Encouraging Social/Emotional Development in Twice Exceptional Youth

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Asynchronous Development

Gifted children develop in multiple layers. They can appear very mature in some areas and less mature in others.

You could see all of the below items at the same time:

- Highly advanced intellect
- Advanced sense of humor
- Acutely aware of fairness and injustice in the world
- Unable to tie their own shoes
- Need to sleep with the light on
- Unable to express their advanced thoughts in writing

Asynchrony Definition of Giftedness:

- A markedly uneven development experienced internally due to different rates of cognitive, social, emotional, and physical growth and manifested externally due to a lack of fit with age mates and with societal expectations.

1991-Columbus Group with Dr. Linda Silverman

Non -Intellective Factors in Gifted Children

- Gifted children---
  - Don't follow the rules.
  - Tend to be domineering.
  - Are argumentative
  - Tend to tune out.
  - Can be excessively competitive
  - Have a tendency toward tunnel vision
  - Have a sense of over excitability
  - May have a sharp sense of humor
  - Are often compulsive collectors.
    - Abraham Tannenbaum

Early Observations

- Alert, active
- Sensitive to environment
- Long attention span
- Exceptional memory
- Learns new things quickly
- May walk, talk early
- Extensive vocabulary
- Observant
- Curious
- Asks more complex questions

Early Observations

- Imaginary playmates
- Creative and imaginative
- Interest in books
- Ability to work puzzles
- Interest in time and numbers
- Sense of humor
- Intense frustration
- Perfectionistic
- Chooses older playmates
- Concern for morality and justice

Outside Influences

- Conformist School Culture
- Home Environment
- Expectations of Others
- Family Relationships
- Peer Relationships

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Social and Emotional Needs

- Security
- Identity
- Belonging
- Purpose
- Competence

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Security

- Awareness of feelings
- Caring
- Protect/Comfort
- Trust
- Personal Responsibility
- A Safe Environment
- Anticipation
- Expectations
- Choices/Consequences

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Identity

- Self-Awareness
- Strengths/Weaknesses
- Physical Self
- Managing Emotions
- Love/Honor
- New Roles
- Heroes
- Celebrate Who I Am

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Promoting Sense of Identity

- Build positive self-images by talking about the positive qualities you see in them.
- Focus on the discrepancy between beautiful person inside and their behavior or the person they present to others.
- Discuss with them the characteristics they most admire in adults.
- Have them discuss their values and those characteristics they value in themselves.
- Help them make realistic assessments about themselves
- Point out their dependable strengths or hidden talents.
- Have them talk about the myths others might believe about them.
- Teach them ways of handling put-downs.
- Help them see that they have choices in how they want to deal with their feelings. Help them express feelings in acceptable ways.
- Find ways to convey a sense of caring.

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Accommodations for Intensity

- Help children with stress management
- Help with task analysis and time management
- Assistance with transitions
- Suggest involvement in Tae Kwon Do
- Discussions with student about triggers
- Counseling about intensity
- Do not attempt to “fix” the intensity.
- Children and parents need to accept intensity and develop strategies to accommodate for themselves.

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Belonging

- Social Skills
- Empathy
- Differences/Commonalities
- Opportunities for Service Learning
- Traditions
- Connectiveness
- Responsibilities

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Purpose

- Interests/Passions
- Problem Solving
- Goal Setting
- Relevance
- Organization/Study Skills
- Vision/Values

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Making Being Gifted O.K.

- Understanding my giftedness
- Validation from people who matter
- Support and enthusiasm
- Gender issues
- Knowing my place in the world
- It's okay to make mistakes and ask for help.

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Competence

- Decision making
- Choices/options
- Mistakes/expectations
- Respond to intelligence
- Celebrate!

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At-Risk Behaviors Warning Signs

- Self-imposed isolation
- Shifts in school performance
- Rigid compulsive behavior
- Extreme perfectionism
- Eating disorders
- Self-depreciation
- Substance abuse
- Depression or continual boredom
- Frequent mood shifts
- Inability to control or express anger
- Withdrawal into a fantasy world
- Unusual fascination with violence
- Preoccupation with death

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Characteristics of Gifted/Autistic Youth

- Poor social skills and understanding of social cues
- Autistic individual who shows signs of giftedness (approximately 10% of autistic population)
  - Preference for routine
  - Low IQ
  - Generally their giftedness will occur in areas other than intellectual
- Creative abilities
  - Artistic and musical
- Extreme possessiveness of unusual objects
  - Hypersensitivity to sensory stimuli

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Instructional Strategies for Autistic/Gifted Youth

- Use hands-on kinesthetic activities
- Teach to their strengths
- Use physical, verbal, and visual aids to signify transition
- Infuse social and communication skills into the academic programming
- Provide structure and routine
- Include parent(s), clinical professional(s), and student when determining educational programming

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Characteristics of Gifted/ Asperger's Syndrome Youth

- Poor nonverbal communication skills
- Lack of coordination
- Exceptional memory
- Normal to high IQ
- Poor sense of time
- Inflexibility
- Difficulty transitioning between tasks
- Inability to explain their feelings and those of others
- Poor social skills

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Instructional Strategies for Gifted/ Asperger's Syndrome Youth

- Establish a daily routine
- Avoid sarcasm
- Teach students to deal with sudden change
- Develop social skills
- Provide a rubric when asking essay questions
- Develop an IEP that addresses student's strengths and weaknesses
- Include parents, clinical professionals, and student when making decisions about educational programming
- Provide hands-on activities
- Arrange the room so that the gifted/AS child is near few distractions

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Characteristics for Gifted/Emotional-Behavioral Disabled Youth

- Defiance
  - Aggression, violence, peer and adult conflict
- Loneliness
  - Withdrawal, depression, isolation, low self-esteem, self-rejection
- Stress
  - Hyperactivity, impulsivity, distractibility, and anxiety
- Socialization problems
  - Immaturity, criticism, humiliation
- Underachievement

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Instructional Strategies for Gifted/ Emotional-Behavioral Disabled Youth

- Incorporate multidisciplinary activities
- Provide supportive, sensitive and positive home/school environments
- Alleviate conflict and shape a positive self-concept
- Create intellectually challenging activities
- Make modifications to enhance learning atmosphere
  - Match methods to gifts/talents and disabilities
  - Utilize inclusion, modeling, cooperative learning, and authentic learning

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Characteristics of Gifted/ADHD

- Inattentiveness
- Impulsive/hyperactive conduct
- Eagerness
- Compassion
- Fidgetiness
- Minimal need of sleep
- Strong-mindedness since early childhood
- Difficulty with lengthy assignments

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Instructional Strategies for Gifted/ADHD

- Incorporate cooperative learning activities that allow the student to take a leadership role
- Teach organizational skills
- Stress appropriate social skills
- Utilize communication sheets with parents
- Create short, intellectually challenging activities
- Provide hands-on kinesthetic activities
- Differentiate the curriculum

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General Characteristics of Gifted/Learning Disabled

- Intelligence
- Ingenious problem-solving skills
- Poor social skills
- Exceptional memory
- Frustration
- Quick conceptualization of ideas
- Advanced abstract reasoning skills
- Academic achievement below academic potential

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General Instructional Strategies for Gifted/Learning Disabled Youth

- Develop social skills
- Establish a daily routine
- Differentiate the curriculum
- Encourage cooperation among teachers, parents, administrators, and student
- Allow for multiple program options
- Develop strengths so that student can compensate for disabilities
- Design activities to engage the learner in real-world learning
- Build self-esteem

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CURRENT RESEARCH ON THE SOCIAL AND EMOTIONAL DEVELOPMENT OF GIFTED AND TALENTED STUDENTS: GOOD NEWS AND FUTURE POSSIBILITIES

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A recent summary of research produced by a task force of psychologists and educational researchers associated with the National Association for Gifted Children and the National Research Center on the Gifted and Talented indicated that high-ability students are generally at least as well adjusted as any other group of youngsters. This research also found, however, that gifted and talented students can face a number of situations that may constitute sources of risk to their social and emotional development. Some of these issues emerge because of a mismatch with educational environments that are not responsive to the pace and level of gifted students' learning and thinking. Others occur because of unsupportive social, school, or home environments. In this article, current research about the social and emotional development of gifted and talented students is summarized and suggestions are made about strategies to enhance these students' school experiences. Suggestions are provided for assessment and educational programming based on students' strengths and interests that may result in helping talented students realize their potential. © 2004 Wiley Periodicals, Inc.

Current press and popular television portray a rather skewed view of gifted and talented youth as the "dorky" misfit. However, this portrayal is generally inaccurate. A recent summary of research produced by a task force associated with the National Association for Gifted Children and the National Research Center on the Gifted and Talented indicated that high-ability students are generally at least as well adjusted as any other group (Neihart et al., 2001). However, gifted and talented students may face sources of risk to their social and emotional development. This article summarizes current research about the social and emotional characteristics of gifted individuals, with the hope that researchers interested in gifted and talented students will consider the use of positive psychology (Seligman & Csikszentmihalyi, 2000; Sheldon & King, 2001) to maximize understanding and encouragement of the talents of high potential children.

Defining Gifted and Talented Students

A perception that giftedness and high IQ are synonymous continues to exist despite more current research supporting multiple components of intelligence (Gardner, 1993; Sternberg & Davidson, 1986). More recent work defines giftedness as having multiple qualities and disputes the use of an IQ score as an inadequate measure of giftedness. Motivation, high self-concept, and creativity were found to be key qualities in many of these broadened conceptions of giftedness (Siegler & Kotovsky, 1986). Renzulli's (1978) three-ring definition of gifted behaviors consists of an interaction among three basic clusters of human traits—above average ability, high levels of task commitment, and high levels of creativity. Renzulli believes that individuals capable of developing gifted behavior are those possessing or capable of developing this composite set of traits and applying them to any potentially valuable area of human performance.

In summary, current work suggests that gifted and talented students are a very diverse group of individuals who have ability, in one or more domains, that is sufficiently advanced and requires changes in the school environment, such as the instructional curriculum and teacher behaviors. The widely accepted federal definition of giftedness (Ross, 1993) highlights their intellectual,

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creative, and/or artistic areas, unusual leadership capacity, or excellence in specific academic fields, and indicates that outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor (p. 26). This diversity of talents is represented in the following two case studies.

Andy

At only three years of age, Andy's emotional intensity, curiosity, and inability to relate to his peers were evident to his parents and his preschool teachers. When Andy was in the second grade, he was described as "out of sync," demonstrating notable academic advancement over his peers while simultaneously showing signs of social isolation. In addition, Andy began to complain of stomachaches and begged his parents to allow him to stay at home. Despite the efforts of his parents and educators, these problems continued sporadically throughout elementary and middle school. By the time Andy entered middle school, his reputation as a "nerd" was established and his differences exacerbated to the extent that his parents sought an evaluation and support both in and out of school. The school psychologist observed Andy to spend the majority of time trying to avoid the school bullies who had made him a favorite target. His feelings of social isolation were accompanied by increasing academic invisibility, as he spent most days trying not to be noticed either socially or academically.

As a result of these findings, several schedule changes were made for Andy, such as cluster grouping him into classes with a few other academically talented students. The school psychologist and counselor began periodically seeing Andy and meeting with his teachers to receive regular updates. Andy had his curriculum compacted (Reis, Burns, & Renzulli, 1992; Renzulli, 1978) to avoid wasting time learning what he already knew, and his curriculum was differentiated and extended to accommodate the varied pacing he needed. One of his teachers became a mentor and helped him with a science fair project and also provided opportunities for accelerating instruction in an advanced math class for Andy and other classmates. A gifted specialist also worked with Andy and several other students on a regular basis, encouraging more supportive relationships between Andy and other students. His parents carefully monitored his school situation and encouraged some initial friendships with students who Andy had academic similarities. His father reduced his work schedule to spend more time with Andy.

With these supports in place, Andy overcame many of the social problems he had initially faced. As he grew older, his differences became less noticeable and he found a small group of friends. Through high school, he was placed in classes that challenged him academically as well as nurtured his interests, and he continued to see his school guidance counselor on a periodic basis. Andy is presently finishing his senior year of high school and is academically successful, is active in music and drama, and has friends in both his academic and extracurricular life. Andy's case demonstrates that this type of success can occur when educators work together to develop Andy's talents and address social and emotional issues that, if unattended, might have affected him very differently.

Daphne

A recent article profiled a similarly talented student who experienced a very different outcome (Allen, 2001). Daphne was once heralded on the cover of *Parade* as one of the brightest high school students in the country and the smartest girl in Maine. Although she grew up in a home with few resources, from the time she entered school it was clear that she was extremely advanced intellectually. Her parents and teachers recognized these talents at a very young age, but while school personnel made some efforts to help Daphne, little encouragement and support were offered

at home. Daphne learned little about effort, earning high grades with absolutely minimal effort. When she was in middle school, she won a scholarship to attend a summer program for gifted and talented students. Despite this opportunity and her work with a gifted and talented program specialist in her public school, the absence of consistent school and home support took a toll. Daphne's grades in high school were variable. Few home resources, non-supportive parents and little high school challenge affected Daphne, who eventually attended and subsequently flunked out of college. Later, she lost a few low paying jobs and struggled to find a way to utilize and further develop her talents and find personal support. Friendships have been slow to develop and personal contentment is yet to be realized in her life.

Both Andy and Daphne experienced some of the social and emotional issues that can affect gifted and talented students. With greater understanding, educators are able to make many of the changes that offer the challenges, flexibility, and acceptance that these students need to flourish. Indeed, many gifted young people possess assets that, when supported, may enhance their resilience to negative life events, enabling them to utilize their talents and live productive and satisfying lives. Applying some of the tenets of "positive psychology" (Seligman & Csikszentmihalyi, 2000; Sheldon & King, 2001) may help to encourage and enhance the talents of high potential children and youth.

Social and Emotional Adjustment of Talented Youth

A recent review of research (Neihart et al., 2002) pointed to one clear finding: high-ability students are generally at least as well adjusted as any other group of youngsters, meaning that most talented students do not face any more social and emotional problems than do other students. However, this review also found that gifted and talented students can and often do face a number of situations that, while not unique to them, constitute sources of risk to their social and emotional development if their needs are not met (Neihart et al., 2002). The failure to address affective components that often help to develop talents in young people may compromise or thwart the actualization of their high potential (Robinson, 2002). Three major areas constitute risks to the social and emotional development of gifted and talented children, including (a) issues deriving from their academic advancement as compared with their age peers and from unevenness in their development; (b) common areas of psychological response to talents, including underachievement and perfectionism; and (c) their dual identification as twice exceptional, such as having a learning disability or attention deficit and also having talents and gifts (Neihart et al., 2002).

Issues Deriving from Students' Advancement Compared with Age Peers

Some talented and gifted students face social and emotional issues deriving from their academic advancement in comparison with their age peers that makes them appear different in school and/or with their social groups (Neihart et al., 2002). Recent research indicates that teachers can seldom adequately meet the needs of gifted children in regular classrooms with classmates of their age (Archambault et al., 1992; Westberg et al., 1992). It is unfortunate that this lack of knowledge exists, as numerous strategies can be used to make the classroom environment more challenging and developmentally appropriate for gifted students while simultaneously improving education for *all* children. These techniques include "compacting" the curriculum to avoid wasting time teaching what children already know (Reis, Burns, & Renzulli, 1992), differentiating and extending what is taught to accommodate varied pacing and levels of development (Renzulli, 1988; Renzulli & Reis, 1997; Tomlinson, 1995), acceleration of instruction (Rogers, 2002), and using high-interest content and hands-on activities to create high engagement and creativity (Renzulli & Reis, 1985, 1997).

Gifted children may also be affected by social context, perhaps because they demonstrate more mature social competence than their chronological peers. Some may have fewer friends, and in order to feel accepted and make more friends, talented students may deny their academic needs to satisfy social needs. As early as elementary school, some gifted youngsters hide their talents; by adolescence, the situation becomes more common. Students who are able to find intellectual peers, either by placement in a special program or by acceleration, generally feel less pressure to conform and more freedom to pursue academics. The situation can be even more awkward for those students who are extremely talented and who have few peers, as they may become less socially adept, more introverted, and more inhibited and lonely (Neihart et al., 2002).

Talented children often experience uneven development in that some areas are advanced while others are average. Affect regulation in gifted children, for example, is often more mature than expected for chronological age. Affect regulation involves managing emotional experience in a healthy way (Keiley, 2002). Gifted and talented children often have fears that are similar to those of older children but they do not know how to cope with these fears as older persons do. Some talented children are advanced in understanding their own emotions and demonstrate compassion, moral sensitivity, loyalty, and courage that can set them apart from their peers (Neihart et al., 2002).

Common Areas of Psychological Response

Current research has identified common areas of psychological vulnerability experienced by some gifted students such as perfectionism (Schuler, 2002), underachievement (Reis & McCoach, 2002), and indecision about which of several talents to pursue. Dabrowski believed that some gifted individuals experience "forms of psychic overexcitability" in the five areas of psychomotor, sensory, intellectual, imaginational, and emotional experience (O'Connor, 2002). This overexcitability can explain a number of issues faced by talented children and adults.

Perfectionism is another common area of psychological response that can affect many talented and gifted students, and it generally involves holding very high standards for one's performance, which can produce both very negative or highly positive outcomes. Perfectionism can translate into persistence, leading to success—but unhealthy, unrealistic perfectionism can also result in avoidance, anxiety, and failure (Schuler, 2002).

Underachievement is widely regarded as one of the most pervasive problems affecting gifted and talented students (Reis & McCoach, 2000, 2002), and can result from multiple sources such as under-challenging schools, peer pressure for conformity, social isolation, and family dysfunction. Unfortunately, the pattern of underachievement is difficult to reverse and often persists into adulthood.

As noted, with the exception of creatively gifted adolescents who are talented in writing or the visual arts, studies do not confirm that gifted individuals manifest significantly higher or lower rates or severity of depression than those for the general population (Neihart & Olenchak, 2002). Gifted children's advanced cognitive abilities, social isolation, sensitivity, and uneven development may cause them to face some challenging social and emotional issues, but their problem-solving abilities, advanced social skills, moral reasoning, out-of-school interests, and satisfaction in achievement may help them to be more resilient (Neihart, 2002b). Similarly, no research indicates that suicide is more common in gifted adolescents than other adolescents (Neihart et al., 2002). Recent incidents of school violence by bright young people have suggested that gifted youngsters may be at special risk for delinquent behavior, but research evidence to date suggests the opposite—that gifted students evidence less delinquency than average students (Neihart et al., 2002).

Groups of Gifted Students with Special Needs

Social and emotional issues may be experienced by gifted and talented students who are members of specific groups, such as gifted females, gifted students with learning disabilities, or individuals who are highly creative (Neihart et al., 2002). For example, talented females' belief in their ability and their feelings of self-confidence may be undermined and/or diminished during childhood and adolescence (Reis, 1987, 1998). This may exist because of external factors including stereotypes and barriers to achievement presented by parents, school, and the larger society; and from internal barriers that include personal priorities for social rather than achievement goals, declines in self-confidence, and competing choices (Reis, 1987, 1998). Talented boys are often praised for their athletic prowess but not for their academic abilities (Hébert, 2002).

Another group of gifted and talented children with special needs are children of color who are consistently underrepresented in gifted programs, an area of widespread concern (Ford, 2002). Gifted Black students encounter more barriers to racial identity development than do White students, particularly when they feel they must choose between academic success and social acceptance (Ford, 2002; Neihart et al., 2002). In addition, students who are creatively talented in the arts may not fit in or excel academically in traditional educational settings. A special risk for bipolar mood disorders exists for those with high creative ability in writing and in the visual arts, although most creative artists and writers are not subject to such diagnosable conditions (Neihart & Olenchak, 2002).

Finally, gifted students with learning disabilities are often misunderstood because their giftedness can mask their disabilities and their disabilities can camouflage their talents. They may be considered "lazy" because, while they are outstanding in some areas, such as verbal skills, they may have trouble producing high-quality written work (Baum, Owen, & Dixon, 1991; Reis, Neu, & McGuire, 1995; Olenchak & Reis, 2002). Even those who are appropriately identified may encounter difficulties in social adjustment because in settings for gifted students, there is less tolerance for their struggles with self-direction and completing work efficiently, and because some impairment of social skills may accompany their learning difficulties (Reis, 1995; Olenchak & Reis, 2002). For example, gifted students with attention-deficit disorder, with or without hyperactivity (ADHD) are at risk for difficulties with social and emotional adjustment (Moon, 2002). Some gifted children who have ADHD face risks such as misidentification, emotional immaturity, peer rejection, family stress, and school stress—all of these enhanced by their difficulties with consistent management of attention and organization (Moon, 2002).

Interventions to Promote Healthy Social Emotional Development in this Population

Some prevention and intervention approaches have been found useful in supporting the healthy social and emotional development of gifted and talented students (Reis & Moon, 2002). Practices that facilitate positive development include (a) the support and encouragement of accelerative learning experiences; (b) time to learn with others of similar abilities, interests, and motivation; (c) engagement in areas of interest with a variety of peers; (d) mentoring and pragmatic coaching to cope with the stress, criticism, and social milieu associated with high levels of performance in any domain; (e) early presentation of career information; and (f) social-emotional curriculum approaches to help gifted children support one another (Neihart et al., 2002).

Various counseling formats have been recommended for working with gifted students who need additional support, ranging from psychoeducational formats like affective curricula delivered by teachers as one component of a comprehensive gifted program to more traditional therapeutic interventions such as group counseling, individual counseling, and family counseling. Group

counseling is an excellent support and preventative strategy if trained counseling personnel are available to implement the groups . For example, counselors who specialize in working with gifted and talented youth find that these children may experience stress related to their giftedness in home and/or school. Thus, stress management techniques and/or counseling provided by individuals with training to work with this population may be beneficial. Specific strategies such as bibliotherapy (reading books about gifted persons; Hébert, 2000) or cinematherapy (watching movies about gifted individuals; Milne & Reis, 2000) can serve as a different kind of self-help experience. True stories, such as biographies of famous people, and fictional stories, like *Little Man Tate* and *October Sky*, can help gifted youth understand their giftedness and inspire them to persist in developing their talents.

In addition to direct counseling, several preventative strategies can be used to address the affective needs of gifted and talented students. Teachers can model kindness, caring, and concern for all students, and maintain high standards for positive behavior such as zero tolerance for any acts of unkindness. Teachers can also give positive feedback and recognition for appropriate behavior, and can provide experiences for students to learn problem solving and how to mediate arguments. Classroom teachers can develop and implement affective curriculum units in areas such as conflict resolution, decision-making, and leadership. In addition to these individual strategies, an integrated continuum of special services has been proposed and implemented with success.

An Integrated Continuum of Special Services

One approach to providing an integrated continuum of special services is through the use of the Schoolwide Enrichment Model (SEM). The Schoolwide Enrichment Model (Renzulli, 1977a; Renzulli & Reis, 1985, 1997) was originally created as a programming model for gifted students, but it has also been used as a talent development approach to provide enriching learning and affective experiences for all children. The SEM has three major goals: (1) developing talents in all children; (2) providing a broad range of advanced-level enrichment experiences for all students; and (3) using the ways that students respond to these enrichment experiences as stepping stones for follow-up advanced learning for children with high potential and demonstrated gifts and talents.

The SEM uses three components to accomplish these goals: (1) The Total Talent Portfolio (individual portfolios for talent development in each child focusing on abilities, interests, and learning styles); (2) Curriculum modification, including a system of curriculum compacting; textbook analysis and curriculum mapping; and expanding the depth of learning to enable students to learn something they select in an advanced manner, and (3) Enrichment teaching and learning (a series of enrichment strategies that take into account the uniqueness of each learner and the enjoyment of learning experiences). Curriculum compacting, the most popular method of the second component, is an instructional technique designed to make appropriate curricular adjustments for students in any curricular area and at any grade level. The procedure involves (1) defining the goals and outcomes of a particular unit or segment of instruction, (2) determining and documenting which students have already mastered most or all of a specified set of learning outcomes, and (3) providing replacement strategies for material already mastered through the use of instructional options that enable a more challenging and productive use of the student's time.

The third component, enrichment teaching and learning, is accomplished through use of the Enrichment Triad Model (Renzulli, 1977a), which was designed to encourage creative productivity on the part of young people by exposing them to various topics, areas of interest, and fields of study, and to further train them to *apply* advanced content, process-training skills, and methodology training to self-selected areas of interest. Three types of enrichment are included in the Triad Model. Type I enrichment is designed to expose students to a wide variety of disciplines, topics, occupations, hobbies, persons, places, and events that would not ordinarily be covered in the

regular curriculum. In schools that use this model, an enrichment team consisting of parents, teachers, and students often organizes and plans Type I experiences by contacting speakers, arranging mini-courses, demonstrations, or performances, and/or distributing films, slides, videotapes, or other print or non-print media. Type II enrichment consists of materials and methods designed to promote the development of thinking and feeling processes. Some Type II training is general, and is usually carried out both in classrooms and in enrichment programs. Training activities include the development of: (1) creative thinking and problem solving, critical thinking, and affective processes; (2) a wide variety of specific learning how-to-learn skills; (3) skills in the appropriate use of advanced-level reference materials; and (4) written, oral, and visual communication skills. Other Type II enrichment is specific as it cannot be planned in advance and usually involves advanced methodological instruction in an interest area selected by the student. For example, students who become interested in botany after a Type I experience might pursue additional training in this area by doing advanced reading in botany; compiling, planning, and carrying out plant experiments; and seeking more advanced methods training if they want to go further.

Type III enrichment involves students who become interested in pursuing a self-selected area and are willing to commit the time necessary for advanced content acquisition and process training in which they assume the role of a first-hand inquirer. The goals of Type III enrichment include providing opportunities for applying interests, knowledge, creative ideas and task commitment to a self-selected problem or area of study and acquiring advanced level understanding of the knowledge (content) and methodology (process) that are used within particular disciplines. In Type III studies, students are encouraged to develop authentic products directed toward bringing about a desired impact upon a specified audience. Through the development of self-directed learning skills in the areas of planning, organization, resource utilization, time management, decision making and self-evaluation, students develop task commitment, self-confidence, and feelings of creative accomplishment that contribute to their healthy social and emotional development.

The Continuum of Services in the SEM. The SEM includes an integrated continuum of services for talented and gifted students that can also be applied to other students (see Figure 1). Services provided in the model range from general enrichment for both wide-ranging and targeted subgroups to highly individualized curriculum modification procedures for rapid learners and first-hand investigative opportunities for highly motivated individuals and small groups. The model also includes a broad array of specific grouping arrangements based on commonalities in abilities, interests, learning styles, and preferences for various modes of expression.

As seen in Figure 1, the arrow on the left-hand side of the figure, Continuum of Potentials (Input) is intended to convey the broad range of abilities, interests, and learning styles that exist in any population and subpopulation of students. Even in highly targeted groups (e.g., advanced math students), there is always a range of abilities, interests, and learning styles, and this range requires that differentiated learning experiences must be provided to accommodate individual differences. The arrow on the right hand side of Figure 1, Continuum of Performances (Output) is intended to illustrate the range of performances and modes of expression that will result from differentiated learning experiences. When considering this range of performances, we should take various modes of expression into consideration as well as levels of ability. The center section of Figure 1 (Process) represents many of the organizational methods for delivering various types of services to students. An important consideration is that any and all services provided through differing organizational approaches are integrated or interconnected so that an experience in one organizational setting can be capitalized upon by connecting it with options from another organizational component. If for example, eight or ten primary age students across two or three grade levels have demonstrated extremely high achievement in mathematics, classroom teachers should provide curriculum differentiation and compacting services for such students, and teachers should

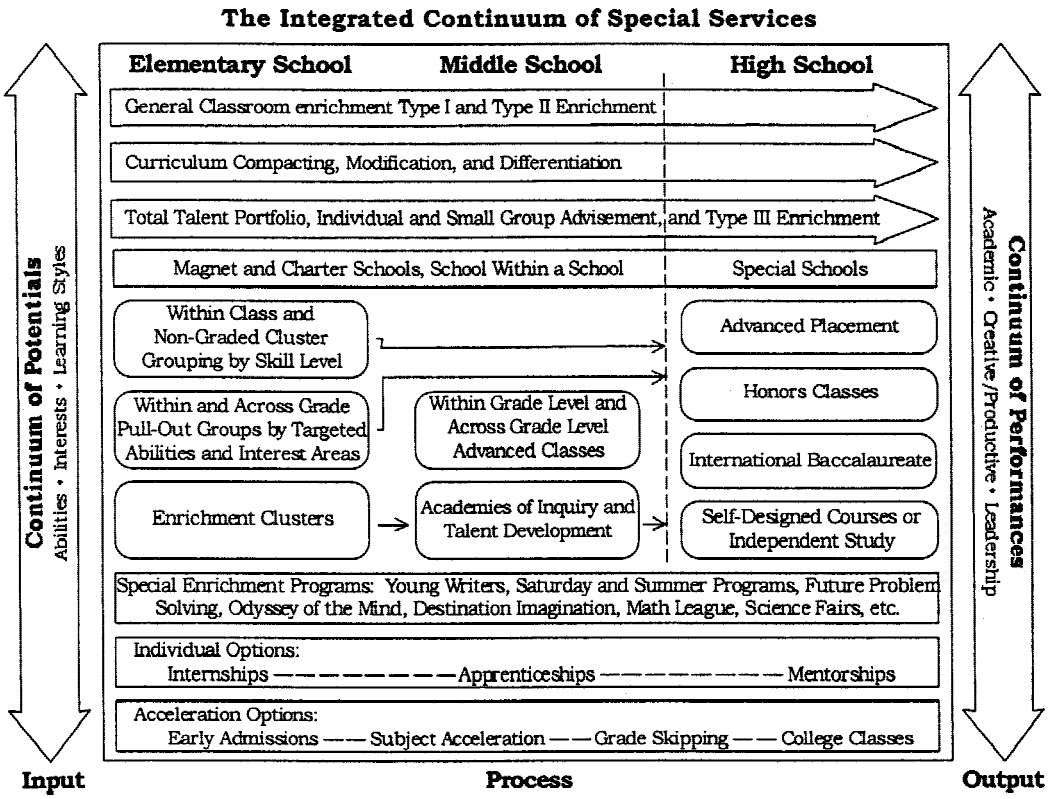

FIGURE 1. The integrated continuum of special services.

be using the time gained through compacting to provide within-class acceleration and mathematics enrichment opportunities. But equally important is the need to arrange a special grouping situation that allows these students to interact with their mathematically able peers on a regular basis, known as cluster grouping (Gentry & Owen, 1999). Both compacting and cluster grouping will be further enhanced if the classroom teachers and the person(s) providing instruction to the special group are in close communication about the respective activities in classroom and special group situations.

Effectiveness of the SEM. The SEM has been implemented in over 3000 schools across the country and the world, and interest in this approach continues to grow. Extensive evaluations and research studies indicate the effectiveness of the model in over 20 years of research and field-testing. The research on SEM has been investigated in over 30 different studies summarized in various articles (Olenchak, 1988; Olenchak & Renzulli, 1989; Renzulli & Reis, 1994). This research is subdivided into eight areas: (a) the effectiveness of the model as perceived by key groups; (b) research related to student creative productivity; (c) research relating to personal and social development; (d) the use of SEM with underserved populations; (e) research on student self-efficacy, (f) the use of SEM as a curricular framework; (g) research relating to learning styles and curriculum compacting and (h) longitudinal research on the SEM. Research on the SEM suggests that the model is effective at serving high-ability students in a variety of educational settings and in schools that serve diverse ethnic and socioeconomic populations.

Implications of the SEM for School Psychologists. School psychologists can also play an important role in guiding educational interventions by focusing on two dimensions of the assessment as related to the SEM. The first dimension deals with gathering strength-based information that extends beyond simple cognitive assessment. Every learner has strengths or potential strengths that can serve as a foundation for effective learning and creative productivity, and in the SEM, educators are asked to consider interests and learning styles. We recommend that this information be systematically gathered through a vehicle called *The Total Talent Portfolio* (Purcell & Renzulli, 1998). School psychologists who participate in creating the TTP can help teachers learn more about students and can help to develop more appropriate learning experiences.

The first type of information recorded in the TTP deals with status information, such as test scores, course grades, teacher ratings of various learning behaviors, and formal and informal assessments of interests and learning styles. Abilities, or maximum performance indicators (as traditionally defined in the psychometric literature), deal with competencies that represent the highest level of performance a student has attained in a particular area of aptitude or scholastic achievement. A teacher-rating instrument that is both valid and reliable such as the *Scales for Rating the Behavioral Characteristics of Superior Students—Revised Edition* (SRBCSS) (Renzulli et al., 2002) can also provide insight into student abilities and talents. Although SRBCSS has traditionally been used to identify students for special services, it can be useful in a TTP as a way to gain insights about student strengths.

Building educational experiences around student interests is probably one of the most effective ways to guarantee that enrichment practices will be provided for students. A planned strategy for helping students examine their present and potential interests is based on a group of instruments called the *Interest-A-Lyzer* (Renzulli, 1977b, 1996). The *Interest-A-Lyzer* family of instruments is available in three levels, Primary (K–3), Elementary (3–6), and Secondary (7–12). The main purpose of the *Interest-A-Lyzer* is to help to identify patterns or factors that might emerge from the instrument include: Performing Arts, Creative Writing and Journalism, Mathematics, Business and Management, Athletics, History, Social Action, Fine Arts, Science, and Technology. These factors represent *general* fields or families of interest and that numerous ways exist in which an individual may be interested in any particular field. Thus, identifying general patterns is only the first step in interest analysis. General interests must be refined and focused so that students identify specific problems within a general field or combination of fields.

Attention should also be given to the ways in which young people might go about pursuing their interests. The use of an instrument entitled *The Learning Styles Inventory* (Renzulli, Rizza, & Smith, 2002) enables us to determine the amount of structure that students prefer in various learning environments. The instrument ranges across the following nine areas of student preference (ranging from more to less structured): Drill and Recitation, Direct Teaching, Instruction Through Technology, Peer Teaching, Discussion, Teaching Games, Simulations, Independent Study, and Projects. While including learning style preferences in the TTP is important, teachers should understand that most students will vary their preferences according to subject and age and so this component should be used to help teachers consider how learning can be more enjoyable for students if opportunities are provided to enable them to work within their area of preference occasionally.

Another category in the Total Talent Portfolio deals with the ways in which people prefer to express themselves. Knowledge about the ways in which young people prefer to express themselves can be a valuable tool for organizing cooperative learning and project groups. An instrument entitled *My Way: An Expression Styles Inventory* (Kettle, Renzulli, & Rizza, 1998) has been developed to help teachers and students identify preferences for products in the following categories: Written, Oral, Artistic, Computer Technology, Audio/Visual Technology, Commercial, Ser-

vice, Dramatization, Manipulative, and Musical. Each of these instruments, used in enrichment programs for decades, have been revised during the last ten years, and have high reported validity and reliability (Renzulli, Rizza, & Smith, 2002; Kettle, Renzulli, & Rizza, 1997).

In addition to playing a role in the creation of the TTP, the school psychologist can work with teachers to periodically review portfolios, and the portfolios can serve as focal points for meetings with parents. The portfolio should travel with a students from year to year and should serve as the basis for understanding the complete picture of individual student strengths and accomplishments.

Conclusion

It is our hope that in the future more school psychologists will be devoted to answering questions from teachers and parents about how we provide appropriate learning options for our most potentially able students. It is also our hope that school psychologists will be able to provide support and advice for parents and teachers regarding social and emotional problems or issues that may be faced by students with gifts and talents. Some of these issues emerge because of a mismatch with educational environments that are not responsive to the pace and level of gifted students' learning and thinking. Others occur because of an unsupportive social, school, and/or home environment. When these problems are identified early, school psychologists can help to resolve them and provide advice about the next logical step to resolution. One of the biggest challenges for the future is to help to provide opportunities for gifted and talented students to realize their potential and to emerge as confident, positive leaders and problem solvers. School psychologists can help in numerous ways to realize this dream.

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Nurturing Social-Emotional Development of Gifted Children

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What Are the Social-Emotional Needs of Gifted Children?

To a large degree, the needs of gifted children are the same as those of other children. The same developmental stages occur, though often at a younger age (Webb & Kleine, 1993). Gifted children may face the same potentially limiting problems, such as family poverty, substance abuse, or alcoholism. Some needs and problems, however, appear more often among gifted children.

Types of Problems

It is helpful to conceptualize needs of gifted children in terms of those that arise because of the interaction with the environmental setting (e.g., family, school, or cultural milieu) and those that arise internally because of the very characteristics of the gifted child.

Several intellectual and personality attributes characterize gifted children and should be noted at the outset. These characteristics may be strengths, but potential problems also may be associated with them (Clark, 1992; Seagoe, 1974).

Some particularly common characteristics are shown in the table.

POSSIBLE PROBLEMS THAT MAY BE ASSOCIATED WITH CHARACTERISTIC STRENGTHS OF GIFTED CHILDREN

Strengths	Possible Problems
Acquires/retains information quickly	Impatient with others; dislikes basic routine.
Inquisitive; searches for significance.	Asks embarrassing questions; excessive in interests.

Intrinsic motivation.	Strong-willed; resists direction.
Enjoys problem-solving; able to conceptualize, abstract, synthesize.	Resists routine practice; questions teaching procedures.
Seeks cause-effect relations.	Dislikes unclear/illogical areas (e.g., traditions or feelings).
Emphasizes truth, equity, and fair play.	Worries about humanitarian concerns.
Seeks to organize things and people.	Constructs complicated rules; often seen as bossy.
Large facile vocabulary; advanced, broad information.	May use words to manipulate; bored with school and age-peers.
High expectations of self and others.	Intolerant, perfectionistic; may become depressed.
Creative/inventive; likes new ways of doing things.	May be seen as disruptive and out of step.
Intense concentration; long attention span and persistence in areas of interest.	Neglects duties or people during periods of focus; resists interruption; stubbornness.
Sensitivity, empathy; desire to be accepted by others.	Sensitivity to criticism or peer rejection.
High energy, alertness, eagerness.	Frustration with inactivity; may be seen as hyperactive.
Independent; prefers individualized work; reliant on self.	May reject parent or peer input; nonconformity.
Diverse interests and abilities; versatility	May appear disorganized or scattered; frustrated over lack of time.
Strong sense of humor.	Peers may misunderstand humor; may become "class clown"for attention.

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Adapted from Clark (1992) and Seagoe (1974).

These characteristics are seldom inherently problematic by themselves. More often, combinations of these characteristics lead to behavior patterns such as:

- **Uneven Development.** Motor skills, especially fine-motor, often lag behind cognitive conceptual abilities, particularly in preschool gifted children (Webb & Kleine, 1993). These children may see in their "mind's eye" what they want to do, construct, or draw; however, motor skills do not allow them to achieve the goal. Intense frustration and emotional outbursts may result.
- **Peer Relations.** As preschoolers and in primary grades, gifted children (particularly highly gifted) attempt to organize people and things. Their search for consistency emphasizes "rules," which they attempt to apply to others. They invent complex games and try to organize their playmates, often prompting resentment in their peers.
- **Excessive Self-Criticism.** The ability to see possibilities and alternatives may imply that youngsters see idealistic images of what they might be, and simultaneously berate themselves because they see how they are falling short of an ideal (Adderholt-Elliott, 1989; Powell & Haden, 1984; Whitmore, 1980).
- **Perfectionism.** The ability to see how one might ideally perform, combined with emotional intensity, leads many gifted children to unrealistically high expectations of themselves. In high ability children, perhaps 15-20% may be hindered significantly by perfectionism at some point in their academic careers, and even later in life.
- **Avoidance of Risk-Taking.** In the same way the gifted youngsters see the possibilities, they also see potential problems in undertaking those activities. Avoidance of potential problems can mean avoidance of risk-taking, and may result in underachievement (Whitmore, 1980).
- **Multipotentiality.** Gifted children often have several advanced capabilities and may be involved in diverse activities to an almost frantic degree. Though seldom a problem for the child, this may create problems for the family, as well as quandaries when decisions must be about career selection (Kerr, 1985; 1991).
- **Gifted Children with Disabilities.** Physical disabilities can prompt social and emotional difficulties. Intellect may be high, but motor difficulties such as cerebral palsy may prevent expression of potential. Visual or hearing impairment or a learning disability may cause frustration. Gifted children with

disabilities tend to evaluate themselves more on what they are unable to do than on their substantial abilities (Whitmore & Maker, 1985).

Problems from Outside Sources

Lack of understanding or support for gifted children, and sometimes actual ambivalence or hostility, creates significant problems (Webb & Kleine, 1993). Some common problem patterns are:

- **School Culture and Norms.** Gifted children, by definition, are "unusual" when compared with same-age children--at least in cognitive abilities--and require different educational experiences (Kleine & Webb, 1992). Schools, however, generally group children by age. The child often has a dilemma--conform to the expectations for the average child or be seen as nonconformist.
- **Expectations by Others.** Gifted children--particularly the more creative--do not conform. Nonconformists violate or challenge traditions, rituals, roles, or expectations. Such behaviors often prompt discomfort in others. The gifted child, sensitive to others' discomfort, may then try to hide abilities.
- **Peer Relations.** Who is a peer for a gifted child? Gifted children need several peer groups because their interests are so varied. Their advanced levels of ability may steer them toward older children. They may choose peers by reading books (Halsted, 1994). Such children are often thought of as "loners." The conflict between fitting in and being an individual may be quite stressful.
- **Depression.** Depression is usually being angry at oneself or at a situation over which one has little or no control. In some families, continual evaluation and criticism of performance--one's own and others--is a tradition. Any natural tendency to self-evaluate likely will be inflated. Depression and academic underachievement may be increased.

  Sometimes educational misplacement causes the gifted youngster to feel caught in a slow motion world. Depression may result because the child feels caught in an unchangeable situation.

- **Family Relations.** Families particularly influence the development of social and emotional competence. When problems occur, it is not because parents consciously decide to create difficulties for gifted children. It is because parents lack

information about gifted children, or lack support for appropriate parenting, or are attempting to cope with their own unresolved problems (which may stem from their experiences with being gifted).

Preventing Problems

- **Reach out to Parents.** Parents are particularly important in preventing social or emotional problems. Teaching, no matter how excellent or supportive, can seldom counteract inappropriate parenting. Supportive family environments, on the other hand, can counteract unhappy school experiences. Parents need information if they are to nurture well and to be wise advocates for their children.
- **Focus on Parents of Young Children.** Problems are best prevented by involving parents when children are young. Parents particularly must understand characteristics that may make gifted children seem different or difficult.
- **Educate and Involve Health-Care and Other Professionals.** Concentrated efforts should be made to involve such professionals in state and local meetings and in continuing education programs concerning gifted children. Pediatricians, psychologists, and other caregivers such as day-care providers typically have received little training about gifted children, and therefore can provide little assistance to parents (Webb & Kleine, 1993).
- **Use Educational Flexibility.** Gifted children require different and more flexible educational experiences. When the children come from multicultural or low-income families, educational flexibility and reaching out may be particularly necessary. Seven flexibly paced educational options, relatively easy to implement in most school settings (Cox, Daniel & Boston, 1985) are: early entrance; grade skipping; advanced level courses; compacted courses; continuous progress in the regular classroom; concurrent enrollment in advanced classes; and credit by examination. These options are based on competence and demonstrated ability, rather than on arbitrary age groupings.
- **Establish Parent Discussion Groups.** Parents of gifted children typically have few opportunities to talk with other parents of gifted children. Discussion groups provide opportunities to "swap parenting recipes" and child-rearing experiences. Such experiences provide perspective as well as specific information (Webb & DeVries, 1993).

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Competing with myths about the social and emotional development of gifted students « SENG

Competing with myths about the social and emotional development of gifted students

Author Tracy L. Cross **Citation** From Gifted Child Today. 2002 Summer. Reprinted with permission.

Competing with Myths about the Social and Emotional Development of Gifted Students

by Tracy L. Cross

As a person who has dedicated himself to the study of the psychological and experiential lives of gifted students, I have encountered widely held myths and associated practices that have negative effects on the social and emotional development of gifted students. These myths are common among parents, teachers, administrators, and gifted students. As a wise person (Lao Tsu) once said, “Nothing is more difficult than competing with a myth.” Doing so, however, can create tremendous opportunities for people. Recall that it was not that long ago that myth prevented women from competing in long distance foot races.

The following list includes some of the most common and insidious examples of myths pertaining to the social development of gifted students. I hope that by discussing these examples, gifted students will be better served and barriers to their well-beings will be broken.

Myth 1. Gifted students should be with students their own age. The worry expressed here is that something inappropriate or untoward will occur if different age groups spend time together. Parents, teachers, and administrators worry that groups of multi-age children will struggle with exploitation, intimidation, inappropriate modeling, and sexuality. This prevailing myth undergirds some advocates’ preferences for educational models that emphasize enrichment rather than acceleration. The logic is as follows: “We should keep the students together even if they have already mastered the material.” Some believers of this myth will claim that research supports this point, but in fact they are mistaken. Writers have published this sentiment, but research does not support this idea. In fact, in my research with Larry Coleman, it is clear that gifted students need opportunities to be together with their intellectual peers, no matter what their age differences (Coleman & Cross, 2001). While there are plenty of appropriate reasons to provide enriching educational experiences, these decisions should not be made out of fear, worry or myth; they should be based on the needs of the students.

Myth 2. Gifted students are better off if they spend their entire school day amidst same-age, heterogeneous classmates. The claim is that if we allow gifted students to be clustered together through one of any means available, they will be unable to get along with others later in life, and this experience will cause emotional distress. Middle school principals and some middle school teachers regularly expressed these feelings. This concern includes the belief on the parts of the adults that gifted students, to be happy, must become socially astute. Becoming socially astute requires that gifted students spend as much time as possible in heterogeneous classroom environments. Once again, the claimed research that supports this myth is virtually nonexistent. Imagine all the opportunities students have to interact with other people. Church, sports, dubs, meals, camps, are just a few examples. Sacrificing learning and creating frustration based on this myth is unethical, in my opinion. This problem increases as the students develop and their knowledge base increases within a specific discipline.

Myth 3. Being perfectly well rounded should be the primary goal for gifted student development. Please note the carefully chosen phrase, “perfectly well rounded,” as opposed to “somewhat well-rounded.” Many parents, teachers, and administrators believe that it is their role to ensure that gifted students are perfectly well-rounded. To that end, they will encourage, prod, goad, push, threaten, and yell at gifted students to get them to spend less time engaged in their passion areas, so they can engage in something the adult wishes them to do. A very common example is that of an introverted gifted student who has great facility with computers. Adults will drag the child away from her passion to get her to participate in something she may loathe. While adults in each of these roles should be concerned with the well-being of gifted students, requiring them to engage in activities for which the gifted student has no interest (e.g., going outside and playing, or spending time with other children you do not choose to play with during the school day) as a means to make them happy later in life is misguided. Much of the research on successful gifted adults has revealed that they spent considerable amounts of time, often alone, in their passion areas as children. A more reasonable approach is to encourage and nurture other interests in the child rather than sending them the message that they are unacceptable as they are. For example, sending gifted children to a residential summer program can do wonders to broaden interests within a community where they feel emotionally safe and accepted for who they are.

Myth 4. Being gifted is something with which you are just born. A corollary to this is that things come easily when you are gifted or being gifted means never having to study or to try hard in school. This naive notion of giftedness, while intuitively proper, can be debilitating to gifted students’ development. Many teachers, parents, administrators, and gifted students hold this belief. It is not informed, however, by research on talent development and development in general. Moving from an entity notion of giftedness to an incremental notion, wherein talent is developed with hard work and some failure, is a much healthier and more nurturing experience of being a gifted student (Dweck, 1986). This change in understanding of giftedness is of particular importance before age 10 or so. That is because a school’s curriculum tends to get more focused as it moves toward middle school. Many gifted students experience this change as personal failure, causing self-doubt and distress, because they have internalized intellectual struggle as failure. To change this belief merely requires teaching gifted students about the two definitions, exposing them to models who failed in the process of great accomplishment (e.g., Thomas Edison) and having them go through processes that include struggle as part of growth.

Myth 5. Virtually everybody in the field of gifted education is an expert on the social and emotional development of gifted students. An extension of this is that every adult (parent, teacher, school administrator) is an expert on the social and emotional development of gifted students. The field of gifted studies is quite small, often yielding professionals in the field who are called on to be experts in numerous areas. This regularly plays out with a high percentage claiming expertise and being called on to provide wisdom on this topic. Another reason for this situation is the fact that we were all students once ourselves and that, supposedly, makes us familiar with gifted students’ lives. This is similar to my having played football as a youngster and now claiming expertise equivalent to that of Peyton Manning. Many factors combine to create situations where competing advice–sometimes by people who mean well, but do not know the research on the social and emotional development of gifted students–is given. As the field of gifted studies grows and matures, I think that children would be better served by having the expertise of those who specialize, rather than relying on a model that requires its experts to know a little about everything associated with the field.

Myth 6. Adults (parents, teachers, and administrators) know what gifted students experience. This plays out on issues such as being around bullies and drugs, sexuality, and social pressures. In addition to the usual generational differences, in many ways, contemporary experiences are different from the experiences of previous generations. For example, many gifted students go to school fearful of schools as unsafe environments. Gifted students of today are often surrounded by guns, and when not, still perceive that they are. In short, the vague red menace of previous generations has been replaced by generalized anxiety and fear; fear that the media has exacerbated and kept alive in ways that are inescapable by today’s youth. The

hubris of adults to believe that they know what gifted students experience on a daily basis is mind-boggling. Consider these two facts: the suicide rate of adolescents rose more than 240% between 1955 and 1990, and suicide is the second leading cause of death of this age group (Holinger, Offer, Barter & Bell, 1994). Is it possible that our children live in a somewhat different context than adults did at the same age? If parents can observe classrooms more often, talk with their gifted children, asking for descriptions of their experiences, then a much richer understanding is possible.

Myth 7. Being too smart in school is a problem, especially for girls. This myth has many facets to it. It represents adults' worries about their own feelings of acceptance; concerns about fears associated with standing out; the typical antiintellectual culture of schools; the reflection of society's under evaluation of high levels of achievement; and the often mentioned, intuitively based association of high levels of intellectual ability with low levels of morality. The obvious consequence of this myth is the nurturing of incredibly high percentages of our students who underachieve in school. A large proportion of American students with gifts and talents have developed social coping strategies that use up time, energy, limit their opportunities, cause bad decisions to be made, retard their learning, and threaten their lives. These behaviors and beliefs about self make perfect sense when one perceives the mixed messages about being gifted in their school's social milieu. We must provide support for these children as they navigate the anti-intellectual contexts in which they spend much of their time.

Myth 8. All kids are gifted, and no kids are gifted. This myth is most often expressed by administrators and occasionally by teachers. The reasons for these two beliefs are predictable given the developmental differences that manifest across the grade levels. For example, while in the elementary grades, which are thought to have a more amorphous curriculum than the later grades, teachers typically perceive manifestations of potential for extraordinary work as indicators of giftedness. As the child moves toward high school where the curriculum tends to be quite focused, with distinct disciplines being taught by teachers passionate about the subject areas they teach (we hope), giftedness is often determined as meaningful only as a manifestation of success within the specific courses. Middle school represents some of both of these operative definitions of giftedness.

Another important aspect to this belief is the primary motivator that led teachers and administrators to pursue their profession. For example, when you ask elementary teacher candidates what they want to do most, they will tell you that they want to teach young children. Secondary teachers tend to say that they want to teach math, English, and so forth. Middle school teachers often hold very strong views about the specific age group of students they have chosen to work with. These teachers and administrators often describe the primary school-based needs of middle school students in terms of social needs and their need to learn in a protective environment that emphasizes the students' developmental frailties. A rigorous educational curriculum is seldom the highest priority.

Another undercurrent to these positions is that being gifted is tied to the assumption that gifted children are better than other students. This is a very unfortunate connection, because it encourages adults to hold the position that all kids are gifted or no kids are gifted. James Gallagher, a wise man in the field of gifted education, once said "When someone claims that all kids are gifted, merely ask them `In what?'" Being gifted eventually has to be in something. While all kids are great, terrific, valuable, and depending on your beliefs perhaps even a gift from God, they are not all gifted in the way the term is used in the field. Giftedness is not an anointment of value. A person who shows extraordinary ability for high levels of performance when young and, if provided appropriate opportunities, demonstrates a development of talent that exceeds normal levels of performance, is gifted.

I hope that providing a list of some of the pervasive and insidious myths that affect the lives of gifted students will inspire us to take action on behalf of the students. If we challenge these myths with examples of good research, provide appropriate counseling and create learning environments where students with gifts and talents can thrive, then many of these myths can be eliminated. Let us work to help all students have an appropriate education, including gifted students.

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The effects of acceleration on the social and emotional development of gifted students

Pollins, L.
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This article is a book chapter by Lynn Pollins. It discusses studies on acceleration as it relates to the student's social and emotional development. There has never been a study that showed a negative result of acceleration. By contrast, there may even be positive effects to the social and emotional development of accelerants.

Abstract
From the two perspectives of a literature review and a longitudinal comparison of accelerants and non-accelerants, an examination of the potential effects of acceleration on the social and emotional development of gifted students revealed no identifiable negative effects. The literature review discusses several major studies with respect to issues central to the problem: the differential effects of varying methods of acceleration, the definition of the "social and emotional development" construct, and the identification of appropriate reference groups. The longitudinal comparison presents the results of a study of twenty-one male radical accelerants and twenty-one nonaccelerants matched on age and ability at the time of the talent search. A comparison on several variables revealed that the two groups were very similar at age 13. Five years later, however, differences favoring the accelerants were found in educational aspirations and in the perceived use of educational opportunities, amount of help they reported having received from SMPY, and their evaluation of SMPY's influence on their social and emotional development.

Daurio (1979) argues that opposition to acceleration of gifted students is justified primarily by concern for its effect on the students' social and emotional development. This report examines the merits of this argument from two perspectives. First, the results of several major studies of the social and emotional development of accelerants are reviewed in the context of a core of issues central to the problem. Second, the social and emotional development of gifted radical accelerants and the social and emotional development of nonaccelerants identified through the Study of Mathematically Precocious Youth are compared. Neither the review of the literature nor the comparison of the SMPY gifted students identified any negative effects of acceleration on social and emotional development. Indeed, any effects of this sort seem to be positive. The validity of the claim that acceleration is somehow detrimental to the social and emotional development of accelerants must thus be seriously questioned.

Research on the Social and Emotional Development of Gifted Students
The social and emotional development of accelerated gifted students has been the subject of much attention from psychologists and educators. The belief that acceleration somehow inhibits social and emotional development appears so widespread that arguments over the advantages and disadvantages of acceleration "seem to hinge on the relative weights that should be given to social and intellectual values in the educative process" (Terman & Oden 1947, p. 264). This section discusses a cluster of issues whose resolution is central to research in this area and reviews the results of several major studies in this context.

ISSUES CENTRAL TO THE STUDY OF THE SOCIAL AND EMOTIONAL DEVELOPMENT OF ACCELERATED STUDENTS
There are several problems inherent in studying the effects of acceleration on the social and emotional development of gifted youths. First, acceleration may be achieved by one or more of a variety of methods. Stanley (1979) has delineated some types of acceleration: grade skipping, early part-time college study, college graduation in fewer than four years (by entering college with sophomore standing, taking heavier-than-average course-loads, attending summer school, and/or concurrent graduate study), and bypassing the bachelor's degree. While all of these methods follow Pressey's (1949, p. 2) definition of *acceleration* as "progress through an educational program at rates faster or ages younger than conventional, "they may affect the social and emotional development of the students choosing them in different ways. It is not difficult, for example, to imagine that studying calculus on one's own at age 13 and taking the Advanced Placement exam to get college credit for it affects the student differently than does taking a regular college calculus course at the same age. Despite the basic nature of this concern, many studies of the social and emotional development of accelerated students do not report the method by which the students became accelerated (see, for example, Terman & Oden 1947). The degree of acceleration, as well as the method used to achieve it, may also differentially affect the social and emotional development of gifted students. Six years of acceleration quite probably affects a gifted student differently than does one year of acceleration. Most research in the area has focused on "moderate" acceleration of one to two years.

Another definitional problem involves the "social and emotional development" construct. Consensus among investigators on the meaning of this phrase is low. In various studies the construct has been equated with participation in extracurricular activities (Pressey 1949; Hobson 1963), presence of leadership qualities (Morgan 1959; Keys 1938), degree of interpersonal effectiveness (Worcester 1956; Birch 1954), and absence of psychopathology (Elwell 1958). That these and other specific, relevant concepts are themselves difficult to define precisely and even more difficult to measure accurately complicates the situation further. Clearly, a thorough study would measure several of these facets of "social and emotional development."

A third problem lies in the definition of reference groups. Many studies have compared the accelerants with their older, more average-ability classmates (Hobson 1963; Pressey 1949). If the question to be addressed is how well the accelerants fit in with their older classmates, this approach seems worthwhile. It does not, however, speak to the more important issue of how acceleration affects the development of gifted students. A bright youth may choose either to accelerate or to opt for some other educational path and still remain equally bright. The most appropriate comparison is thus between the social and emotional development of two groups of equally gifted youths—accelerants and nonaccelerants (as in Terman & Oden 1947; Fund for the Advancement of Education 1953).

A number of investigators have examined the effects of acceleration on the social and emotional development of gifted youths with varying degrees of consideration of the issues just discussed. A large group of educators recommended exercising extreme caution when considering acceleration as an educational alternative for gifted students. Most of these recommendations were based on intuition or on case studies that did not involve comparison with any reference groups (Zorbaugh 1937; Edelston 1950).

FINDINGS OF RESEARCH ON THE SOCIAL AND EMOTIONAL DEVELOPMENT OF ACCELERATED

FINDINGS OF RESEARCH ON THE SOCIAL AND EMOTIONAL DEVELOPMENT OF ACCELERATED STUDENTS

Among the scientific investigations in this area, a review of the literature confirmed Daurio's (1979) finding that not one study has found acceleration to harm the social and emotional development of gifted students permanently or severely. The following is a discussion of the results of several of the major studies in this area.

Terman (1925-59) investigated longitudinally, descriptively, and observationally the development of more than 1,000 gifted children. In chapter 20 of the fourth volume of the *Genetic Studies of Genius* series, Terman and Oden (1947) divided their sample into three groups according to age at high-school graduation. The routes by which these students had come to be accelerated were not specified. The three groups were compared longitudinally on a number of measures of social adjustment, including ratings by parents, teachers, and fieldworkers, extracurricular participation in high school and college, and scores on a marital adjustment test. Terman and Oden found that "the influence of school acceleration in causing social maladjustment has been greatly exaggerated. There is no doubt that maladjustment does result in individual cases, but our data indicate that in a majority of subjects the maladjustment consists of a temporary feeling of inferiority which is later overcome. The important thing is to consider each child as a special case" (ibid., p. 275).

Terman and Oden also found that the accelerants had a higher probability of furthering their education, had greater occupational success, had higher marital satisfaction, and had suffered no negative effects on their physical maturation.

Keys's (1938) carefully controlled study compared a group of gifted accelerated students with a sample of equally bright nonaccelerants. Further, two subgroups of accelerants were defined according to I.Q.; one group of accelerants had IQs below 120 and another had IQs greater than 136. The effects of acceleration could thus be analyzed in terms of both intelligence and chronological age. Keys found that the accelerants participated in more extracurricular activities, had better study habits, held more offices, and won more scholarships than did the equally intelligent nonaccelerants. Sociability appeared more related to intelligence than to age. The highest self-estimated happiness was reported by the very bright accelerants.

Hobson (1963) followed up underage students admitted to school on the basis of mental, rather than chronological, age. The underage pupils participated in more extracurricular activities than their normal-aged classmates. Worcester (1956) also examined the social and emotional development of underage students admitted on the basis of test scores. Peers and teachers rated the underage students as being as well or better adjusted socially and emotionally as their older classmates. Worcester concluded that "the younger ones had gained a year of school time without a loss in social adjustment" (ibid., p. 28).

Pressey (1949) studied underage college students at Ohio State University matched with a control group of equally bright, older students. He found that a larger percentage of the underage students worked part time and that more of the underage students participated in extracurricular activities.

The Ford Foundation (Fund for the Advancement of Education 1953) compared a group of accelerated Ford Scholars with an equally able, nonaccelerated group of comparison students. The social and emotional development of the Scholars was evaluated with respect to problems resulting directly from acceleration. No social maladjustment directly attributable to acceleration was found. "The Scholars encountered more initial difficulties in adjusting to campus life than their older Comparison students, but most of the difficulties were minor and were soon overcome" (ibid., p. 10).

Finally, Keating, Wiegand, and Fox (1974) examined the behavior of five precocious boys aged 12 to 15 in a college course. In addition to outperforming their older classmates, these young students interacted as much as their older classmates and often were not even identified as being young.

This by no means complete summary of the relevant literature is intended only to give the reader the flavor of the research in this area. For a more thorough review the reader is directed to Daurio (1979).

Data available from SMPY provide an opportunity to investigate the social and emotional development of accelerated students in a way that is unique with respect to the issues delineated here. Gifted radical accelerants (students accelerated three years or more) and nonaccelerants were longitudinally studied. Measurements for a number of the facets of the social and emotional development construct were available. The findings of this study are in accord with those of the investigations previously mentioned—that is, the social and emotional development of gifted students choosing to accelerate is not harmed by that choice and may in fact be enhanced.

Mathematically Talented Radical Accelerants and Nonaccelerants: Their Social and Emotional Development

Over 2,500 mathematically talented seventh- and eighth-graders took the College Board's Scholastic Aptitude Test in SMPY's 1972, 1973, and 1974 talent searches. The SMPY students' scores on this test were superior to those of a national sample of high-school juniors and seniors. High-scoring participants were encouraged to consider acceleration as one means of developing their talents. Many youths did choose to accelerate and entered college at an age between one and six years younger than that of the average college freshman. Other equally high-scoring youths chose different educational paths. The data SMPY has collected on these youths provide an opportunity to investigate the effects of acceleration on the gifted students' social and emotional development that is unique for three reasons. First, the social and emotional development of the accelerants may be compared with that of equally bright nonaccelerants. As pointed out earlier, several studies (e.g., Hobson 1963; Pressey 1949) have compared the social and emotional development of accelerated students with that of their postacceleration classmates--that is, older students of more average ability. That kind of investigation does not address the effects of acceleration on the social and emotional development of the gifted child. Second, the development of both accelerating and nonaccelerating high scorers has been longitudinally monitored by SMPY (Benbow 1981). A retrospective comparison of the two groups both before and several years after acceleration occurred can thus be made. This kind of comparison deals with the issue of potential self-selection factors that might bias results. In other words, any differences in the two groups before any of the students accelerated which might account for postacceleration differences can be ascertained and evaluated. Finally, a significant number of the students who accelerated have done so radically (i.e., are three or more years ahead of their age-mates). It is these radical accelerants who have been the subject of the most concern over social and emotional development (e.g. Maeroff 1977; Nevin 1977) and whose development has been chosen for investigation.

METHOD

Subjects

Twenty-one male radical accelerants were found in the ranks of talent-search participants between 1972 and 1974.' Two female radical accelerants were also found; they are not included in the analyses. It is interesting that so few girls chose to accelerate their education radically. This finding may be partially attributed to the smaller number of girls who scored high in the talent searches (Stanley, Keating, & Fox 1974; Keating 1976), but probably also results from other considerations such as sex differences in social interests and interest in

mathematics and science (Fox 1976; Fox, Brody, & Tobin 1980).

Radical accelerants were defined as those students who at some point are at least three years ahead of their age-mates in educational placement. This may be accomplished via one or more of the accelerative methods previously delineated. Thus any youth who is a college freshman at age 15 or younger, a college sophomore at 16 or younger, a baccalaureate recipient at 19 or younger, a master's degree recipient at 21 or younger, a law degree recipient at 22 or younger, or a four-year professional degree (M.D., Ph.D., etc.) recipient at age 23 or younger is considered a radical accelerant no matter how he or she has achieved that acceleration. Once a student acquires radical accelerant status he is always treated as such, even if he slows down his educational pace. Most of the radical accelerants in this study accelerated by skipping grades and by subject matter acceleration.

These twenty-one male radical accelerants were matched with other talent-search participants who were of approximately the same age and who had scored about as well on the SATs. The results of this matching can be seen in table 9.1. The two groups seem well-matched, with respect to both age and verbal and mathematical abilities. Further, it is clear that both the accelerant and the nonaccelerant groups are extremely able, averaging 691 and 690, respectively, on SAT-M and 543 and 536, respectively, on SAT-V. These scores

represent the ninety-sixth percentiles on SAT-M and seventieth percentiles on SAT-V for college-bound seniors (Admissions Testing Program 1979).

An interesting problem arose during the matching process. It became increasingly difficult to find nonaccelerated youths of ability equal to that of the radical accelerants as the matching progressed. While most of the high-scoring talent-search participants did not radically accelerate their educations, neither did most of them avoid acceleration altogether. For this reason it was decided to include as nonaccelerants some youths who had accelerated their education to a minimal extent (e.g., had entered college with AP credits).

Data Set and Analysis Protocol

With the available data, the social and emotional development of the subjects in one group was compared with that of the subjects in the other group at two points: first, at the time of the talent search, prior to acceleration, when the subjects were roughly 13 years old, and, second, five years later, when the subjects were of high-school graduation age. Comparison of available data for the two groups at the first measurement point addresses potential dissimilarities between the two groups which might have affected the acceleration decision and/or the social and emotional results of acceleration. Differences at the second measurement point can therefore more confidently be attributed to the acceleration itself rather than to any prior social/emotional characteristics.

The results of three relevant standardized affective measures were available for most of the subjects. All three of these tests had been administered when the subjects were of seventh- or eighth-grade age. The three measures are the California Psychological Inventory (CPI) (Gough 1969), the Strong-Campbell Interest Inventory (SCII) (Strong & Campbell 1974), and the Study of Values (SOV) (Allport, Vernon, & Lindzey 1970).

These three measures address different aspects of the social and emotional development construct. The CPI purports to measure "personality characteristics important for social living and social interaction" (Gough 1969, p. 5). The device is composed of eighteen scales clustered into four groups. "The profile obtained gives a good indication of the general social functioning of an individual" (Weiss, Haier, & Keating 1974, p. 128). Furthermore, the CPI has been successfully used with gifted junior-high-school students (Lessinger & Martinson 1961). A variety of reference groups are thus available. Means and standard deviations for each of the eighteen scores were computed separately for the two groups, and a linear discriminate analysis was performed using the SPSS package (Nie et al. 1975).

The SCII, on the other hand, has as its goal the measurement of vocational interests. Six occupational categories (realistic, investigative, enterprising, artistic, social, and conventional), as well as academic orientation and introversion-extroversion are ranked for each individual. Holland (1973), whose vocational preference scales are incorporated in the SCII, believes that vocational interests and personality are closely linked. He feels that within an occupational category, people's interests and values tend to be similar. Various personality types are thus associated with different occupational category ratings. As with the CPI, means and standard deviations for each category were computed separately for the two groups and a discriminate analysis was performed.

The SOV is an ipsative measure of evaluative attitudes based on Spranger's (1928) theory of types of men. He posited six types: the theoretical, truth-seeking man; the economic, practical man; the aesthetic, beauty-seeking man; the social, altruistic man; the political, power-seeking man; and the religious, mystical man. SOV profiles have also been shown to be related to traits such as creativity (Hall & MacKinnon 1969). The analysis protocol was the same as that for the CPI and the SCII.

The final piece of available data on the subjects when they were of seventh- or eighth-grade age was self-rated liking for school and for mathematics. These ratings were obtained from the questionnaire required for participation in the talent search on a 5-point scale (with 1 equaling strong like and 5 equaling strong dislike). The same analysis protocol was used. Approximately five years after each talent search (i.e., when its participants were of high-school graduation age) each participant was sent a detailed questionnaire about his or her progress as part of another study (see Benbow, chapter 2, Appendix 2.1). Thus the group as a whole was followed up at age 18, when the radical accelerants were, on the average, seniors in college, and the nonaccelerants were college freshmen. The questionnaire was aimed primarily at identifying the academic accomplishments and status of former talent-search participants; however, questions about high-school and college activities, liking for college, educational aspirations, and self-perceived social and emotional development were also included. The two groups' answers to these questions were compared via discriminate analysis. Unfortunately, this questionnaire represents the only data SMPY yet has on the social and emotional development of the students subsequent to their acceleration.

Results

California Psychological Inventory. In figure 9.1 and table 9.2 can be seen the mean CPI profiles for four groups: the SMPY radical accelerants, the SMPY nonaccelerants, and Lessinger and Martinson's (1961) eighth-grade gifted and eighth-grade random groups. It is clear that the two SMPY groups differ very little if at all in their CPI profiles. The SMPY groups are also similar to the eighth-grade gifted group. All three of these groups seem to be functioning more effectively than the eighth-grade random group. The largest differences, not

surprisingly, are in the achievement potential/intellectual efficiency cluster composed of the achievement via conformance (Ac), achievement via independence (Ai), and intellectual efficiency (Ie) scales.

Profiles of the two SMPY groups show them to be well adjusted and interpersonally effective. The generally high scores of the SMPY group members, compared with those of the random eighth-grade sample, indicate that the gifted radical accelerants and nonaccelerants are mature, academically advanced, and interpersonally effective. The relatively high scores on flexibility (Fx) and psychological-mindedness (Py) point toward a group of insightful individuals, while the rather low scores on well-being (Wb) and good impression (Gi) suggest a

cautious group.

A discriminate analysis performed on the CPI data for the two SMPY groups (see table 9.6) revealed no differences between them.

Strong-Campbell Interest Inventory. In table 9.3 are presented the means and standard deviations for the radical accelerants and nonacelerants on eight SCII scales. Both groups' scores on the six occupational themes fall into the average range (40 to 60), but there are some large intra-profile differences. Both groups scored highest on investigative and in the low range on artistic and social themes. Surprisingly, both groups fell within the average range on the academic orientation scale--that is, working with people was not preferred to working with things or vice versa. Both groups achieved rather high scores on the introversion-extroversion scale--that is, they seem to be rather introverted. The two groups thus appear to be investigative in outlook. People who prefer investigative activities are described by Holland (1973) as scholarly, independent, cautious, introverted, and rational. This description seems to correspond well with the impression of the two groups gleaned from the CPI.

The results of a discriminate analysis performed on this data are nonsignificant (see table 9.6). It thus appears that the vocational interests of the two groups do not differ.

Study of Values. Means and standard deviations for each of the six SOV scores for the two SMPY groups and for high-school students are reported in table 9.4. Again, the radical accelerants and nonaccelerants appear quite similar. Both groups scored highest on theoretical, second highest on political, and lowest on religious values. Both groups obtained "high" scores on theoretical, "low" scores on religious, and fell within the average range on the other four scales compared with high-school students (Allport, Vemon, & Lindzey 1970, p. 24). Allport, Vernon, and Lindzey also claim that a theoretical type is "inclined to actively seek truth in a logical, often scientific manner." The political scale, on which the two SMPY groups scored second-highest, denotes "a concern for power." These findings also correspond well with those of the other standardized measures.

A discriminate analysis performed on the SOV data for the two groups again resulted in a nonsignificant discriminate function (see table 9.6).2 There is no evidence that at age 13 the values of the two groups differed.

Liking for School and Math. The data presented in table 9.5 concern liking for school and for math for the radical accelerants and nonaccelerants. Both groups reported a strong liking for math and a fairly strong liking for school. In this respect, too, the two groups appear quite similar.

The Composite Profiles for the Two Groups at Age 13. At age 13 there is no evidence of any dissimilarity, favoring either group, between the radical accelerants and nonaccelerants. This was true with respect to age, academic ability, and social and emotional development (general social functioning, vocational interests, and values). None of the three discriminate analyses performed on this data resulted in significant discriminate functions (see table 9.6).

Considering the diversity of the measures used, the composite profile is remarkably consistent. Subjects from both groups seem best described as solid, well adjusted, socially mature, and interpersonally effective individuals who are also rather cautious and introverted. Both groups also seem to prefer academic/intellectual pursuits to social ones. It may be surprising that the group profile is so consistently positive. The manner in which subjects were selected may have influenced this. All of the subjects volunteered to participate in a difficult contest and in the follow-up testing sessions. Thus there is a potential positive bias in the profile.

If some kind of self-selection factor is operating for the two groups, it does not appear to be operating differentially for the radical accelerants and nonaccelerants. This finding is in itself interesting. Thus any differences between the two groups after acceleration may be attributed with some confidence to the acceleration and not to a priori differences between the two groups.

The Questionnaire: Five Years Later. In table 9.7 the means and standard deviations of the two groups' answers to the follow-up questionnaire can be seen. It is clear from this table that the radical accelerants and nonaccelerants differ in a number of respects at age of high-school graduation. In high school the radical accelerants participated in slightly more types of activities than did the nonaccelerants, but the nonaccelerants took part in a greater number of activities. This was true even though the number of activities was corrected for the number of years spent in high school. The nonaccelerants held more jobs than did the radical accelerants. Many of the radical accelerants, however, were too young to work in high school. The nonaccelerants participated in more college activities than did the radical accelerants, although the radical accelerants had been in college longer. The nonaccelerants reported a slightly greater liking for college than did the radical accelerants. Whether these last two findings are the result of a real difference or are the artifactual product of freshman enthusiasm on the part of the nonaccelerants is unknown.

The radical accelerants had higher educational aspirations than did the nonaccelerants; the radical accelerants planned, on the average, to obtain a doctoral degree, while the nonaccelerants aspired, on the average, to obtain a master's degree (table 9.7).

The final section of the follow-up questionnaire presented perhaps the most important and interesting questions, since they deal with the students' perceptions of their own academic and social/emotional development. More specifically, they asked each subject how well he had used his educational opportunities, how much SMPY had helped him, how SMPY had affected his social and emotional development, and how acceleration had affected his social and emotional development. The two groups answered these questions quite differently. The radical accelerants felt that they had used their educational opportunities rather well compared with the nonaccelerants, who thought they had used them "about average." The radical accelerants felt that SMPY had helped them very much, while the nonaccelerants thought that SMPY had given them very little help. The radical accelerants thought that their association with SMPY had positively influenced their social and emotional development, while the nonaccelerants perceived no influence. Interestingly, both groups felt that acceleration (if any) had influenced their social and emotional development in a slightly positive way (table 9.7).

A discriminate analysis performed on the questionnaire data resulted in a discriminate function of considerable power. The results of this analysis can be seen in table 9.6. Eight of the original twelve variables were retained in the discriminate function, which had a chi-square value of 48 9 with 8 df ($p < .001$).

While the significance of the discriminate function indicates clear differences between the radical accelerants and the nonaccelerants, the nature of the measurement instrument makes it difficult to explain precisely this difference. The data on participation in extracurricular activities are equivocal-neither group consistently outperformed the other in that respect. The best interpretation of these data is perhaps that no differences in extracurricular participation exist between the two groups. The nonaccelerants held more jobs in high school than did the radical accelerants, but this is attributable to the fact that the radical accelerants were too young to work in high school

work in high school.

The last five questions are more easily interpretable. The radical accelerants had higher aspirations than the nonaccelerants. The radical accelerants report that they have used their educational opportunities better than the nonaccelerants have. The radical accelerants report being helped more by SMPY. The radical accelerants report that SMPY has influenced their social and emotional development more positively than do the nonaccelerants. Interestingly, both groups reported that acceleration had positively influenced their social and emotional development. Thus it appears that the effects of acceleration on the social and emotional development of gifted students are not negative and might in fact be positive. A more thorough follow-up of the social and emotional development of talent-search participants would shed light on this question.

Conclusions

The potential effects of acceleration on the social and emotional development of gifted students were examined from two perspectives: (1) a review of the relevant literature, and (2) a longitudinal comparison of the social and emotional development of equally bright radical accelerants and nonaccelerants identified by SMPY. The literature survey resulted in the identification of three dimensions along which research in this area may be classified and evaluated: method and degree of acceleration of the subjects, the definition of "social and emotional development," and the identification of an appropriate reference group. No study, regardless of its orientation on these dimensions, has demonstrated any permanent or significant negative effects of acceleration on social and emotional development. The present study, which is unique in its combination of orientations along the three dimensions, also found no negative effects of acceleration on social and emotional development. In fact, some evidence of positive effects is presented. The similarity of findings of these two approaches is strong support for the claim that there is no validity to the argument that acceleration is harmful to the social and emotional development of gifted youths. A more extensive longitudinal investigation of the social and emotional development of SMPY accelerated and nonaccelerated gifted students would be worthwhile.

Notes

1. Two of the subjects were not formal talent-search participants, since they lived outside the search region, but they have otherwise been treated as such by SMPY and are thus incorporated into this study.
2. The SOV data were ipsative. Since no significant differences were found this should not affect the results.

Please see original chapter for all tables and figures.

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Permission Statement

Chapter 3

The Social World of Gifted Children and Youth

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Introduction

The young people about whom this book is written share mainly the fact that, in one or more cognitive/academic domains, their development is advanced. Aside from this characteristic, however, they are as diverse as any group one can find—diverse in ethnic and socioeconomic backgrounds and experiences, diverse in family composition and family dynamics, and diverse in aptitudes and creativity. They are just as diverse in motivation, energy, confidence, temperament, and social skills. Finally, they are diverse in the asynchronies they exhibit—some advanced in all cognitive domains (though seldom equally advanced in all) and others in only a few; some exhibiting maturity in social skills and emotional self-regulation at a level commensurate with their mental age and many somewhere between mental age (MA) and chronological age (CA) in this respect; some only age-appropriate in fine and/or gross motor skills; and so on. Complicate this with their degree of advancement or giftedness, gender-related issues, age-related issues, and educational experience as well as peer groups, and it is easy to see that any generalizations about social issues need to be tempered by significant caution!

The focus of this chapter is deliberately limited to the social world of gifted children, that is, their interpersonal relationships. Because other chapters deal with intrapersonal or emotional issues, with family issues, and with specific populations such as females/males, ethnic groups, underserved populations, and the highly gifted, these topics are touched on here only tangentially.

The Social Life of Gifted Children

Social Skills and Maturity of Gifted Students

Despite the diversity mentioned above, there is plentiful and consistent evidence that, *on average*, gifted students are more mature socially than their age peers in spheres such as friendship patterns, play interests, social knowledge and behavior, and personality. While this degree of maturity may not equal their maturity in intellectual domains, gifted children and youth exhibit personal maturity that contradicts the widespread belief that they are "only" gifted and otherwise just like other children their age. Furthermore, in critical areas such as self-concept, gifted children tend to compare favorably with peers (the major exception being adolescence, especially for girls). Reviews of the literature (e.g., Assouline & Colangelo, 2006; Janos & Robinson, 1985; Robinson & Noble, 1991) are consistent on this point: Group differences—when they exist (and they do not always exist)—usually favor the gifted.

Are Gifted Youngsters Inherently More Socially Vulnerable Than Others?

In short, the answer to this question is no. In fact, as a group, they are probably more robust than an unselected group of their agemates. But neither are they immune to the social-emotional issues and disorders that other people endure. According to a task force of the National Association for Gifted Children (Neihart, Reis, Robinson, & Moon, 2002) that recently examined research on a variety of topics related to the social-emotional development of gifted young people,

> High ability students are typically at least as well adjusted as any other group of youngsters. Nevertheless, they face a number of situations that, while not unique to them, constitute sources of risk to their social and emotional development. (p. xiv)

Among these situations are:

- intellectual and often social advancement compared with age peers, so that their social environments are poorly calibrated to their interests, language, and personal maturity
- typically inappropriate school settings that fail to match the level and pace of their learning and understanding
- their own internal developmental unevenness (asynchronies)
- the tensions created by their creativity, energy, intensity, and high aspirations, often far greater than those expected at their age
- at the same time, their wish to be "like everyone else" and therefore the temptation to deny their abilities in the service of finding friends
- local and national milieus that are often anti-intellectual and unsupportive, sometimes frankly negative

All of these issues can be exacerbated, of course, when gifted students are "twice exceptional"—doubly different from the norm by virtue of having a disability, being a member of an ethnic or sexual minority group, or growing up in a dysfunctional family.

Social Needs Shared with Agemates

The basic social needs of gifted children are no different from those of other children: stability and security in a family and the ability to count on someone's unwavering love

and support; a peer group and close friends with whom there are comfort, acceptance, and shared interests; an educational setting and trajectory that provide both a good match for their pace and level of learning and the sense of strength that comes from mastering the difficult; opportunities to develop their special talents and interests and to share these with peers who are similarly engaged and passionate; rules of daily living and independence calibrated to their competence; and warmly engaged parents and teachers whose expectations are appropriately high—high but not impossible (Csikszentmihalyi, Rathunde, & Whalen, 1993; Neihart et al., 2002).

Social Needs that Are Special (if Not Unique) to This Group

The major problem is, of course, that in an age-stratified society such as ours, gifted children and adolescents are almost always out of step with those groups they encounter in the natural course of events—mostly agemates in school, church, the playground, or the neighborhood. The younger the children are, the more circumscribed is their social radius and the less likely they are to encounter truly compatible friends; the older they are, the more paramount the social agenda becomes. Even within the family, gifted children are sometimes a poor fit if parents and siblings do not share their abilities, interests, and aspirations, and if parents are inexperienced in navigating the educational system.

The school setting is in many ways the most acute problem, since we compel children to attend school 180 days a year, 6 hours or so a day. If the setting is a poor match, the consequences can be nearly unbearable. Children who are otherwise kind, good-hearted, and patient can grow irritable, impatient, negativistic, even arrogant under such circumstances, and alienate potential friends as well as adults who might otherwise pave the way for them. Conversely, gifted youngsters may adopt the goal of "being like everyone else" and purposefully squelch their own curiosity, aspirations, and abilities. The brighter the child is, the more acute the mismatch and its ensuing consequences.

Developmental asynchrony from domain to domain can produce special challenges to social options. By definition, the development of "average" youngsters has a relatively narrow range, exhibiting neither aspects that are exceptionally high (that would qualify as "gifts") nor exceptionally low (that would qualify as "disabilities"). The typical range of a gifted student's development, however, includes some areas that are more-or-less age-appropriate, some exceptionally high, and still others in-between, with none below average unless a disability exists. While, as mentioned, gifted students tend to be more socially and emotionally mature than others of their chronological age (Janos & Robinson, 1985; Robinson & Noble, 1991), emotional regulation, social skills, size and physical maturity, as well as fine and gross motor skills, are seldom the equal of their mental age. These asynchronies place realistic limits on academic solutions that might otherwise be appropriate, such as radical acceleration in grade placement, and on the age-restricted clubs and other groups in which gifted children might seek friends. Although too much is often made of milestone issues such as the age of attaining driving privileges or being invited to the prom, these, too, are not irrelevant.

Interestingly, beginning in infancy (e.g., stranger anxiety) and early childhood (e.g., encounters with death), the advanced cognitive abilities of gifted children cause them to experience fears and concerns like those of older children (Klene, 1988), awareness of world issues such as famines and conflicts (Clark & Hankins, 1985), at

least according to parental report (von Károlyi, 2006), and even concepts like infinity ("What's holding up the universe?"). For the same reason, gifted youngsters are also likely to be more sensitive to issues of social comparison, such as class status and competition, before these concepts mean much to others. Because they do not have the emotional calluses that develop with the experience of living through such episodes, they are vulnerable to worries of which their agemates remain blissfully unaware.

Social Issues that Are More Common in Gifted Students

For the reasons outlined above, a few social issues appear with some regularity among the gifted population. These are, by and large, natural outcomes of the advancement of these youngsters compared with their age peers and school environments. Several of these issues will be dealt with in detail in other chapters, so coverage will be a bit uneven in this chapter, but the following list may give the reader a feel for the kinds of things to expect, primarily when there is a mismatch with peers and school.

- Difficulties meeting compatible peers and aspirations for greater intimacy, loyalty, and stability in their close friendships (Gross, 2001), with consequent loneliness even if casual observers believe this student to be reasonably popular and accepted. This disconnect with peers cannot be stressed too greatly. Gifted children are not just looking for pals who "talk their language" and understand their jokes, but buddies who share their notion of what close friendship entails: sharing feelings, worries, and secrets as well as triumphs; standing up for one another; and staying close friends over time.
- The brighter the children, the more likely are they to report that they seek older friends, have fewer friends than they wish, and see that "being smart" makes it harder to make new friends (Janos, Marwood, & Robinson, 1985). Children who see themselves as "different" are also more likely to report that they have few friends (Janos, Fung, & Robinson, 1985), even when the difference they identify is what most people would consider positive (e.g., "bigger," "draw better," "better at games").
- Withdrawal from an unsatisfying social scene, giving the impression of being unapproachable, "stuck-up."
- Difficulties reconciling achievement/affiliation conflicts that result from membership in conflicting subcultures, an especially acute problem for gifted students who aspire to high academic achievement in school but who come from social or ethnic backgrounds that devalue such aspirations and commitment (Neihart, 2006).
- Suboptimal ways of dealing with school boredom, including daydreaming; impatience and irritability with fellow students who move so slowly or fail to understand the "obvious"; rebellion against homework; "meltdowns" (among the younger students). Sometimes, conversely, gifted students conclude that, because they understand concepts such as multiplication or spelling rules, they needn't practice them and therefore fail to master these to the degree needed to use them efficiently, leading to even more negativity.
- Depression and hopelessness about the future, endless years of the "same old thing" seeming to loom ahead.

Because these issues are not inherent in gifted children but arise from the disconnect between the level and pace of their development, and the environments in which they live, the solution is obvious: Correct the mismatch. To the extent that special school programs are provided to meet the needs of gifted students, and/or they are given opportunities to move into school and social situations with older students, these problems are likely to be minimized or prevented altogether. Of course, no "solution" is without its drawbacks and side effects, but educational approaches that simultaneously provide appropriate challenge and access to compatible peers are effective not just academically, but socially as well (Kulik, 2004; Rinn, 2006; Shaunessy, Suldo, Hardesty, & Shaffer, 2006; Shore, Cornell, Robinson, & Ward, 1991).

The Contribution to Social Issues of Personal Variables that May Differ in Gifted Students

Aside from the cognitive issues like the fears and concerns described above, which are simply a part of being intellectually gifted, there may be inherent personal variables that impinge on the social experience of gifted children. We regard the evidence for these differences as more tenuous, and their generality among gifted children questionable, but present them here for consideration:

- Introversion. A number of authors (e.g., Silverman, 1993) suggest that gifted individuals are more introverted, on average, than nongifted peers, with the result that they may be more independent of and less needy in social relationships than others. Extensive research with the Myers-Briggs inventory (Mills & Parker, 1998; Sak, 2004) confirms this observation. While introverts do not tend to win popularity contests, they may be more comfortable pursuing solitary pursuits (compatible with high achievement) and able to maintain a more even keel than those tossed about by the vicissitudes of turbulent social agendas.
- Sensitivity (sometimes phrased as overexcitability). This notion derives from the theories of the Polish psychologist, Kazimierz Dabrowski (1964), whose most prominent contemporary interpreter is Michael Piechowski (e.g., 1997, 1999). According to Dabrowski's theory, development of gifted individuals consists of a series of stages, each of which is terminated by a process of disintegration and succeeded by more mature adaptation and deepening self-knowledge. The "psychic excitabilities" accompanying development can be seen in psychomotor, sensual, intellectual, imaginational, and emotional domains and inevitably impinge on the relationships individuals have with others. Physical tensions and restlessness may interfere with calm interactions. Moreover, gifted children may be more sensitive to minor slights from others and instances in which they pick up on aspects of unfairness, either in their immediate experience or events in the society or the world at large. Their subsequent crusades for "justice" may not endear them to those they consider the perpetrators.
- Perfectionism (see Chapter 17, this volume). Perfectionism is an exceptionally controversial topic in the field. In part, this stems from differing definitions of the concept, representing for some authors simply high aspirations, interest in doing one's best whenever possible, and commitment to success but comfort with lower standards when appropriate, while others view perfectionism as an inherently neurotic trait, a "compulsive and unrelenting strain toward impossible

goals" (Schuler, 2002, p. 73). Still others view perfectionism as segmented into various components, some of which are more destructive than others. Hewitt and Flett (1991), for example, see the high standards we set for ourselves and for others as sometimes positive and certainly less neurotically debilitating than the feeling that one must live up to the expectations of others. (Insisting on high standards for one's family and friends may, on the other hand, have its downside in those relationships but is not necessarily debilitating.)

Indeed, gifted children who go on to develop their talents do set high goals for themselves, in the context of families who expect them to do their best (Csikszentmihalyi et al., 1993) without which they would not endure the hours and hours of practice (Ericsson, Nandagopal, & Roring, 2005) and single-minded commitment needed for success. In the context of a social setting in which their peers have neither the aspirations nor the commitment they do, however, they may be regarded with some derision and criticism. Despite the obvious positive outcomes of successful talent development (Czikszentmihalyi et al., 1993; Subotnik & Jarvin, 2005; von Rossum & Gagné, 2006), the aspiring student may be isolated from classmates both by being actively excluded from friendships and because of time commitments that interfere with ordinary contacts. The situation is, of course, somewhat different for students whose activities are team related (e.g., tennis or math competitions or participation in an orchestra) versus those that are more solitary (e.g., piano or long-distance running).

- Extreme giftedness. As Hollingworth (1942) noted as a major finding of her study of children with IQs above 180,

> … there is a certain … range of intelligence which is most favorable to the development of successful and well-rounded personality in the world as it now exists. This limited range appears to be somewhere between 125 and 155 IQ. Children and adolescents in this area are enough more intelligent than the average to win the confidence of large numbers of their fellows, which brings about leadership, and to manage their own lives with superior efficiency. … But those of 170 IQ and beyond are too intelligent to be understood by the general run of persons with whom they make contact. They are too infrequent to find many congenial companions. They have to contend with loneliness and with personal isolation from their contemporaries throughout the period of immaturity. (pp. 264–265)

Contemporary research (Gross, 1993, 2004; Janos, Marwood, & Robinson, 1985) bears out this astute observation by Hollingworth. Indeed, the child who is so astonishingly variant from expected norms is very difficult to nurture appropriately. Asynchronies in development are even more marked with these children than with those more moderately gifted, so that even when they are placed in school with mental peers, perhaps nearly twice their age, they remain visibly and painfully different. Of a group of children with IQs above 160, Gross (1993) reported that 80% experienced intense social isolation in regular classrooms and carefully monitored their own behavior to conform to the norms of the social group.

There are, of course, very few of these children and many practitioners will not encounter even one in a lifetime of practice. But they do exist and both they and their parents deserve thoughtful support and respect, understanding of the complexity of their situation, and inventive solutions to their needs, if they are going to develop in a healthy way and make anything like the unique contributions of which they are capable.

Enduring Myths Constitute Barriers

Except for the writings of Galton (1869), Lewis Terman was the first—and certainly the most ambitious—investigator to turn attention to the development of gifted individuals. Starting in the 1920s, he identified a group of about 1500 children, almost all in California schools, who scored high on the original, 1916 version of the Stanford-Binet Intelligence Scale (Terman, 1925). These individuals were followed throughout their lifetimes, and research continues on their offspring. Terman was motivated in this undertaking by his conviction that the myths then in vogue—myths such as "early ripe, early rot" and stereotypes of gifted children as weak and awkward—were untrue. He was right, of course, but surprisingly, the myths persist. Here are some:

- "Gifted children are nerds, bookish, socially ill-at-ease, sickly, and clumsy." Even for the exceedingly bright children like those studied by Hollingworth and Gross (whom most people do not encounter but only read about), this stereotype is grossly untrue. In the public mind, there is considerable confusion between giftedness and the characteristics of Asperger disorder (Klin, Volkman, & Sparrow, 2000), among whom of course there are some gifted children but also many nongifted, the average IQ of groups so identified being about 100 (Klin et al., 2000). Terman's own work and the research of many other investigators have demonstrated the fundamental error of this stereotype—it simply does not fit the majority of gifted children and youth.
- "If you're so gifted, why can't you tie your shoes?" The expectation that children who are intellectually gifted will be equally advanced in all domains is also inaccurate, as we have already discussed.
- "You can be anything you want to be." Gifted youth may be advanced in a number of domains (i.e., showing "multipotentiality"), even if not equally so, so that deciding on college majors and careers can be wrenching and even paralyzing. Even among those showing multipotentiality, however, very few in fact show "equipotentiality"—equal potential across domains. Achter, Lubinski, and Benbow (1996), who gave a battery of rigorous adult-level tests to gifted adolescents, found a very small percentage with flat profiles, even using a very generous definition of what constituted a flat profile. Given the usual measures standardized for their age groups, many gifted children do "hit the ceiling" on most if not all of them. It is only when such ceiling effects are removed by above-level measures that true differentiation of talents can be seen. Even though gifted children may have a number of choices, they will profit from appropriate assessment of their talents and guidance in choosing courses of study and ultimate careers.
- "Math nerds are the worst." Contrary to expectation, Dauber and Benbow (1990), following a group of students identified by high SAT scores during early adolescence, found that those with high math scores reported themselves to be more successful in their social relationships than those with high verbal scores. The authors concluded that one can easily hide one's math talents, but that every time high-verbal individuals open their mouths, they inadvertently reveal their "gifts" and suffer the consequences.
- "Skipping a grade ruins you for life." Acceleration in school can take many forms, most of which have been examined carefully (Colangelo, Assouline,

& Gross, 2004). The academic benefits of such options are clear and unmistakable (Rogers, 2004), but many practitioners retain fears about the harmful effects of accelerative options that permit youngsters access to classes for older students (Jackson, Famiglietti, & Robinson, 1981; Southern, Jones, & Fiscus, 1989; Vialle, Ashton, Carlon, & Rankin, 2001).

Indeed, the social benefits are, surprisingly, less clear than we might expect, but study after study finds an absence of harmful effects on social adjustment (Cornell, Callahan, Bassin, & Ramsay, 1991; Robinson, 2004) for groups of students who are accelerated. Most investigators have restricted their research to the effects of acceleration on academic self-concept measures, (e.g., "I'm good at most school subjects,") even though a wide array of measures of personal and social adjustment could potentially have addressed more differentiated questions.

- "Selective schools shatter your self-concept." A 26-country study (Marsh & Hau, 2003) using a few questions tapping academic self-concept, found consistently lower scores for gifted children in academically rigorous and/or accelerated situations than gifted children in regular classrooms (but not lower than those of nongifted students). The meaning of this finding is, however, far from clear (Dai, 2004; Plucker et al., 2004). Do gifted children grasp earlier than others the unwritten modesty code? Do they discover, on entering the more accelerated class, that they are no longer the single star who effortlessly gets every answer right? Do the findings reflect a more accurate sense of what expertise actually requires, once the student is appropriately challenged? Said one, "Now I know that I won't always be the smartest person, but I do know what I can do, and I do know I can do something when I put my mind to it" (Noble, Arndt, Nicholson, Sletten, & Zamora, 1999, p. 80). In contrast, people who are not skilled at something tend to overestimate their own skill levels and to underestimate those of others (Dunning, Johnson, Ehrlinger, & Kruger, 2003). Is being the big fish in a little pond (Marsh, 1987) the road to confidence and success, or is being a medium-size fish in a bigger pond more likely to lead to a feeling of belonging and an invitation to investment in learning? As Gross (1998) expressed it, "The modest academic self-esteem … reflects an acceptance of how far they still have to go if they are to become all they can be" (p. 23).

The essential issue is, of course, the social comparison group. When students enter a class or school better matched to the level and pace of their learning, or when they graduate to a higher group in ballet, skiing, or soccer, their perspective changes—often without their realizing it. Their companions are perhaps older, more skilled, harder working than those they are used to, and their feelings may—especially at first—be ambivalent. (How many readers remember such disconcerting feelings their first week of college?) Adults can be most helpful by reminding students, in preparation for and again after the change, of this shift in the comparison group, acknowledging that it is hard to give up their former status even though the new opportunity has much to offer. They can also encourage what Marsh, Kong, and Hau (2000) have referred to as the "reflected glory effect," consciousness of having been admitted, because of their abilities and skills, to a more selective class/school, with its enhanced opportunities for learning.

Furthermore, as noted, investigators have failed by and large to look at more subtle indicators of adjustment than academic self-concept. Those who have

done so have tended to find trivial effects on personality and adjustment measures (e.g., Kulik, 2004; Robinson & Janos, 1986) when the comparison groups were equally bright, and much more positive reports from students who have experienced the acceleration (e.g., Janos et al., 1988; Noble et al., 1999; Noble & Drummond, 1992; Noble & Smyth, 1995). A typical quote: "[I could] be friends without feeling I had to *be* my friends" (Noble et al., 1999, p. 79).

- Social relationships within the family: "It's a burden to have a gifted sibling." For some time, it was assumed that having a gifted sibling, especially if one was not equally gifted, produced negative effects on self-esteem, achievement, and general well-being. A number of studies seemed to confirm this assumption, all of these based on interviews with siblings and other family members that encouraged the expression of negative feelings. A more objective appraisal of the situation was provided by Chamrad, Robinson, Treder, and Janos (1995), who did not ask the loaded question, but instead administered a battery of questionnaires about sibling characteristics and relationships, as well as behavioral issues, to a large number of mothers and to pairs of siblings, both ages 6 to 12. Initially, the classification of "gifted" was by placement in a special program; this approach yielded not a single significant difference among pairs in which there were 0, 1, or 2 "gifted" members (fewer than expected by chance). Next, we designated "giftedness" by the child's status above or below the median of mothers' appraisals of ability. With this change, a modest number of effects emerged, all indicating positive effects of having a gifted sibling! We believe that the previous studies had exploited the fact that sibling relationships are seldom perfect, finding the scapegoat in giftedness.
- Relationships with parents: "It's more work to have a gifted child." There is evidence that gifted children's parents spend more time with them in activities that are a good cognitive match, such as reading, playing, and going to interesting places (Karnes, Shwedel, & Steinberg, 1984; Thomas, 1984). Child-centered parents can raise gifted children even in poverty (Robinson, Lanzi, Weinberg, Ramey, & Ramey, 2002). Until their child is able to establish satisfying peer friendships, many parents are called on to play the "best friend" role. The situation is sometimes complicated by home schooling, which is on the rise for gifted children.

The Stigma of Being Gifted in an Anti-Intellectual Society

Being labeled as "gifted" in a society that does not value the life of the mind can be as much of a stigma as any other characteristic that sets a person apart from others. Coleman and Cross (2000) describe a stigma-of-giftedness paradigm (Coleman, 1985) as influencing social relationships. Gifted students, like others, want "normal" social interactions and see the label as influencing others to treat them differently. As a result, they manage information about themselves (e.g., information about good grades or awards) to hide their accomplishments (Cross, Coleman, & Stewart, 1993), though some do this more than others (Coleman & Cross, 1988).

Unlike some other stigmatizing features such as race, giftedness can, of course, be hidden, though this is more difficult for some than others. As noted, Dauber and Benbow (1990) found that students who were highly able in math were more successful in their social relationships than those who were highly able verbally, presumably because the latter students found it harder to hide their abilities.

From a surprisingly early age, many—but apparently not all—gifted children sense their difference from others. The differences are almost invariably felt, whether admitted or not, by older students (Rimm, 2002). In a study by Janos, Fung, and Robinson (1985), even at age 6 to 10, more than a third of 271 gifted children said they felt "different" from others. Even when this difference was phrased in a positive way, such as being better at games or sports, these children described more negative views of themselves and their social relationships than those who did not report such feelings. Coleman and Cross (1988) indicated that even if children don't feel themselves to be different, they assume that others look on them in that way and modify their behavior accordingly.

Rimm (2002), surveying the literature on peer pressures and social acceptance of gifted students, found that "…they are generally well liked and sometimes are even more popular than their peers, although, by age 13, that popularity advantage disappears" (p. 13). Rimm points to a study by Schroeder-Davis (1999) in which, responding to a newspaper columnist's question asking whether they would rather be best looking, most athletic, or smartest in their class, over 3500 secondary students actually favored being "most intelligent" (54%), followed by "most athletic" (37%) and "best looking" (only 9%). Even so, their essays revealed considerable sensitivity to experiencing the anti-intellectual stigma of high ability, and almost none suggested that high ability conferred social benefits.

This problem may be felt more acutely by girls than boys (see Chapter 14, this volume). Beginning in early childhood, the social agenda is more important to girls than to boys (Maccoby & Jacklin, 1974), and it gains special significance and power for gifted adolescent girls (Kerr, 1985, 1997; Reis, 2002; Rimm & Rimm-Kaufman, 2000). In fact, gifted boys may be more popular than nongifted girls or boys, with gifted girls tending to be the least popular (Luftig & Nichols, 1990). In line with this finding, Janos, Sanfilippo, and Robinson (1986) found that, among the minority of very young early entrants to college who were underachievers (college GPA below 3.0), the boys' achievement appeared to reflect the issues of disorganization and family conflict found in other groups of underachievers, while the girls appeared to be favoring an attractive social agenda over an academic agenda, with temporary damage to the latter. Indeed, by the time the article was published, the girls' GPAs no longer qualified by the < 3.0 criterion, while the same was not true for the boys. Apparently the girls had learned ways to cope with more than one agenda simultaneously.

Again, the problem lies not within the students who are gifted but in the setting in which they are growing up. Particularly rampant in American life is a spirit of anti-intellectualism (Colangelo, 2002; Hofstadter, 1962), a denigration of the "elite" status of the bright and high-performing (except in sports). Fairness is seen to require equal education (not "appropriate" education) for all, regardless of individual differences (Benbow & Stanley, 1996). Coupled with the demands of the No Child Left Behind Act of 2002 (PL 107-110), which accords struggling students priority in school, little wonder that gifted students feel recognition of their accomplishments to be stigmatizing.

The Expanding Social World of the Child, Adolescent, and College Student

Social issues change in nature and intensity as children grow up, as do potential interventions.

Early Childhood

As gifted children begin to emerge from the family into preschool, play groups, and even visits to the homes of family friends, they are often puzzled by the fact that

their playmates do not enjoy the same complex games, read books, or play board games with complex rules as they do. Gifted preschoolers are more advanced in language and in the use of metacognitive strategies than are nongifted children (Kanevsky, 1992; Moss, 1992). They also show more cooperative play patterns (Barnett & Fiscella, 1985; Lupkowski, 1989) and on average are advanced in what they know about social relationships, even though this knowledge does not always translate into more mature behavior (Roedell, Jackson, & Robinson, 1980).

Even at this age, many activities are organized by age (the "threes" in the day-care center hardly ever play with the "fours," even though no more than a few days may separate the oldest "three" from the youngest "four"). The asynchronies of early childhood compound the situation—issues such as toilet training, naps, and skills with crayons, scissors, and tricycles—and require some flexibility in standard expectations if the child is to join an older group for even part of the day. Smaller preschools sometimes do provide cross-age grouping, and some, such as Montessori programs, encourage children to go at their own pace. In informal groups at neighborhood playgrounds and at family gatherings, often gifted children happily do seek out older children. At this age, parents are well advised either to seek a flexible environment such as a mixed-age preschool, or to seek a variety of settings for their children – for example, a gymnastics or dance class with agemates and a story time at the library for somewhat older children.

Early Elementary School

While kindergartens are generally relatively nonacademic, and therefore not necessarily a negative (though not necessarily an especially positive) experience for bright children, the primary grades can be deadly for a child who enters first grade already reading competently and comfortable with the number system. For bright children with competent motor skills who have already mastered the symbol systems of reading and math at a level advanced for their age, early entrance to kindergarten or first grade, or skipping first or second grade, should be a definite consideration, the research findings being on the whole quite positive and this step one that can be taken quite smoothly because it occurs from the beginning (Colangelo, Assouline, & Lupkowski-Shoplik, 2004). In addition, the three primary grades can be telescoped into two by skipping first or second grade.

Still, it is a decision to be made cautiously, taking into account the personal maturity of the child and remembering that a year at ages 5 to 6 is a larger proportion of a child's life than a year will be later on. Fallout, when it occurs, hardly ever results from academic problems; almost always—when they occur—the issues are social. A recent study by Gagné and Gagnier (2004), for example, suggests that boys who enter school early may be a little more vulnerable than girls. Beware, though, of the extensive literature that shows that *unselected* younger children are, in the early grades, not as mature or successful as their older classmates! Such research is irrelevant.

Elementary Years

Teasing, even overt bullying about being "smart" or getting good grades can begin as early as kindergarten for gifted children, with a peak in sixth grade. About a quarter of gifted children admit to at least one instance of acting as a bully themselves,

however (Peterson & Ray, 2006). A few gifted children (11%) in the Peterson and Ray study admitted to being bothered "a lot" by such events. Classmates' teasing them for being smart is experienced as hurtful and confusing (Ford, 1989) even when it may be meant in a kindly way. As we have mentioned, the sense of difference from others plays a major role in peer relations of gifted preadolescents, even when the differences perceived are in a positive direction and are not particularly intellectual (Janos, Fung, & Robinson, 1985). Many gifted students at this age begin to hide their talents, to do their best "to be like everybody else."

Counseling—preferably in groups, for children who are not seriously debilitated by such conditions—can help gifted children to normalize their feelings and to develop positive ways of coping. Books such as *Gifted Kids Speak Out* (Delisle, 1987) or *The Gifted Kids' Survival Guide for Ages 10 and Under* (Galbraith, Espeland, & Mohar, 1998) are also excellent resources to help children develop insight and coping skills.

Middle-School Years

The issues that began earlier intensify in the early adolescent years—the strong wish to fit in, to belong to a group, and yet a growing sense of difference from same-age classmates (Assouline & Colangelo, 2006).Gifted students who are good at sports are liked better by their peers than those who are not, particularly gifted boys who are not good at sports. Self-concept tends to decline for gifted students more intensely than for others, and a middle-school curriculum that is not rigorous makes the situation even worse. Tedium significantly erodes optimism and coping skills (Hoekman, McCormick, & Barnett, 2005) that in turn relate to intrinsic motivation and commitment to schoolwork.

In a study (Colangelo & Assouline, 1995) of 563 gifted students, grades 3–11, although the overall picture was relatively positive, there was a perceptible decline in self-concept across grade levels. Scores overall were highest in domains of intellectual and school status, and lowest in interpersonal skills and self-satisfaction. A review of the several studies on self-concept of gifted children (Neihart, 1999) found few differences between gifted and nongifted students except that gifted students felt more positive about their academic abilities. (Recall that, at earlier ages, gifted students tended to feel more positive than other students, so no difference represents a shift.) Moreover, gifted students tend to feel that others view them negatively (Kerr, Colangelo, & Gaeth, 1988) and, in fact, this seems to be the case for those who do not know the students well (Monaster, Chan, Walt, & Wiehe, 1994). As with any other group who see themselves as victims, however, it is important to move on from that perception of being the victim, to adopting positive coping skills. (See last section of this chapter.)

Various curricula exist for teaching personal and social talent development (Moon & Ray, 2006), as well as secondary-level affective curriculum and instruction for gifted learners (VanTassel-Baska, 2006). Here again, group experience can shore up a student's feeling of belonging, and devising coping strategies. For gifted teenagers, books such as *The Gifted Kids' Survival Guide: A Teen Handbook* (Galbraith, Delisle, & Espeland, 1996) that address the issues directly, or various novels in which gifted teens are the major characters, can spark effective discussions.

Another approach that works well for gifted students is participation in team competitions, such as debate teams, math team competitions, chess clubs, and the like. When students participate in individual contests such as the National Spelling Bee, they may bring some reflected glory on their school but also risk the negative consequences of putting themselves forward as "the best." Team competitions, on the other hand, can be just as demanding but clearly are identified with the school, encouraging classmates to root for the success of the team, just as they do for football or basketball teams.

The High School Years

Like other adolescents, gifted adolescents face complex and competing developmental tasks during this period of transition to young adulthood. Even though gifted adolescents may traverse these years with competent social skills, there are still built-in pressures to "fit in," and to resist the largely anti-intellectual atmosphere of the high school. Fortunately, especially in the upper grades of high school, peers tend to become less critical of those who are different, exerting less incentive for gifted students—*if* they are still engaged—to "hide."

Moreover, the options for finding and creating a better academic and personal match increase during the high school years. Even though the self-concepts of many gifted students, especially girls, are at a low ebb during the early high school years (Robinson & Noble, 1991), students can often move ahead to more advanced classes and in other ways find a community of like-minded peers (Csikszentmihalyi et al., 1993). Many students in the latter half of high school will be able to enroll in college courses simultaneously or instead of high school courses. As mobility increases through use of public transportation, or even driving a car, it is increasingly feasible for teens to find "homes" in clubs and specialized talent-development groups. It is encouraging to find so few gifted students dropping out of high school (Matthews, 2006), despite the persistence of myths to the contrary.

Even so, gifted adolescents do not all flourish. Piechowski (1989), for example, found that there were two distinct patterns of adaptation in a small group of adolescents. The healthier group was characterized by responsibility, hard work, and altruism, while others were characterized by sensitivity, intensity, and self-criticism.

The interventions suggested earlier, including counseling, particularly group counseling; reading books with gifted individuals as heroes; group participation in competitions; and pursuit of talent-development groups—are all equally valid during this period.

The College Years

Much less is known about gifted students during the college years than grades K–12. We seem to assume that all we have to do is help students survive to college, where they will automatically find Nirvana. Indeed, some thrive in college and others create the environments they need (Hébert, 2006). And yet, colleges differ greatly in the opportunities they offer gifted students, and many offer few opportunities at all (Robinson, 1997; Yoo & Moon, 2006). Students who follow a standard curriculum or fail assertively to find appropriate settings to develop their interests and friendships, may be as unhappy as at any other time. Several longitudinal studies

following highly talented students through the college years (Arnold, 1995; Kerr, 1985; Subotnik & Steiner, 1994) have found a disappointing trajectory. Some of the risk factors include a habit of being at the top of the class with little effort, "culture shock" on encountering classmates of equal or higher accomplishment, coming from a family outside the educational mainstream without the tacit knowledge and skills needed to operate within the complex bureaucracy of higher education, as well as all the hazards other students may face, such as homesickness, depression, financial stresses, the anonymity of large classes, time management, selecting activities and classes judiciously among many tempting alternatives, and so on (Robinson, 1996, 1997; Yoo & Moon, 2006). It is essential to prepare during the high school years, before gifted students sink or swim in the new environment, and to be sure that supports are in place once they reach college to assist with the transition. Otherwise, "Nirvana" may turn out to be "never-never land," where promising children never grow up.

Positive Coping Skills

As we have seen, gifted children and youth face all the situations and dilemmas that other students do, intensified perhaps by their self-awareness and the fact that they often encounter these dilemmas at an earlier-than-average age, before their experience has produced the kinds of emotional "calluses" that enable them to put the issues into perspective. This section will, therefore, focus only on those coping skills that address what we have identified as the relatively unique issues for gifted individuals: (1) finding compatible friends in an incompatible environment and (2) resolving the incompatibility of finding acceptance in a social group and pursuing one's academic talents. (It should be pointed out that students whose talents lie in nonacademic fields often do find compatible peers within that talent area.)

Finding Friends: "That's where the money is!"

The famous remark credited to Willie Sutton when asked why he robbed banks is good advice for gifted youngsters in search of potential friends: Go where they are. Look in places you will find a variety of people whom you find compatible in terms of shared topics of interests and the depth and complexity of their understanding, whatever their ethnicity, age, gender, philosophy, or political views. In school, this certainly means looking for programs for bright students and more advanced classes, as well as multiage or other groups that are open and welcoming even if most of their members are older. Yet, gifted students who are given the opportunity to move into such settings are often reluctant to do so, fearing to lose the few friends they have made already—often at considerable personal cost. Adults sometimes need to insist that students give the new setting a good try, sharing with them their optimism that a person who has in the past made friends under trying circumstances can do so even more readily when the ground is more fertile.

Social Coping Skills

A group of young adolescents queried by Buescher (1989) about their preferred coping strategies yielded a variety of coping approaches, based on their personal experiences. While the specific ranking of the following strategies varied somewhat

from one age to another over the course of 4 years (ages 11 to 15), the list is informative. In order from least preferred to most preferred, they were:

1. Pretending to know less than you do.
2. Acting like a "brain" so friends leave you alone.
3. Change language and behavior to mask your true abilities.
4. Avoid programs designed for gifted students.
5. Engage in community activities where age is unimportant.
6. Develop talents outside of school.
7. Focus on achieving at school in nonacademic areas.
8. Seek adults to relate to.
9. Select programs and classes that are designed for gifted students.
10. Seek friends among other students who have exceptional abilities.
11. Become comfortable with your abilities and use them to help peers.

Of course, this list could be extended:

- Take an active problem-solving stance; if your life needs changing, change it. Advocate for yourself if you'd like a modified school option, an alternate assignment, a new friend, or whatever.
- Distinguish between having one or a few close friends and being "popular," the former being much more satisfying than the latter.
- Broaden your horizons—think outside the box. Especially in cities, an extraordinary variety of clubs exists for people with all kinds of interests, and if there isn't one you'd like, start one.
- Join in team competitions.
- Focus on developing one or two areas of special interest and/or talent—avoiding frenetic activity designed just to fill up time and to avoid the realization that your life is boring, boring, boring. The more you invest in a specialized area, the more pleasure you will have, and the more you will encounter others across the age span whose company you enjoy. Try on some career opportunities to see whether they appeal, and whether you feel comfortable with the people who are in those fields, be they young or older.
- Engage in community service projects or political campaigns. Making a contribution to the lives of others enriches you as well as those who can use your help.
- Keep a few projects going at home that you really want to do – alone.

Conclusion

As we have seen, professionals can make a serious error by assuming that poor social skills and social vulnerability are an *inherent* part of being gifted. They are not. [On the other hand, gifted students are not invulnerable, either (Pfeiffer, 2003).] The condition of being gifted does not constitute a liability—rather, in many ways, it is a social asset. The combination of cognitive competence and social maturity is a precious one.

The most important social issues arise when there is a mismatch with the academic and/or social setting in which the student is growing up. Often, there are more options than students or families are aware of. Your professional support can often help the students, and the adults responsible for them, to see matters in a more realistic light, to put things into proportion, and to make effective choices and transitions.

Gifted students have a great deal to offer the world—and you have special skills to help them along the way. Don't overlook the possibilities in this partnership!

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The Socioaffective Impact of Acceleration and Ability Grouping:

Recommendations for Best Practice

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Abstract: Although the academic gains associated with acceleration and peer ability grouping are well documented, resistance to their use for gifted students continues because of concerns that such practices will cause social or emotional harm to students. Results from the broad research indicate that grade skipping, early school entrance, and early admission to college have socioaffective benefits for gifted students who are selected on the basis of demonstrated academic, social, and emotional maturity, but may be harmful to unselected students who are arbitrarily accelerated on the basis of IQ, achievement, or social maturity. There is little research on the socioaffective effects of peer ability grouping. The limited evidence indicates strong benefits for highly gifted students and possibly for some minority or disadvantaged gifted students. Robust evidence does not exist to support the idea that heterogeneous classroom grouping per se significantly increases the risk for adjustment problems among moderately gifted students. Recommendations for best practice based on the available evidence are presented.

Putting the Research to Use: What is the best educational placement for a gifted student? What grouping or acceleration options are most beneficial? Many of us grapple with these decisions every week. We sometimes hesitate to pursue certain programming options out of concern for the gifted child's psychological adjustment. Decisions are often complicated by conflicting claims made about the social or emotional consequences of acceleration and peer ability grouping for gifted students, in particular. Analyzing and synthesizing a body of empirical research is one way to answer these questions and to recommend best practices. My hope is that the analysis and synthesis I offer here will provide some evidence-based guidance for these important decisions, and that in the future, such decisions will be approached systematically on the basis of the best evidence. More importantly, I am optimistic that this synthesis will encourage educational leaders to reevaluate their school district policies and practices regarding acceleration and ability grouping and will strengthen their confidence to institute policies that reflect the best evidence. This synthesis helps to clarify what we do not know, as well as what we do know, about ways in which the consequences of acceleration and peer ability grouping vary in different contexts and raises pointed questions for future research.

Keywords: *peer ability grouping; social; emotional; acceleration*

In spite of the well-documented academic benefits of acceleration and peer ability grouping (Colangelo, Assouline, & Gross, 2004; Cornell, Callahan, Bassin, & Ramsay, 1991; Gagné & Gagnier, 2004; Gross, 1993, 2003; Kulik & Kulik, 1982, 1984, 1987, 1992; Lubinski, 2004; Lubinski, Webb, Morelock, & Benbow, 2001; Moon, Swift, & Shallenberger, 2002; Noble, Arndt, Nicholson, Sletten, & Zamora, 1999; Richardson & Benbow, 1990; Rogers, 2004; Southern & Jones, 1991; Swiatek & Benbow, 1991), there is ongoing resistance to increasing the use of either in many public schools. The reasons given often have to do with concerns about the potential for social or emotional harm to students (Colangelo et al., 2004; Southern, Jones, & Fiscus, 1989). Parents express concern that acceleration will isolate their children or will be too stressful emotionally. Teachers and administrators hesitate over concerns about burnout and adjustment problems years down the road. What can we

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Table 1
Socioaffective Benefits Associated With Academic Acceleration

Benefit	Sample Studies Reporting the Benefit
Accelerants report satisfying social relationships	Brody, Lupkowski, & Stanley, 1988; Brody, Muratori, & Stanley, 2004; Caplan, Henderson, Henderson, & Fleming, 2002; Charlton, Marolf, & Stanley, 1994; Gross, 2003; Gross & van Vliet, 2005; Janos et al., 1988; Lupkowski, Whitmore, & Ramsay, 1992; Noble, Arndt, Nicholson, Sletten, & Zamora, 1999; Pollins, 1983; Robinson & Janos, 1986; Sayler & Brookshire, 1993
Positive self-esteem, self-concept, or self-confidence	Bower, 1990; Lupkowski et al., 1992; Olenchak, 1995; Rogers, 1992; Thomas, 1987
No evidence of significant negative effects on social or emotional development	Bower, 1990; Brody et al., 2004; Gagné & Gagnier, 2004; Gross, 1993, 2003; Janos, Robinson, & Lunneborg, 1989; Lubinski, 2004; Lubinski, Webb, Morelock, & Benbow, 2001; Noble, Robinson, & Gunderson, 1993; Richardson & Benbow, 1990; Robinson & Janos, 1986; Rogers, 1992; Sayler & Brookshire, 1993; Swiatek, 1993
High level of satisfaction about the choice to accelerate	Brody, 1988; Brody et al., 2004; Charlton et al., 1994; Gross, 2003; Lubinski et al., 2001; Noble et al., 1999; Noble & Drummond, 1992; Noble & Smyth, 1995; Sayler & Brookshire, 1993; Stanley, Slotnik, & Cargain, 1996
Advanced social maturity; greater independence; social leadership	Gross, 1993, 2003; Hobson, 1963; Janos et al., 1989; Noble et al., 1993; Robinson & Janos, 1986; Rogers, 1992; Thomas, 1987; Worcester, 1956
No evidence of burnout	Kolitch & Brody, 1992; Swiatek, 1993; Swiatek & Benbow, 1991
Higher educational aspirations	Lubinski, 2004; Lubinski et al., 2001; Olszewski-Kubilius & Grant, 1996

say in response? What do we know about the immediate and long-term socioaffective impact of acceleration on gifted students? Is there any research on the socioaffective impact of peer ability grouping to guide us? What recommendations can we make for best practice?

Given that several comprehensive reviews of the research on acceleration and on peer ability grouping are available (Brody, Muratori, & Stanley, 2004; Cornell et al., 1991; Gross & van Vliet, 2005; Kulik & Kulik, 1982, 1984, 1992; Lubinski, 2004; Moon & Reis, 2004; Proctor, Black, & Feldhusen, 1986; Robinson, 2004; Rogers, 1992; Slavin, 1987; Southern & Jones, 1991), another review will not be offered here. Instead, the aim of this article is to pull from the research those findings that specifically address the socioaffective impact of acceleration and peer ability grouping and to make recommendations for best practice based on the evidence. The goal is to guide the practitioner in evidence-based decision making regarding the utilization of these two educational options for gifted students.

The Socioaffective Impact of Acceleration

Academic acceleration of high-ability youth is one of the most well-researched topics in education. The growing number of universities accepting younger students and the success of the talent search programs in identifying exceptional academic talent nationwide have made it easier to locate and assess accelerated students, resulting in an ever-growing body of research (Bower, 1990; Brody & Benbow, 1987; Gross, 1993, 2003; Heinbokel, 1997; Plucker & Taylor, 1998; Pollins, 1983; Prado & Scheibel, 1995; Richardson & Benbow, 1990; Swiatek & Benbow, 1991; Thomas, 1993). Although acceleration can take many forms, the three most commonly studied are early entrance to school, early entrance to college, and grade skipping. Studies of these forms of acceleration consistently fail to find evidence of any negative social or emotional effects for nearly all accelerants (Brody et al., 2004; Cornell et al., 1991; Gross, 1993, 2003; Gross & van Vliet, 2005; Robinson, 2004; Rogers, 1992), and numerous studies have identified social or emotional benefits. Table 1 lists the most common socioaffective benefits, along with samples of the empirical studies reporting them.

Although the majority of studies find that acceleration does no harm in either the short or long term, few studies find that it results in a socioaffective advantage for gifted students. In the most thorough analysis of the social and emotional effects of acceleration, Rogers (1992) reviewed 81 studies that investigated the social or emotional impact of acceleration and, using Slavin's (1986, 1987) *best-evidence synthesis* technique, found positive effects in both social (mean effect size = 0.46) and emotional (mean effect size = 0.12) aspects. Social effects were typically examined via social maturity

scores, teacher ratings of social skills, participation in extracurricular activities, and leadership positions held. Emotional effects typically referred to measures of self-concept or teacher or parent ratings of risk taking, independence, and creativity. Rogers (1992) noted significant emotional effects (effect size = .58) for subject-based acceleration in particular.

Several excellent longitudinal studies of accelerated gifted students have tracked the long-term effects of acceleration and found long-lasting social and emotional benefits (Gross, 1993, 2003; Lubinski, 2004; Lubinski et al., 2001). Among them, Gross's (1993, 2003; Gross & van Vliet, 2005) study of 60 Australian children with an IQ of 160+ is noteworthy as the only comparison of children who were radically accelerated with those who were not. Of the 17 students in her study who were able to accelerate radically, there was not a single instance of harm or disadvantage as a result. In sharp contrast, however, was her finding that "the majority of children retained with age peers experienced significant and lasting difficulties in forming or maintaining friendships" (Gross & van Vliet, 2005, p. 159). Her study is unique in its demonstration that failure to accelerate was associated with significant adjustment problems.

Students who skip all or some of high school to enroll in college full time are the focus of a great many studies (Brody, Lupkowski, & Stanley, 1988; Brody & Stanley, 1991; Caplan, Henderson, Henderson, & Fleming, 2002; Ingersoll & Cornell, 1995; Janos et al., 1988; Janos, Sanfilippo, & Robinson, 1986; Lupkowski, Whitmore, & Ramsay, 1992; Muratori, Colangelo, & Assouline, 2003; Noble et al., 1999; Noble & Drummond, 1992; Olszweski-Kubilius, 1995; Robinson & Janos, 1986). These studies come to similar conclusions: Students who are carefully selected tend to do very well academically, socially, and emotionally. Early studies did observe negative social or emotional effects for some early entrants, but these were often ameliorated by a change in curriculum, a change in counseling support, or improved selection criteria.

Do any studies observe a negative socioaffective impact from acceleration? What about the common concerns that accelerated students will not fit in, that they will have problems making friends or be unhappy and have behavior problems? Among the hundreds of studies on acceleration, only three have observed negative emotional effects for accelerated children as a group. The negative effects noted are as follows: decline in academic self-concept (Marsh, Chessor, Craven, & Roche, 1995; Marsh & Hau, 2003; Zeidner & Schleyer, 1999), higher anxiety (Zeidner & Schleyer, 1999), and decline in grades (Zeidner & Schleyer, 1999).

Marsh and Hau's (2003) ambitious, large-scale study of self-concept in a sample of more than 100,000 high school students in 26 countries from the Program of Student Assessment database for the Organisation for Economic Co-operation and Development deserves mention for the controversy it has stirred up. The authors used multilevel modeling to analyze the relationship between self-concept, individual achievement, and school average achievement. They found that students in academically challenging programs had significantly lower self-concepts than did those in nonselective schools. Marsh and Hau argued persuasively that the observed decline in academic self-concept was a serious concern given that academic self-concept mediates educational aspirations, effort, motivation, and coursework selection.

Critics, however, warned that it is difficult to interpret these findings (Dai, 2004; Plucker et al., 2004). Is a higher academic self-concept and less anxiety necessarily better? What if it means that students have a distorted view of their competence? Plucker et al. (2004) reasoned

> Is it possible that self-concepts are reduced but remain high (i.e., a modesty effect)? If so, we see the implications of this study quite differently. Indeed, recent research on competence suggests that people who are not skilled at something tend to think of themselves as being highly skilled, often underestimating the abilities of others (Dunning, Johnson, Ehrlinger, & Kruger, 2003). Sternberg (1999) has proposed that this lack of realistic self-assessment prevents success in highly competitive fields: One needs a realistic view of one's abilities in order to capitalize on personal strengths and compensate for weaknesses. For these reasons, being in the company of like-minded peers with whom one can relate, converse, and argue is a critical component of intellectual and social development that this study does not address. (p. 269)

In spite of the consistent evidence of socioaffective benefits for accelerants as a group, it is important to note that negative effects are occasionally observed for individuals. Some accelerated gifted students do exhibit problems with conduct or mood. Two examples will illustrate.

Richardson and Benbow (1990) asked more than 2,000 junior high students who scored high on the Scholastic Achievement Test (SAT)–Math from 1972 to 1974 to complete questionnaires at ages 18 and 23. By age 18, more than one half the sample had accelerated their education. Richardson and Benbow found no differences between accelerants and nonaccelerants with

respect to self-esteem, locus of control, social interactions, identity, self-acceptance, or social and emotional problems. They also found no gender differences. At age 23, however, 3% of the respondents did view the acceleration as having a negative impact on their life.

Gagné and Gagnier (2004) asked 78 Canadian teachers, each with at least one early entrant in his or her classroom, to judge all of their students on four indicators of adjustment: interest in academic achievement, maturity toward school tasks (attention, concentration, and perseverance), social integration, and conduct. To minimize raters' tendency to exaggerate positive ratings, the authors asked the teachers to choose the five most well-adjusted students in their class and rank them from 1 to 5 and then to choose the five least well-adjusted students and rank them from A to E. In their quantitative analysis, Gagné and Gagnier found no differences in adjustment between early entrants and regularly admitted students, but in their qualitative analysis they observed that teachers rated almost 30% of the early entrants as below average on two or more dimensions of adjustment.

We should conclude that the oft-cited concern that academic acceleration will cause social or emotional harm to gifted children is not supported in the empirical literature. There is no evidence that accelerated gifted students as a group will have problems making friends or getting along with others or that they will become overly stressed, depressed, or suicidal. However, there are documented cases of individual accelerated students having significant adjustment problems. We therefore cannot conclude that all gifted students should grade skip or enter kindergarten or enroll in college early.

Although research shows no substantial positive or negative socialization or psychological differences for grade skipping, early admission to college, or early entrance to kindergarten, we cannot make similar claims for other accelerative options, because they are not as well researched. It is impossible to draw solid conclusions about the social or emotional impact of Advanced Placement (AP) or honors classes, magnet schools, independent study, and curriculum compacting, for instance, because studies do not distinguish one form of acceleration from another and there is too much uncontrolled variability in how students are selected for these options (Cornell et al., 1991). We can predict that gifted students who are carefully selected for accelerative options should not only experience academic benefits, but may also experience some social or emotional benefits as well, and that there may be circumstances in which it is not the best option for certain individuals. Risks can possibly be minimized by using a tool like the Iowa Acceleration Scale (Assouline, Colangelo, Lupkowski-Shoplik, & Lipscomb, 2003) to select candidates carefully.

Given that there is little evidence to support the idea that gifted children who are accelerated manifest better social and emotional adjustment than those who are not accelerated, primarily because few studies compared gifted accelerated children with those who did not accelerate (e.g., see Gross, 2003), we do not have sufficient evidence to make the claim that gifted children who are accelerated do better socially or emotionally than do gifted children who are not accelerated.

The Socioaffective Impact of Peer Ability Grouping

There is ample evidence in the literature that grouping students of high ability together benefits their achievement (Brody & Benbow, 1987; Brody & Stanley, 1991; Gamoran & Berends, 1987; Isaacs & Duffus, 1995; Janos & Robinson, 1985; Kolloff, 1989; Kulik & Kulik, 1982, 1984, 1987, 1990; Lou et al., 1996; Rogers, 1992, 1993, 2004; Slavin, 1990; Southern & Jones, 1991; Starko, 1988; Vaughn, Feldhusen, & Asher, 1991), but few have examined its socioaffective impact (Adams-Byers, Whitsell, & Moon, 2004; Gross, 1993, 2003; Gross & van Vliet, 2005; Kulik & Kulik, 1982, 1987; Marsh et al., 1995; Marsh & Hau, 2003; Moon, Swift, & Shallenberger, 2002; Shields, 1995; Zentall, Moon, Hall, & Grskovic, 2001). How clear is it that such grouping provides social or emotional benefits? Is there empirical evidence that failure to group students by ability harms some gifted students? What socioaffective impact, if any, does ability grouping have?

The literature on the socioaffective effects of peer ability grouping is not nearly as extensive as it is on acceleration, and the debate about ability grouping is often confounded by mixing of terms. Peer grouping is defined in the literature as any arrangement that attempts to place students with similar levels of ability in instructional groups. The most common form is between-class ability grouping in secondary schools, but forms of within-class ability grouping are also seen, especially at the primary level, where students are often grouped by ability within class for reading and, less often, math. Tracking (or *streaming*, as it is called in Europe) is a hotly debated but pervasive form of ability grouping in secondary schools in which students are assigned on the basis of ability to a series of classes.

Table 2
Socioaffective Benefits Associated With Peer Ability Grouping

Benefit	Sample Studies Reporting the Benefit
More favorable attitude toward subject matter	Adams-Byers, Whitsell, & Moon, 2004; Gross, 2003; Kulik & Kulik, 1982, 1984, 1987; Rogers, 1993; Starko, 1988
Greater development of students' career interests	Isaacs & Duffus, 1995; Shields, 1995; Starko, 1988
Healthy social relationships	Gross, 2003; Isaacs & Duffus, 1995; Janos et al., 1988; Janos, Robinson, & Lunneborg, 1989; Noble & Drummond, 1992; Olszewski-Kubilius, 1995; Sayler & Brookshire, 1993
High motivation	Adams-Byers et al., 2004; Isaacs & Duffus, 1995; Kuriloff & Reichert, 2003

Most commonly these include a college-prep track, a vocational track, and a special education track. Tracking is a full-scale, permanent grouping of students by ability, as measured by test scores or grades. Ability grouping includes tracking, but not all ability grouping is tracking.

The overall conclusion is that various forms of ability grouping have differential effects for gifted students. Peer ability grouping seems to have positive socioaffective effects for some gifted students, neutral effects for others, and detrimental effects on a few. Table 2 lists the socioaffective benefits associated with peer ability grouping along with the studies reporting the benefits.

Among the studies that examined the impact of ability grouping on self-concept, some reported a decline in self-concept (Gross, 2003; Kulik & Kulik, 1984; Shields, 1995), others reported a gain (McQuilkin, 1981), and some reported no change (Maddux, Scheicher, & Bass 1982; Vaughn et al., 1991). Even within studies, differential effects on self-concept are observed. For instance, Rogers' (1992) best-evidence synthesis found differential effects on self-esteem for different grouping arrangements: small gains for nongraded classrooms and early entrance to college, small losses for subject acceleration, and no differences for AP.

Although some authors view a decline in self-concept as a serious concern (see, e.g., Marsh & Hau, 2003), others perceive the decline as simply an adjustment to a more realistic perception of one's abilities (see, e.g., Plucker et al., 2004; Rogers, 2004) or a reflection of a new realization of the discrepancy between their ability and their achievement (Gross, 2003).

Studies that use student self-report measures to explore the socioaffective impact of ability grouping also report mixed findings. For instance, in their survey of gifted students' perceptions of homogeneously and heterogeneously grouped classrooms, Adams-Byers et al. (2004) reported that their 44 subjects "perceived mixed-ability grouping to offer the greatest number of social/emotional advantages and high-ability grouping to offer the greatest number of academic advantages" (p. 10). However, 54% of the self-reported disadvantages of ability grouping were related to a decrease in achievement status due to the greater competition in such classrooms.

In another example, Shields (1995) used a questionnaire to assess the attitudes and perceptions of fifth- and eighth-grade gifted students in homogenous and heterogeneous classrooms and came up with some unexpected results. First, both fifth- and eighth-grade students in homogeneous classrooms reported more development of their career interests. Eighth-grade students in heterogeneous classrooms demonstrated greater academic self-concept than those in homogeneous classrooms. No significant differences were noted in perceptions of autonomy, independent development, peer relations, enjoyment of school, or involvement in school activities.

A study noteworthy for its finding that heterogeneous grouping may have deleterious social and emotional effects on high-ability students is Farmer and Farmer's (1996) comparison of social affiliations. They studied patterns of social affiliations in third- and fourth-grade gifted students, students with learning disabilities, and students with emotional or behavioral disorders in mixed-ability classrooms. They observed that students tended to form affiliations within only one cluster and that these affiliations were based on shared social or personal characteristics.

"[B]oys receiving AG [academically gifted] services seemed to thrive when there were enough of them in a classroom to allow them to form a core

prosocial group. In the absence of this critical mass, though, the social positioning of boys with AG services was not nearly as positive" (p. 447).

The authors observed that gifted boys in particular tended to rely on antisocial behaviors and affiliations to gain a central social position in the classroom when the classroom lacked a "critical mass" of gifted boys.

The socioaffective impact of ability grouping is further illuminated by a few studies that investigated the academic and personal adjustment of talented minority students (Diaz, 1998; Fordham & Ogbu, 1986; Hebert, 1996, 2001; Isaacs & Duffus, 1995; Jones, 2003; Kuriloff & Reichert, 2003). These studies stressed the contribution of peer support networks to persistence with challenging curriculum and successful transitioning to challenging postsecondary options. They provide limited empirical support that ability grouping facilitates satisfactory peer relationships that may be crucial to keeping students who face barriers to high achievement like language, social isolation, and discrimination engaged in challenging coursework and in keeping motivation and aspirations high.

However, differential results are observed among them as well. For instance, Kuriloff and Reichert's (2003) qualitative study of 27 high school boys in an elite prep school observed that talented Black students who formed a cohesive peer group were able to better negotiate the social geography of the school. Kuriloff and Reichert postulated that being surrounded by peers who were also thinking of going to college, who were also struggling with crossing economic, cultural, or racial borders, and with whom students could share strategies for negotiating the unique social terrain of the school may have reduced the attrition of talented minority students from challenging coursework. In contrast, Jones (2003) concluded in her study of 10 talented women from working-class backgrounds that participation in advanced classes sometimes intensified the experience of marginality and visibility experienced by working class, minority gifted students because in such classes they developed greater awareness of advantage and disadvantage, privilege and injustice, at an earlier age. The apparent contradiction between Jones's findings and those of Kuriloff and Reichert may be due to the opportunities students had in their peer groups to discuss the affiliation conflicts they felt. It is not clear form Jones's study whether her subjects had opportunity to discuss or externalize the conflicts they experienced. It may be that for gifted minority students, peer grouping itself is not as important as having regular opportunities to explore the conflicts they feel regarding affiliation and achievement.

In contrast to those studies that report social or psychological benefits, several studies observed negative socioaffective effects of ability grouping (Adams-Byers et al., 2004; Marsh et al., 1995; Marsh & Hau, 2003; Zeidner & Schleyer, 1999; Zentall et al., 2001). The most common finding is a significant drop in self-concept among high-ability students who are homogeneously grouped, but Zeidner and Schleyer (1999) also observed higher levels of anxiety in homogeneously grouped children.

Highlighting the complexity of the variables involved is a study by Zentall et al. (2001). They conducted the only empirical study examining the socioaffective adjustment of accelerated gifted students with Attention Deficit/Hyperactivity Disorder (AD/HD) in a self-contained classroom. They compared gifted AD/HD students in a self-contained accelerated classroom with gifted peers without AD/HD in the same classroom and average AD/HD students in a regular classroom and found that though the gifted AD/HD students did well academically, they had trouble with social relations. Zentall et al. concluded that "gifted students with AD/HD may be at risk for problems with social/emotional development if they are accelerated with their GT peers without further accommodations for their AD/HD disability" (as cited in Moon & Reis, 2004, p. 114).

Adding to our understanding of the socioaffective impact of ability grouping on gifted students are the results of two studies that observed a negative impact in mixed-ability classrooms. Gross (1989) observed social rejection and alienation, and Baker, Bridger, and Evans (1999) reported decreased motivation and disinterest in school.

Rogers (1993) aptly concludes:

> What seems evident about the spotty research on socialization and psychological effects when grouping by ability is that no pattern of improvement or decline can be established. It is likely that there are many personal, environmental, family, and other extraneous variables that affect self-esteem and socialization more directly than the practice of grouping itself. (p. 10)

Best Practice Recommendations

Given the findings from the research and the limitations of the studies, what best practice recommendations can we make for acceleration and ability grouping in

terms of the social and emotional benefits? Regarding acceleration, we can say the following:

- Acceleration should be routine for highly gifted children. All highly gifted children should be evaluated for grade skipping, in particular.
- Acceleration options should be available for capable students. No school district or school administrator should have a policy that prohibits accelerative options for students, including grade skipping.
- All school districts should have written policies or procedures in place to ensure that acceleration options (e.g., grade skipping, early entrance to kindergarten, and early admission to college) are available in all schools and to guide parents and teachers in the steps to follow for referral and evaluation of students.
- Students who are being considered for acceleration should be screened for social readiness, emotional maturity, and motivation for acceleration. A tool, such as The Iowa Acceleration Scale (Assouline et al., 2003), may help to select candidates for acceleration.
- When possible, students who are grade skipping or making an early entrance to college should do so as part of a cohort. There appear to be benefits to cohort acceleration that are more difficult to replicate when students go it alone.
- Young students considering early college entrance should begin taking one or more college-level classes to gain experience with the social, cognitive, and academic expectations of such classes before attending college full time.
- Similarly, candidates for early entrance to kindergarten should ideally have some experience with preschool before enrolling in kindergarten.
- In selecting candidates for acceleration, educators should consider the possibility that a student who demonstrates low motivation, social withdrawal or isolation, and negative attitudes toward school or academic work might, in fact, be a good candidate for acceleration options.
- All gifted students are not good candidates for grade skipping, early entrance to kindergarten, or early admission to college.

Given that few studies examined peer ability grouping for socialization or psychological effects, what recommendations can we make regarding peer ability grouping? We can suggest the following:

- The menu of grouping arrangements available to gifted students should be expanded so that we meet the diverse needs of this population. Ask "What grouping options do we currently not offer?" and strive to make it available.
- Although peer ability grouping is associated with strong achievement benefits, it appears to pose social or emotional challenges for some gifted children. Do not promote it as the panacea for all.
- It should be recognized that twice-exceptional children may face significant difficulties with social adjustment when ability grouped, if accommodations are not made for their disabilities.
- One should keep in mind that students' preference for mixed-ability grouping arrangements may be reflective of their desire to maintain their perceived achievement status, rather than an indication of any real difficulties with peer relations.
- Staff development should be made the highest priority so that every mixed-ability classroom has a teacher who can deliver accelerated instruction to high-ability students. It is well established that both academic and socioaffective gains are associated with advanced instruction for gifted students.

We should also stress that any discussion about ability grouping must address the valid concern that grouping in the past has been associated with inequality of opportunity (Oakes, 1985; Pool & Page, 1995; Rosenbaum, 1980). Ability grouping has historically discriminated on the basis of class (Hochschild & Scovronick, 2003). Affluent children are three times as likely as disadvantaged children to be placed in high-ability groups, and even though scores of ability or achievement are the primary determinants of such placements, class-based factors come in second (Dauber, 1996; Hochschild & Scovronick, 2003). Peer ability grouping is also often viewed as a race issue, because accelerated or high-ability classes have traditionally been dominated by affluent White children, whereas lower ability classes and special educational programs have been dominated by children of color from economically disadvantaged backgrounds. These are important issues that are not easily resolved. Indeed, they are the basis for some authorities' insistence that the only satisfactory option for all children is placement in heterogeneous classrooms with differentiated instruction, even though research demonstrates that this option does not meet the needs of some children (Gamoran & Mare, 1989; Oakes, 1985).

Proponents of peer ability grouping for gifted children typically emphasize that they are not advocating for tracking, per se, but for flexible ability grouping. However, reality is often not congruent with rhetoric, and in practice, peer ability grouping effectively becomes tracking in many schools in the United States, especially

at the high school level. Our common neglect of this valid concern perpetuates the sometimes adversarial and vitriolic debates about the benefits of homogenous grouping for high ability students. Given that peer grouping is about separation and divisions, any kind of ability grouping is anathema to those who believe that inclusion is the only way to guarantee equity. Within-class groups must be very flexible and provide opportunities for all students to change groups according to their abilities on specific skills. We must be prepared not only to address these concerns, but also to work to ensure fair allocation of resources and quality instruction for all children.

Limitations of the Research

The body of literature on the social and emotional effects of acceleration and ability grouping has four serious limitations. The first is that most of it is descriptive or correlational by design. Well-controlled, randomized design studies are simply not undertaken for obvious reasons, so findings are always based on samples or methodologies that are flawed in some way.

A serious second limitation is that most studies rely on subjective perceptions of adjustment by students, parents, or teachers, rather than on objective measures of psychological indices that are known to be related to positive and negative adjustment. Future research that compares gifted students who are ability grouped or accelerated with those who are not on standardized, objective measures of adjustment would strengthen the empirical base for specific recommendations.

A third limitation is that the common methodology in research on grade-skipping and early entrance to college is ex post facto design, a methodology limited in that it does not control for preexisting group differences on outcome measures. Therefore, we must make caveats before making broad generalizations about the social or emotional impact of acceleration and ability grouping.

The fourth limitation is the voluntary nature of participation in most accelerated or ability-grouped programs. There may be significant differences between those students (and their families) who choose to accelerate learning, select homogenous grouping options, and even load up on advanced classes and their gifted classmates who do not pursue these options. It may be that students who make such choices are better adjusted and demonstrate greater social and emotional maturity than those who do not.

It is often impossible in the research to separate the effects of the accelerated content from the effects of peer ability grouping. When benefits are observed, was it the advanced curriculum that made the difference or the new access to true peers? Gross's (Gross, 2003, 2004; Gross & van Vliet, 2005) analyses suggest that it was some of both.

Unanswered Questions

With the exception of Gross's longitudinal study (1993, 2003; Gross & van Vliet, 2005) no studies examined the socioaffective impact of capable children who were eligible for accelerative options and remained in the regular classroom. Is there harm in not pursuing such options? Gross (1993, 2003) found significant negative effects for the highly gifted children in her sample. Similarly, what happens to students who are dissatisfied in the regular classroom and seek accelerative options to no avail? We do not have research to address that question either.

Few of the studies on early college admission compared early entrants with nonaccelerants to help determine the extent to which acceleration contributes to the observed positive effects (Janos, Robinson, & Lunneborg, 1989; Noble, Robinson, & Gunderson, 1993; Robinson, 2004; Robinson & Janos, 1986). It is possible that students who choose early entrance to college are different from those who do not on some other variable that contributes to their success. Given that few studies compare matched samples of early entrants with students who choose to stay in high school, we do not know how much better or worse their adjustment is than that of students who enter college at age 18. Is the initial period of adjustment for freshman tougher if they are 16 or 14? What differences, if any, are there between gifted college students who enter college at 18 and those who enter at younger ages? What kinds of support, family history, or personal characteristics if any, make a difference for early entrants (Robinson, 2004)?

Although there is a large volume of research on the impact of ability grouping on academic outcomes, there is little research on its effects on social or emotional indicators, making it harder to draw unequivocal recommendations. Most of the earlier research on ability grouping focused on issues of equity or the differences in achievement outcomes of students assigned to different ability groups (Hoffer, 1992; Natriello, Pallas, & Alexander, 1989; Oakes, 1985, 1989; Slavin, 1990).

Little of the research has explored the ways in which ability grouping affects objective indices of social or emotional functioning.

Future research should explore the antecedents of various effects, and we need more studies conducted with comparison groups that rely on recognized standard measures of adjustment. We do not know how ability grouping affects motivation, efficacy, or perceptions of ability in oneself and others. We also know surprisingly little about the friendship patterns of gifted adolescents who are accelerated and those who are not.

Summary

Given that feelings, perceptions, attitudes, and social relations can facilitate or hinder learning, it is essential that the socioaffective impact of various educational practices be assessed. Regarding acceleration, we have sufficient research to conclude confidently that accelerated gifted children, as a group, are no more at risk for social or emotional difficulties than are other children. At the same time, there is little evidence to support the claim that accelerated gifted children have a socioaffective advantage over gifted children who are not accelerated.

Although the research consistently finds no ill group effects, some accelerated gifted children do have adjustment difficulties (e.g., Gagné & Gagnier, 2004). Important individual differences in perceived social and emotional adjustment have been noted among accelerated gifted children in some studies. Proponents of acceleration must be careful to acknowledge this and to guard against giving the impression that there are never any problems when children are accelerated.

Peer ability grouping has differential socioaffective effects and seems to be more advantageous for some students than for others. In particular, the limited research evidence suggests homogeneous grouping arrangements are more strongly associated with positive adjustment outcomes among highly gifted children, although this connection is less clear with moderately gifted students. Gross and van Vliet's (2005) research does suggest that failure to accelerate some highly gifted children can cause relationship problems that last well into adulthood.

There is some evidence to suggest that peer ability grouping may also be more strongly related to positive social and emotional outcomes for gifted minority students, but more research is needed to verify whether this relationship exists for larger numbers of such students.

When negative effects of ability grouping are observed we must use caution in our interpretation of them. In some cases authors have interpreted the data to support a favored viewpoint, rather than putting forth multiple interpretations for consideration. For instance, the finding in some studies that accelerated students spend less time in social activities may indicate a negative change in socialization patterns, or it may indicate that the child is now happily spending more time in talent development and has less time and interest for social activities. A decline in self-esteem may indicate a negative attitude, or it may reflect a more realistic appraisal of one's abilities.

Although the research finds academic and achievement benefits for ability grouping for gifted students, the research does not support the claim of social or emotional benefits for such grouping arrangements. Although advantages in peer relations, motivation, career development, and attitudes toward school have been documented for some gifted students, there is evidence that heterogeneous grouping is an advantage for others as long as challenging curriculum is provided.

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