maladaptive homework practices: The role of self-efficacy and self-regulation. *Journal of Advanced Academics, 22*, 448-473.
- Betts, G. T. (1986). Development of the emotional and social needs of gifted individuals. *Journal of Counseling & Development, 64*, 587-589.
- Betts, G. T., & Neihart, M. F. (1985). Eight effective activities to enhance the emotional and social development of the gifted and talented. *Roepers Review: A Journal on Gifted Education, 8*, 18-23.
- Boekaerts, M. (1991). The affective learning process and giftedness. *European Journal for High Ability, 2*, 146-160.
- Bracken, B. A., & Brown, E. F. (2008). Early identification of high-ability students: Clinical assessment of behavior. *Journal for the Education of the Gifted, 31*, 403-426.
- Bratter, T. E., Bratter, C. J., Coiner, N. L., Kaufman, D. S., & Steiner, K. M. (2006). Motivating gifted, defiant, and unconvinced students to succeed at the John Dewey academy. *Ethical Human Psychology and Psychiatry: An International Journal of Critical Inquiry, 8*, 7-16.
- Bratter, T. E. (2006). When psychotherapy becomes a war: Working with gifted, alienated, angry adolescents who engage in self-destructive and dangerous behavior. *International Journal of Reality Therapy, 26*, 9-13.
- Bratter, T. E. (2009). Rejection of psychotropic medicine and DSM-IV nomenclature produce positive outcomes for gifted, alienated, and dually diagnosed John Dewey academy students who were self-destructive: Part I. *Ethical Human Psychology and Psychiatry: An International Journal of Critical Inquiry, 11*, 16-28.
- Bratter, T. E. (2011). Compassionate confrontation psychotherapy: Working with gifted but self-destructive adolescents in a therapeutic boarding school. *Adolescent Psychiatry, 1*, 227-234.

- Brulles, D., Castellano, J. A., & Laing, P. C. (2011). Identifying and enfranchising gifted English language learners. In J. A. Castellano, & A. D. Frazier (Eds.), *Special populations in gifted education: Understanding our most able students from diverse backgrounds* (pp. 305-313). Waco, TX, US: Prufrock Press, Waco, TX.
- Brulles, D., Saunders, R., & Cohn, S. J. (2010). Improving performance for gifted students in a cluster grouping model. *Journal for the Education of the Gifted*, 34, 327-350.
- Callahan, C. M. (1996). A critical self-study of gifted education: Healthy practice, necessary evil, or sedition? *Journal for the Education of the Gifted*, 19, 148-163.
- Callahan, C. M., & Moon, T. R. (2007). Sorting the wheat from the chaff: What makes for good evidence of effectiveness in the literature in gifted education? *Gifted Child Quarterly*, 51, 305-319.
- Carroll, J.B. (1993). *Human Cognitive Abilities: A Survey of Factor-Analytic Studies*. New York: Cambridge University Press.
- Carroll, J.B. & Horn, J.L. (1981). On the scientific basis of ability testing. *American Psychologist*, 36, 1012-1020.
- Castellano J. A., Frazier A. D. (Eds.). (2011). *Special populations in gifted education: Understanding our most able students from diverse backgrounds*. Waco, TX: Prufrock Press.
- Cattell, R.B. (1941). *General Psychology*. Cambridge, MA: Sci-Art Publishers.
- Cattell, R.B., & Horn, J.L. (1966). Refinement and test of the theory of fluid and crystallized generalized intelligences. *Journal of Educational Psychology*, 57, 253-270.
- Chan, D. W. (2003). Gifted education and educational psychology: The expanding roles of educational psychologists in Hong Kong. *Journal of Psychology in Chinese Societies*, 4, 103-120.
- Chan, D. W. (2003). Dimensions of emotional intelligence and their relationships with social coping among gifted adolescents in Hong Kong. *Journal of Youth and Adolescence*, 32, 409-409-418.
- Chan, D. W. (2005). Perceived multiple intelligences and learning preferences among Chinese gifted students in Hong Kong. *Journal for the Education of the Gifted*, 29, 187-212.

- Chan, D. W. (2007). Components of leadership giftedness and multiple intelligences among Chinese gifted students in Hong Kong. *High Ability Studies, 18*, 155-172.
- Chan, D. W. (2007). Leadership competencies among Chinese gifted students in Hong Kong: The connection with emotional intelligence and successful intelligence. *Roeper Review: A Journal on Gifted Education, 29*, 183-189.
- Chan, D. W. (2007). Leadership competencies among Chinese gifted students in Hong Kong: The connection with emotional intelligence and successful intelligence. *Roeper Review: A Journal on Gifted Education, 29*, 183-183-189.
- Chan, L.K. (1988). The perceived competence of intellectually talented students. *Gifted Child Quarterly, 32*, 310-314.
- Chovan, W., & Freeman, N. L. (1993). Moral reasoning and personality components in gifted and average students. *Perceptual and Motor Skills, 77*, 1297-1298.
- Chung, D., Yun, K., Kim, J. H., Jang, B., & Jeong, J. (2011). Different gain/loss sensitivity and social adaptation ability in gifted adolescents during a public goods game.
- Cohen, J. (1998). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.) Mahwah, NJ: Lawrence Erlbaum Associates.
- Cohen, R., Duncan, M., & Cohen, S. L. (1994). Classroom peer relations of children participating in a content replacement enrichment program. *Gifted Child Quarterly, 38*, 33-37.
- Deary, I.J., Whiteman, M.C., Starr, J.M., Whalley, L.J., & Fox, H.C. (2004). The impact of childhood intelligence on later life: Following up the Scottish Mental Surveys of 1942 and 1947. *Journal of Personality and Social Psychology, 86*, 130-147.
- D'Ilio, V.R., & Karnes, F.A. (1987). Social performance of gifted students as measured by the Social Performance Survey Schedule. *Psychological Reports, 60*, 396-398.
- Dixon, F. A., Prater, K. A., Vine, H. M., Wark, M. J., Williams, T., Hanchon, T., & Shobe, C. (2004). Teaching to their thinking: A strategy to meet the critical-thinking needs of gifted students. *Journal for the Education of the Gifted, 28*, 56-76.
- Fei, Z. (2004). The past and present of studies on perfectionism. *Psychological Science (China), 27*, 943-945.
- Feldhusen, J. F. (2004). Transforming gifts into talent: The DMGT theoretical model--A response. *High Ability Studies, 15*, 151-152.

- Feldhusen, J. F., Proctor, T. B., & Black, K. N. (2002). Guidelines for grade advancement of precocious children. *Roeper Review: A Journal on Gifted Education*, 24, 169-171.
- Field, T., Harding, J., Yando, R., Gonzalez, K., Lasko, D., Bendell, D., & Marks, C. (1998). Feelings and attitudes of gifted students. *Adolescence*, 33, 331.
- Figg, S. D., Rogers, K. B., McCormick, J., & Low, R. (2012). Differentiating low performance of the gifted learner: Achieving, underachieving, and selective consuming students. *Journal of Advanced Academics*, 23, 53-71.
- Floyd, R. G., Evans, J. J., & McGrew, K. S. (2003). Relations between measures of Cattell-Horn-Carroll (CHC) cognitive abilities and mathematics achievement across the school-age years. *Psychology in the Schools*, 40, 155-171.
- Freeman, J. (2015). Why some gifted children are notably more successful in life than others with equal ability and opportunities. *Revisa-de-educacion*, 367, 122-142.
- Gagné, F. (2004). Transforming gifts into talents: The DMGT as a developmental theory. *High Ability Studies*, 15, 119-147.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York, NY: Basic Books.
- Gardner, H. (2011). *Frames of mind: The theory of multiple intelligences (third edition)*. New York, NY: Basic Books.
- Gresham, F.M., & Elliott, S.N. (2008). *Social Skills Improvement System (SSIS) Rating Scales Manual*. Minneapolis, MN: Pearson.
- Hay, I., Byrne, M., & Butler, C. (2000). Evaluation of a conflict-resolution and problem-solving programme to enhance adolescents' self-concept. *British Journal of Guidance & Counselling*, 28, 101-101-113.
- Heng, M. A. (2000). Scrutinizing common sense: The role of practical intelligence in intellectual giftedness. *Gifted Child Quarterly*, 44, 171-182.
- Hollingworth, L. S. (1942). *Children above 180 IQ Stanford-Binet: Origin and development*. Yonkers-on-Hudson, NY: World Book Company.
- Hong, E., Greene, M., & Hartzell, S. (2011). Cognitive and motivational characteristics of elementary teachers in general education classrooms and in gifted programs. *Gifted Child Quarterly*, 55, 250-264.
- Hong, E., Wan, M., & Peng, Y. (2011). Discrepancies between students' and teachers' perceptions of homework. *Journal of Advanced Academics*, 22, 280-308.

- Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (2004).
- Janos, P.M., & Robinson, N.M. (1985). Psychosocial development in intellectually gifted children. In F.D. Horowitz, & M. O'Brien (Eds.) *The gifted and talented: Developmental Perspectives* (pp.149-195). Washington, DC: American Psychological Association.
- Kerr, B.A., Vuyk, M.A., & Rea, C. (2012). Gendered practices in the education of gifted girls and boys. *Psychology in the Schools, 49*, 647-655.
- Kong, T. (2014). *Social emotional competencies, cognitive ability, and achievement in gifted students* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (Accession No. 2014-99170-462)
- Kulik, J. A., & Kulik, C.L. (1992). Meta-analytic findings on grouping programs. *Gifted Child Quarterly, 36*. 73-77.
- Kwan, P.C. (1992). On a pedestal: Effects of intellectual-giftedness and some implications for programme planning. *Educational Psychology, 12*, 37-62.
- LeBuffe, P. A., Shapiro, V. B., & Naglieri, J. A. (2009). *Devereux student strengths assessment*. Lewisville, NC: Kaplan Early Learning Company.
- Lea-Wood, S.S., & Clunies-Ross, G. (1995). Self-esteem of gifted adolescent girls in Australian schools. *Roeper Review, 17*, 195-198.
- Lee, S., Olszewski-Kubilius, P., Donahue, R., & Weimholt, K. (2007). The effects of a service-learning program on the development of civic attitudes and behaviors among academically talented adolescents. *Journal for the Education of the Gifted, 31*, 165-197.
- Lee, S., Olszewski-Kubilius, P., Donahue, R., & Weimholt, K. (2008). The civic leadership institute: A service-learning program for academically gifted youth. *Journal of Advanced Academics, 19*, 272-308.
- Lee-Corbin, H., & Denicolo, P. (1998). Portraits of the able child: Highlights of case study research. *High Ability Studies, 9*, 207-218.
- Linn-Cohen, R., & Hertzog, N. B. (2007). Unlocking the GATE to differentiation: A qualitative study of two self-contained gifted classes. *Journal for the Education of the Gifted, 31*, 227-259.

- Little, C. A., Kearney, K. L., & Britner, P. A. (2010). Students' self-concept and perceptions of mentoring relationships in a summer mentorship program for talented adolescents. *Roeper Review: A Journal on Gifted Education*, 32, 189-199.
- Lohman, D. F., & Hagen, E. P. (2001). *Cognitive Abilities Test (Form 6)*. Itasca, IL: Riverside.
- Luftig, R.L., & Nichols, M.L. (1990). Assessing the social status of gifted students by their age peers. *Gifted Child Quarterly*, 34, 111-115.
- Makel, M. C., Li, Y., Putallaz, M., & Wai, J. (2011). High-ability students' time spent outside the classroom. *Journal of Advanced Academics*, 22, 720-749.
- Mandelman, S. D., Tan, M., Aljughaiman, A. M., & Grigorenko, E. L. (2010). Intellectual giftedness: Economic, political, cultural, and psychological considerations. *Learning and Individual Differences*, 20, 287-297.
- Martin, L. T., Burns, R. M., & Schonlau, M. (2010). Mental disorders among gifted and nongifted youth: A selected review of the epidemiologic literature. *Gifted Child Quarterly*, 54, 31-41.
- Marland, S. P. (1972). *Education of the gifted and talented*. Report to Congress by the U.S. Commissioner of Education. Washington, DC: Government Printing Office.
- Matthews, D., & Kitchen, J. (2007). School-within-a-school gifted programs: Perceptions of students and teachers in public secondary schools. *Gifted Child Quarterly*, 51, 256-271.
- Matthews, M. S. (2004). Leadership education for gifted and talented youth: A review of the literature. *Journal for the Education of the Gifted*, 28, 77-113.
- McCallister, C., Nash, W. R., & Meckstroth, E. (1996). The social competence of gifted children: Experiments and experience. *Roeper Review: A Journal on Gifted Education*, 18, 273-276.
- Mcclain, M., & Pfeiffer, S. (2012). Identification of gifted students in the United States today: A look at state definitions, policies, and practices. *Journal of Applied School Psychology*, 28, 59-88.
- McGrew, K.S. (2005). The Cattell-Horn-Carroll theory of cognitive abilities: Past, present and future. In D. Flanagan, & P. Harrison (Eds.), *Contemporary intellectual assessment: Theories, tests and issues* (pp. 136-181).

- Miller, K., & Cummings, G. (2009). Gifted and talented students' career aspirations and influences: A systematic review of the literature. *International Journal of Nursing Education Scholarship (IJNES)*, 6, 1-26.
- Monsen, J.J., Ewing, D.L., Kwoka, M. (2014). Teachers' attitudes towards inclusion, perceived adequacy of support and classroom learning environment. *Learning Environments Research*, 17, 113-126.
- Moon, T. R. (2011). A primer on research ethics in the field of gifted education. *Gifted Child Quarterly*, 55, 223-229.
- Moran, S. (2009). Purpose: Giftedness in intrapersonal intelligence. *High Ability Studies*, 20, 143-159.
- Morawska, A., & Sanders, M. (2009). An evaluation of a behavioural parenting intervention for parents of gifted children. *Behaviour Research and Therapy*, 47, 463-470.
- Mudrak, J. (2011). 'He was born that way': Parental constructions of giftedness. *High Ability Studies*, 22, 199-217.
- Mumford, M. D., Connelly, M. S., Baughman, W. A., & Marks, M. A. (1994). Creativity and problem solving: Cognition, adaptability, and wisdom. *Roeper Review: A Journal on Gifted Education*, 16, 241-246.
- Murphy, M. C., & Dweck, C. S. (2010). A culture of genius: How an organization's lay theory shapes people's cognition, affect, and behavior. *Personality and Social Psychology Bulletin*, 36, 283-296.
- Naglieri, J.A., Goldstein, S., & LeBuffe, P. (2010). Resilience and impairment: An exploratory study of resilience factors and situational impairment. *Journal of Psychoeducational Assessment*, 28, 349-356.
- Neber, H., & Schommer-Aikins, M. (2002). Self-regulated science learning with highly gifted students: The role of cognitive, motivational, epistemological, and environmental variables. *High Ability Studies*, 13, 59-74.
- Neihart, M. (2006). Dimensions of underachievement, difficult contexts, and perceptions of self: Achievement/Affiliation conflicts in gifted adolescents. *Roeper Review: A Journal on Gifted Education*, 28, 196-196-202.
- Nelson, A.K., & Buchholtz, E.S. (2003). Adolescent girls' perceptions of goodness and badness and the role of will in their behavioral decisions. *Adolescence*, 38, 421-440.

- Nicpon, M. F., & Pfeiffer, S. (2011). High-ability students: New ways to conceptualize giftedness and provide psychological services in the schools. *Journal of Applied School Psychology, 27*, 293-305.
- No Child Left Behind Act (NCLB) Act of 2001, 20 U.S.C.A. § 6301et seq. (West 2003)
- Nokelainen, P., Tirri, K., & Merenti-Välimäki, H. (2007). Investigating the influence of attribution styles on the development of mathematical talent. *Gifted Child Quarterly, 51*, 64-81.
- Oden, M.H. (1968). The fulfillment of promise: 40 year follow-up of the Terman gifted group. *Genetic Psychology Monographs, 77*, 3-93.
- Outside the lines: Innovations in researching giftedness. (2009). *Exceptionality Education International, 19*, 77-79.
- Park, S., Park, K., & Choe, H. (2005). The relationship between thinking styles and scientific giftedness in Korea. *Journal of Secondary Gifted Education, 16*, 87-97.
- Peterson, J. S., & Lorimer, M. R. (2011). Student response to a small-group affective curriculum in a school for gifted children. *Gifted Child Quarterly, 55*, 167-180.
- Peterson, J.S., & Ray, K.E. (2006). Bullying Among the gifted: The subjective experience. *Gifted Child Quarterly, 50* 252-269
- Pfeiffer, S. I. (2002). Identifying gifted and talented students: Recurring issues and promising solutions. *Journal of Applied School Psychology, 19*, 31-50.
- Pfeiffer, S. I. (2009). The gifted: Clinical challenges for child psychiatry. *Journal of the American Academy of Child & Adolescent Psychiatry, 48*, 787-790.
- Pfeiffer, S. I. (2012). Current perspectives on the identification and assessment of gifted students. *Journal of Psychoeducational Assessment, 30*, 3-9.
- Pfeiffer, S. I., & Jarosewich, T. (2007). The gifted rating scales-school form: An analysis of the standardization sample based on age, gender, race, and diagnostic efficiency. *Gifted Child Quarterly, 51*, 39-50.
- Pierce, R. L., Cassady, J. C., Adams, C. M., Neumeister, K. L. S., Dixon, F. A., & Cross, T. L. (2011). The effects of clustering and curriculum on the development of gifted learners' math achievement. *Journal for the Education of the Gifted, 34*, 569-594.
- Porath, M. (2006). Introduction: A developmental view of giftedness. *High Ability Studies, 17*, 139-144.

- Pramathevan, G.S., & Garces-Bacsal, R.M. (2012). Factors influencing altruism in the context of overseas learning experiences among gifted adolescent girls in Singapore. *Roeper Review: A Journal on Gifted Education*, 34, 145-157.
- Preckel, F., Brull, M. (2008). Grouping the gifted and talented: Are gifted girls most likely to suffer the consequences. *Journal for the Education of the Gifted*, 32, 54-85
- Putallaz, M., Baldwin, J., & Selph, H. (2005). The Duke University talent identification program. *High Ability Studies*, 16, 41-54.
- Ramdass, D., & Zimmerman, B. J. (2011). Developing self-regulation skills: The important role of homework. *Journal of Advanced Academics*, 22, 194-218.
- Ramsey, D. C., & Ramsey, P. L. (2002). Reframing the perfectionist's catch-22 dilemma: A systems thinking approach. *Journal for the Education of the Gifted*, 26, 99-111.
- Rayneri, L. J., Gerber, B. L., & Wiley, L. P. (2006). The relationship between classroom environment and the learning style preferences of gifted middle school students and the impact on levels of performance. *Gifted Child Quarterly*, 50, 104-104-118.
- Reis, S. M., & Renzulli, J. S. (2009). Myth 1: The gifted and talented constitute one single homogeneous group and giftedness is a way of being that stays in the person over time and experiences. *Gifted Child Quarterly*, 53, 233-235.
- Renzulli, J. S. (2002). Emerging conceptions of giftedness: Building a bridge to the new century. *Exceptionality*, 10, 67-75.
- Renzulli, J. S. (2011). Theories, actions, and change: An academic journey in search of finding and developing high potential in young people. *Gifted Child Quarterly*, 55, 305-308.
- Renzulli, J.S. (2012) Reexamining the role of gifted education and talent development for the 21st century: A four-part theoretical approach. *Gifted Child Quarterly*, 56, 150-159.
- Rinn, A. N., Reynolds, M. J., & McQueen, K. S. (2011). Perceived social support and the self-concepts of gifted adolescents. *Journal for the Education of the Gifted*, 34, 367-396.
- Robinson, N.M (2008). The social world of gifted children and youth. In S. I. Pfeiffer (Ed.) *Handbook of Giftedness in Children: Psychoeducational Theory, Research, and Best Practices (pp.33-51)*. New York, NY: Spring Science + Business Media.
- Rogers, K.B (1993). Grouping the gifted and talented: Questions and answers. *Roeper Review*, 16, 8-12.

- Rogers, K. B. (1999). The lifelong productivity of the female researchers in Terman's genetic studies of genius longitudinal study. *Gifted Child Quarterly*, 43, 150-169.
- Rudasill, K. M., & Callahan, C. M. (2010). Academic self-perceptions of ability and course planning among academically advanced students. *Journal of Advanced Academics*, 21, 300-329.
- Schober, B., Reimann, R., & Wagner, P. (2004). Is research on gender-specific underachievement in girls an obsolete topic? New findings on an often discussed issue. *High Ability Studies*, 15, 43-62.
- Seeley, K. (1993). Gifted students at risk. In L. Silverman (Ed.), *Counseling the gifted and talented* (pp. 263-276). Denver: Love Publishing.
- Siegle, D., Da Via Rubenstein, L., Pollard, E., & Romey, E. (2010). Exploring the relationship of college freshmen honors students' effort and ability attribution, interest, and implicit theory of intelligence with perceived ability. *Gifted Child Quarterly*, 54, 92-101.
- Snyder, K. E., Nietfeld, J. L., & Linnenbrink-Garcia, L. (2011). Giftedness and metacognition: A short-term longitudinal investigation of metacognitive monitoring in the classroom. *Gifted Child Quarterly*, 55, 181-193.
- Song, K., & Porath, M. (2005). Common and domain-specific cognitive characteristics of gifted students: An integrated model of human abilities. *High Ability Studies*, 16, 229-246.
- Spearman, C. (1927). *The Abilities of Man*. Oxford, England: Macmillan.
- Spearman, C. (1927). *The nature of intelligence and the principles of cognition*, 2nd edition. Oxford, England: Macmillan.
- Stephens, K. R. (2011). Federal and state response to the gifted and talented. *Journal of Applied School Psychology*, 27, 306-318.
- Sternberg, R. J. (2000). Identifying and developing creative giftedness. *Roepers Review: A Journal on Gifted Education*, 23, 60-64.
- Stoeger, H. (2011). Studies on talent development and expertise in various domains. *High Ability Studies*, 22, 1-2.
- Tanner, C. K. (2008). Explaining relationships among student outcomes and the school's physical environment. *Journal of Advanced Academics*, 19, 444-471.

- Terman, L.M. (1925).). *Genetic studies of genius*. Stanford, CA: Stanford University Press.
- Terman, L. M., & Oden, M. H. (1947). *The gifted child grows up: Twenty-five years' follow-up of a superior group*. Oxford, England: Stanford University Press.
- Tirri, K., & Koro-Ljungberg, M. (2002). Critical incidents in the lives of gifted female Finnish scientists. *Journal of Secondary Gifted Education, 13*, 151-163.
- Tirri, K., & Nokelainen, P. (2007). Comparison of academically average and gifted students' self-rated ethical sensitivity. *Educational Research and Evaluation, 13*, 587-587-601.
- Torrance, E.P., & Reynolds, C.R. (1978). Images of the future of gifted adolescents: Effects of alienation and specialized cerebral functioning. *Gifted Child Quarterly, 22*, 40-54.
- Treffinger, D. J., & Isaksen, S. G. (2005). Creative problem solving: The history, development, and implications for gifted education and talent development. *Gifted Child Quarterly, 49*, 342-353.
- Tzuriel, D., Bengio, E., & Kashy-Rosenbaum, G. (2011). Cognitive modifiability, emotional-motivational factors, and behavioral characteristics among gifted versus nongifted children. *Journal of Cognitive Education and Psychology, 10*, 253-279.
- U.S. Department of Education Office of Educational Research and Improvement (1993). *Gifted and Talented Students*. Washington, DC: U.S. Government printing office.
- U.S. Department of Commerce (2010). *2010 Census Shows America's Diversity*. Washington, DC: U.S. Government printing office.
- Von Károlyi, C. (2006). Grappling with complex global issues: Issue awareness in young highly gifted children: Do the claims hold up? *Roeper Review: A Journal on Gifted Education, 28*, 167-174.
- Walker, C. L., & Shore, B. M. (2011). Theory of mind and giftedness: New connections. *Journal for the Education of the Gifted, 34*, 644-668.
- Walker, C. L., Shore, B. M., & French, L. R. (2011). A theoretical context for examining students' preference across ability levels for learning alone or in groups. *High Ability Studies, 22*, 119-141.
- Watters, J. J. (2010). Career decision making among gifted students: The mediation of teachers. *Gifted Child Quarterly, 54*, 222-238.

- Wellisch, M., Brown, J., Taylor, A., Knight, Berresford, L., Campbell, L., & Cohen, A. (2011). Secure attachment and high IQ: Are gifted children better adjusted? *Australasian Journal of Gifted Education, 20*, 23-33.
- White, D. A. (2003). Philosophy and theory in the study of gifted children. *Roeper Review: A Journal on Gifted Education, 26*, 16-19.
- Winner, E. (2000). The origins and ends of giftedness. *American Psychologist, 55*, 159-169.
- Woitaszewski, S. A., & Aalsma, M. C. (2004). The contribution of emotional intelligence to the social and academic success of gifted adolescents as measured by the multifactor emotional intelligence scale - adolescent version. *Roeper Review: A Journal on Gifted Education, 27*, 25-30.
- Wood, S. M., & Craigen, L. M. (2011). Self-injurious behavior in gifted and talented youth: What every educator should know. *Journal for the Education of the Gifted, 34*, 839-859.
- Wood, S., Portman, T. A. A., Cigrand, D. L., & Colangelo, N. (2010). School counselors' perceptions and experience with acceleration as a program option for gifted and talented students. *Gifted Child Quarterly, 54*, 168-178.
- Worrell, F. C. (2007). Consultation in the gifted-education arena: Old wine in a new skin. *Journal of Educational & Psychological Consultation, 17*, 375-386.
- Worrell, F. C., & Erwin, J. O. (2011). Best practices in identifying students for gifted and talented education programs. *Journal of Applied School Psychology, 27*, 319-340.
- Worrell, F. C., & White, L. H. (2009). Review of critical issues and practices in gifted education: What the research says. *Psychology of Aesthetics, Creativity, and the Arts, 3*, 259-261.
- Wu, E. H. (2008). Parental influence on children's talent development: A case study with three Chinese American families. *Journal for the Education of the Gifted, 32*, 100-129.
- York, E.A. (2008). Gender differences in the college and career aspirations of high school valedictorians. *Journal of Advanced Academics, 19*, 578-600.
- Ysseldyke, J. (2001). Reflections on a research career: Generalizations from 25 years of research on assessment and instructional decision making. *Exceptional Children, 67*, 295-309.

Ysseldyke, J., Tardrew, S. P., Betts, J., Thill, T. L., & Hannigan, E. (2004). Use of an instructional management system to enhance math instruction of gifted and talented students. *Journal for the Education of the Gifted*, 27, 293-310.

Table 1
Number of students in each placement type by gender

Gender	Self-contained	Cluster	Content replacement
Male	18	22	44
Female	22	18	76
Total	40	40	120

Table 2

Overall Means and Standard Deviations of Study Variables

Construct	Mean	SD
Personal Responsibility	55.32	10.48
Optimistic Thinking	55.21	11.05
Goal-Directed Behavior	54.46	11.26
Social Awareness	53.32	10.76
Decision-Making	54.85	10.27
Relationship Skills	55.02	10.38
Self-Awareness	54.44	10.57
Self-Management	54.95	9.48
DESSA Total	54.78	9.84

Notes. n= 200; DESSA = Devereux Student Strengths Assessment.

Table 3
One-Sample T Tests on DESSA Subscales

Subscale	Mean	SD	t	Mean Difference	<i>d</i>
Personal Responsibility	55.20	10.49	7.12	5.20*	0.50
Optimistic Thinking	55.11	11.08	6.61	5.11*	0.46
Goal-Directed Behavior	54.35	11.25	5.56	4.35*	0.39
Social Awareness	53.22	10.75	4.30	3.22*	0.30
Decision Making	54.77	10.34	6.62	4.77*	0.46
Relationship Skills	54.85	10.54	6.61	4.85*	0.46
Self-Awareness	54.34	10.61	5.88	4.34*	0.41
Self-Management	54.82	9.51	7.28	4.82*	0.51
Composite	54.67	9.90	6.76	4.67*	0.47

Note. N=206; Test Value = 50.

* $p < .001$. (Two-tailed)

Table 4
Means and Standard Deviations for DESSA Scores in Different Placement Types

	Placement	Mean	Std. Deviation
PR	self-contained	55.05	13.245
	cluster	56.73	9.899
	content replace.	54.94	9.662
OT	self-contained	56.85	12.769
	cluster	58.08	9.239
	content replace.	53.71	10.802
GB	self-contained	54.48	14.943
	cluster	57.43	9.930
	content replace.	53.46	10.124
SO	self-contained	53.80	13.150
	cluster	54.65	10.242
	content replace.	52.71	10.075
DM	self-contained	55.85	13.206
	cluster	57.70	7.884
	content replace.	53.57	9.693
RS	self-contained	56.15	12.881
	cluster	57.10	9.265
	content replace.	53.94	9.720
SA	self-contained	57.00	12.686
	cluster	58.18	8.542
	content replace.	52.34	9.938
SM	self-contained	55.95	11.147
	cluster	56.88	8.492
	content replace.	53.97	9.124
Composite	self-contained	55.63	12.778
	cluster	57.35	8.186
	content replace.	53.64	9.099

Notes. n= 200; DESSA = Devereux Student Strengths Assessment; PR = Personal Responsibility; OT = Optimistic Thinking; GB = Goal-directed Behavior; SO = Social Awareness; DM = Decision Making; RS = Relationship Skills; SA = Self-Awareness; SM = Self-Management; Composite = Social-Emotional Composite; content replace. = content replacement.

Table 5
Means and Standard Deviations for DESSA Scores in girls

	Placement	Mean	Std. Dev.
PR	self-contained	58.00	12.367
	cluster	58.22	9.046
	content replacement	56.47	9.424
OT	self-contained	59.50	10.932
	cluster	60.78	7.848
	content replacement	55.18	10.100
GB	self-contained	58.55	14.625
	cluster	58.83	7.808
	content replacement	53.61	10.005
SO	self-contained	54.95	13.861
	cluster	56.33	9.204
	content replacement	53.61	10.005
DM	self-contained	58.91	12.270
	cluster	58.78	7.059
	content replacement	54.07	9.893
RS	self-contained	59.82	11.750
	cluster	59.11	7.873
	content replacement	55.89	9.192
SA	self-contained	59.32	11.387
	cluster	60.06	6.983
	content replacement	53.17	9.767
SM	self-contained	57.32	11.256
	cluster	57.39	8.132
	content replacement	54.97	9.079
Composite	self-contained	58.45	11.895
	cluster	58.89	6.936
	content replacement	54.92	8.875

Notes. n= 116; DESSA = Devereux Student Strengths Assessment; PR = Personal Responsibility; OT = Optimistic Thinking; GB = Goal-directed Behavior; SO = Social Awareness; DM = Decision Making; RS = Relationship Skills; SA = Self-Awareness; SM = Self-Management; Composite = Social-Emotional Composite; content replace. = content replacement

Table 6
Means and Standard Deviations for DESSA Scores in boys

	Placement	Mean	Std. Dev.
PR	self-contained	51.44	13.729
	cluster	55.50	10.595
	content replacement	52.30	9.598
OT	self-contained	53.61	14.361
	cluster	55.86	9.862
	content replacement	51.16	11.596
GB	self-contained	49.50	14.156
	cluster	56.27	11.432
	content replacement	51.36	10.339
SO	self-contained	52.39	12.472
	cluster	53.27	11.038
	content replacement	51.16	10.120
DM	self-contained	52.11	13.681
	cluster	56.82	8.561
	content replacement	52.00	9.236
RS	self-contained	51.67	13.092
	cluster	55.45	10.145
	content replacement	50.57	9.782
SA	self-contained	54.17	13.913
	cluster	56.64	9.515
	content replacement	50.91	10.179
SM	self-contained	54.28	11.097
	cluster	56.45	8.943
	content replacement	52.25	9.045
Composite	self-contained	52.17	13.294
	cluster	56.09	9.044
	content replacement	51.43	9.156

Notes. n= 84; DESSA = Devereux Student Strengths Assessment; PR = Personal Responsibility; OT = Optimistic Thinking; GB = Goal-directed Behavior; SO = Social Awareness; DM = Decision Making; RS = Relationship Skills; SA = Self-Awareness; SM = Self-Management; Composite = Social-Emotional Composite; content replace. = content replacement.

Table 7
MANOVA and ANOVA Analyses of Differences in DESSA Scores by Placement Type

Construct	MANOVA			ANOVA	
	Wilk's <i>A</i>	<i>F</i>	multivariate η^2	<i>F</i>	η^2
DESSA Scores (all scales and Total)*	.84	1.97	.86		
Personal Responsibility				.45	.01
Optimistic Thinking				2.95	.03
Goal-Directed Behavior				1.88	.02
Social Awareness				.54	.01
Decision- Making				2.72	.03
Relationship Skills				1.70	.02
Self- Awareness**				6.36	.06
Self- Management				1.70	.02
DESSA Total				2.35	.02

Notes. n= 200; DESSA = Devereux Student Strengths Assessment.

* $p < .05$, ** $p < .01$

Table 8
MANOVA and ANOVA Analyses of Differences in DESSA Scores by Placement Type for girls

Construct	MANOVA			ANOVA	
	Wilk's Λ	F	multivariate η^2	F	η^2
DESSA Scores (all scales and Total)*	.81	1.27	.98		
Personal Responsibility				.35	.01
Optimistic Thinking**				3.24	.05
Goal-Directed Behavior				1.86	.03
Social Awareness				.52	.01
Decision-Making				2.50	.04
Relationship Skills				1.90	.03
Self-Awareness**				5.83	.09
Self-Management				.84	.02
DESSA Total				2.13	.04

Notes. n= 200; DESSA = Devereux Student Strengths Assessment.

* $p < .05$, ** $p < .01$

Table 9

MANOVA and ANOVA Analyses of Differences in DESSA Scores by Placement Type for boys

Construct	MANOVA			ANOVA	
	Wilk's Λ	F	multivariate η^2	F	η^2
DESSA Scores (all scales and Total)*	.70	1.59	.16		
Personal Responsibility				.86	.02
Optimistic Thinking				1.20	.03
Goal-Directed Behavior				1.99	.05
Social Awareness				.29	.01
Decision-Making				1.80	.04
Relationship Skills				1.56	.04
Self-Awareness				2.13	.05
Self-Management				1.47	.04
DESSA Total				1.59	.04

Notes. n= 200; DESSA = Devereux Student Strengths Assessment.

* $p < .05$, ** $p < .01$