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It is one of the most frequently addressed topics in gifted education journals and newspaper articles about the field. Every handbook and textbook on gifted education devotes one or more chapters to the topic. It is a central concern of parents and, increasingly one on which they will spend money in the hopes of gaining an edge for their child over the competition. In some states, it is the only mandated activity for gifted education and in others, the largest line-item in the budget. And yet it remains as controversial and, in many quarters, as poorly understood as ever. What is it? Identification. Many of us who have worked to help schools develop better, fairer identification policies have concluded that these efforts are unlikely to succeed as long as they are tied to the word gifted. The question “Who are the gifted children in this school?” leads to policies and practices quite unlike the question “Who are the children who are currently mismatched with the level of instruction they are receiving?” or even “Who are the children who show talent in this domain that we might help them develop?” Although many have objected to current policies, few have offered specific guidelines for new ones. This book bridges that gap.

The authors begin by boldly announcing that their approach differs radically from gifted education as currently practiced, so radically that they give it a different name: advanced academics. Identification of the cognitive,
motivational, and personality traits that might uniquely characterize gifted learners is left for psychologists to investigate and debate. For practitioners, identification should refer to “a formalized system that sets out to determine which students have needs that are not being met by the standard curriculum of a given school or district” (p. 15). The goals and processes for identifying students in need of advanced academic programming are described in greater detail in Chapters 2 and 3. To identify is to predict that a student will succeed (or at least not suffer harm) in a particular instructional program. It is local, not only to the school, but to the particular academic program at that school. At one extreme, students might be allowed self-identify by opting to enroll in a class or participate in a program. At the other extreme, the system can offer (or require) a multistep, multimeasure assessment that is designed either to prevent unqualified students from entering the program and/or to encourage qualified but unwilling students to participate in it. But it is decidedly not about imposing a more permanent label such as gifted.

The consequences for curriculum and school organization are described in successive chapters devoted to Total School Cluster Grouping (Chapter 4), acceleration (Chapter 5), and enrichment (Chapter 6). Then the final three chapters revisit identification, this time addressing knottier issues that are often ignored or mishandled. Underrepresentation is tackled in Chapter 7. Specific guidance is offered on how to use assessment data to achieve better representation of underrepresented groups, a problem that is made much easier when the goal is to identify those who are (or might be) mismatched, not to confer an enduring label. Common pitfalls in identification policies are enumerated an illustrated in Chapter 8. And Chapter 9 gives a nontechnical introduction to procedures for combining multiple measures, a topic that is as poorly understood as it is critical for the success of any identification system that relies on more than one data point for each student.

This book will delight some, annoy others, but challenge all. It offers a radical, but needed, perspective on what gifted education without gifted students might look like.

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Gifted or advanced education is focused on providing appropriate education for those students who need it. Regardless of whether or not we call them gifted, students exist in every school who could do more than they are currently being asked to do. Every school has those students who would benefit—academically, socially, and motivationally—from additional challenge. This book is about how to find and serve those children. However, before we begin this complicated trek, we first address how the perspective we offer differs from that of traditional gifted education. To do so we will, in places, offer some seemingly harsh critiques of gifted education. We have all dedicated our careers to the field, and we believe passionately in championing the cause of challenging all learners. We only offer criticisms to the service of this cause, while simultaneously offering suggestions for change and improvement.

Determining whether or not a child meets a formal definition of giftedness is not a particularly useful thing to do from the point of view of the stakeholders in K–12 education—students, teachers, administrators, and parents. Instead, we believe that it is much more educationally helpful to determine which children are not being well-served by the existing curriculum and then design programs to meet their needs. Identification, when it is necessary at all, then becomes focused on answering the question, “Who can thrive in the advanced academic program(s) we’ve designed?”
instead of “Who is gifted?” In place of the old “gifted education” approach, we will provide a new framework that is logical, clear, and free of some of the internal contradictions and atheoretical practices that have been part of the practice of gifted education for many decades. Although our position stands in contrast to many years of practice, we believe it is supported by theory and is also far more defensible than current practice. We believe that the adoption of the framework we describe in this book would result in vastly improved K–12 educational experiences for bright students. Furthermore, our framework securely grounds programs and policies for gifted students within the context of major current educational initiatives such as the Common Core State Standards and Response to Intervention (RtI).

It is time that we, as passionate advocates of gifted education in K–12 schools, recognize that some (but not all) of the criticism directed at our field is legitimate. We have been unable to provide evidence-based arguments against these criticisms. As a result, advocates of gifted education have been less persuasive of policy makers, K–12 educators, and funding agencies than any of us would like. The history of the field is characterized by the slow assimilation of, and reform around, legitimate criticisms from the outside. For example, the historical concept of giftedness was essentially synonymous with high IQ, whereas now the widespread consensus in the field is that giftedness is a multidimensional construct that cannot be adequately measured by a single IQ score (Borland, 2005; Worrell, 2009). This book should be understood as another instance of the same historical trend within the field.

Finally, this book does not provide a step-by-step procedure or a “canned” program for using these ideas. This book is far more in the spirit of a persuasive essay whose goal is to reframe discussion and debate around gifted education. The principles presented in this book argue for advanced educational opportunities that are intensely local, that is, that are closely tailored to the needs and values of a particular setting at a particular time. Providing a canned program for implementation of our ideas would represent a violation of the very principles we espouse. These ideas place much of the burden of responsibility on local district and school personnel to develop appropriate programming for their advanced learners. This perspective is consistent with a philosophical viewpoint that believes teachers are professionals and experts in whose care we entrust the development of our children. Teaching is not, and should not be, a turnkey operation that anyone with a pulse can simply walk into a classroom and do!
Defining Giftedness, Talent, and Advanced Academics

What can be said most confidently about conceptual definitions of giftedness, talent, and high ability is that they are widely inconsistent. In fact, there is so much disagreement on the topic that even a workgroup of the National Association for Gifted Children (NAGC) had much difficulty agreeing on a definition. The two most general types of conceptual definitions revolve around typical academic skills (those important to student success in traditional K–12 school subjects) and those specific tasks that are not as directly related to traditional academics. For example, Renzulli (2005) referred to children who excel in academic subjects as the “schoolhouse gifted,” and he observed that the schoolhouse gifted are not necessarily the same group of children who exhibit adult creative productivity. Some in the gifted education community have taken this as evidence that we, as a field, have been focusing on the wrong individuals or the wrong goals (e.g., Subotnik, Olszewski-Kubilius, & Worrell, 2011). We disagree. Whether a child will or will not become an eminent adult is irrelevant to K–12 instruction; we hope many children will, but it simply is not possible to predict with accuracy which children will attain eminence as adults. Adult eminence is tangential to whether or not that child will spend his entire year sitting through coursework or instruction in content that he has already mastered. Schools are designed to help children develop expertise in a rather circumscribed set of disciplines and skills, and this book focuses on helping schools conceptualize programming to foster more advanced levels of development in those domains.

Because the approach we describe is so different from what is usually practiced under the rubric of gifted education, we consciously have decided to give it a different name. We refer to our approach as advanced academics. We clarify the precise meaning of the term in later chapters of the book. To summarize succinctly, gifted education is about identifying and serving a distinct class of individuals—the gifted. Advanced academics is about providing students who are not challenged by the ordinary curriculum and instruction with faster, deeper, and more rigorous instruction than they would receive within their typical academic experience, regardless of whether or not they are formally identified as gifted. Many students in need of such instruction may have been identified as gifted, but many others who also need and can benefit from such instruction have not. To better
Defining Gifted and Talented

The current federal definition of “gifted and talented” comes from the 1993 *National Excellence* report created by the U.S. Department of Education:

Children and youth with outstanding talent perform or show the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience, or environment. These children and youth exhibit high performance capability in intellectual, creative, and/or artistic areas, possess an unusual leadership capacity, or excel in specific academic fields [emphasis added]. They require services or activities not ordinarily provided by the schools. Outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor. (p. 3)

What is interesting to note about this definition is that the term *gifted* is conspicuously absent and instead the term *outstanding talent* is included. Although having a national-level definition might seem convenient for the sake of consistency, given the absence of any federal mandate for its use, identification, or programming, this definition serves as little more than guidance for states and districts. In practice, taking a closer look at the state-level definitions reveals many stark similarities.

Also at the national level are multiple conceptual definitions offered by the National Association for Gifted Children, the official current form of which is as follows:

Gifted individuals are those who demonstrate outstanding levels of aptitude (defined as an exceptional ability to reason and learn) or competence (documented performance or achievement in top 10% or rarer) in one or more domains. Domains include any structured area of activity with its own symbol system (e.g., mathematics,
music, language) and/or set of sensorimotor skills (e.g., painting, dance, sports) [emphasis added]. (NAGC, 2010b, p. 1)

This recent NAGC definition is broader and more inclusive than that of the U.S. Department of Education (1993) report and includes a wider range of skills and abilities than are typically addressed in public schools. Even if a school were to adopt this definition verbatim, the school still would have to decide which content areas or domains it would serve under the purview of advanced (specific) academic programming. In addition, this definition specifies the percentage of individuals at 10% or fewer. It is likely that most percentages used in conceptual definitions are arbitrary. Therefore, it is somewhat unusual to mandate that no more than 10% of some unknown group could be considered gifted and/or talented in any single area without first considering what the “other” people can or will do. However, because the NAGC definition does not specify a norm group, the terms outstanding and exceptional remain open to interpretation by the end user.

**State-Level Definitions**

Fortunately, a conceptual definition of giftedness turns out to be not all that important when it comes to fostering advanced academic skills. In other words, we don’t need a fixed percentage or a psychological framework in order to provide students in need with subject-specific advanced content. However, many states do provide some structure and/or mandate when it comes to anything falling under the guise of “gifted” education. Because of this, programs for advanced academics should, when possible, align with any required state definitions or mandates that relate to gifted education. At the time of the 2010–2011 *State of the States in Gifted Education* report, 41 (out of 45 states responding) states had an official state definition for giftedness (NAGC & Council of State Directors of Programs for the Gifted [CSDPG], 2011). However, only 32 of these required that their definition be followed, allowing individual schools and districts much latitude in defining and identifying giftedness. For example, the State of Wisconsin dictates that gifted and talented students can and must be identified in five areas: intellectual, specific academic area, leadership, creativity, and visual and performing arts (Wisconsin Administrative Rule PI 8.01(2)(t)2, 2012; see https://docs.legis.wisconsin.gov/code/
Such state-level guidance in the form of a mandate makes gifted/advanced academic programming easier than if a given state had no formal definition or did not require adherence to such a definition. In theory, all Wisconsin schools must identify students in these five areas and then provide these learners with appropriate services. This is similar to the other 31 states that require either identification or services, or both (NAGC & CSPDG, 2011). However, just because a state has a formal definition and a mandate to identify and serve does not mean the mandate is universally followed or that all areas of the mandate receive equal attention. Some Wisconsin schools have no gifted program even if they do identify students, and many others only identify high-ability learners in math and language arts.

The situation is similar in other states; for example, a recent survey of the high school gifted coordinators across the state of Indiana revealed that although Indiana mandates that all school districts have a gifted and talented coordinator, only 75% of respondents indicated such a position or person existed (Peters & Mann, 2009). Given that the surveys were sent to the person listed by the state as the gifted coordinator, it’s clear that having a state mandate does not always assure action. Furthermore, although states such as Wisconsin and Indiana specify that multiple measures must be used in student identification, both stop short of requiring specific assessments to be used, again leaving that decision to the school or district.

States such as Georgia have a conceptual definition similar to Indiana and Wisconsin. In Georgia, a gifted student is defined as

A student who demonstrates a high degree of intellectual and/or creative ability(ies), exhibits an exceptionally high degree of motivation, and/or excels in specific academic fields, and who needs special instruction and/or special ancillary services to achieve at levels commensurate with his or her abilities. The abilities manifest in a collection of traits, aptitudes and behaviors that, when taken together, are indicative of gifted potential. (Georgia Department of Education, 2012, p. 7)

Although this definition is similar to Wisconsin’s in that it includes general intellectual, creative, and specific academic abilities, the Georgia definition does not include leadership or visual art abilities (although these perhaps could be considered part of creative talent). However, Georgia
does allow for a high degree of motivation as being sufficient to identify gifted ability in these areas, whereas high ability or achievement are required in the other two states mentioned. Although Georgia leaves some freedom to local districts to decide criteria for identification, the state does specify initial eligibility criteria based on the five areas of their conceptual definition. Students in Georgia then have two pathways to identification. They can either receive high scores on a nationally normed measure of mental ability (99th percentile in K–2, 96th percentile in 3–12) and on achievement tests (90th percentile or “superior” rating), or they can follow an alternate path that involves additional tests of creativity and motivation. For a discussion of some of the inherent issues and complexities with such a system, see McBee, Peters, and Waterman (in press).

The State of the States (NAGC & CSDPG, 2011) report is a biannual survey of gifted education policies across the country. In the 2010–2011 report, 45 states responded to a wide range of questions regarding gifted education practice in their respective states. As mentioned above, 41 of the responding states reported having a formal definition of giftedness. Of these, the most common area of giftedness listed was intellectual giftedness (34 states) followed by creatively gifted (26), performing and visual arts (25), academics (23), and specific academic areas (21). Other areas listed less frequently included leadership, culturally diverse, English language learners (ELL), disabled/twice-exceptional, highly gifted, and underachieving.

Within the State of the States (NAGC & CSDPG, 2011) report, 45 states responded to the question regarding identification practices. Of those states, 33 required the use of specific identification practices (such as in Georgia, as outlined above). Such requirements included multiple criteria (20), IQ tests (16), achievement tests (13), a menu of state-approved tests from which schools can choose (10), and nominations (8). However, even when specific criteria are required for the local schools, often the process and procedures are not specified. Only eight states mandate a specific process be followed, while seven states allow for collaborative decision making by the state and local district. In 15 states, schools are completely free to create an identification process. For example, how “multiple measures” are to be used in a state that requires such a practice (e.g., Arkansas, Indiana) is not specified, leaving each local district or school to decide what combination of measures to use and/or how to combine them. In another example, eight of the 33 states responding require nominations as
part of the specific methods of identification: Some list specific tools that are approved or recommended, but others do not. The same can be said for virtually all of the various required methods. Even though a class or type of assessment (e.g., IQ test) might be required, the definition specifies neither which particular test to use, nor the manner of its use. Because of this widespread emphasis on local control in education, the roles of the district coordinator, school board, and other local stakeholders can be extremely important in fostering effective identification and programming for academically advanced students.

Some areas of giftedness and talent are easier to assess and evaluate than others. In fact, several states specifically name the local education agency (school or district) as the deciding body for matters related to conceptual definition. For example, both North Carolina and Florida require locally developed plans to guide gifted identification and programming, although in both cases, these plans are reviewed at the state level for their compliance with the state rule.

In conclusion, states vary widely in their definitions of giftedness and their identification of students for gifted or advanced programming. With regard to identification, some states do not specify content areas at all (leaving terms like specific academic area to be operationalized by the district or school), other states specify content areas but not how these areas should be assessed, and still others specify the types of assessments but stop short of naming specific assessments to be used. Interested parents or professionals should investigate state-level policies before attempting to create a new framework or program for a specific school or district. In some cases, the advanced academic approach is sufficiently different from gifted education that schools may not need to worry about whether the advanced academics program is in compliance with the state's gifted education policy, especially for students not currently identified as gifted or in settings where gifted status is not tied to funding. After all, advanced academics are not gifted education!

**Local Definitions**

In cases where a state lacks an official definition or specifically leaves the decision to the local education agency (LEA), the decision falls on local school personnel. This situation obviously allows the greatest flexibility for implementing advanced academic programs.
Whenever advanced academic programs are being contemplated, the first step should be a needs assessment. What skills, aptitudes, and dispositions need additional development, in the form of educational programming, as justified by local values and unmet student need? This final point is very important. If student need is being met by the general education curriculum, such that even the highest performing students are challenged and engaged, then it is unnecessary to create an advanced academic program in that area. This may seem like a trivial issue, but when defining gifted or advanced, a major consideration needs to be what content is offered as standard or grade level in the given district, school, or grade. The need for specialized academic programming arises from a mismatch between a given student and his or her environment. Therefore, when a school board or group of individuals sets out to define advanced academics in a local setting, both existing local curriculum (and its accompanying student needs) and the characteristics of the local student population must be taken into account. Using a national perspective for comparison is likely to result in a large mismatch between the type of content and level of skills students need and what is actually being delivered. Lohman (2006) illustrated this issue with the example of a high-achieving school where an average student’s achievement is around the 95th percentile relative to the national average. At this school, the content offered as standard or grade level would be much more advanced than that offered at a more typical, average-performing school district.

Even in the world of increasingly strict content standards, wide variation within a single school district is common. In average performing school districts, a subject such as Algebra I might be viewed as advanced, honors, accelerated, or gifted for eighth graders. However, in the high-achieving schools referenced above, Algebra I might be considered grade-level content for seventh graders. As Renzulli (2005) argued, “Even in schools where achievement levels are below national norms, there still exists an upper-level group of students who need services above and beyond those that are provided for the majority of the school population” (p. 271). Thus, supplementary advanced academic services should focus on needs that are not being met as part of the general curriculum of a local school or district, rather than on a statewide or national grade-level standard. This local-norm perspective is critical if a program is to best connect with local students’ levels of need. This also means that some students who would be in an advanced academic program at one school would not have a need for
such a program in a different school, and that some students within a given school might be in need of a program one year, but not the following year.

Needs change across time and across schools, and programming should be responsive enough to change with them. When national standards or national norms are used for gifted and talented identification, a few schools will end up having 0% or 100% of their students being classified as gifted. Although the 100% instance might seem very appealing (what a wonderful thing to have 100% gifted students), the idea is rather absurd. If 100% of the students in a school are identified as in need of “advanced academics” (meaning they require more challenging curriculum than is being offered by the standard curriculum), then the standard curriculum is simply inadequate! It is impossible to specify on an a priori basis a desirable percentage of students who should be receiving advanced academic opportunities in a given school. However, when the percentage grows steadily over time (as we have seen it do), schools need to reconsider what level of content they offer as their standard, grade-level curriculum. In other words, when large numbers of students need advanced academics, this suggests there are deficiencies in the standard curriculum. Rather than shunting those students into special programs, the standard curriculum needs to be upgraded.

Where Does Giftedness Begin?

Often state or district policy identifies a set percentage of students as gifted. The use of these percentages may be arbitrary, but it is also likely that these target percentages were based on intelligence test percentiles (e.g., an IQ of 130 = approximately 2.5% of a population) and are rooted in the historically fixed percentages of some special education diagnoses (i.e., intellectually disabled, which traditionally has required an IQ score below 70, in addition to other criteria). Although those students in need of more challenge beyond the standard curriculum should by definition be somewhat rare, in this book we will not argue for any specific percentage of a population as being in need of advanced academic programming. Instead, the percentage of students served by advanced programming should be directly proportional to the number of students whose needs cannot readily be met in the general education classroom as it currently exists in a particular setting. In a district with a large portion of above-grade-level students, the percentage of the population labeled as in need of such programs could actually be
relatively small (e.g., 1%–2%) because the high-achieving nature of the school population requires that most needs typical of high-ability students are met as part of the general curriculum. Such a situation might occur in a high-performing high school serving an affluent population, where nearly all students take several honors, AP, or above-grade-level classes and go on to college. In this instance there (ideally) would be services that would not necessitate a label or advanced program because they already exist for most students as part of the general curriculum (so that, because the need is being met, no special program is required). The opposite could also be true. In a very large school in which the majority of students are low performing, the percentage of students identified for advanced academic services could be relatively high (e.g., 10%–15%) because these students are unlikely to have their needs met in the general education curriculum. Such a case could exist in a middle school where most students take pre-algebra in eighth grade, and algebra and geometry are not offered until high school. In this setting, some middle school students who are ready for advanced algebra, geometry, and trigonometry are unlikely to have their needs met in the general education classroom and are more likely to need special services.

These examples run contrary to the popular wisdom that says high-performing districts can expect to have a larger percentage of identified high-need students and low-performing districts would have a smaller percentage of such students, although such scenarios are also possible. When educational need is locally defined based on the students enrolled in a particular school or district and the standard curriculum of that district, the percentages of students who require academic programming outside of the standard grade-level curriculum varies. For this reason, our use of particular percentages in the examples does not imply that any set number or percentage is the “right number” for any advanced academic program.

A point that arises throughout this book is that predetermined percentages (or cutoffs) that only serve to arbitrarily limit the number of students who can receive a service should be avoided. The use of percentages can lead to a fixed number of spaces being set aside for a given program; this puts the needs of schools ahead of the needs of their students, rather than focusing on students’ needs as they differ from year to year and grade level to grade level. In contrast, percentages can be very useful for the purpose of comparing the ethnic, gender, racial, ELL, and socioeconomic status (SES) makeup of the identified student population. If dominant cultural
groups are overly represented in the population served by advanced programming, additional services might be necessary or the administrators and staff of the local school might consider reevaluating the philosophical, cultural, and practical base of their existing program. Because score discrepancies are correlated with cultural, ethnic, and especially economic status on nearly every existing measure of academic achievement or academic aptitude (Valencia & Suzuki, 2001), it may not be realistic to expect that students who are identified based on their performance on such measures should be representative of overall student population in a given school. Nevertheless, we suggest, existing discrepancies usually are far more lopsided than test scores alone would predict. We return to this issue in more depth in Chapter 7.

**Does It Really Matter if a Student Is Gifted?**

So what is giftedness and who are the gifted? These two questions have driven eight decades of educational philosophy, research, and practice. Even today, more than 90 years after the 1922 publication of Terman’s seminal work, scholars still have not coalesced on a consensual, paradigmatic definition of the term. This lack of a common definition of the term gifted (and the related term talented) is frequently decried by researchers in the field (e.g., Lohman, Korb, & Lakin, 2008), for whom the lack of definitional consistency leads to great difficulty in synthesizing research results across studies. Furthermore, varied and inconsistent definitions don’t tell us what to do with those students for whom the standard content or curriculum is inappropriate. Teachers need to know “Who needs more challenging math on Monday?” and “What do I do during reading time for my kindergarten students who can already read chapter books?” In the context of K–12 schooling, these are the questions that matter.

The lack of definitional consistency for the term gifted suggests there may be other fundamental flaws and logical inconsistencies in current educational practice. As we detailed in a recent paper (McBee, McCoach, Peters, & Mathews, 2012) the concept of giftedness does not really answer the educationally relevant question of “Who needs harder math problems?” Although it might seem like the gifted students would be those with unmet needs (and some scholars have argued that giftedness itself creates need), in our experience this is simply not the case. Every student who attends the North Carolina High School for Science and Math, for example, could be
considered gifted according to the field’s most common definitions of that term. Does that imply that the education they are receiving is automatically inadequate—that they need more by virtue of being gifted? Do only neighborhood schools need a gifted program? What about a high-poverty school in which no students meet the criteria for being identified gifted? Are we prepared to argue that none of those students can and should be doing more than what they are asked to do academically? In many cases, there will be substantial overlap between those students who would be identified as gifted under traditional definitions and those who would be determined to have unmet academic needs, but this overlap is not perfect. Furthermore, the very term gifted, due to its long history, carries with it many unhelpful and unavoidable connotations in the minds of teachers, parents, children, and the academy. Replacing the concept of giftedness with the much more contextual notions of academic need and advanced academic programming removes an invisible intellectual straightjacket that has tied our hands and blinded our eyes to obvious changes our schools must make to support high-achieving or potentially high-achieving students.

We realize that our last few paragraphs may have alarmed the reader. It is critical at this point to clarify what we mean. We do not argue that bright children do not exist—we have collectively worked with many extraordinarily bright students whose minds work in qualitatively different ways and whose cognitive skills far surpass their physical and emotional development. It is precisely for this reason that we argue explicitly, forcefully, and passionately that many children in our schools need a great deal more challenge, opportunity, and intellectual rigor than is provided in the typical K–12 setting. Discarding the concept of giftedness on the part of parents, teachers, researchers, and advocates for gifted children is the very best thing that can happen to the gifted child when it comes to the educational experiences he or she receives in K–12 schools, provided other appropriate changes are made in order to meet bright children’s educational needs.

The Case for Separating Advanced Academics From Gifted Studies

Gifted education has grown out of several fields and represents a truly multidisciplinary arena. Although psychologists dominated the first era of research and theory on giftedness, today gifted education is a mélange of several branches of psychology (primarily educational, cognitive, and
developmental) and education. Some of the long-running lack of consistency in definitions and theoretical conceptions must surely result from the diversity of perspectives brought by people who approach the study of giftedness from varying intellectual traditions.

Psychologists have contributed perhaps more theory than any other single constituent groups. However, psychologists have, in aggregate, quite different priorities and interests than educators. Psychologists interested in high ability often aim to understand and predict eminent achievement in adulthood. Psychologists yearn for a common definition of giftedness that is constant across settings and domains (and therefore consistent across studies), hoping to operationalize the construct of giftedness in the same way that they approach constructs such as depression. For example, to determine whether someone is depressed or not, his or her symptoms are compared against an operational definition that is defined objectively with respect to some external criteria. Whether or not someone is classified as depressed is not at all affected by whether that person happens to be the most or least melancholy person in his or her social context. In this way, and unlike definitions of giftedness, depression is a criterion-referenced construct as opposed to a norm-referenced construct.

Educators, on the other hand, may be tolerant of much less rigid definitions—a fact that has challenged researchers in the field for some time. Educators’ primary concern must be with providing optimal services and education to students. Advanced academics should focus on designing, implementing, evaluating, and improving instructional models, program design, and curriculum for those students who need more—the question of whether a psychologist might define that student who needs more as gifted is completely irrelevant. Advanced academics, therefore, is a completely needs-based and school-based construct that stems directly from historical conceptions of gifted education with their focus on student need. Therefore, assessing the degree to which a student’s level of academic need matches with his or her currently provided level of education becomes the key feature of any “identification” system. Although insights, discoveries, and theory from high-ability psychology may occasionally be applicable to advanced academics, there should be no attempt to force this connection. Indeed, the progress of our field has been stunted precisely because of our insistence on theoretical unification across subfields. The psychological focus on understanding talent, creativity, and eminence (which we refer to as high-ability psychology) is still incredibly important as a scientific dis-
cipline and undoubtedly requires additional research. But schools should have a different focus, a focus on advancing students’ academic skills. Although there are many important areas of human endeavor worthy of investigation from a psychological point of view, not all content areas or domains can be the purview of K–12 schools. Instead, schools focus on a semistandardized set of academic skills, and some students demonstrate far greater proficiency in those areas than their grade-level peers, necessitating the provision of programs or services to meet their advanced academic needs. The term advanced academics that we promote throughout this book is meant to capture educationally relevant, academically oriented, needs-based programming geared toward students who have already mastered the grade-level curriculum or who have the capability of doing so far faster than their chronological peers.

The notion that giftedness is a stable trait has naturally led to a great deal of concern and attention in our field being directed to the effort of finding the gifted. The common misconception is that if we could just create or purchase the right test, then we would be able to find those gifted kids. The prevailing “trait” theory of giftedness has naturally led to the labeling of children as a primary concern. Labeling is only useful to the degree that it provides diagnostic information, and perhaps to a lesser extent as a means of directing funding toward specific needs. The label gifted, just like the label tall, provides little diagnostic information. We believe that effort expended in the interest of finding children who need more educationally than their peers is a better investment of resources—indeed this is what tests in schools are supposed to be for; however, identifying the gifted has been dramatically overemphasized and has crowded out other more educationally relevant efforts, such as what to do with these children once they are identified. We know of schools that have spent 100% of their gifted education funding for a year on a single test, only to have no funds remaining for programming. In the state of Connecticut, the identification of gifted students is mandatory; however, school districts are not required to provide programming or services for gifted students. We find such policies and practices absurd.
Legitimate Critiques of Gifted Education

Gifted education is under constant attack by critics with a variety of perspectives. As a field, we have frequently failed to provide convincing counterarguments to some of these criticisms. In this section, we explore common criticisms of gifted education; some of this discussion continues in Chapter 8. If gifted education is to grow beyond the niche program that it so often is, often surviving on the thinnest margins of public support, then the field must change the way that it operates so that these critiques can be honestly addressed.

Why Do We Set the Identification Cutoff Where It Is? Is the Child Who Scores One Point Below the Cutoff Really so Different From the One Who Scores One Point Above?

A child must exhibit a score or scores above some cutoff(s) in order to be identified as gifted. These cutoffs vary, in some cases dramatically, from state to state and district to district. For example, for a child to meet the “intellectual ability” aspect of the state of Georgia’s mandated definition, students must score above the 96th percentile on an appropriate test. This prompts the question, “What is so special about the 96th percentile?” As it turns out, there is nothing special about the 96th percentile. It’s simply an arbitrary cutoff. Proponents of the status quo would argue that you have to draw the proverbial line somewhere, and that the act of “line drawing” is not unethical.

Is there any evidence that a child at the 95th, 92nd, or 90th percentile on mental ability would be unable to keep up with the “top 4%ers” in the advanced educational services that (should) follow identification? If we had evidence that a cut score at the 96th percentile actually does discriminate between those who can and those who cannot succeed in an advanced educational program, then perhaps that cutoff would be justified. But such evidence does not exist. So a cutoff-based system that sorts children into the gifted and nongifted without sufficient thought and/or evidence for the creation of the cutoff appears to bestow a desirable label on some students but not others. This practice cannot be defended convincingly, and it only reinforces the image that gifted education is an optional luxury. Instead, cutoffs or identification criteria should be based on the demands
of the programming or intervention. We will address this topic in depth in Chapters 3 and 9.

**Why Do Gifted Students Get to Do Fun Activities While the Other Students Do Worksheets?**

Another criticism addresses what children actually do in gifted education programs after they have been identified. There are two general classifications of service provided in gifted education: acceleration and enrichment. Academic acceleration involves moving through the typical curriculum at a faster rate, whereas enrichment involves more in-depth study of topics within the curriculum and/or the study of topics that are outside the regular curriculum. A vast amount of research has supported the effectiveness of acceleration (Colangelo, Assouline, & Gross, 2004), but there is much weaker evidence supporting the efficacy of enrichment (although to be fair, enrichment programs are much more difficult to evaluate). Nonetheless, programs such as resource rooms and differentiation in the regular classroom were the most common types of gifted education programming reported in the *State of the States* report (NAGC & CSDPG, 2011). Ironically, schools appear overwhelmingly to prefer offering enrichment-like services to acceleration, even though there is far stronger evidence supporting the practice of acceleration. Why is enrichment more popular than acceleration? Enrichment maintains the status quo, the chronological delivery of curriculum. Gifted children in an enrichment-only program follow the same timeline and pace through the curriculum as their nongifted peers. Often when schools have provided acceleration, due to inadequate coordination across grades and schools, students may rapidly advance through content in some subjects or grades only to slam into an administrative brick wall in a later grade, at which point it is all too common that they are required to repeat material that has already been mastered. This does not happen with enrichment. In short, acceleration is much more complex from a logistical and administrative standpoint. Because in many settings the dominant proportion of care, concern, and energy is expended on the effort of identifying children, the question of “identifying them for what” (see Chapter 2) too often becomes an afterthought, when it should in fact be the most important question under consideration.
One rationale for acceleration is that gifted students are capable of learning more rapidly than their peers (Davis, Rimm, & Siegle, 2011); therefore, they can master material with less instructional time and less practice. The rationale for enrichment stems from common conceptions of giftedness: (a) that the gifted have wide and intense interest in intellectual topics; (b) that the gifted possess a proclivity to make spontaneous connections across subjects and domains; and (c) that the gifted engage in higher order thinking skills and these skills can be honed through the enrichment process. We will return to this topic in depth in Chapter 6.

The term *enrichment* encompasses a wide variety of programming. However, generally, enrichment entails the coverage of topics not usually encountered in the usual curriculum, frequently through individualized or small-group instruction or independent study, and often involving open-ended projects leading to products or performances (Davis et al., 2011). Often, these projects allow the exercise of creativity in ways that are rarely available in the usual curriculum, with its prescribed learning goals and state-mandated assessments. For most students, enrichment activities are far more enjoyable than “business as usual” instruction. For these reasons, enrichment is a hallmark of many gifted education programs. However using enrichment as the core of a gifted education program is potentially problematic: Although gifted students are likely to benefit from an enriched curriculum, there is no evidence that only gifted children benefit from enriched curriculum. Most, if not all, children would prefer to be involved in enrichment activities instead of the endless drill and practice of basic skills that characterizes so much of contemporary American education. If enrichment is to have a place in a program of advanced academics (and we believe that it should!), the program should be designed such that not all children can thrive in it due to its challenging demands. We will address this point in detail in Chapters 3 and 6. The perception that gifted students are allowed to have fun and be creative, while other students must endure monotony, undermines support for gifted education.

One might suspect that a central reason for the dominance of enrichment as gifted education programming is simply because of its convenience to the school and district, which does not have to engage in the troublesome coordination of effort required for integrated and meaningful acceleration opportunities or for focusing more attention on the match between student need/readiness and the curriculum. Also, acceleration typically requires a larger commitment to “dosage”—the amount of time...
and energy devoted to the intervention by the school—than does enrichment; enrichment frequently is implemented with small dosages of one hour per week or less (i.e., in pull-out or coteaching program models). One of the authors of this book actually participated in an enrichment program that was comprised of two afterschool trivia competitions each semester in middle school and a single field trip each year in high school. In short, schools frequently default to enrichment because it is easy and convenient for them to implement; it often doesn’t involve specialized training, students enjoy their time in the program, and parents are happy because the school has recognized their child’s giftedness and is appearing to be responsive to their child’s needs. There’s also little chance of harm to the child. These programs are not deemed ineffective because often there is no stated purpose or goal for the program, and there are no formal assessments or evaluations of the program’s efficacy. With so little risk also comes little potential for reward.

The State of Gifted Education

How should we characterize the state of gifted education today? Only one word is sufficient: Gifted education is in crisis. Many schools currently do nothing for gifted students. Of the schools that do provide services, many end that “service” at identification. Well-articulated programs of reasonable dosage are the exception, not the rule. The best evidence we have today regarding the overall effectiveness of gifted education programs was provided in a recent study performed by Adelson, McCoach, and Gavin (2012). Using the most rigorous statistical techniques and a very large, nationally representative dataset (the Early Childhood Longitudinal Study), the researchers compared children in gifted education programs and matched children who did not participate in gifted education. The result? There was no difference in students’ academic performance in math or reading whether they were in gifted programs or not. Two potential takeaway messages from this research are that current gifted education programming is not influencing academic achievement and/or that programming is so inconsistent that some programs work while others do not.

Similarly Bui, Craig, and Imberman (2011) performed a rigorously designed study to estimate academic effects of gifted education. There were no differences for those students identified as gifted versus those who
were very similar but were not identified in math or reading. There was an effect for science achievement, but there were no effects in other academic areas. Some proponents of gifted education argue that the effects of gifted education are not well measured by achievement tests. However, in the world of increasingly stringent standards and accountability, increased achievement at least must be considered. In the end, the status quo is not well-supported by current research.

What is gifted education without giftedness? Focusing on the delivery of advanced academics allows for the development of a model that is less fundamentally unfair, that responds to local needs with tailored and responsive programs, and is centered around what students do (behavior) rather than who they are. Gifted education without giftedness is called advanced academics.
Identification for What?

Perhaps no single step in the process of gifted and talented identification is more overlooked than answering the following question:

“For what program are we identifying students?”

Before any identification or assessment system can be devised, we must determine the purpose of the program and what it is that the identification seeks to find. The traditional model in gifted education has been to:
1. adopt a definition of giftedness,
2. identify the gifted, and
3. provide an educational intervention.

We describe a much different approach; an approach that is focused on advanced academics. In the advanced academic framework, we:
1. design or identify the program we want to offer,
2. think locally and in the present tense about student need,
3. identify those who have a need for and would succeed in the program, and
4. regularly review student progress.
An identification plan or policy cannot be developed in isolation from the programming or curriculum that will be provided to those students who are identified. We repeat this message throughout the book because we believe it is one of the most often misapplied parts of gifted or advanced academic programming: It is impossible to design an identification system unless we know, specifically, for what type of program or service we are identifying students. There is no point in having an identification system for which the corresponding academic need—that is, the content area(s) or domain(s) that programming would address—are ones that the school is not prepared to serve. This might seem obvious, but we have seen many districts spend their time and money to identify students but then provide little to no programming for the students they have spent such effort to identify. Being identified as gifted should not be a reward, but rather should be the outcome of a formal observation identifying a need that is not being met (see the definition discussion later in this chapter). Identification is a formalized system (see Chapter 3) that sets out to determine which students have needs that are not being met by the standard curriculum of a given school or district.

We (the authors) have been approached by frustrated teachers, parents, and administrators and asked what should be done to identify gifted students. Unfortunately, adding to the frustration of people looking for a simple answer, our most frequent answer is that “it depends.” In essence, ethically defensible identification decisions cannot be made unless programming decisions already have been answered by local education leaders, administrators, and teachers, with (when applicable) appropriate attention to state-level education regulations. The programming a school wants to provide must be determined first. To make decisions about programming, stakeholders need to understand (a) current curriculum offerings of a local school or district, (b) current levels of student mastery or need, (c) what state regulations require when it comes to gifted and talented education, and (d) whether the planned advanced academics program needs to be in compliance with gifted education policies at all. Once these initial programming questions have been answered with sufficient detail, only then should attention turn to the process of selecting students for the program. This process, as outlined above, essentially operationalizes the term advanced academics in our model. Figure 2.1 represents this process in graphical form.
Design the Program First

The traditional model for gifted education begins with identifying gifted students. Although this approach is understandable from the psychologist’s point of view, the concept of giftedness lacks detailed diagnostic information about the specific areas of academic need possessed by the student and whether or not the student is an appropriate match to a given program. Telling a teacher that a child is gifted tells that teacher very little about what to do with that child.

Once freed from thinking that we must “find the gifted,” we suddenly are able to adopt a different perspective. By beginning with program design, rather than the identification of students, we can begin to address many existing (and justified) critiques of gifted education. Specifically, an important critique of gifted education is that the identification cutoffs chosen are often arbitrary and are not connected with the available gifted education programming, assuming there is some. The advanced academics paradigm addresses that critique by ensuring that the identification or student selection process is designed to predict success in the specific program.
being offered. Identification should be based on the principle of beneficence, both for students and for the program itself. Beneficence for students means protecting them from experiencing abject failure. Therefore, we guide students away from programs where their probability of failure is high. It also means that when the program cannot accommodate all interested students, the admission decision is driven on the basis of predicted probability of success in the program (or in other words, by student need for the program). Beneficence for programs means that identification is sometimes required to protect the integrity of a program. This topic is addressed in detail in Chapters 3 and 9.

Questions to consider when designing the program include:
- In what areas do we (the school community) want to devote additional resources? What areas do we want to foster?
- What will be the nature of the program? Is it primarily acceleration? Is it enrichment? Is it some combination of these, or something altogether different?
- What content area(s) will the program serve?
- What are the goals of the program? In other words, how will we (the school community) know if the program was successful?
- How much intensity (“dosage”) will be required in order for the program to have a reasonable chance of meeting its goals?
- What administrative barriers may impede the success of the program? How will these be reduced, removed, or modified?
- What resources will be needed, in terms of time, space, materials, and personnel, for the program? What resources actually are available?
- Given that available resources will always be limited, is there a maximum number of students that can be accommodated by the program? How does the program’s capacity compare to the number of students who may potentially benefit from the program?
- Will the program feature tiered classrooms or levels of service analogous to Response to Intervention tiers?
- What does successful completion of the program look like? How will progress be measured? How will/can nonthriving students be removed from programming once placed?

Answering these questions will be more difficult for some types of programs than for others, but these questions must be answered clearly
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for any contemplated intervention. For example, these questions generally will be easier to answer for acceleration programs than for enrichment programs. Given that enrichment is typically enjoyable and educational for most students, it may be reasonable to assume that interest in the program may greatly exceed the number of students that can be served, necessitating some type of identification process. But for this identification process to satisfy the principle of beneficence, it must predict success in the program. Otherwise it is arbitrary, exclusionary, and therefore unethical. Luckily, as we demonstrate in Chapter 3, a formalized identification system is not always required.

When deciding on the program goal(s), it is very important that these goals be specific and measurable. The widespread adoption of vertically equated growth scales for achievement tests may be fortuitous here. For example, if the program is math acceleration, one goal might be that “students in the program will show at least 1.5 years of growth in math per instructional year.” This goal is specific and is measurable for all students. Further, the goal provides an organizing principle for the structure and curriculum of the program itself; if 1.5 years of growth are needed, the curriculum for the program must sample topics and learning objectives for the current grade—presuming this is where students are; recall (b) above, the need for knowledge of current levels of student mastery—as well as topics and learning objectives for half of the next grade, if not more. In other words, topics and objectives are not selected on the instructor’s whim—that there is a philosophy and a purpose behind what is being done.

The necessary dosage of a program may be quite difficult to estimate. In these cases, the “sports rule” should be used. The sports rule works like this—if you wanted to field a successful sports team, how much practice and game time would be required each week? One would be hard-pressed to find a football coach who only devotes one hour per week to practice, and yet such low dosage is the norm rather than the exception in gifted education. It is ironic that such low dosages are tolerated in educational programs, the raison d’être of schools, even though they would never be tolerated in school-sponsored competitive sports.

To continue with the math acceleration example, identifying and removing administrative barriers means ensuring that the program is integrated at the school and district policy levels, with adequate buy-in from relevant administrators and teachers, to ensure that students can continue their progression through the curriculum to its logical conclusion. If the
acceleration program in mathematics is to begin in elementary school, it is likely that participating students will be ready to take Algebra 1 much earlier than it is typically offered. However, many school districts have formal or informal policies restricting Algebra I to students in eighth grade or higher. Unless a solution is found, students may either exhaust the math curriculum before they reach grade eligibility to take algebra, leaving them with years of no math at all, or worse, they might be forced to drop back into the regular math curriculum that they had mastered long ago.

Moreover, some states specifically forbid early entrance to kindergarten or early graduation (NAGC & CSDPG, 2011). Therefore, if the Algebra 1 barrier is removed, another barrier to consider is that students may exhaust the high school’s complement of AP courses long before 12th grade. In this case, removing administrative barriers means providing opportunities for students to continue learning mathematics after completing AP Calculus. Possibilities here would include dual-enrollment college courses, online programs, independent studies, and mentorships. Additionally, if there is a large enough group of students and sufficient faculty expertise, the high school may wish to offer college-level mathematics classes itself.

**Think Locally and in the Present Tense**

When designing a program of advanced academics, the focus should be intensely local. What program serves the needs of the students in this school? What level of instruction would be required to challenge and engage the students in this classroom who are coasting through the standard curriculum? What types of educational programming are valued the most in this community? Decades of tradition and practice in gifted education have conditioned its advocates to think in terms of identifying the “gifted.” According to this status quo, if a child is gifted, then he is gifted forever and everywhere. He remains gifted regardless of the classroom environment in which he is placed—even if that classroom is meeting his needs, his giftedness itself creates special needs that require curricular intervention. Because this system has been the dominant paradigm for so long, and the paradigm under which many of us were trained, it can be difficult to break out of this way of thinking. But breaking out is something that we must do in order to create advanced academic programs that make sense.

The advanced academic perspective, rather than considering the child’s absolute level of ability, focuses deeply on the match between the child
and her instructional environment. In this view, it is not high ability itself that creates a need for intervention; rather, it is a mismatch between the child’s ability and the pacing, depth, and content of the instruction provided that creates the need for intervention. Because of this critical fact, we must take the current instructional environment into account when identifying students for programming. A child may require intervention in one school, class, grade, year, or subject, but not in another, depending on the degree of child-to-context compatibility. Perhaps one school has a class that meets a child’s needs but in another school, her needs would only be met by an advanced academic program. Alternatively, perhaps Mrs. Johnson is very skilled at differentiating up to challenge a wide range of students whereas Mr. Alexander is not. As a result, more of Mr. Alexander’s students might need advanced academic programming.

**Identify Those Who Have a Need for and Can Succeed in the Program**

The proper role of identification is to allocate opportunity for special programming in such a way as to optimally benefit students while protecting them from needless failure. Although identification issues traditionally have been the predominant concern in gifted education, in advanced academics the role of identification is far less prominent. In some cases, where the program capacity exceeds or is equal to the size of the population of interested students, and where consequences of failure are mild, formal identification may not be required at all (think of student self-selection into music, business, and career technical education in high school). In other cases, where the consequences of failure within the program (the potential risks) are substantial, effective identification becomes critical. That said, justifiable identification must always be explicitly linked to the program itself and to qualities and characteristics that predict success in the program. Indeed one of the failures of traditional gifted education programs is their attempt to identify for global giftedness (or g) but then program for domain-specific talent. We have seen many such programs.

We believe that identification carried out solely on the basis of general characteristics and arbitrary cutoffs is unethical and indefensible. As an illustration, consider the Supreme Court case of *Griggs v. Duke Power Co.* In that decision, the court ruled that when employers use tests to make employment or promotion decisions, those tests must be “reasonably
related” to the job requirements. In other words, using the results of an IQ test to determine who may be promoted to a management position is only allowable if evidence shows that high-IQ individuals perform better in the position than low-IQ individuals do. Similarly, when assessments are adopted as part of an identification system for an advanced academic program, they should be “reasonably related” to the program in question. Therefore, they should predict success or failure in the program. When creating identification systems, educators should ask themselves what evidence exists that the system will locate students who have a need for a particular program and which students will be successful in that program.

Regularly Review Student Progress

The program, whatever it may be, should allow for the frequent review of student progress. When programs are designed with specific and measurable goals at the programmatic and student levels, this process becomes much easier. Indeed, a lack of sufficient evidence regarding the effectiveness and measurable outcomes of gifted programming is a tremendous barrier when it comes to advocacy. Students who repeatedly fail to make even minimal progress should be discontinued and allowed to transition back to the standard curriculum in the most graceful way possible. The program should be designed such that discontinued students experience a “soft landing”—resuming their participation in the usual curriculum in the least-disruptive manner.

Regular documentation of student progress also serves another important end; it provides evidence of the program’s impact on student learning. In an era of budget cuts, programs that cannot justify their existence with evidence can expect to find themselves on the chopping block.

Guidelines for Program Design

This book will focus primarily on locating students who are most in need of and would benefit the most from advanced academic programming that is related to the content areas and skills most commonly addressed in American schools. Both of these considerations must be taken into account, because if students are identified who are in need, but then the
district provides programming in which they will not be successful, there is a mismatch between program and service just as there was before the student was even identified. At the same time, if we place students in a program in which they will be successful, but that has not been targeted toward their specific needs, the program in unlikely to have any meaningful impact. We focus on the creation of advanced academic programs that correspond to the subjects usually taught in K–12 schools and do so with two acknowledgments. First, we recognize the importance of skills and talents that fall outside the purview of what is taught and addressed in school. Second, we fully recognize that the population of students currently labeled gifted often do have widespread unmet academic need that spans many subjects as well as potential or realized talents in domains that are not part of the usual curriculum (such as painting or computer programming). Although these students would also benefit from talent development in those noncurricular domains, we feel that the focus of teachers’ efforts generally should be on meeting students’ academic needs.

Similarly, teachers are certainly on the front line in dealing with students’ social, emotional, behavioral, and psychological issues every day within the classroom setting. However, intensive needs in the psychological, emotional, social, or behavioral realm are best addressed in conjunction with counselors and school psychologists, whether or not the student is gifted or academically advanced.

**Furthering a Needs-Based, Developmental Perspective on Giftedness and Talent**

Regardless of one’s conceptual definition of giftedness, the term gifted provides little to no specific diagnostic information about a student’s current academic needs. Just because two students are identified as gifted does not mean that these students have the exact same needs. Schools commonly label students as special education/not special education or gifted/nongifted. Although use of these labels is widespread and they help schools address state reporting requirements and receive dedicated funding for these groups of learners, these broad labels contain little diagnostic information. Although labeling special and gifted education students helps from an organizational perspective, doing so “can also reinforce the perverse human tendency to misrepresent a characteristic that varies continuously” (Lohman, 2006, p. 10). Put another way, when attaching labels
to objects, individuals start to view those objects as falling into mutually exclusive, all-or-nothing categories, as opposed to viewing what we are labeling as a single point on a continuum.

Because the purpose of gifted and talented identification is to identify student needs and then address them with services, a categorical (all students are either gifted or not gifted) definition is not very helpful. As we have stated before, it doesn’t tell us who needs more math (i.e., advanced academics) on Monday. The degree to which a student can develop excellence in any given domain or demonstrates a need for advanced academic programming in a domain is not dichotomous (i.e., yes or no). This categorical gifted/not gifted focus is likely one of the culprits that has led the field to focus so heavily on identification over assessment of students needing appropriate programming. Lohman (2006) put this point quite eloquently:

We are not interested in identifying bright kids in order to congratulate them on their choice of parents or some other happenstance of nature or nurture. Rather, the goal is to identify those children who either currently display or who are likely to develop excellence in the sorts of things we teach in school. (p. 7)

The categorical label of gifted does not inform the educator, parent, or administrator about what it is that the student needs, or the programs in which he or she would be successful. To remedy this deficit, we suggest that the act of identifying a student should look more like a needs assessment—determining a student’s specific needs so that he or she can be matched with appropriate programming. Sometimes a single identification tool can accomplish both tasks, while at other times additional information might be needed to better understand the nature of the student’s need. For example, a student with a score of 189 on the Measures of Academic Progress (MAP) might be functioning far beyond what is currently being taught in his or her classroom (signifying a need not being met). Because of this, school professionals could compare the student’s current level of performance (need) and place that student in a classroom where that need is better met. This may be done by comparing the student’s current level of mastery with a curricular map of courses in his or her district (see Chapter 4). However, in other instances, the match is not as clear. A student who has a score of 155 on a standard IQ test is clearly very bright, but where
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or how to best meet that student’s academic needs is less clear because IQ tests contain no information about curricular levels. Therefore, the MAP provides a link between identification and programming for advanced academics; the IQ test (by itself) does not.

The developmental perspective (Horowitz, Subotnik, & Matthews, 2009) focuses on how students’ gifts and talents are mitigated or augmented by normal developmental stages and life events, and this focus implies that students’ needs will change over time. A gifted label cannot be permanent and cannot be unilateral: Not all students who are labeled as gifted require the same things in order to receive an appropriate educational experience. Just as not all gifted students require the same services, a given individual (gifted or not) does not automatically need the same services year after year. Just because a student is identified or labeled as gifted or as in need of advanced academic programming and requires special services one year, does not mean he or she will automatically need services the next year. His or her needs can, and likely will, change as he or she develops physically and cognitively. These needs also depend on the current educational placement and how well that placement meets the student’s current level of academic readiness.

Gifted education is similar to special education in that it is fundamentally concerned with students who fall outside traditional developmental stages and growth curves (hence the term exceptionality). In special education, these differences are addressed through Individualized Education Plans (IEPs), and a few states and schools have adopted this model with gifted education through Differentiated Education Plans (DEPs; NAGC & CSDPG, 2011). The philosophy behind such plans, and one of the reasons they are successful, is that they are programs individualized to meet students’ needs.

Even in the absence of IEPs or DEPs, gifted services and programming must be based on students’ needs. Therefore, it is completely conceivable that during some years a gifted student would need special services not provided in the general curriculum, while in other years he or she would not. As curriculum, instructional staff, and students change with the passage of time; educational labels and services should be flexible enough to change with them. Some years the standard grade-level curriculum will be enough for a given student, whereas other years advanced academic programming might be needed. For instance, if a kindergarten student is already reading fluently while the rest of the class is learning their letters,
such a student likely would require special academic programming to meet his or her needs. However the need for specialized services might change in first grade. For example, if the school has a multiage grade 1/2 classroom or if the kindergarten teacher is able to teach many of her students to read chapter books in a single year, then the following year our original student might no longer need special/gifted services because his or her needs now are being met in the general education setting. We believe this goal is easier to accomplish under the guise of advanced academic programming than when using the gifted terminology because the term gifted tends to be perceived as a stable trait, rather than a sign of an immediate need. In the advanced academic perspective that we espouse, teachers, parents, and students should all expect programs and services to change from year to year as the needs of the students change. Parents often become very upset if they are told that their child was gifted one year but is no longer gifted the next year, but these parents may be more understanding of fluctuating academic need. The fluctuating need essentially represents a differing degree of mismatch between a student’s ability and his or her regular classroom environment, which is as much a function of the context as of the student.

**The Process: Philosophical Decisions**

**Background.** With local curriculum in hand, the interested educator or committee can proceed to deciding what content areas and student skills are in need of special programming. In other words, what counts as part of advanced academics? This is no easy task, as it encompasses philosophical, cultural, and practical considerations. It is philosophical because local community members, teachers, parents, students, and all other stakeholders must decide what areas they value enough to foster through specific advanced programming. For example, the science, technology, engineering, and math (STEM) disciplines have gained national and international attention as high-need areas. The 2009 National Assessment of Educational Progress Science Report Card found that only 34% of fourth-grade and 21% of twelfth-grade students scored above proficient in science (National Center for Educational Statistics [NCES], 2011). Such statistics make a compelling case for subjects and content areas such as science being an emphasis area in an advanced academic program. Some might take this as a sign that no advanced program in STEM areas is needed—after all, very few students are above proficient. But the NCES level of advanced
is unrelated to what is being taught in the general education classroom of a local school. Whether or not an advanced program in STEM is needed depends solely on whether or not there are students who could do more than they are currently being asked to do. Therefore, a district might choose to emphasize talents in the STEM areas with regard to their definition of what is included as advanced academic programming. In the same fashion, a rural district with a strong agricultural base might include 4-H or other natural resource-related curricula as worthy of special programming and services, despite this traditionally being a nonacademic curricular focus. Regardless of the rationale, a philosophical decision needs to be made as to which skill areas will be supported by advanced programming and services, which will be addressed through enrichment programming, which will be encouraged or fostered through outside organizations and mentors, and which are completely outside the purview of public education. Even in states with explicit conceptual definitions of giftedness, these local decisions guide the specific academic areas addressed by the program.

So far we have discussed two different terms: needs and values. Needs identify students’ abilities and skills that are not currently being fostered by the standard education curriculum. Values identify the content areas, domains, or skills that the local school or district decides to devote resources toward developing in students. Renzulli (2005) argued that one of the purposes of gifted education is “to increase society’s supply of persons who will help to solve the problems of contemporary civilization by becoming producers of knowledge and art rather than mere consumers of existing information” (p. 249). Viewed from this perspective, all content areas are valuable, but some are in greater demand or are of greater value, due to current issues and problems facing the world community, than others. Therefore, the local school community must decide what domains will be fostered through its advanced academic programming based on both local value and local need.

Sometimes needs and values overlap: Students who have a high need for advanced math and science content happen to reside in a district that provides advanced math and science programming. However, there are instances where a need exists in an area that the school does not address. For example, a student who is very skilled in woodworking may have exhausted all available courses on the topic; however, the school may not provide any advanced programming to further meet his or her needs. In this case, the district (with input from key stakeholders, we hope) has decided not to
invest additional resources into woodworking. This discussion illustrates
the two masters that advanced academic programming seeks to serve:
Student need is the driving focus, but only within the context of skills and
domains that the school has decided are part of its mission to develop.
Again, this perspective stands in stark contrast to the philosophies under-
pinning some gifted and talented programs. Schools will never be able to
address every need that every student has—it’s just not possible. Therefore,
a values-based decision needs to be made with regard to what areas will
receive additional attention and which will be left to the assistance of
resources outside the school setting.

**What to do.** The philosophical decision is twofold, with both compo-
nents being equally important to consider. First, the decision about which
programs and services are to be included in a definition and then served
under a program for advanced academics should be based in part on the
needs of students that are not being met within the existing curriculum. In
some cases, this requires the school or district to conduct a needs assessment
or gap analysis (see Chapter 3) of what programs are missing and/or what
needs are not already being met. Such assessments are similar to formative
assessments in that they help guide instruction and programming directly
in response to students’ needs. The second component is truly a philosoph-
ical value-based decision, wherein stakeholders must decide whether each
area of needs and skills is to be fostered directly, indirectly, or not at all in
the school setting. As mentioned above, the reason for this step is that not
all needs can be addressed by schools. Student abilities always outnumber
available services and resources. Programs should not exist solely because
they deal with a content area that has not been mastered by students. For
example, just because many students can’t speak Chinese does not mean
that Chinese language should be the focus of special programming—how-
ever, if local values include a strong connection to Chinese culture, then it
may be an appropriate option for special programming because the phil-
osophical decision of what programs, services, and content areas are to be
served under the banner of advanced academics must take local values into
account.

Of course, every public school also has standards and regulations under
which it must operate. Because of this, stakeholders do not need to proceed
blindly into this process. Instead, existing state content standards can serve
as a guide for what content areas (at a minimum) should be included under
an advanced academic program.
**The Process: Cultural Decisions**

**Background.** The second decision is a cultural one. Schools are increasingly diverse, as is society at large. In 2008, Briggs, Reis, and Sullivan conducted a review of promising practices for culturally, linguistically, and ethnically diverse gifted learners. Successful programming as identified by these authors took a wide perspective on talent that included skills valued by the populations served. Thus, certain cultural practices, skills, or behaviors might be included in a gifted program in one school that would be unheard of in another. Such culturally relevant pedagogy (see Castellano & Frazier, 2010) is important for the student-school connection as well as for high levels of minority student success in school as a whole. Therefore, an operating definition of what is included as advanced academics should not depend solely on what skills are important to the world or country as a whole, but should also consider skills valued by the local community and local culture.

In 2009, Yoon and Gentry reviewed the current status of ethnic and racial representation in the United States using various federal data sets. Their findings confirm what has been known since the mid-1970s: Students from African American, Native American, Latino/a, and low-income families are underrepresented in programs for gifted and talented students. Partially, this is due to limitations of student identification as traditionally practiced; however, it is also the case that many gifted and talented programs do not include a local perspective that consciously values the skill sets of the local community. Even if a group of stakeholders makes the philosophical decision that academics in the form of math and science should be the primary focus of a local advanced academic program, these same stakeholders need to also consider local, culturally specific content areas that might be valued by the populations being served by that particular school. This should not be taken to mean that nondominant cultural groups lack skills in traditional academic areas such as math and science. However, extra effort may be required for school staff to identify these or other skill areas in cultural groups that are different from their own. This will be discussed in depth in Chapter 7.

Gifted and talented programming and identification also need to be culturally responsive. For example, the Paradise Valley (Arizona) School District has a large Hispanic and ELL population. Because of this distinct cultural composition, in addition to International Baccalaureate programs at all levels, honors courses in traditional academic areas, and cluster
grouping in the elementary grades, Paradise Valley provides a nonverbal core honors program at the middle school level. This program was created explicitly to foster the skills that were present and valued in a large portion of the district’s population and to help those students further develop their skills in traditional academic areas. It did this by identifying students as they completed their sixth-grade year using one of two nonverbal aptitude tests. Identified students were then placed in project-based courses taught by teachers who were dual-licensed in bilingual and gifted education. The goal of this program was to prepare ELLs for the advanced academic curriculum of high school over the course of their seventh- and eighth-grade years. Thus, the program leveraged student strengths to enhance academic achievement. In other words, programs and services took cultural values and interests into account when creating a full-service educational program. Programming focused both on depth (below- and above-grade-level courses in traditional academic areas) as well as on breadth (a wider range of services and content areas beyond just academics). This second point is especially important for programs among culturally diverse districts, as having culturally relevant programming has been shown to increase student success, as it did for the Paradise Valley district. By incorporating these features into the program for advanced learners, this school district is better able to foster the skills of all students while at the same time increasing the representation rates of an often-overlooked group of students in advanced academic programming.

What to do. In 1999, Peterson published an article describing her conversations with cultural leaders regarding what they see as gifted or talented among members of their communities. Perspectives varied widely, especially among Native American and Hispanic groups who downplayed the idea of individual achievement but instead focused on the good of the group. Given such a range of what is valued within school communities, administrators and school boards need to consider (a) how they can include those values in the K–12 school setting as a whole (including in the advanced academic program), and (b) how school officials can work within the diverse cultural values and beliefs of their students in order to further develop traditional academic skills. The nonverbal honors core course described above offers a perfect example of this second consideration.

Two questions need to be asked in order to accomplish the cultural connection of diverse students to an advanced academic program. First, stakeholders need to find out how best to connect the cultures of the pop-
ulations they serve with the overall goals of the K–12 school. This is critical for all aspects of education. Just as 4-H or other agricultural skills might be important to a local community because of their professions, so might a specific kind of art be important to a given cultural group. Schools should strive to incorporate such locally valued domains into both the general and the advanced academic curriculum. Second, if underrepresentation is occurring in an existing program, stakeholders need to investigate why. In the case of students categorized as ELL, often the problem is a language barrier. Once underrepresentation and its suspected causes have been established, the school can determine how best to mitigate this barrier. Such an example was presented above with mitigation by means of a specific nonverbal honors program. Other examples of targeted interventions for underrepresented students might include additional levels of service in order to provide scaffolding to students, modified identification procedures in order to better locate students who have skills but are not demonstrating them well (Chapter 4), feeder programs that accelerate students’ learning and develop prerequisite skills, and even social-emotional support and counseling in order to help underachievers or students who have a variety of challenges in their lives that prevent them from focusing on advanced academics. The most important takeaway is that the problem of underrepresentation will not solve itself. It requires explicit action on the part of school officials.

The Steps: Practical Decisions

**Background.** The final decision is a practical one. Although many educators and parents would love to see all student skills and abilities fostered in school, not all can be addressed directly within the confines of the current educational structure. Although it’s true that technology is allowing for a wider range of independent studies, mentorships, and enrichment courses, schools can’t be responsible for everything. For financial, logistical, and simple space reasons, not all skills, regardless of their worth, can be developed within advanced academic programming. If specific content domains are not specified at state or federal levels, then local school personnel must decide which skills the district is able to address with additional programming. “Programs would do a better job of identifying talented children if they started with a clear understanding of the types of expertise that they seek to develop and the kinds of instruction that they
can offer” (Lohman, 2006, pp. 46–47). School and community members need to ask themselves (while taking state and local laws and regulations into consideration), what skills and content areas fall under the purview of K–12 schools and which should be left to outside organizations? In addition, they also need to consider what kinds of programs and services they are in a position to offer.

Logistical and practical considerations will always be a factor; however, technology and creativity can expand advanced academic options, even in small or remote schools. For example, Stoughton High School in Wisconsin (see Palmer, 2009) addressed this issue by offering a wide range of different independent study courses and mentorships for credit, the majority of which took place outside of the school walls. Students, in collaboration with the high school gifted coordinator, were able to design a “course” that not only fit their interest area and skill set, but was also targeted toward meeting goals of the general school curriculum. Mentors or facilitators were then recruited (over the course of several years) from the local community to help guide students through content that was far beyond something a school could offer within its own walls.

**What to do.** Once a group of stakeholders has decided on a general conceptual idea of what to include in its programming for advanced academics (after taking into account relevant philosophical orientations and cultural factors), specific conversations need to take place with school administrators regarding what the school is able to support. Most times, this conversation also should involve the school board, as more money might be required for programming, teacher training, or extra staff, depending on the programming required. Additional assessment tools might also be needed in order most effectively to identify students’ needs. Part of this decision also requires that stakeholders have a general idea of students’ needs, as this is a major factor of consideration when making the practical decision of what services the school will be able to support.
Chapters 4–7 serve as illustrative examples of many of the ideas and methods posed so far. Because our main philosophy is that identification is only effective if it is for a special program, the following chapters present example programs or purposes, along with how a school might identify students in need of those particular programs.

Ability grouping in general is one of the most researched and discussed topics both within the gifted education literature and in the world of general education research. Throughout the book we have made several references to the Total School Cluster Grouping Program (TSCG)—a program developed by Marcia Gentry and colleagues (Gentry & Mann, 2009; Gentry & Owen, 1999) to implement flexible achievement grouping in the elementary grades. Most of the information regarding the background of the program comes from the book Total School Cluster Grouping and Differentiation (Gentry & Mann, 2009). Even though TSCG deals exclusively with elementary grades, this chapter will include references and discussion regarding how a similar program might work at the middle and high school levels.

Before we discuss the identification of students for placement within a TSCG model, we first need to explain why such a model is necessary and what need it fills within a school setting (i.e., a needs assessment).
After all, school programming should respond to students’ academic and affective learning needs. To do this, we need to look at the makeup of the average classroom in the United States. In the K–12 setting, this process could be accomplished by, for example, a school principal reviewing state achievement test scores. To show what might be learned, instead of looking at school-level data (as a K–12 practitioner would), we will look at national data and averages. Although much attention is paid to average student scores over time on assessments such as the National Assessment of Educational Progress (NAEP) or the NWEA MAP, the standard deviations of such scores often are not considered. The standard deviation is a measure of variability—the degree to which a group of scores is clustered around the mean—and smaller standard deviations indicate consistent or similar scores across a group of test takers, while larger standard deviations indicate scores that tend to be very different from each other and from the average level of performance. When examined for a single grade level within a single school, the standard deviation indicates the degree of diversity in achievement in that setting.

For example, the National Center for Educational Statistics provides NAEP data for the last few decades regarding the average achievement of students in fourth-, eighth-, and 12th-grade math and reading. The same datasets also provide the standard deviations for these scores. For example, in 2011, the average NAEP Scale Score for Reading for eighth-grade students was 265. This raw score aligns with the bottom of the NAEP “proficient” category for grade 8 and indicated that the average eighth grader in 2011 possessed skills and abilities such as the ability to “Recognize the motivation of the narrator in a literary essay” via a multiple-choice question and could “Use information from an article to provide and support an opinion” in a constructed response question (this interpretive information is provided in the NAEP 2011 eighth-grade report card; see http://nces.ed.gov/nationsreportcard/itemmaps and select 8th grade from the menu options). Teachers and stakeholders can understand and use this information about what the average student can do as a guide for their instructional decisions. However, in addition to what the average student knows, what is equally important is the range of what students know. For the score of 265 from 2011, the standard deviation was 34 points. Based on how the normal distribution works, this means that roughly two thirds of eighth-grade students received scores between 231 and 299 (the mean score of 265 +/- 34). Because these are NAEP scores, which are sampled such that
they are representative of all students in the country, this information can be interpreted as saying that two thirds of all of the eighth graders in the country scored between 231 and 299.

On its face this may not appear to have much meaning—it doesn’t answer the “so what?” question. However, the NAEP item map reveals that this score range is quite large when it comes to what students know and can do. An individual teacher or principal seeing these data should think “Wow, that’s a pretty wide range for one person to teach.” Students with a score of 231 are at the very bottom of the eighth-grade NAEP (they are below minimal proficiency for an eighth grader, or far below grade-level expectations). Such students can “Recognize an implicit main idea of a story” in a multiple-choice question but cannot yet use that information to support an opinion. In fact, the students with scores of 231 are actually closer to the average score of a fourth grader (221) than they are to the performance of the average eighth grader (265). At the other end are students who scored near 299—one standard deviation above the mean. Students at this level can “Explain a cross-text connection between a poem and a fable” in a constructed response question, or “Evaluate how a subheading relates to [a] passage and provide text support” in a constructed response question—the evaluation level of Bloom’s taxonomy. Comparable data for 12th-grade students are not available for 2011, but in 1998 their average NAEP Reading score was 290 (eighth graders averaged 263—similar to now). This means that across the United States in 2011, the average heterogeneous grouped eighth-grade classroom included students who scored close to that of the average fourth grader as well as others who scored higher than the average 12th grader. To be sure, this range of diversity is not present in all eighth-grade classrooms, but it is an average—there are classrooms that have a narrower range of student achievement and readiness, as well as classrooms that have a wider range.

An important point to consider further is that everything discussed so far describes two thirds of eighth-grade students (the score range of 231–299). This means that it only applies to about 20 of the 30 students in the average classroom. The students who remain are those five or so students who are below 231 and five or so who are above 299! This translates to eighth graders who are nearly nonreaders all the way to those who are closer to college-level readers—all in one classroom. Again, these are averages, which assume that students are randomly placed into classrooms and schools (which of course is not the case). In actuality, there are schools
that have very little variability (i.e., that are very homogenous) in their eighth-grade classrooms (all 30 students score near 265), but there are also those with far wider ranges. Understanding where your particular school falls in this regard is crucial to your ability to make appropriate decisions about programming!

Our reason for presenting this example is to show that the “typical” classroom (if there is any such thing) is likely to be a very diverse place, with students who demonstrate a wide range of proficiency. To return to the beginning of this rather lengthy example, if we examine score variation in standard deviations within a single grade level, this could serve as the initial indicator of need that we discussed in the introduction to the example chapters. As we have demonstrated above, the average eighth-grade classroom likely contains readers from nearly the full K–12 range, as measured by grade-level standards. This diversity in grade-level student performance is a perfect impetus for the adoption of a program like TSCG.

The TSCG Program

The purpose of Total School Cluster Grouping is to narrow the range of achievement levels of the students within every classroom at a given grade level so that each teacher can more effectively meet the needs of his or her students. It therefore can serve as a program to meet the needs of all students—including those in need of advanced academic programming. A key characteristic of TSCG is that the identification or placement of students into cluster classrooms is ongoing—occurring at least yearly and across multiple subject areas. It is also different from traditional homogeneous grouping in that a range of student achievement levels in a given classroom still exists. However, this range is not as wide as would be found in the typical classroom to which students have been assigned at random. The overall philosophy of TSCG is based on the idea that a narrower range of student achievement levels will help teachers more effectively differentiate their curriculum and instruction for students’ learning levels. This, in turn, yields improved learning outcomes for all students (including gifted or advanced students). Student achievement status is reevaluated at least yearly in TSCG, and students move in and out of the five clusters based on need. The five clusters in the TSCG model include high achieving, above-average achieving, average achieving, low-average achieving, and
low achieving. It’s important to note that these groups are intended to be very flexible; students are reassessed frequently in order to assure that all students are being challenged, while at the same time learning to work with others of similar and differing achievement levels. It is important that all students learn to work with those who are different from them, both academically and in other ways, and TSCG provides for this. Research has supported that teachers do feel more comfortable and effective differentiating in cluster-grouped classes (Gentry & Owen, 1999), and a variety of studies have demonstrated achievement growth for gifted students and nongifted students alike when TSCG is implemented (Brulles, Peters, & Saunders, 2012; Brulles, Saunders, & Cohn, 2010).

Total School Cluster Grouping is not simply a structural model in which students are moved around as the sole intervention. Instead, TSCG requires that teachers differentiate in all classrooms regardless of the current achievement levels of their students. For this reason, TSCG could be seen as a mandatory Tier I to Tier II intervention for all schools. If Tier I is to reach a large portion of students (up to 80% in an RtI model; Pereles, Omdal, & Baldwin, 2009), then systems and procedures need to be in place to aid this goal. If every classroom is completely heterogeneous, as discussed earlier, and includes students who are several years below grade level as well as several years above, there is little chance that even the best teacher would be able to differentiate effectively enough to enable the students at all ability levels to learn (Firmender, Reis, & Sweeny, 2012). Schools, and even individual grade levels within a single school, are very diverse places with regard to what students currently know and are able to do. Something like TSCG must be in place if a school is planning to implement RtI. Otherwise it is likely that in a heterogeneously grouped classroom some students will be left behind and others will remain unchallenged. Such a system also would result in Tier II interventions being overpopulated by students who could have their needs met most effectively in the regular classroom, and potentially would “water down” the level of challenge provided in advanced programming for students who really do need and can benefit from it. Because of the TSCG emphasis on providing conditions that allow for successful differentiation, quality assessment data are key both for student placement in clusters (identification) and for differentiation following student placement into clusters.

Because of the total school emphasis of TSCG, the program may be viewed as a Tier I RtI intervention for all students (i.e., with most students
being served in the “regular”/clustered classroom), as well as possibly a Tier II intervention for students identified as in need of advanced academic intervention or remediation. In this fashion, the cluster or clusters with the highest performing students could also include additional challenge activities as one aspect of the Tier II intervention. Although students still would remain in the clustered general education classroom, the Tier II students would be clustered together within this classroom for targeted support and more intensive intervention.

### The Content Area

Total School Cluster Grouping offers a particular form of cluster grouping targeted toward the elementary level. The reason for this is that most middle school or junior high models already have a structure in place to allow for flexible, leveled classrooms based on students’ demonstrated levels of achievement and need. The content areas within which students are clustered in the primary and elementary grades are not set in stone. However, the majority of schools that have implemented TSCG have done so for math and reading. In the upper elementary grades, especially at larger schools with wider ranges of achievement, it also is feasible to cluster students for science and social studies instruction. What should dictate the content areas in which clusters are needed is the standard deviation or relative diversity within each content area. If the fifth-grade science lesson is supposed to challenge those students who have minimal science mastery, as well as those who are ready for high-school-level science, then clustering across classrooms based on science readiness is necessary in order for this to be possible.

### The Need

Much of the identification or needs-assessment process for TSCG has been detailed in other sources (e.g., Gentry & Mann, 2009). We present similar information as well as some expanded suggestions here. The Gentry and Mann (2009) approach to cluster grouping uses student achievement, as measured by standardized achievement tests, and teacher input to place
students into classrooms using five identification categories. Both of these data sources offer information on student need and therefore both are used as methods of inclusion. As we discussed in Chapter 3, when dealing with programs or interventions that are unlikely to result in high risks of negative outcomes should an inappropriate placement be made, identification systems should default toward inclusion. TSCG has the same philosophy.

The Gentry and Mann (2009) TSCG model suggests that the five different clusters should be determined based on local norm percentiles on achievement tests, or by a teacher recommendation if considering a placement other than what test scores would suggest (i.e., if the recommendation is for inclusion in a higher cluster). Both sources of information are local and in the present tense. They are not based on national norms or even district-level comparisons. What this means is that if 10 schools in a given district implement TSCG, a given cluster (say, above-average) could look very different from school to school and would contain students with very different levels of mastery in different school settings. In School A, the above-average cluster could involve students who are working on Common Core State Standards grade-level content, whereas at School B, this same cluster could involve students working on below-grade-level content (despite being called “above-average”). The level of the cluster depends on the overall achievement level of the students within a given school. Thus data related to current levels of student mastery (achievement) and relative to other learners within each school (local norms) are critical to the effective implementation of the TSCG model.

Identification or program placement in TSCG takes the form of class lists that incorporate from three to four achievement levels in any one classroom: no single classroom receives all of the high or low students lest that room be perceived as the “smart” or “weak” room. Further, the highest achieving students (highest single cluster) are all clustered together within a single classroom. Schools with very high numbers of students in a given grade level can create additional classrooms containing clusters of high-achieving students. The highest achieving cluster allows the highest students to work on more challenging tasks together. This “gifted” cluster may also receive additional interventions beyond TSCG; such additional interventions are akin to a Tier II intervention. Such clustering also facilitates budgetary and reporting requirements for schools subject to a gifted mandate or that receive targeted funding for gifted education programming and services. Of course, if the program goes especially well, addi-
tional classes may need to include groups of the high-achieving students, but no teachers should be required to have these students in their classes unless they are *willing and able* to meet the academic and affective needs of these learners. It’s also important that the students in the lowest performing clusters not receive the lowest performing or least experienced teachers. In fact, students at both extremes of the distribution will need the most-skilled teachers if they are to make appropriate progress.

Imagine that a given school or district has noticed an especially wide range of achievement levels at a given grade level—a needs assessment similar to what was presented earlier with NAEP scores. A concerned administrator has noticed this high level of variability in performance on standardized achievement tests and wants to do something to better target instruction to students’ needs. How would he and his staff create a TSCG identification plan?

**Identification/Creation of Clusters**

TSCG identification uses two data sources: teacher identification of classroom achievement and achievement test results. Gentry and Mann (2009) emphasized that teacher recommendations need to take place *before* teachers see student achievement test data because teachers might change their recommendations based on the test scores. However, teacher recommendations provide a second, sometimes different, source of data; not just a rubber stamp endorsing the results of the achievement tests. If recommendations end up being based on achievement test scores, then that goal has not been achieved. In addition, for the teacher recommendations to be most effective, teachers need to have a good understanding of the TSCG model. This can be accomplished through a traditional professional development session or through the online modules that are available at http://www.purdue.edu/geri. Training is critical—the key to obtaining useful recommendations is for teachers to know why they are recommending students. For more information on effective use of nominations, see McBee et al., in press.
**Teacher Recommendations**

The teacher recommendation phase is straightforward. At the end of a given academic year (often in April or May), teachers identify the achievement cluster level of each of their students, using definitions for each of the five categories (see Gentry & Mann, 2009, for these definitions) and working in consultation with other colleagues at their grade level. This can be done in the form of a bubble sheet where each student’s classroom achievement level is noted, in an online survey where each student’s name is presented along with an option for placement in each of the five categories (see Figure 4.1), or using paper data cards placed in each teacher’s mailbox. Whatever method is chosen should be the easiest and least work-intensive for teachers. If the process is too complicated or cumbersome, some students could end up not being rated, or teachers may rush through the rating process, which increases the probability of making inappropriate recommendations.

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**Figure 4.1. TSCG placement survey.**

<table>
<thead>
<tr>
<th>Matthew Anderson</th>
<th>High Achieving</th>
<th>Average Achieving</th>
<th>Low Achieving</th>
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<tbody>
<tr>
<td>Kylie Abel</td>
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<td>Michael Bennett</td>
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<td>Franklin</td>
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<td>Virginia Porter</td>
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</tbody>
</table>

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**Total School Cluster Grouping Placement Survey**

1. Below is your current class roster. In order to facilitate student class placement for the coming academic year, we would like to get your thoughts on which Cluster Level would best meet each student’s academic needs. Do not worry about being perfect in your ratings as the cluster placements are flexible and this process will be repeated a year from now. Please compare each student to his or her age / grade-level peers and then suggest he or she be placed in one of the following five clusters:

   - High Achieving
   - Above-Average Achieving
   - Average Achieving
   - Low-Average Achieving
   - Low Achieving

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If the teacher recommendation data are collected via an online survey, the data can simply be printed with student identification categories. Because most such survey systems can export into Excel or another database format, these data also could be imported into a school’s data management system. Regardless of how the data are collected, they need to be organized in such a way that faculty and administrators are able to examine these draft placement recommendations that are based only on teacher recommendations.

Achievement Test Data

Many schools administer summative achievement tests in the late spring in order to gauge student achievement over the preceding year. Unfortunately, summer learning loss has been well documented (Cooper, Nye, Charlton, Lindsay, & Greathouse, 1996), with some students losing or forgetting a substantial amount of content from the prior year over the summer break. What’s especially unfortunate is that summer learning loss is much more of an issue for students from low-income families (Cooper et al., 1996) and for students with lower achievement levels. Because of this, TSCG placement decisions should be based on the most recent testing information possible. Ideally, placements would be made immediately following testing. However, because it is too late to place students in classes beginning in the late spring of a given year, prior year spring achievement data often are the best and most feasible to use for TSCG placement beginning in the fall semester. While students are taking their spring achievement tests, their teacher can complete their cluster recommendations for the following year. The timeline for this process would be as follows:

1. In the late spring, students take achievement tests, which will be used as one data source in cluster placement.
2. At the same time, as students are taking achievement tests in the spring, current grade-level teachers complete a “recommended cluster level” form on each of their students.
3. Just before school lets out for the summer, the teachers who did the ratings (grade-level teams) review the draft cluster slates based on their recommendations and make any necessary changes.
4. Once achievement data are available, individual student cluster placement (based on achievement data) is then compared to
cluster placements based on teacher recommendation data. These two slates are then reconciled, by the same staff members who originally did the ratings, to determine a final placement for each student.

5. In the late summer before students return for the start of the semester, grade-level teams of teachers for the upcoming year review the draft slates to see whether any students are in inappropriate placements (this may be based on new information, if available), or if there are certain students who should not be clustered together. Changes can also be made at this time in response to parent requests.

Ideally, a school’s student data management system could be modified to include “cluster placement” and “teacher recommendation” categories. This way an administrator or data staff member could simply look up those students for whom the recommended cluster placement based on test score and teacher recommendation differ. This process would eliminate the need to review two very long slates (one based on achievement data and one on teacher data) for all students, and instead would focus extra attention on decisions for students for whom the two slates do not agree about a proper cluster placement.

Gentry and Mann (2009) suggested using a local norm of high scores in both math and reading (90th+ percentile scores in both) to determine placement in the highest cluster. Although this works for elementary levels where math and reading are often taught by the same teacher, we believe a different system should be used at the secondary level. Instead of basing placement on a norm-referenced basis (even a local one), we suggest criterion-referenced evaluation should also be considered. In other words, mastery of content also is relevant at the secondary level, rather than considering only how well students fare in comparison to their classmates. Instead of simply breaking up the students of a certain grade level into groups (e.g., 50th–75th percentile, 75th–90th percentile, and 90th and above), we endorse the creation of clusters based on class content as aligned to Common Core State Standards or state content standards. Not all content is created equal—some content might be easier to teach to a very wide range of students at the same time, while other content is very difficult to teach to a diverse group. To illustrate this point we will use the
NWEA MAP. Figure 4.2 presents the math test norm score ranges for the MAP in 2011.

The MAP is a vertically scaled score test, which means that the same numerical scores are comparable regardless of the students’ grade level. These norms (NWEA, 2011a) were developed based on a sample of 20,000 students drawn from the pool of roughly five million students who took the NWEA MAP test in 2011. For example, the grade 3 data were based on a sample of 20,294 students (NWEA, 2011b). As such, the scores serve as an indicator of average performance for the students tested. It’s important to note that, unlike the NAEP discussed earlier, the NWEA MAP test does not represent the full U.S. population of students because districts and schools choose to use MAP on a voluntary basis. As with the NAEP data, the MAP RIT score standard deviation is a critical consideration when evaluating student mastery. For third-grade math scores in 2011, the standard deviation was just over 14 points. Just as we discussed with the NAEP scores, this means that roughly two thirds of third-grade students in 2012 scored between 189 and 217 (the mean of 203 +/- 14) and the final third scored outside that range (both above and below) in math. If we look at the mean score plus or minus two standard deviations,
we can encapsulate nearly all (just more than 95%) students. This score range comes out to 175–231. Before we discuss the implications this has for cluster placement in TSCG, let’s first examine what this means about the students at a hypothetical school that just happens to mirror the MAP average scores for 2011 in math. The score range of 175–231 (representing 95% of students) means that the average third-grade classroom is made up of students who score below the performance expected for an average first grader and above the average for seventh graders. This “typical” classroom then includes students performing across roughly seven grade levels (from first-grade level material through seventh-grade level material). That’s the full range of students that the third-grade teachers in this particular hypothetical school are charged with educating. This range itself can be regarded as one measure of student need in mathematics.

This range of 175–231 is substantial and represents wide variability in what third-grade students know and are able to do when it comes to math. It would be extremely difficult for a single teacher to effectively challenge every student across such a wide range (assuming 25 to 30 students in a class). The goal of TSCG then is to narrow this range so that each teacher has a classroom composition that is more manageable in terms of effective teaching. What is nice about the TSCG model is that the “narrowing” process is not prescribed. In other words, depending on the actual range of student performance, the number of classrooms at a given grade level, the number of students in each classroom, and a host of other factors, clusters may be structured differently in response to these needs. When these numbers are applied to this example school (five grade-level classrooms serving 125 third-grade students), a structure starts to take shape. Table 4.1 breaks down the range of math scores into the five clusters.

Table 4.1 breaks the range of student achievement into groups using the standard deviation. For example, the average cluster students include those from one half a standard deviation on each side of the mean. Similarly, each other cluster also includes a half-standard deviation of current math achievement. This is a simple way to make clusters, but as was mentioned earlier, there might be a reason to have some clusters larger or smaller. For example, students at the upper ranges may be getting into novel content for which they have little prior experience (such as algebraic thinking). Because of this, an administrator could believe that the range for this group should be a little narrower than for the other clusters. This might result in the above-average cluster going up to 225 (instead of 217). This
would mean the high-achieving cluster would start with those students above 225. Considering actual content in the creation of cluster levels is preferable to using only statistical methods such as percentiles or standard deviations. Although percentiles or standard deviations are a great way to create initial cluster cut scores, content, as well as other factors, should be considered to make sure the groups will function smoothly and can be differentiated instructionally.

Cluster levels should never be translated directly into the makeup of individual classrooms—having one class made up of only below-average students and no others would be a bad idea. Table 4.2 presents what the cluster classrooms might look like based solely on test scores. As mentioned earlier, teacher recommendations and considerations also are taken into account. For example, the three students in the low-average cluster of Classroom 1 could easily have been placed in Classroom 2 or Classroom 4 with similar-achieving peers. However, there are students in these three groups who do not get along, and this could cause behavior problems if these learners were placed together. This was noted by classroom teachers in the teacher recommendation and placement phase, and based on this information, a change was made to the initial slate of cluster placements. In a similar fashion, there are two English language learners who are receiving some support for language acquisition but who also have average to above-average skills in math. Because of this particular need, they are clustered together in order to facilitate an itinerant bilingual educator.
when needed in Classroom 5, while at the same time allowing these two students to receive math instruction at an appropriate level.

Once the draft slate (Table 4.2) is created based on test scores and other relevant factors (such as behavior issues), teacher ratings and recommendations are considered by comparing two draft slates—one based on test scores and the other based on teacher recommendations. Because both test scores and teacher recommendations adopt the perspective of inclusion (as TSCG is a low-risk program), the identification system for TSCG should err on the side of a higher placement. However, there will be cases where a cluster teacher for the upcoming year doesn’t believe a certain student would be well suited for a particular placement. Although placement decisions (the teacher slate) are based on the previous year’s teachers, the upcoming year’s teachers should still be involved to create buy-in and to proactively address any issues that might come up. These subjective decisions can be made on an individual basis at the early fall semester grade-level team meetings. This should be done keeping in mind that even after initial placements have been made, students still can be moved mid-year as needs dictate. Table 4.3 presents a revised slate after upcoming year teacher suggestions are considered.

Note that the students and the cluster levels into which they fall have changed. This doesn’t mean their scores have changed; rather, they have been moved in response to teacher recommendations or other instruc-

<table>
<thead>
<tr>
<th>TABLE 4.2</th>
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<tbody>
<tr>
<td>Student Cluster Assignment by Classroom—</td>
</tr>
<tr>
<td>Classroom</td>
</tr>
<tr>
<td>High Achieving (217–231+)</td>
</tr>
<tr>
<td>Above-Average (210–217)</td>
</tr>
<tr>
<td>Average = 203 (196–210)</td>
</tr>
<tr>
<td>Low-Average (189–196)</td>
</tr>
<tr>
<td>Low (-175–189)</td>
</tr>
<tr>
<td>Special Education</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

<sup>Note.</sup> Special education category does not count toward the total as these students are already counted in their respective achievement category.

<sup>1</sup>Twice-exceptional child who is learning disabled and gifted

<sup>2</sup>Students with a disability who are also average achieving
tionally relevant factors. For example, in Table 4.3, we assume that two above-average students from Classroom 3 and one from Classroom 5 were recommended for the gifted cluster. Ideally these students would have been placed in Classroom 1, but assume that a parent requested a particular teacher (a common occurrence), and to accommodate this request, these students were placed in Classroom 2. Gentry and Mann (2009) recommended that individual schools decide how they want to handle parent requests. In cases where students could really benefit from Tier II material as provided in Classroom 1 for the other high-achieving students, they could simply be moved across the hall for specified instructional periods.

A final important note is that all of the clusters as defined by MAP scores are subject to standard error. For the national MAP score data, this error is around three points. This means that any student score needs to be considered within the range established by the standard error (+/- 3 points). This is especially relevant because if a parent or teacher challenges a classroom placement that is on the border (i.e., that is within the standard error), the change should be made to move to the student to the higher cluster. If, in the future, this student’s scores do not improve, this may be an indication that a lower placement would be better suited for his or her needs. Ideally, such situations will be relatively uncommon and can be dealt with on an individual basis.

**TABLE 4.3**

*Student Cluster Assignment by Classroom—Achievement Test and Teacher Recommendations*

<table>
<thead>
<tr>
<th></th>
<th>Classroom</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>123</td>
</tr>
<tr>
<td><strong>High Achieving (217–231+)</strong></td>
<td>17</td>
</tr>
<tr>
<td><strong>Above-Average (210–217)</strong></td>
<td>17</td>
</tr>
<tr>
<td><strong>Average = 203 (196–210)</strong></td>
<td>55</td>
</tr>
<tr>
<td><strong>Low-Average (189–196)</strong></td>
<td>20</td>
</tr>
<tr>
<td><strong>Low (-175–189)</strong></td>
<td>14</td>
</tr>
<tr>
<td><strong>Special Education</strong></td>
<td>5</td>
</tr>
</tbody>
</table>

*Note.* Special education category does not count toward the total as these students are already counted in their respective achievement category.

\(^1\)Twice-exceptional child who is learning disabled and gifted

\(^2\)Students with a disability who are also average achieving
Multiple Content Areas

So far this example of cluster grouping has focused on a single content area: mathematics. For some schools or districts, as in the example, one particular content area might possess more variability in student readiness than in the other areas—thus necessitating the clustering based solely on a single content area. Perhaps the school used as the example above had a wide range of math scores for its third graders, but a much narrower range of reading scores. Alternatively, perhaps the students with the highest math scores are also those with the highest reading scores. For this reason, students are only clustered for math, and scores in reading are not considered (beyond the minimum reading level demanded by the math content instruction). However, it’s also possible that a school’s scores in one area vary just as widely as they do in others, necessitating consideration of additional information.

Full-time clusters can be made based on teacher recommendations plus a single achievement test score (such as math) as detailed above or can include multiple achievement test scores. In one variation, a certain classroom might include all of the students who scored high on both math and reading achievement test scores, whereas a different room would have those who scored high only in math and still another for those who scored high only in reading. Again, there is no one single way to cluster. The overarching goal is simply to narrow the range of student achievement levels that any one teacher needs to address.

The timeline for the process of identification, including solicitation of scores in multiple content areas, does not change regardless of the specific clustering pattern a given school chooses to implement. Gentry and Mann (2009) recommended that when using math and reading scores, students in the high-achieving cluster should be those who receive scores at the 90th percentile or above in both math and reading. Students who are placed in the above-average cluster are those who receive math and reading scores at or above the 75th percentile or those who receive either math or reading scores above the 90th percentile. As mentioned earlier, these criteria are not set in stone, and some schools may choose to group by either or both criteria, or even to have multiple types of clustering, depending on the size of the school and its local needs. Slight changes in order also can be made to yield a better set of instructional levels for a given classroom and teacher. Following the criteria for using more than one content area is no different
for a single content area. A table similar to Table 4.3 will be the end result, except that the high-achieving cluster will be high achieving in both math and reading (or whatever two content areas are in need of clustering).

## Conclusion

Although this chapter presented TSCG as an example of how to identify students for a particular program, TSCG is unique in that it offers a schoolwide approach to classroom organization. If students are placed in classrooms at random and thus completely heterogeneously, then every teacher has an exceptionally wide range of students to teach. With increasing emphasis on student growth, including for purposes of teacher evaluation, we believe this is an unreasonable expectation with a class of 30+ students. For this reason, we see TSCG as a kind of universal total school model that could serve as the Tier I in which most students have their needs met within the clusters. Additional programming can then be made available (albeit for a much smaller group than is typical) for those who still need additional challenge or support. If such a system is not in place to address the needs of the vast majority of students, far larger numbers of students will need to be placed in Tier II programming at both the remedial and advanced academic ends of the RtI spectrum.


References


References


Wisconsin Administrative Rule PI 8.01(2)(t)2, 2012.


Seeking a more comprehensive vision for gifted education, this book offers a modern vision of programs and services for gifted and talented students. *Beyond Gifted Education: Designing and Implementing Advanced Academic Programs* provides the first comprehensive look at designing and implementing K–12 advanced academic student programs.

Written by four leading experts in the field, *Beyond Gifted Education* reviews the current range of traditional gifted education practices and policies. Then, the book offers the concerned gifted program coordinator or school administrator a more expansive approach to educating gifted learners. The authors lead readers through the process of identifying needs, responding with programming, and then finding students who are well-suited for and would benefit from advanced academic programming. Detailed examples walk the reader through real-world scenarios and programs common to the K–12 gifted coordinator on topics such as cluster grouping, acceleration, and increasing diversity. Throughout the book, connections are made to Common Core State Standards, Response to Intervention, and a wealth of outside research in order to support ideas.

About the Authors: Rising scholars in the field of education, Scott J. Peters, Ph.D., Michael S. Matthews, Ph.D., Matthew T. McBee, Ph.D., and D. Betsy McCoach, Ph.D., combine their experiences in schools and research settings to offer a ground-breaking approach to gifted education. Faculty members in education departments at top universities across the nation, the authors are actively committed to research on identifying and serving gifted youths through their work with the American Educational Research Association and the National Association for Gifted Children.