

chapter fifteen

LEARNERS WITH SPECIAL GIFTS AND TALENTS



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LEARNING OUTCOMES

Learning Outcome 15.1: Learn about the definition and prevalence of giftedness.

Learning Outcome 15.2: Understand the origins of giftedness, how students with special gifts and talents are identified, and some psychological and behavioral characteristics of people with special gifts and talents.

Learning Outcome 15.3: Learn about the effect of cultural values on students with special gifts and talents and groups of

students with special gifts and talents who are neglected.

Learning Outcome 15.4: Learn about some educational considerations for people with special gifts and talents.

Learning Outcome 15.5: Learn about issues that should be considered with respect to early intervention and transition to adulthood for individuals with special gifts and talents.

MISCONCEPTIONS ABOUT

Learners with Special Gifts and Talents

- MYTH** People with special intellectual gifts are physically weak, socially inept, have narrow interests, and are prone to emotional instability and early decline.
- FACT** Wide individual variations exist among individuals with special intellectual gifts, and most are healthy, well adjusted, socially attractive, and morally responsible.
- MYTH** People who have special gifts or talents are in a sense superhuman.
- FACT** People with special gifts or talents are not superhuman; rather, they are human beings with extraordinary gifts in particular areas. And like everyone else, they may have particular faults.
- MYTH** People with special gifts or talents tend to be mentally unstable.
- FACT** Those with special gifts or talents are about as likely to be well adjusted and emotionally healthy as those who do not have such gifts.
- MYTH** We know that 3% to 5% of the population has special gifts or talents.
- FACT** The percentage of the population that is found to have special gifts or talents depends on the definition of *giftedness* used. Some definitions include only 1% or 2% of the population; others, over 20%.
- MYTH** Giftedness is a stable trait, always consistently evident in all periods of a person's life.
- FACT** Some of the remarkable talents and outstanding productivity of people with special gifts develop early and continue throughout life; in other cases, a person's gifts or talents are not noticed until adulthood. Occasionally, a child who shows outstanding ability becomes a nondescript adult.
- MYTH** People who have special gifts do everything well.
- FACT** Some people who are characterized as having a special gift have superior abilities of many kinds; others have clearly superior talents in only one area.
- MYTH** People have special intellectual gifts if they score above a certain level on intelligence tests.
- FACT** IQ is only one indication of one kind of giftedness. Creativity and high motivation are as important as general intelligence. Gifts or talents in some areas, such as the visual and performing arts, are not assessed by tests that measure IQ.
- MYTH** Students who have a true gift or talent for something will excel without special education. They need only the incentives and instruction that are appropriate for all students.
- FACT** Some children with special gifts or talents will perform at a remarkably high level without special education of any kind, and some will make outstanding contributions even in the face of great obstacles to their achievement. But most will not come close to achieving at a level commensurate with their potential unless their talents are deliberately fostered by instruction that is appropriate for their advanced abilities.

GUIDING QUESTIONS

- How is giftedness defined?
- What is the prevalence of giftedness?
- What are the origins of giftedness?
- How is giftedness identified?
- What are the psychological and behavioral characteristics of students with special gifts and talents?
- How do cultural values affect the education of students with special gifts and talents?
- What groups of students with special gifts and talents are neglected?
- What are the major educational considerations for students with special gifts and talents?
- What are the major problems of early intervention for children with special gifts and talents?
- What provisions are made for transition of students with special gifts and talents?

People who have special gifts or the potential for gifted performance can go through life unrecognized. They might seem unremarkable to the people who are closest to them. Sometimes their special talents or gifts aren't discovered because their families and friends don't think their special abilities are very important. And sometimes they aren't recognized because they aren't given opportunities or training. Especially in the case of those who are poor or members of minority groups, students with extraordinary gifts or talents may be deprived of chances to demonstrate and develop their potential. How many more outstanding artists and scientists would we have if all talented students had the opportunity and the training necessary to develop their talents to the fullest possible extent? We know that we'd have more, but we don't know how many more (see Callahan & Hertzberg-Davis, 2013a).

Unlike disabilities, gifts and talents are abilities that nearly everyone believes should be fostered deliberately and celebrated. Yet giftedness is not without risk of stigma and rejection. Many people have a low level of tolerance for others who eclipse ordinary people in some way, especially in academic knowledge or achievement. Children who achieve far beyond the level of their average peers may be criticized, socially isolated, or pressured by their parents, other children, or school personnel to be like everyone else (Freeman, 2005; Plucker & Callahan, 2017). In fact, they may be teased, bullied, rejected, or hated (you may want to explore <http://highability.org/> and evaluate what you see there in the light of our comments on social status, self-perception, mental illness, and stigma).

Some of the problems of giftedness parallel those of disabling conditions. For instance, defining and identifying children with special gifts or talents involve the same difficulties as defining and identifying children with intellectual disability or emotional or behavioral disorders (see Kauffman, Hallahan, Pullen, & Badar, 2018; Kauffman & Landrum, 2018; see also Landrum, Wiley, Tankersley, & Kauffman, 2014). All of the theoretical and philosophical issues involving disability and special education apply also to giftedness and special education (see Anastasiou & Kauffman, 2011, 2012, 2013; Kauffman & Anastasiou, in press). Nevertheless, an underlying philosophical issue regarding giftedness makes us think differently about this exceptionality: Most of us feel a moral obligation to help people who are at some disadvantage compared to the average person, who have differences that prevent them from achieving ordinary levels of competence unless they're given special help. But we may not feel the same moral obligation to help people who have special gifts, who are already ahead of most of us, to become even better and to distinguish themselves further by fulfilling their highest promise (see Gallagher, 2013; Plucker & Callahan, 2017).



MyLab Education
Video Example 15.1

Early elementary school teachers can play a crucial role in spotting giftedness in students early, which helps ensure that these students reach their potential.

The desirability or necessity of helping the highest-achieving students to reach their full potential is often questioned. Today, the emphasis is on programs to develop the talents of *all* students, with less special attention given to those who might be identified as gifted or talented. Some researchers have noted this trend toward downplaying or neglecting giftedness (Gallagher, 2000b, 2013; Kauffman et al., 2018; Plucker & Callahan, 2014, 2017; Plucker & Peters, 2016). The neglect of our most talented students is an ugly secret of contemporary American public education policy (<http://www.brainy-child.com/>) (DiGennaro, 2007).

DEFINITION

Students with special gifts excel in some way compared to other students of the same age. Beyond this almost meaningless statement, however, little agreement exists among educators about how giftedness should be defined (see Plucker & Callahan, 2017). School systems have widely differing practices regarding the education of students with special gifts or talents, because the term *gifted* has no clear-cut definition. Disagreements about definition are due primarily to differences of opinion regarding the following questions:

1. *In what ways do students with a special gift or talent excel?* Do they excel in general intelligence, insight, creativity, special talents, and achievements in academic subjects or in a valued line of work, moral judgment, or some combination of factors? Perhaps nearly everyone is gifted in some way or other. Which kind of giftedness is most important? Which kind of giftedness should be encouraged?
2. *How is giftedness measured?* Is it measured by standardized tests of aptitude and achievement, teacher judgments, past performance in school or everyday life, or some other means? If it's measured in any one particular way, some individuals will be overlooked. If past performance is the test, giftedness is being defined after the fact. Which measurement techniques are valid and reliable? Which measurements will identify students who have the potential to develop special gifts or talents?
3. *To what degree must a student excel to be considered to have a special gift or talent?* Must the student do better than 50%, 80%, 90%, or 99% of the comparison group? The number of individuals with special gifts will vary depending on the criterion (or criteria) for giftedness. What percentage of the population should be considered to have special gifts?
4. *Who should be in the comparison group?* Should the comparison group comprise every student of the same chronological age, the other students in the same school, all students of the same ethnic or racial origin, or some other grouping? Almost everyone is the brightest or most capable in some group. Which group should set the standard?
5. *Why should students with special gifts be identified?* What social or cultural good is expected to come from their identification? Is it important to meet individual students' educational needs? Are national economic or security issues at stake? Does identifying these individuals maintain an elite group or social power? By providing special educational opportunities for these students, will others reap personal or social benefits? What criteria will be used to judge whether identifying students with special gifts or talents pays off?

Giftedness, or *talent*, like *intellectual disability*, is whatever we choose to make it. Someone can be considered gifted (or to have intellectual disabilities) one day and not the next, or in one place but not another, simply because an arbitrary definition has been changed. The definitions that professionals use have no inherent rightness or wrongness. Some definitions might be more logical, more precise, or more useful than others, but we are still unable to say that they are more correct in some absolute sense. We have to struggle with the concepts of gift and talent and the reasons for identifying individuals with gifts or talents before we can make any decisions about definition. Any definition of giftedness is shaped to a large extent by what the surrounding culture believes is most useful or necessary for its survival. Giftedness is defined, not discovered (see Callahan & Hertberg-Davis, 2013b; Lohman, 2006; Plucker & Callahan, 2014, 2017).

Even the terminology of *giftedness* can be rather confusing. Besides the word *gifted*, a variety of other terms have been used to describe individuals who are superior in some way: talented, creative, insightful, genius, and precocious, for example.

- *Precocity* refers to remarkable early development. Precocious children develop gifts in such areas as language, music, or mathematics at a very young age.
- *Insight* may be defined as separating relevant from irrelevant information, finding novel and useful ways of combining relevant bits of information, or relating new and old information in a novel and productive way.
- *Genius* has sometimes been used to indicate a particular aptitude or capacity in any area. More often, it has been used to indicate extremely rare intellectual powers (often assumed to be indicated by IQ) or creativity.
- *Creativity* refers to the ability to express novel and useful ideas, to sense and elucidate novel and important relationships, and to ask previously unthought of, but crucial, questions.
- *Talent* ordinarily has been used to indicate a special ability, aptitude, or accomplishment.
- *Giftedness*, as we use the term in this chapter, refers to cognitive (intellectual) superiority (not necessarily of genius caliber), creativity, and motivation in combination and of sufficient magnitude to set children apart from the vast majority of their age peers and make it possible for them to contribute something of particular value to society.

The lack of consensus about what giftedness means poses problems for government definitions. No federal law requires special education for students with special gifts or talents, although federal legislation encourages states to develop programs and support research. The federal mandate for special education applies only if the student has a disability in addition to giftedness (see Huefner, 2006; Yell, 2016). However, most states mandate programs, and the most common elements of state definitions are (1) general intellectual ability, (2) specific academic aptitude, (3) creative thinking ability, (4) advanced ability in the fine arts and performing arts, and (5) leadership ability.

The field of special education is beginning to appreciate the different ways in which giftedness can be expressed in various areas of human endeavor. Likewise, educators are starting to acknowledge the extent to which the meaning of giftedness is rooted in cultural values (Lohman, 2006; see also Plucker & Callahan, 2017). There are many different abilities and many different ways of measuring them. What's considered giftedness and how it's measured depend to a large extent on what a culture values and believes. Most experts now acknowledge that intelligence isn't all there is to giftedness.

Recognizing the many facets of human intelligence has led to dissatisfaction with previous conceptualizations of general intelligence that reduced it to a single number (IQ) that was assumed to be unchangeable. Sternberg (1997, 2017; also, search the Web for "triarchic theory of intelligence") described a theory of intelligence that suggests three main kinds of giftedness: analytic, synthetic, and practical:

- *Analytic giftedness* involves being able to take a problem apart—to understand the parts of a problem and how they are interrelated, which is a skill typically measured by conventional intelligence tests.
- *Synthetic giftedness* involves insight, intuition, creativity, or adeptness at coping with novel situations, skills that are typically associated with high achievement in the arts and sciences.
- *Practical giftedness* involves applying analytic and synthetic abilities to the solution of everyday problems, the kinds of skills that characterize people who have successful careers.

A popular idea today is that individuals have "multiple intelligences" (Gardner & Hatch, 1989; see Chan, 2006 and Sternberg, 2017; also, search the Web for "multiple intelligences"). However, the concept of multiple intelligences is seen by many as scientifically untenable because it is not supported by research (Lloyd & Hallahan, 2007; Willingham, 2009). The theory of multiple intelligences is widely held to be legitimate,

but few, if any, reliable applications of the theory to teaching exist (see Callahan & Hertzberg-Davis, 2013b; Plucker & Callahan, 2017).

Today, most experts in educating students with special gifts and talents suggest that giftedness refers to superior abilities in specific areas of performance, which may be exhibited under some circumstances but not others. Even though giftedness is believed to be a remarkable ability to do something that society values, it's not an inherent, immutable trait that a person necessarily carries for life (Reis & Renzulli, 2009; Renzulli & Delcourt, 2013; Renzulli & D'Souza, 2014). Moreover, having a special gift in one area doesn't mean that a person is good at everything—or even that someone who is a good thinker about one thing is a good thinker about all things (<http://www.nagc.org/>). People become extraordinarily good at something only by developing their ability to do that particular thing. Ability is not a mental ability that can be used in any way one wants. All measures of intellectual ability, with no exceptions, tap into what has already been developed (Lohman, 2006).

PREVALENCE

Federal reports and legislation have assumed that 3% to 5% of the U.S. school population could be considered to have special gifts or talents. The prevalence of giftedness is a function of the definition that is used; if giftedness is defined as the top x percent on a given criterion, the question of prevalence has been answered. Of course, if x percent refers to a percentage of a national sample, the prevalence of gifted pupils in a given school or cultural group may vary from that of the comparison group, regardless of the criteria that are used to measure performance (see Callahan, 2011).

MyLab Education Self-Check 15.1

MyLab Education Application Exercise 15.1: Where Does Your State Stand?

This exercise asks you to consider IDEA-related services for students who are gifted and/or talented, and the variation across states with respect to how they are identified and served.

ORIGINS OF GIFTEDNESS

As defined today, giftedness isn't something that sets people apart in every way from people who are average. Instead, it refers to specific, valued, and unusual talents that people may exhibit during some periods of their life. The main factors that contribute to giftedness therefore are really much the same as those that foster any type of behavior, whether typical or exceptional:

1. Genetic and other biological factors, such as neurological functioning and nutrition
2. Social factors, such as family, school, the peer group, and community

We are all combinations of the influences of our genetic inheritances and social and physical environments. What environments foster gifted performance? We can often change students' environments; we cannot yet change their genetic makeup.

Although giftedness may be determined in part by one's genetic inheritance, whatever genetic combinations are involved are exceedingly complex and not distributed according to race or social class. The idea that giftedness is entirely inherited is one of the worst ideas associated with gifted education (Gallagher, 2006). However, children are not born with equal capabilities. Some learn much faster than others, and in a multicultural society it's particularly difficult to define ideas, concepts, or abilities that should be most highly valued and then identify students who should be included among those who are gifted or talented.

Families, schools, peer groups, and communities have a profound influence on the development of giftedness. Stimulation, opportunities, expectations, demands, and rewards for performance all affect children's learning.

How can families, schools, and the larger culture nurture children's giftedness? Research has shown that parents differ greatly in their attitudes toward and management of the giftedness of their children. Home and family are critically important, especially in the child's younger years (see Muratori et al., 2006; Robinson, 2013). In the families of highly successful persons:

- Someone in the family (usually one or both parents) had a personal interest in the child's talent and provided great support and encouragement for its development.
- The parents were role models (at least at the start of their child's development of talent), especially in terms of lifestyle.
- There was specific parental encouragement of the child to explore, to participate in home activities related to the area of developing talent, and to join the family in related activities. Small signs of interest and capability by the child were rewarded.
- Parents took it for granted that their children would learn in the area of talent, just as they would learn language.
- The family exhibited expected behaviors and values related to the talent, holding to clear schedules and standards for performance appropriate for the child's stage of development.
- Teaching was informal and occurred in a variety of settings. Early learning was exploratory and much like play.
- The family interacted with a tutor/mentor and received information to guide the child's practice—including specific tasks to be accomplished, information or specific points to be emphasized or problems to be solved, a set time by which the child could be expected to achieve specific goals and objectives, and the amount of time to be devoted to practice.
- Parents observed practice, insisted that the child put in the required amount of practice time, provided instruction where necessary, and rewarded the child for doing something especially well or meeting a standard.
- Parents sought special instruction and special teachers for the child.
- Parents encouraged participation in events (recitals, concerts, contests, etc.) in which the child's capabilities were displayed in public.

The ways in which schools can nurture children's giftedness have received too little attention (Brighton & Jarvis, 2017); Robinson, Shore, & Enersen, 2007). Yet the ways in which schools identify giftedness, group children for instruction, design curricula, and reward performance have profound effects on what the most able students achieve. When schools facilitate the performance of all students who can achieve at a superior level in specific areas, giftedness is found among children of all cultural and socioeconomic groups.

IDENTIFICATION OF GIFTEDNESS

Measuring giftedness is a complicated matter (Borland, 2014; Lohman, 2006; Plucker & Callahan, 2017). Appropriate methods of early identification will help children with special talents achieve self-fulfillment and aid them in developing their special potential to make a unique and valuable contribution to society.

The most common methods of identifying giftedness include IQ (based on group or individual tests), standardized achievement test scores, teacher nominations, parent nominations, peer nominations, self-nominations, and evaluations of student work or performance. In fact, strong arguments can be made not to disregard the traditional psychometric test-score approach altogether (Robinson, 2005). Typically, some combination of several of these methods is used (<http://www.youtube.com/watch?v=WjjVTPpimDk>).

In devising identification procedures that are fair to individuals from all cultural and ethnic groups and all social classes, educators must take into account the varied definitions of giftedness and recognize the effects of cultural variation on children's behavior (Borland, 2014; Plucker & Callahan, 2017). In addressing multicultural differences, it's

important to recognize the variations of socioeconomic status, language, and values that occur within various ethnic and cultural groups, not just between them. Hunsaker and Callahan (1995) proposed eight general identification principles to help ensure fairness:

1. Assessments exceed a narrow conception of talent.
2. Separate and appropriate identification strategies are used to identify different aspects of giftedness.
3. Reliable and valid instruments and strategies are used to assess talent.
4. Appropriate instruments are employed for underserved populations.
5. Each child is viewed as an individual, recognizing the limits of a single score on any measure.
6. A multiple-measure/multiple-criteria approach is followed.
7. Appreciation is shown for the value of the individual case study and the limitations of combinations of scores.
8. Identification and placement are based on individual students' needs and abilities rather than on the numbers who can be served.

Identification methods should focus on balancing concern for identifying only those students whose capabilities are markedly above average with concern for including all who show promise for gifted performance (see Callahan & Hertzberg-Davis, 2013b; Plucker & Callahan, 2017; Robinson, 2005).

PSYCHOLOGICAL AND BEHAVIORAL CHARACTERISTICS

Giftedness has been recognized in some form in every society throughout recorded history. In many societies, individuals with special gifts have been stereotyped in one of two ways: (1) as physically weak, socially inept, narrow in interests, and prone to emotional instability and early decline; or, in the opposite direction, (2) as superior in intelligence, physique, social attractiveness, achievement, emotional stability, and moral character and immune to ordinary human frailties and defects. Although it might be possible to find a few individuals who seem to fit one stereotype or the other, the vast majority of people with special gifts or talents fit neither.

Nevertheless, stereotypes persist (see Plucker & Peters, 2016). A still-common misperception is that genius predisposes people to mental illness. The idea that giftedness and insanity are linked is one of the worst misconceptions of the field (Gallagher, 2006). Some people with special gifts and talents accomplish remarkable things in spite of, not because of, mental illness or physical disability (see Goldsmith, 2005; Martin, Burns, & Schonlau, 2010; Mueller, 2009).

Perhaps it shouldn't be surprising that the majority of students who show giftedness enter occupations that demand greater-than-average intellectual ability, creativity, and motivation. Most find their way into the ranks of professionals and managers, and many distinguish themselves among their peers in adulthood (Renzulli & D'Souza, 2014). But not all such students enjoy occupational success in demanding jobs; some choose career paths that do not make use of their talents, or they otherwise fail to distinguish themselves.

The self-concepts, social relationships, and other psychological characteristics of students with special gifts or talents have been matters of considerable interest (Assouline & Colangelo, 2006; Robinson et al., 2007). Many of these students are happy, well liked by their peers, emotionally stable, and self-sufficient. They may have wide and varied interests and perceive themselves in positive terms. Nevertheless, some gifted students experience bullying and are traumatized by it (Peterson & Ray, 2006). Giftedness can be stigmatizing. But, regardless of the reason for bullying—the bullied student has a disability or is gifted or is different in some other way—it's important to address it in effective ways (see Leff, Waanders, Waasdorp, & Paskewich, 2014).

Students with intellectual gifts are often acutely sensitive to their own feelings and those of others and they are highly concerned about interpersonal relationships,

intrapersonal states, and moral issues. Using their advanced cognitive abilities appears to help many of these children develop at a young age the social and emotional adjustment strategies used by most adults. In short, many (but not all) students with high intellectual gifts are self-aware, self-assured, socially skilled, and morally responsible.

However, assuming that gifted students never need education in morality is a terrible mistake. Students identified as gifted sometimes bully others (Peterson & Ray, 2006). Moreover, individuals can and have used their special gifts for nightmarish purposes. Therefore, it's important to recognize the enormous potential for both good and evil purposes to which special gifts and talents can be put and to help individuals who have such gifts and talents see the value of using them in the service of what is morally right.

Giftedness includes a wide variety of abilities and degrees of difference from average (Plucker & Callahan, 2017). Moreover, the nature and degree of an individual's giftedness may affect his or her social and emotional adjustment and educational and psychological needs. Consider, for example, that categorizing only people with IQs of 180 or higher as "gifted" is roughly like categorizing only those individuals with IQs of 20 or less as having "intellectual disabilities." In fact, children who are exceptionally precocious—those whose talents are extremely rare—may constitute a group for which extraordinary adaptations of schooling are required (just as extraordinary adaptations are required for children with very severe intellectual disabilities) (see Gross, 2000, 2002; von Karolyi & Winner, 2005). Child prodigies are children whose development and accomplishments meet or exceed those of adults with extraordinary talent. They often astonish others by their talent at an early age, and they often need opportunities that more typical students don't require and would find intimidating. For an example of a musical prodigy, see the accompanying feature, *Up Close with Geoff Gallante*, "A Child Prodigy on Trumpet."

UP CLOSE with Geoff Gallante *Geoff Gallante: A Child Prodigy on Trumpet* Geoff Gallante has already had a remarkable career, although he is quite young. He started playing the trumpet at age 4. As a 6-year-old, he had already played with Wynton Marsalis and Maynard Ferguson. He's also appeared on national television and played with many well-known performers and groups, both jazz and orchestral (<http://www.youtube.com/watch?v=Bh2Fk5T0Xmo>). •

Video Example from

YouTube

MyLab Education

Video Example 15.2

In this video, Gabriel uses his gifts and talents to affect change for children with disabilities in Gaborone, Botswana in sub-Saharan Africa. Gabriel, like many other students with intellectual gifts, is acutely sensitive to his own feelings and those of others and highly concerned about interpersonal relationships, intrapersonal states, and moral issues.

MyLab Education Self-Check 15.2

MyLab Education Application Exercise 15.2: "What Is Giftedness?"

Listen to the comments of a student teacher and a professor talking about gifted students; then respond to the questions that follow.



CULTURAL VALUES REGARDING STUDENTS WITH SPECIAL GIFTS AND TALENTS AND THEIR EDUCATION

In American culture, it's difficult to elicit sympathy and next to impossible to arrange sustained public support for education that meets the needs of children with special gifts, especially intellectual gifts (Gallagher, 2000a, 2004; Murray, 2005). This is not a peculiarly American problem, but there's something self-limiting, if not self-destructive, about a society that refuses to acknowledge and nourish the special talents of its children who have the greatest gifts (see De Hahn, 2000; DiGennaro, 2007; Gallagher, 2013; Murray, 2005; Renzulli & D'Souza, 2014).

Gallagher (2000a) described American society's ambivalence toward students with special gifts or talents. Our society loves the good things that people with extraordinary gifts produce, but it hates to acknowledge superior intellectual performance. Opponents of special education for students with special gifts argue that it's inhumane and un-American to segregate such students for instruction and to allocate special resources for educating those who are already advantaged. There is the danger of leaving some children out when only the ablest are selected for special programs. However, it seems impossible to argue against special education for students with special gifts and talents without arguing against special education in general, because all special education involves recognizing and accommodating unusual individual differences (Kauffman et al., 2018). Drawing a line is necessary if you are going to have any special service or special program of any kind (see Kauffman, 2013; Kauffman & Lloyd, 2017).

NEGLECTED GROUPS OF STUDENTS WITH SPECIAL GIFTS AND TALENTS

Students who are disadvantaged by economic needs, racial discrimination, disabilities, or gender bias are often overlooked in programs for gifted and talented students. In fact, many groups of gifted learners are neglected in a diverse, multicultural society (Callahan, 2011; Callahan & Hertberg-Davis, 2013a, 2013c). Two facts cannot be ignored:

1. Children from higher socioeconomic levels already have many of the advantages, such as more appropriate education, opportunities to pursue their interests in depth, and intellectual stimulation, that special educators recommend for those with special gifts or talents.
2. Far too many individuals with special gifts or talents are disadvantaged by life circumstances or disabilities and have been overlooked and discriminated against, resulting in a tremendous waste of human potential.

Underachievers

Identifying underachieving gifted students is very difficult, in part because no universally accepted definition exists (Siegle & McCoach, 2013). Students can fail to achieve at a level consistent with their abilities for a variety of reasons, including low expectations, lack of motivation, the influence of peers, family trauma, and other causes (Robinson et al., 2007; Siegle & McCoach, 2013). Many females achieve far less than they have the ability to achieve because of social or cultural barriers to their selection or progress in certain careers, even though males are most often identified by teachers as underachieving gifted students. Students who are members of racial or ethnic minorities also are often underachievers because of bias in identifying or programming for their abilities. Likewise, students with obvious disabilities are frequently overlooked or denied opportunities to achieve.

Underachievement of children with special gifts or talents can result from any of the factors that lead to underachievement in any group, such as emotional conflicts or a chaotic, neglectful, or abusive home environment. A frequent cause is inappropriate school programs—schoolwork that is unchallenging and boring because these students have already mastered most of the material or because teachers have low expectations or mark students down for their misbehavior. A related problem is that underachievers with special gifts or talents often develop negative self-images and negative attitudes toward school. When students show negative attitudes toward school and self, any special abilities they might have will likely be overlooked.

One way of preventing or responding to underachievement is allowing students to skip grades or subjects so that school becomes more nurturing and provides greater interest and challenge. However, acceleration is not always appropriate, nor is it typically

sufficient by itself to address the problems of the underachieving student with exceptional abilities. Counseling, individual and family therapy, and a variety of supportive or remedial strategies are possible alternatives or additions to acceleration.

Underachievement must not be confused with nonproductivity. A lapse in productivity doesn't necessarily indicate that the student is underachieving. Students with extraordinary ability should not be expected to be constantly producing something remarkable. But this highlights the difficulty in defining giftedness: How much time must elapse between episodes of creative productivity before we say that someone no longer exhibits giftedness or has become an underachiever? We noted earlier that giftedness is in the performance, not the person. Yet we know that the unrelenting demand for gifted performance is unrealistic and can be inhumane.

Students from Low Socioeconomic Status Families or Who Live in Remote Areas

Children who are reared in poverty might not have toys, reading materials, opportunities for travel and exploration, good nutrition and medical care, and many other advantages that more affluent families typically provide. Lack of basic necessities and opportunities for learning can mask intelligence and creativity. Families of children in inner-city areas don't have the financial resources to provide the opportunities and early experiences to foster talent. Yet support for gifted students from low-income families often appears to be an easy target for elimination in tight state or local budgets (see Chandler, 2015; Murray, 2005).

Children who live in rural or remote areas might not have access to many of the educational resources typically found in more populated regions. Many of those who live in remote areas also experience economic deprivation and lack the advantages that children from affluent families have (Davis & Rimm, 2004; Plucker, 2013).

Cultural- and Ethnic-Minority Groups

Some ethnic groups, such as many ethnic minorities from Asian countries, are included in programs for gifted students more often than would be suggested by their percentage of the general population (see Oh & Callahan, 2013). However, other ethnic groups, especially African Americans and Spanish-speaking students, are underrepresented in programs for gifted students (Grisson & Redding, 2016; Hebert, 2013; Worrell, 2013; Yoon & Gentry, 2009).

Some of the greatest challenges in the field today are identifying culturally diverse and disadvantaged students with special abilities and then including and retaining these students in special programs (Callahan & Hertberg-Davis, 2013a; Ford, 2015; Moore, Ford, & Milner, 2005; Robinson et al., 2007). Some cultural and ethnic groups have been sorely neglected in programs for students with special gifts or talents (you may want to go to <http://blogs.scientificamerican.com/> and search for "gifted minorities"). Many ethnic minority students with special gifts or talents remain underachievers, even if they recognize the importance of achievement in American society (Borland, 2004; Lohman, 2005; Tomlinson, Ford, Reis, Briggs, & Strickland, 2004).

Appropriate identification and programming for students with special gifts or talents can be assumed to result in approximately equal proportions among all ethnic groups. However, this proportionality will likely occur only if educators renew efforts to achieve the following:

- Devise and adopt culturally sensitive identification criteria.
- Provide counseling to raise the educational and career aspirations of students in underrepresented groups.
- Make high-achieving models from all ethnic groups available.
- Retain underrepresented ethnic students in programs for gifted students.
- Adopt a workable system to ensure the inclusion of underrepresented groups.
- Build relationships with the families of minority children.



MyLab Education
Video Example 15.3

Teachers should be careful not to allow their own biases to influence their judgment as to the potential of minority students.



MyLab Education Video Example 15.4

For some cultures, giftedness in traditional academics is not valued as much as success in work and contributing to the family and community.



MyLab Education Video Example 15.5

Some students with Asperger syndrome can benefit from gifted programming. Allowing them to put their special skills to use for the benefit of the entire class is a nice way to help their social assimilation into the general education classroom.

Ultimately, the larger social-environmental issue of making families and communities safe, as well as intellectually stimulating, for children and youths of all cultural and ethnic backgrounds must be addressed (Borland, 2004; Gallagher, 2000a; Plucker & Callahan, 2017). Equal opportunity for development outside the school environment would help address the underrepresentation of minority students in programs for students with extraordinary abilities (see Davis & Rimm, 2004; Ford & Moore, 2006).

Students with Disabilities

The education of students with both disabilities and special gifts or talents is a newly emerging field (see Coleman & Roberts, 2015). The idea that students can be **twice exceptional** (meaning that they have both a disability and a special gift or talent) (see Kalbfleisch, 2013; Missett, 2013) is, as Gallagher (2006) noted, one of the best ideas in gifted education.

The major goals of special education for twice-exceptional students are identifying gifted and talented students with specific disabilities, performing research and development, preparing teachers and other professionals to work with such children and youths, improving interdisciplinary cooperation for the benefit of such children and youths, and preparing students for adult living. Educators should consider the full range of programs for gifted and talented students for those who are twice exceptional, including acceleration. The accompanying Responsive Instruction, “Twice Exceptional Students in Advanced Placement Classes,” provides a summary of the early stages of the research on instructional strategies for these students.

Our stereotypic expectations of people with disabilities frequently keep us from recognizing their abilities. For example, if a child lacks the ability to speak or to be physically active or presents a demeanor associated with intellectual dullness (e.g., drooling, slumping, dull eyes staring), we tend to assume that the child has intellectual disability. The fact is, students with physical characteristics typically associated with severe intellectual disabilities might be intellectually brilliant; unless this is acknowledged, however, the talents of students with cerebral palsy and other physical disabilities can be easily overlooked. Students with special gifts or talents and hearing impairment also can be overlooked if their communication skills are poorly developed, if their teachers are not looking for signs of talent, or if they are taught by teachers who have limited competence in communicating with people who are deaf. Students with learning disabilities involving written language may be overlooked (Assouline, Nicpon, & Whiteman, 2010). In fact, students with disabilities associated with communication problems, such as autism spectrum disorder or mental disorders, may be found to be gifted (Assouline, Nicpon, & Doobay, 2009; Coleman & Roberts, 2015; Martin et al., 2010). And people with physical disabilities may be found to have an extraordinary talent that we might not expect, as illustrated by the example of Doug Landis, an artist whose work we featured in Chapter 1 earlier.

Giftedness occurs in combination with disabilities of nearly every description. Marie Curie, twice the winner of the Nobel Prize (physics and chemistry), suffered from profound depression (Goldsmith, 2005). Consider also Evelyn Glennie, a deaf percussionist (<http://www.youtube.com/watch?v=IIOemXqTOW8>), and Timothy Cordes, a blind physician. They don't fit the stereotypes we hold. True, they are not typical of people with their disabilities—or of people who do not have their disabilities, for that matter. Fortunately, their disabilities did not preclude their pursuit of their areas of special talent.

We don't want to foster the myth that giftedness is found as often among students with disabilities as among those who do not have disabilities. But clearly, students with special gifts or talents as well as disabilities have been a neglected population. A key factor in meeting these students' needs is the collaboration of a variety of disciplines and institutions to provide appropriate technology and training.

RESPONSIVE INSTRUCTION

Meeting the Needs of Students with Special Gifts and Talents

TWICE EXCEPTIONAL STUDENTS IN ADVANCED PLACEMENT CLASSES

What the Research Says

For students who are twice-exceptional (that is, they have a diagnosed disability but also demonstrate areas of high ability or talent), their high school experience tends to be focused on addressing their disability rather than their talents (Schultz, 2012). For example, when developing a student's individualized education program, educators tend to identify objectives that target deficit areas—not areas of strength. Yet, success in college can be fostered through a rigorous and robust high school curriculum. Therefore, twice-exceptional students can benefit from participation in advanced placement courses provided that appropriate accommodations or supports are in place.

Research Study

Schultz (2012) conducted a study to identify barriers and supports that exist for students with disabilities participating in advanced placement (AP) courses. For the study, Schultz interviewed parents, teachers, guidance counselors, and college students who had identified disabilities and who had participated in AP courses while in high school. Participants answered interview questions that included information about school culture, accommodations, and academic experiences.

Research Findings

Several themes emerged from Schultz's research. First, school culture played an important role in determining access to AP classes. Some schools operated under the assumption that AP classes were exclusively for honors students, while other schools had more open philosophies in terms of accessibility to these classes. A second, similar theme was equity. While the College Board's *Equity Policy Statement* encourages any student willing to challenge himself or herself to participate in more rigorous coursework, some guidance counselors viewed "equity" as treating all students the same, particularly in regard to selection criteria for AP classes. In some cases,

these criteria served as a barrier to entry for students with disabilities. Another theme was lack of AP enrollment as part of transition planning. Even though the students who participate in AP classes were college bound, they did not enroll in AP courses as part of their transition planning. Incorporating such coursework into a plan could strengthen students' preparation for the transition to college. In general, Schultz also found that students either did not receive their required IEP accommodations or were discouraged from requesting them. Again, the notion that fairness means that everyone gets the same treatment was a common sentiment.

Finally, both advocacy and mentoring provided significant support for students. It was clear from the interviews that parents had advocated early for their children to have access to advanced or challenging work throughout their educational careers. Similarly, adult mentors such as special education teachers or guidance counselors were frequently instrumental in providing guidance and encouragement for students to enroll in AP courses.

Applying the Research to Teaching

Many schools and school districts may be unaware of how their culture or policies create barriers to access to AP courses for students who are twice exceptional. Schools should embrace the *Equity Policy Statement of the College Board* and encourage a wider range of students who are interested in challenging themselves to participate in advanced coursework. Similarly, special education teachers can give guidance to general educators on how to provide accommodations and supports that do not sacrifice quality or lower standards of expectations. Finally, all school personnel from special educators to guidance counselors to advanced placement teachers should recognize the important role they can play in terms of mentoring and supporting students who are twice exceptional. Indeed, positive mentoring can boost confidence and facilitate risk taking—essential components of success.

BY KRISTIN L. SAYESKI

Females

Females comprise the largest group of neglected students with special gifts or talents. Females with extraordinary capabilities today have many opportunities for education and choice of careers that were denied to females a generation ago, but there are many opportunities that still elude them (see Goldsmith, 2005; Plucker & Callahan, 2017; Reis, 2013).

Cultural factors work against the development and recognition of females with special gifts or talents. Females simply have not had equal opportunity and motivation to enter many academic disciplines or careers that have by tradition been dominated by males, such as chemistry, physics, medicine, and dentistry. When females have entered these fields, they have often been rewarded inappropriately (according to irrelevant

criteria) for their performance. English literature has tended to portray females as wives, mothers, or “weaker” sisters, who are either dependent on males or sacrifice themselves for the sake of males. Such barriers to giftedness in females have been brought forcefully to public attention (see Davis & Rimm, 2004; Plucker & Callahan, 2014, 2017).

Females with special gifts or talents lag behind males in many measures of achievement and aptitude (e.g., professional and career achievement, standardized test scores, grades) and tend not to pursue courses of study or careers involving science, engineering, and math. In short, they are underrepresented in many fields of advanced study and in professions and careers that carry high status, power, and pay. We can only presume to know the reasons for their underrepresentation. Factors that have contributed to the situation might include lower parental expectations for females, overemphasis on and glamorization of gender differences, school and societal stereotypes of gender roles, and educational practices that are detrimental to achievement (e.g., less attention to high-achieving girls, expectations of less independence of girls).

Research suggests that the problems of neglect and underrepresentation of females with exceptional abilities are much more complex than previously believed. Like underrepresentation of ethnic and cultural minorities, the problems involving females are closely tied to cultural, social, and political issues, and they do not have simple or easy solutions. Nevertheless, the education of females with special gifts or talents might be improved by encouraging females to take risks by enrolling in challenging courses, to make career choices appropriate for their abilities, and to explore avenues that break stereotypical female roles.

MyLab Education Self-Check 15.3

MyLab Education Application Exercise 15.3:

The Home Environment

Watch a video in which Dr. Irma Olmedo discusses how the home environment affects students' behavior in school, and answer the question that follows.



Gender Identity

Neglect of females is quite clear, but gender identity is also an issue in identification of individuals with special gifts and talents. Outstanding achievement may be stereotypically male or female, carrying suspicion that an individual who excels in an activity that has been dominated by the opposite sex is gay, bisexual, or transgendered. Zephyrus Todd, for example, transgendered to male after gaining fame as a highly gifted little girl called “Super Awesome Sylvia,” an amazing robot-maker (Selk, 2017). He first was a role model for girls in science, a male-dominated field. Our society still struggles in many ways with gender identity, and one aspect of that struggle is decoupling gender identity and the identification of gifted and talented individuals.

EDUCATIONAL CONSIDERATIONS

The focus of education is now on talent development across the full spectrum of abilities in particular areas of functioning (see Plucker & Callahan, 2017; Robinson et al., 2007; Tomlinson et al., 2002). However, this point of view includes the recognition that equity for many students with special gifts and talents may require special education (Kauffman et al., 2018). No federal requirement exists for special education for gifted students. State and local policies are uneven and often inadequate (Van Tassel-Baska, 2006).

All students at all ages have relative talent strengths, and schools should help students to identify and understand their own best abilities. Students whose talents are at

exceptionally higher levels than those of their peers should have access to instructional resources and activities commensurate with their talents (Davis & Rimm, 2004). The one-size-fits-all mentality that is at least partly an outgrowth of the inclusion movement reflects a mistaken view of human development. Highly talented young people suffer boredom and negative peer pressure in heterogeneous classrooms. Students at all ages and grade levels are entitled to challenging and appropriate instruction if they are to develop their talents fully (see Callahan, 2013; Plucker & Callahan, 2017). For some, this instruction might be available only in a setting apart from their age mates. Effective instruction should be a greater concern than keeping a student in a classroom with age peers.

The belief that students with special gifts or talents don't need special education designed for their needs is among the most awful ideas anyone can hold and works against talent development, for it justifies doing nothing in schools to meet the needs of gifted students. It fosters the idea that all students, no matter what their needs, should be included in general education and it lowers expectations for the performance of gifted students (Gallagher, 2006). As we noted earlier, family support plays a crucial role in the development of talent, but many students also need special school supports if they are to achieve to their full potential. The consensus of leaders in the field is that special education for students with special gifts or talents should have three characteristics:

1. A curriculum designed to accommodate the students' advanced cognitive skills (see Van Tassel-Baska & Stambaugh, 2006)
2. Instructional strategies consistent with the learning of students with extraordinary abilities in the particular content areas of the curriculum (see Davis & Rimm, 2004; Dixon & Moon, 2006)
3. Administrative arrangements facilitating appropriate grouping of students for instruction (see Callahan, 2000, 2001, 2011, 2013; Plucker & Callahan, 2017; Robinson et al., 2007)

States and localities have devised a wide variety of plans for educating students with special gifts or talents. Generally, the plans can be described as providing **enrichment** (additional experiences provided to students without placing them in a higher grade) or **acceleration** (placing the students ahead of their age peers).

Many variations of enrichment and acceleration have been invented, ranging from general education placement with little or no assistance for the teacher to special schools offering advanced curricula in special areas such as science and mathematics or the arts. STEM high schools—special high schools emphasizing science, technology, engineering, and mathematics—are appropriate for some gifted students (see Ambrose, 2010). Between the extremes of regular classrooms in which the teacher tries to go it alone and special schools for gifted students are consulting teacher programs, resource rooms, community mentor programs (in which highly talented students work individually with professionals), independent study programs, special classes, and rapid advancement of students through the usual grades, including early admission to high school or college.

Not every community offers all possible options. The types of services offered vary greatly within the school systems of given states and from state to state. As one might expect, large metropolitan areas typically offer more program options than small towns or rural areas.

Some of the educational options for students with high ability, such as acceleration and inclusion, are extremely controversial. Acceleration and advanced placement seem to be particularly effective (Gavin & Adelson, 2014). However, no single type of program option meets the needs of all students who have special gifts or talents (see Callahan, 2013). Ideally, assessment, identification, and instruction are closely linked, whether students have disabilities or special gifts and talents—or both. When including students with disabilities and special gifts and talents, it is important to use strategies that meet the needs of both types of students.

Advances in telecommunications, the presence of computers in the home and classroom, and the call for excellence in U.S. education are three developments with implications for educating the most able students. The possible uses of computers for enhancing the education of extraordinarily high-performing students are enormous. Using software tutorials, accessing data banks, playing or inventing intellectually demanding computer games, writing and editing in English and foreign languages, learning computer languages, and solving advanced problems in mathematics are only a few of the possibilities (see Plucker & Callahan, 2017; Robinson et al., 2007).

EARLY INTERVENTION

The giftedness of young children presents special problems of definition, identification, programming, and evaluation (Brighton & Jarvis, 2017; Porter, 2005; Robinson et al., 2007; Ruf, 2005). Although educators have made progress in building model programs and providing better services for young children with special gifts, negative attitudes toward such efforts persist. Barriers inhibiting the development of better education for these children include lack of parental advocacy, lack of appropriate teacher training, an emphasis on older students of extraordinary ability, financial constraints, and legal roadblocks such as laws preventing early admission to school. The barriers to early identification and programming for students with special gifts or talents include school policies and ideologies that refuse to advance students to grades beyond their chronological age peers.

Many questions remain unanswered about the education of young children who have special gifts. Relatively little is known about how advantageous it is to identify and provide programs for such children before they are in third or fourth grade or how best to train parents and teachers to work with preschoolers with special abilities. Young children with disabilities need the best possible early intervention to make sure that all of their abilities, including any special gifts they might have, are not overlooked (see Odom & Wolery, 2006; Porter, 2005).

Although not a panacea, early admission to school and acceleration through grades and subjects offer significant advantages for some young students with special gifts or talents. What many young children with special abilities need most is the freedom to make full and appropriate use of school systems as they now exist. They need the freedom to study with older children in specific areas in which their abilities are challenged. Such children need to be able to get around the usual eligibility rules so that they can go through the ordinary curriculum at an accelerated rate. Unfortunately, relatively few preschoolers with special gifts receive the kind of educational programming appropriate for their abilities. See the accompanying Responsive Instruction feature, “Acceleration: A Nation Deceived Report.”



MyLab Education Video Example 15.6

No matter the model, for example acceleration or enrichment, a key component should be parent involvement.



MyLab Education Video Example 15.7

Acceleration, when individualized, can be an effective way to meet the needs of gifted students.

MyLab Education Self-Check 15.4

MyLab Education Application Exercise 15.4: Characteristics of Students Who Are Gifted

Consider the characteristics of gifted students suggested by the comments of teachers and family members in two videos, and respond to the accompanying questions.



TRANSITION TO ADULthood

For students with special gifts or talents who are achieving near their potential and who have been given opportunities to take on adult roles, the transitions from childhood to adolescence to adulthood and from high school to higher education or employment are

HOW CAN I HELP?**Working with Gifted Students in the General Education Classroom****“How can I challenge him when half of my students have difficulty reading?”**

Working with students with gifts and talents can be especially challenging for classroom teachers, considering the wide range of achievement levels in today's classrooms. Collaboration with a teacher of students with special gifts and talents can help general education teachers challenge all students. Collaboration to meet the needs of gifted students is often difficult. Instruction in a differentiated classroom is based on student readiness and includes constant assessment of student skill and knowledge, varying of activities or assignments for individuals, and the active exploration of topics at varying levels by individuals or groups of students. This can be quite difficult to manage with 20 or 30 students who have a wide range of skills. Teachers of gifted students can help manage the classroom when groups and individuals are working, assess student progress, and collect resources.

Consider a differentiated activity designed to help all students learn the water cycle.

Students choose one of six possible activities to complete in class (time permitting) or as homework.

A. Design a cartoon that illustrates your journey as a water droplet. Include an appropriate caption.

- B. Draw an accurate version of the water cycle that includes all steps. Be sure to show the processes that get a water droplet from one step to another.
- C. Create a fictional story about the journey of a water droplet. Base it on your water droplet's journey.
- D. Design a similar game using another cycle we have studied (e.g., the carbon cycle or the nitrogen cycle). Write out or sketch one possible journey. How does this journey differ from your journey as a water droplet?
- E. Create a bar graph of your journey and the journey of two other droplets, based on the amount of time spent at each station. For data, refer to your paper clip chain and the chains of two classmates.
- F. Create a local version of the water cycle. Be sure to include the names of local rivers, bays, oceans, mountains, and so on.

This lesson can be used with students of all achievement levels; however, the instructional support necessary for all students to understand the lesson varies. Collaborating with a teacher of students with special gifts and talents would allow both teachers to provide instructional support, observe student work, and develop subsequent lessons. Differentiation to this extent may not be possible without this collaboration.

BY MARGARET P. WEISS

typically not very problematic. Particularly by adolescence, these students tend to be aware of their relative strengths and weaknesses. This means that they might not see themselves as gifted in their areas of relative weakness even though they perform as well as or better than the majority of their age peers in those areas (Plucker & Stocking, 2001; Robinson et al., 2007).

In many ways, transitions for these youths tend to mirror the problems in transitions faced by adolescents and young adults with disabilities (see Kohler & Field, 2006). Not all adolescents and young adults with special gifts or talents take transitions in stride. Many need personal and career counseling and a networking system that links students to school and community resources (Herbert & Kelly, 2006; Neihart, Reis, Robinson, & Moon, 2002).

If there is a central issue in the education of adolescents with special gifts or talents, it is that of acceleration versus enrichment (see Callahan & Hertberg-Davis, 2013a; Colangelo, Assouline, & Marron, 2013; Plucker & Callahan, 2017). Proponents of enrichment believe that these students need continued social contact with their age peers. They argue that such students should follow the curriculum of their age peers and study topics in greater depth. Proponents of acceleration believe that the only way to provide challenging and appropriate education for students with special gifts and talents is to let them compete with older students. These educators argue that because the cognitive abilities of these students are advanced beyond their years, these students should proceed through the curriculum at an accelerated pace.

RESPONSIVE INSTRUCTION

Meeting the Needs of Students with Special Gifts and Talents

ACCELERATION: A NATION DECEIVED REPORT

What the Research Says

In *A Nation Deceived: How Schools Hold Back Its Brightest Students*, Colangelo, Assouline, and Gross (2004a) summarized 50 years of research on the various forms of acceleration and came to the singular conclusion that acceleration, in many of its forms and under many different circumstances, benefits gifted students both academically and socially. Unfortunately, concern over ability tracking (an extreme form of ability grouping that sorts students based on global measures such as IQ or GPA) has spilled over into concern about acceleration programs. Acceleration, not a form of tracking, is any educational program that moves students through at a faster rate or younger than typical age. Effective acceleration programs match the level and complexity of the curriculum to the readiness and motivation of the student.

A Nation Deceived dispels many myths associated with acceleration including the belief that the majority of students are not socially mature enough to advance grades, holding students to their grade level is the “safer” educational route, and acceleration results in gaps in students’ knowledge. The report touches upon the 18 types of acceleration found in schools today and reviews the relevant research associated with each practice. The types of acceleration are early admission to kindergarten, early admission to first grade, grade skipping, continuous progress, self-paced instruction, subject-matter acceleration/partial acceleration, combined classes, curriculum compacting, telescoping curriculum, mentoring, extracurricular programs, correspondence courses, early graduation, concurrent/dual enrollment, advanced placement, credit by examination, acceleration in college, and early entrance into middle school, high school, or college.

BY KRISTIN L. SAYESKI

Acceleration for adolescents with special gifts or talents can mean enrollment in advanced placement courses, early entrance to college, or enrollment in college courses while they are attending high school (see Callahan, 2003; Colangelo et al., 2004b; Muratori et al., 2006). Some of the most highly gifted students might even be admitted early to graduate study. Other students with special gifts or talents who are nonetheless less dramatically different from their age peers may not benefit from radical acceleration.

Acceleration programs, particularly in mathematics, have been evaluated very favorably (see Assouline & Lupkowski-Shoplik, 2003; Brody & Stanley, 2005; Muratori et al., 2006; Plucker & Callahan, 2017). In fact, early entrance to college on a full-time or part-time basis appears to work very well for adolescents, as long as it is done with care and sensitivity to the needs of individual students. It’s important to provide counseling and support services for students who enter college early to ensure that they have appropriate, rewarding social experiences that enhance their self-esteem, as well as academic challenges and successes.

Beyond acceleration and enrichment, adolescents with special gifts or talents often need attention to social and personal development if they are to make successful and gratifying transitions to adulthood and careers (Assouline & Colangelo, 2006; see also Callahan, 2013). Like other groups of students with special characteristics and needs, they may benefit from opportunities to socialize with and learn from other students who have similar characteristics and face similar challenges. They may be able to obtain particular benefit from reflecting on the nature and meaning of life and the directions they choose for themselves. Given proper supports, they can often make use of self-determination and survival skills (see Neihart et al., 2002).

▼ chapter fifteen SUMMARY

How is giftedness defined?

- Students with special gifts excel in some way compared to others of the same age. However, little agreement exists about how giftedness should be defined. Disagreements about definition include:
 - What is to be measured
 - How it is to be measured
 - The degree to which one must excel
 - The comparison group
 - Reasons for identifying giftedness
- Giftedness is actually whatever we wish to make it.
- There may be different kinds of giftedness, such as analytic, synthetic, and practical intelligence.

What is the prevalence of giftedness?

- Prevalence depends on definition; school systems across the nation typically identify about 3% to 5% of students as gifted.

What are the origins of giftedness?

- Both biological (primarily genetic) and social factors (e.g., family, school, peer group, community) are involved.
 - No one knows precisely how much each of these two factors contributes to giftedness, especially in the individual case.
 - We can alter many social factors but not genetic factors, and more attention needs to be given to how schools foster giftedness.

How is giftedness identified?

- Individual intelligence tests have been the traditional means of identifying giftedness.
- More attention is being given now to additional, culturally sensitive identification procedures, including nomination by peers, parents, teachers, and self as well as to interests and accomplishments.

What are the psychological and behavioral characteristics of students with special gifts and talents?

- Gifted students typically learn to read at an early age and achieve other developmental milestones earlier than most children.

▼ PERTINENT ORGANIZATIONS

- The National Association for Gifted Children (<http://www.nagc.org/>) offers much useful information for teachers, school administrators, and parents.
- The Association for the Gifted, a division of CEC (the Council for Exceptional Children) known as CEC-TAG, maintains useful information for teachers and teachers in training (<http://www.cectag.org/>).



Fuse/Corbis/Getty Images

- Gifted students are typically good at many things.
- Gifted students typically like school and like learning.
- Gifted students are subject to the same psychological and physical problems as other students.

How do cultural values affect the education of students with special gifts and talents?

- American culture is ambivalent about giftedness, liking the good things that giftedness brings but disliking intellectual superiority and identifying individuals with intellectual gifts.

What groups of students with special gifts and talents are neglected?

- Underachievers are often overlooked.
- Students who are from low socioeconomic status families and those living in remote areas are often unrecognized.
- Students from cultural- and ethnic-minority groups are often neglected.
- Students who also have disabilities are often not identified.
- Females are underrepresented.

What are the major educational considerations for students with special gifts and talents?

- Acceleration and enrichment are the two most common ways of accommodating gifted students; and both have advantages and disadvantages, proponents and opponents.

What are the major problems of early intervention for children with special gifts and talents?

- Lack of research to indicate effective ways of identifying giftedness in young children (i.e., before third or fourth grade) is a major problem.

What provisions are made for transition of students with special gifts and talents?

- The problems of gifted adolescents tend to mirror those of students with disabilities of the same age, and many will need personal counseling about further education and career paths.
- Acceleration (including early admission to college) and enrichment (including advanced placement courses) are the two primary accommodations.

- The National Society for the Gifted and Talented (<http://www.nsgt.org/>) has the mission of advancing the development of gifted, talented, and high potential youth by providing opportunities, advocacy, and exemplary programs and practices.
- The World Council for Gifted and Talented Children (<http://www.world-gifted.org/>) is a nonprofit organization that provides advocacy and support for gifted children throughout the world.