Aligning Assessment, Identification, and Gifted Education Program Services

By Todd Kettler, Ph.D., and Kelly C. Margot

It is common to find gifted education beginning with the assignment of some students to the category of gifted while other students are intentionally not assigned to the gifted category. This type of categorization has historically arisen from a needs-based justification (Dai & Chen, 2014; Grant, 2002) for gifted education. In other words, gifted students need specialized educational services while others not assigned to the gifted category do not need such services. Specifically, gifted education services focus on advanced or modified curriculum and instruction (Borland, 1989). Cross and Coleman (2005) described two problems associated with this approach to categorical identification. The first problem is that some students assigned to the gifted category do not display their advanced abilities beyond the sequence of identification testing. Moreover, students not assigned to the gifted category, yet in the same classrooms, may be performing at levels greater than the gifted students. We might call this first scenario the false positive problem. The second problem described by Cross and Coleman is that students assigned to the gifted category gain access to special programs regardless of performance in school whereas higher performing students not assigned to the gifted category are denied access to those special programs. Thus, the message is sent that high performance does not earn students entry into the most advanced curriculum. We might call this the equitable access problem.

The false positive problem and the equitable access problem may result in negative or ambivalent attitudes toward gifted education in school settings (Matthews & Foster, 2005). We have heard numerous high school teachers lament that gifted education is a mysterious and elite enterprise, as some students categorized as gifted do not perform at advanced levels, and other students who are not categorized as gifted do perform at high levels, even though they do not have access to participate in the gifted education program. In order to reduce the impact of the false positive problem and the equitable access problem, schools are encouraged to think critically about assessment practices and improve alignment of identification of gifted and talented students with specific programs and services provided through gifted education.

Gifted and talented students in Texas are expected to demonstrate skills in self-directed learning, thinking, research, and communication as evidenced by the development of innovative products and performances reflecting individuality and creativity.

Assessments are used to locate or identify those students who are in need of gifted education programs. Moreover, these assessments are used to predict whether or not a student will be successful in a particular gifted program. Therefore, the assessments used in a particular school should be aligned with the goals of that specific program and those talent domains (Johnsen, 2011). According to the National Association for Gifted Children (NAGC, 2010) assessment standard, evidence-based practices include using multiple assessments to measure diverse abilities, talents, and strengths. These assessments should be based on current research and theories and be nonbiased and equitable.

How might schools align the identification process to the goals of gifted education in Texas? First, schools ought to spend time deeply understanding the definition of giftedness and the goal of gifted education when thinking about identifying those who will participate. In Texas, gifted students are those who perform at or show potential for performing at remarkably high levels of accomplishment when compared to others of the same age, experience, or environment, and who: (a) exhibit high performance capability in an intellectual, creative, or artistic area; (b) possess an unusual capacity for leadership; or (c) excel in a specific academic field (Texas Education Agency, 2009). In other words, giftedness is demonstrated through performance. In the absence of performance at a remarkably high level, students may be identified to participate based on demonstration of potential for performance at a remarkably high level.

The goal of gifted and talented education in Texas has been clearly established (Texas Education Agency, 2009). Gifted and talented students in Texas are expected to demonstrate skills in self-directed learning, thinking, research, and communication as evidenced by the development of innovative products and performances reflecting individuality and creativity. These products and performances are characterized as advanced in relation to products and performances of other students of similar age, experience, or environment. By the end of high school, students who have participated in gifted education services are expected to have produced products and performances of professional quality as part of their participation in the program (Texas Education Agency, 2009). Again, like the definition of giftedness, the goal of gifted education is performance-based. Students are expected to demonstrate their advanced-level performances in one or more domains (mathematics, science, language arts, social studies, leadership, or creativity).

RECOMMENDATIONS TO IMPROVE ALIGNMENT OF IDENTIFICATION AND SERVICES

In addition to critically examin-

ing the definition of gifted and talented students and the goal of gifted education, we offer the following recommendations to improve assessment practices related to gifted education and to align identification of giftedness with program services designed to develop exceptional levels of performance.

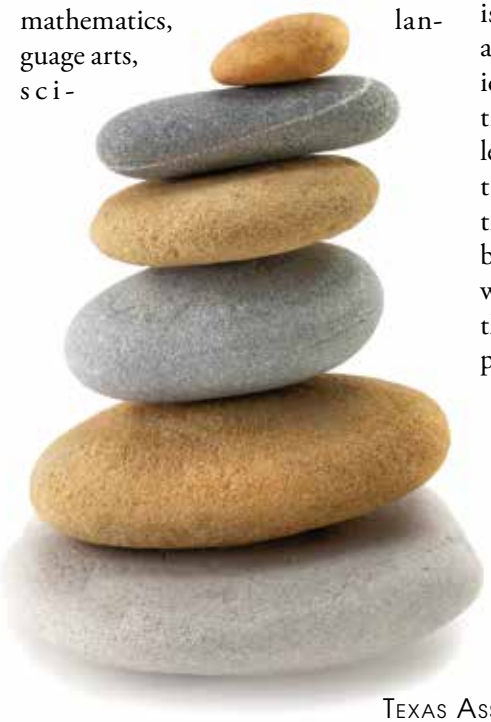
1. Recognize the difference between assessing for performance at a remarkably high level and the potential for performance at a remarkably high level, and develop systems to do both.

Texas policy effectively creates two ways to qualify students for gifted education—those performing at a remarkably high level and those who show potential to perform at a remarkably high level. Because of this distinction, schools might want to implement assessments for both purposes—actual performance and potential performance. In many cases, schools may only implement assessments to identify performance at a remarkably high level. For instance, students who perform in the top 5% on standardized achievement tests may be deemed performing at a remarkably high level. Students who receive the highest scores on authentic assessments may be deemed performing at a remarkably high level. Schools often consider cognitive measures of intelligence in the top 5% as remarkably high performances.

However, understanding of and assessment of potential to perform at a remarkably high level are often not well-developed. How might the assessment protocol distinguish between those with moderately high performance who have potential for higher levels of performance and those who do not? What are the factors that could be indicators of potential in the absence of actual performance? One way to understand the factors associated with potential performance is to consider those factors that are generally associated with remarkably high levels of performance. Subotnik, Olszewski-Kubilius, and Worrell (2011) make a good case that gifted levels of performance involve an interaction of ability, opportunity, commitment, and practice. Renzulli (1978, 1986, 2005) has long argued that gifted levels of performance involve the right combination of above-average abilities, task commitment, and creativity. Perhaps a model for assessing for potential looks for some of these elements to be present with the hopes that other elements can be developed. For instance, students with above-average abilities and relatively high levels of performance who have had few opportunities to develop their skills might be deemed to have potential for remarkably high levels of performance given the opportunities.

2. Deconstruct the goals of the gifted education program and seek to identify those students capable of reaching those goals.

Students in the gifted education program are expected to demonstrate their advanced skills through the development of advanced-level products and/or performances that reflect both individuality and creativity. Texas gifted education policy requires services and opportunities in the four core curriculum areas: mathematics, language arts, science, and social studies. Using backward design thinking, how might we predict which students by the end of high school are most likely to be remarkably high performers in one or more of the four domains of the core curriculum? In other words, another way of thinking about identification of giftedness is to seek to predict which students will be most likely to meet the performance goals of the gifted programs in mathematics, language arts, science, and social studies. The predictive performance approach is an alternative to the needs-based approach.



This outcome-oriented approach requires the school to define what remarkably high levels of performance looks like in each discipline by the end of high school. For instance, a school might define remarkably high level of performance in science as advancing to the state level or beyond in science fair or scoring a four or higher on two or more of the science Advanced Placement (AP) exams. Advanced level of performance in mathematics may be earning a score of four or higher on either an AP Calculus exam or an AP Statistics exam. It could also be earning mathematics credits beyond calculus or winning awards in mathematics competitions. Defining these outcomes is a local decision, and once they are defined, the gifted and talented identification system seeks to identify those on track to achieve at these levels. In this identification approach, the pool of students identified for the gifted program early on would be large, but over time the group would be narrowed to include only those reasonably on track to meet the performance goals. This approach to identification and alignment of services distinctly avoids the pitfalls of the problem of false positives and the problem of equitable access.

3. See identification as the beginning of assessment in the

gifted education program, not the end of assessment.

Whether or not to reassess for identification to participate in the gifted education program is a contentious issue. Most schools do not define a system for ongoing assessment for participation. When assessment for identification involves categorization (gifted—not gifted), the pressure to correctly categorize is tremendous when the categories last forever. Moreover, the absence of ongoing assessment protocols is a significant contributor to the problem of false positives. The reasons for avoiding ongoing assessment for participation are many, and they generally include a reluctance to change a student's category from gifted to not gifted. To avoid that pitfall, it may be more helpful to think of assessment and categorization associated with the performance (or potential for performance) rather than the person (Renzulli, 1978). Most school systems routinely assess and categorize performances over time. Even special education assessment systems mandate regularly scheduled reassessment to determine if services need to continue. If identification for participation in the gifted education program is associated with being on track to achieve the defined performance expectations (recommendation 2), reassessment protocols are based on benchmarks of advanced performance. It is through this systematic, ongoing assessment that the large group of early participants is narrowed over time to include those actively seeking to achieve and on target for achieving advanced performance outcomes defined by the school system.

4. Understand giftedness as a developmental process and in turn think about identification differently across the K–12 continuum.

Most contemporary thinking about giftedness is developmental (Horowitz, Subotnik, & Matthews, 2009; Subotnik et al., 2011). Most schools practice assessment for identification in a way that honors this implicit assumption, and Texas gifted education policy requires making assessment for identification available at least once per year across all grade levels. Some students who did not demonstrate gifted levels of performance in the early grades will begin to demonstrate gifted levels of performance in the later grades. Some may not demonstrate gifted levels of performance until high school or even beyond high school.

The reasons why some manifest advanced performances early and others are late bloomers are complex. Gottfried, Gottfried, and Guerin (2009) presented substantial evidence that the earlier a student is assigned to either category—gifted or not gifted—the higher the likelihood that the category will change over time. Failure to acknowledge the developmental and fluid nature of gifted levels of performance leads to greater incidences of the problems of false positives and equitable access. When schools apply what we know about development and gifted performance, they create assessment for identification systems that look differently in early childhood than they look middle childhood or adolescence. We recommend that in the early grades, identification for participation focus largely on potential while also identifying a few students performing at remarkably high levels. As students progress through school, actual performance begins to be more important than potential for performance (Coleman & Cross, 2001).

An assessment for identification system should include different protocols and criteria at middle school and at high school than in elementary. The assessment should focus increasingly on discipline-specific authentic performances. For instance, assessment for participation in the high school mathematics gifted program may consider the student's current level of mathematics and classroom performance. Taking pre-calculus in ninth grade with a history of high classroom performance is valid evidence of a remarkably high level of performance in the discipline. Participation in the high school mathematics competitions club ought to be evidence of motivation and commitment to high levels of performance in mathematics. These more authentic measures of performance combined with above-average ability in mathematics (measured by a standardized cognitive abilities measure) are predictive of the student's potential to meet the performance goal of the program. Simply utilizing standardized test scores minimizes actual performance and is less predictive of gifted levels of achievement at the adolescent stage of development in high school.

5. Quit thinking of giftedness as dichotomous. Rather, think of giftedness as a complex phenomenon of potential transforming into performance based on ability, opportunity, and psychosocial factors including motivation, commitment, practice, and sustained attention.

One way to reduce or minimize the problems of false positives and equitable access is to eliminate the near-permanent, dichotomous categorization of students. Gifted level of performance in any field—language, science, or fine arts—is a complex phenomenon. Tremendous opportunity and high levels of motivation can make up for moderately high levels of ability. Low resiliency and negative perfectionism can moderate exceptional levels of intellectual potential (Dweck, 2007; Gagné, 2005). Understanding the complexity of advanced levels of performance in a domain should lead to more informative assessment systems aligned with program goals and services. Too often assessment protocols only measure ability (general or domain-specific) and standardized

achievement. However, opportunity, motivation, commitment, practice, and sustained attention to work in a domain are important variables that go unmeasured. Expanding the assessment to include these factors may lead to more diagnostic models of why students are not currently performing at remarkably high levels in a domain. Assessing these factors can also aid in the recognition and identification of potential for remarkably high levels of performance.

6. Assess student performance in increasingly discipline specific ways across the K–12 continuum, and clearly articulate advanced performance benchmarks in each discipline to measure student performance.

In early elementary grades, identification for participation in the gifted education program is primarily based on the potential for subsequent advanced performances. When schools recognize early potential, it is most often broad and general. However, as students progress through school, manifestation of advanced performances becomes more discipline specific. Moreover, the programs and services associated with gifted education become increasingly discipline specific over time. For instance, many schools offer gifted mathematics programs beginning in middle school. Determining which students ought to participate in the gifted mathematics program should not be based on verbal abilities or composite scores on cognitive measures. Similarly, eligibility to participate in a gifted language arts or humanities program in middle school should not be based on quantitative abilities or composites scores. Discipline-specific assessments are the most appropriate way to align identification of gifted students with gifted curriculum and instruction.

Suppose the gifted mathematics program in middle school includes one year of Pre-algebra, followed by Algebra I and Geometry. The curriculum is not only accelerated 2 full years, but it is also differentiated with depth and complexity involving complex problem solving, inquiry learning, and application of mathematical models to solve authentic problems. Using a composite cognitive measure obtained in the primary grades is at best a crude predictor of which students are qualified for this gifted mathematics program. Ideally, schools should develop mathematics benchmarks to be achieved by the end of elementary school aligned with a 2-year acceleration program in middle school. Students whose actual performance on those discipline-specific benchmarks—combined with the desire and motivation to tackle advanced mathematics—may be qualified to participate. Students who do not demonstrate performance on all of the mathematics benchmarks at the end of elementary grades but do demonstrate high levels of motivation and task commitment may be qualified as having potential for advanced levels of performance.

Gifted education policy in Texas (Texas Education Agency, 2009) requires written board-approved policies to be disseminated to parents. Policies for assessment and identification should be transparent and explicit. In addition, performance benchmarks for identification and participation should be increasingly domain specific allowing for students to show advanced products in multiple domains. This discipline-specific assessment coupled with full transparency not only allows students to develop talents at all stages of development, but is also invites students to develop talent. The measures used must be relevant to that program domain's content. A writing sample should be used for program with an emphasis in writing (VanTassel-Baska, 2005). Complex mathematical problem solving may be used for a program with an emphasis in mathematics. Developing research plans for scientific inquiry could be a way to identify advanced science performance. These domain-specific measures can be assessments already administered in a school if the curriculum and assessment includes authentic performances with high ceilings to distinguish exceptional from good performances. Not all students who qualified for the gifted program in the primary years will qualify for the discipline-specific programs at the secondary level. Furthermore, some students who have not previously qualified for participation will qualify for gifted education as the performance expectations become more discipline specific. To fail to acknowledge this is to complacently accept the problems of false positives and equitable access.

7. Take a balanced approach to assessment to include multiple forms of qualitative and quantitative data weighted equally.

The goal of student assessment for identification in gifted education is to identify instruments and protocols that provide students an opportunity to demonstrate their diverse talents and abilities (Texas Education Agency, 2009). The instruments and protocols should yield both qualitative and quantitative data. Additionally, these instruments and protocols should be recognized as valid and reliable assessments for the purpose of distinguishing advanced performances or potential for advanced performances.

Qualitative assessments provide flexibility for both the examiner and examinee. They also more closely simulate real performances beyond the testing environment. Quantitative assessments may have lower levels of measurement error as they are more structured and controlled; however, they are not without measurement error. Portfolios, interviews, and performance assessments (such as the Texas Performance Standards Projects) are examples of qualitative assessments. If each source of data has sim-

ilar reliability and validity, then each source should be considered equally in the decision-making process (Johnsen, 2011). No one source of data should carry more weight than another.

Too often schools rely primarily on quantitative cognitive ability measures. Specific cut scores are not recommended as best practices (Johnsen, 2011), yet it seems they are still used in many places. A single score on a standardized test should be interpreted with the standard error of measurement (SEM) to yield a range of scores within a 90–95% confidence interval (CI). In other words, with a SEM of ±3, a cognitive ability score of 127 should be interpreted as a single observation representing a true score that falls between 124–130 [90% CI] or 121–133 [95% CI]. Thus, how should a school use an observed score of 127 with a systematic cut score of 125 or 130? The point is that even well-designed standardized assessments are not so precise that cut scores are valid for decision making. Best practices in assessment expect schools to interpret that single score with its SEM as a piece of the puzzle, not the primary decision point. This is why Texas gifted education policy requires multiple assessments (minimum of three) before making placement decisions in gifted education.

8. To improve assessment and identification of gifted students, better articulate gifted education programs and services.

Although it may be a general gifted program in early elementary, the program should become increasingly discipline specific over time. The abilities that are being assessed ought to match the abilities needed to be successful in the curriculum of the program. Think of identifying students participating in the gifted math program, the gifted science and technology program, and the gifted language and humanities program. The better the program services are defined, the more closely the assessment for identification can be aligned. When the gifted language arts program or the gifted science program is vaguely articulated, it becomes very difficult to design an assessment system to align with specific program components.

To increase alignment of assessment and program, clearly define the program. The following questions may be used to better define and describe services: (a) In what ways is this curriculum accelerated? (b) In what ways is this curriculum modified to provide greater depth and complexity? (c) What are the expected outcomes demarking remarkably high levels of accomplishment in this curriculum? (d) What are grade-level benchmarks of remarkably high levels of accomplishment in this curriculum? (e) What discipline-specific competencies are baseline expectations for participation in this advanced curriculum?

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As schools answer those questions for each aspect of the gifted program (e.g., gifted mathematics, gifted humanities, gifted science, gifted fine arts), clear descriptions of the curriculum and expectations should be developed and published. Texas gifted education policy expects program descriptions to be clearly articulated and shared with parents and community. Knowing exactly what the program entails in elementary school, middle school, and high school gives the school an opportunity to design an assessment plan to identify those students who are well matched to the curriculum. Failure to do so creates conditions for the problems of false positives and equitable access to persist.

9. Commit to reducing bias and helping students gain equitable access in assessment and identification, but realize there is no panacea or ultimate test that will distribute gifted performance equally across all backgrounds and contexts.

In order to reduce bias and identify economically disadvantaged and culturally diverse gifted students, schools ought to closely examine the assessments they use. Test administrators and committee decision makers need to understand the purpose of each specific test and the strengths and limitations of the test (Joint Committee on Testing Practices, 2004). If a nonverbal ability measure is to be used, then the program ought to be designed in conjunction with that assessment. It would not be fair and likely not have a positive outcome if English language learners (ELL) were identified with this type of assessment and then placed in a traditional advanced academic program without linguistic support. Nonverbal assessments certainly have many merits and can be used as one type of data in the decision-making process. However, schools need to recognize that using nonverbal assessments as a single data point for program placement not only undermines the purpose of multiple and varied data collection, but also fails to align with most program services.

It is also important to use multiple sources of information for identification. Teachers need to be trained in order to recognize gifted abilities and potential in their diverse student population (Ryser & Rambo-Hernandez, 2011). In addition, use of alternative assessments such as observation profiles of children during an extension activity in the classroom or student work portfolios can increase inclu-

sion of underrepresented populations (Briggs, Reis, & Sullivan, 2008).

Perhaps it is not possible to eliminate all bias in assessment of potential giftedness. However, it is possible to be open and honest about the possibility and the influence of bias in assessment. Select assessments and develop protocols with the intent of minimizing bias. Use multiple types of assessment to create profiles of students who may be well-matched to the programs and services of gifted education based on either performance or potential performance at remarkably high levels. Commit to providing equitable opportunities for all students through a balanced and comprehensive assessment system.

10. Seek more to develop gifted students rather than simply to identify gifted students through assessment.

Some gifted programs spend most of their time and resources on identification of students for their programs, yet many of the identified students never accomplish the goals of the gifted program. In other words, identification is not perfect no matter how hard schools try. Schools should consider seeking ways to begin with broad nets to bring in lots of performers and potential performers. Then use ongoing assessments to identify those students on target for meeting the articulated goals of the program. Assessments should also be used to diagnose strengths and weaknesses, so that it takes on characteristics of formative assessment in pursuit of helping students attain the gifted program goals. Assessment should be used in a way that develops giftedness in our students. We believe that using assessment to develop giftedness is a more educationally noble practice than simply using assessment to identify giftedness. Moreover, taking this perspective ought to reduce or even eliminate the problems of false positives and equitable access.

CONCLUSION

There is no doubt that giftedness is multidimensional and each child has a distinct profile of strengths and relative weaknesses making giftedness elusive in its manifestation (VanTassel-Baska, 2005). By understanding this elusiveness, school districts can focus less on finding this elusive and intangible talent and more on developing it into advanced-level products and performances in as many children as possible. Establishing and sustaining quality gifted education programs and services should begin with critical examination of assessment and identification. It should seek reduction or elimination of the problems of false positives and equitable access. Additionally, excellence in gifted education includes aligning valid identification for participation with increasingly domain-specific opportunities leading to remarkably high levels of performance as defined by local school systems.

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this, but it is well worth it. Instead of a traditional grade like a "B" or 87%, such a tool would provide much more meaningful information as to where a student is in regards to critical skills like transfer and cognitive complexity level. This information is much more informative for both parents and students. Students would know where they stand and could begin setting specific goals as to how they can achieve more success. A grade of "B" or 87% does not provide this information. Furthermore, the aforementioned assessment strategies that have been shared influence student motivation to learn. Students are motivated when three key factors are in place:

- *Task clarity*—when they clearly understand the learning goal and know how teachers will evaluate their learning.
- *Relevance*—when they think the learning goals and assessments are meaningful and worth learning.
- *Potential for success*—when they believe they can successfully learn and meet the evaluative expectations. (McTighe & O'Connor, 2005, p. 17)

Clearly, a traditional system of teaching, learning, and assessing is no longer appropriate for the 21st century and focuses on "what will be forgotten." By using a concept-based curricular framework and developing assessment tasks and tools that are clear, relevant, and authentic, educators can truly teach toward the "education that will remain."

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