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Common Sense about the Under-Representation Issue: A School-Wide Approach to Increase Participation of Diverse Students in Programs that Develop Talents and Gifted Behaviours in Young People

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It is better to have imprecise answers to the right questions than precise answers to the wrong questions.

Donald Campbell

Abstract

Changing demographics in schools around the world have raised questions about the nature and role of gifted education programs. An intense interest in the underrepresentation of students from low-income families and minority groups in gifted education programs has caused the field to re-examine both identification and services. In this article, the authors discuss the larger issues related to identification and programming, including data about the extent of the problem in American schools. We review the recommendations and suggested practices made by other researchers and writers in the field for improving the representation of diverse students in gifted programs and provide examples of efforts taking place in schools that are dealing with this challenge. The authors conclude by describing how a specific approach developed over decades shows promise in addressing the problem of under-representation.

The education landscape in public schools around the world is adapting to increasingly diverse demographics with rising numbers of low income, language-minority, and cultural-minority group populations. These changing populations include the talent pool of high potential young people who are and should be the focus of gifted education programs. One of the biggest challenges facing our field is how to develop policies and procedures that are more responsive for finding and serving these under-represented students. Although this article draws on data about the under-representation issue in the United States, colleagues from other nations, such as Chile, Switzerland, India, Italy, China, and several countries in the Middle East have indicated that similar concerns are being raised in their own countries.

In the United States of America (USA), half of the 50 million children in public schools are members of minority groups (National Center for Education Statistics, 2016c) and 5l% of children nationwide live either in or near-poverty (Suitts, Barba, & Dunn, 2015). Many students

from low socio-economic status families attend schools where a majority of students live in poverty, including 42% of children of colour (National Equity Atlas, 2016). More than 4.5 million of today's students are English Language Learners (ELL) and more than 6.5 million young people have special needs (National Center for Education Statistics, 2016a, 2016b). These new American school demographics have raised questions about the nature and role that gifted education programs can and should play in accommodating the dramatic changes that are taking place. It is little wonder that the hottest topic and single-most controversial issue facing the field of gifted education today is the continued under-representation of students from low-income families and minority groups. According to a 2016 report from the U.S. Department of Education's Office of Civil Rights, Black and Hispanic students make up only 28% of students enrolled in gifted and talented programs, despite making up 42% of students in schools that offer gifted and talented programs. English learners make up only 3% of students in these programs, even though 11% of students in schools offering gifted and talented programs are English learners. At the high school level, fewer advanced math and science courses are available in schools whose population is 75% or more Black or Hispanic than in schools whose population is 25% or less Black or Hispanic.

In spite of longtime recognition of the limitations of IQ testing (e.g. Ford, 2004; Green, 1975; Sternberg, 1985, 2015), admission to school-based gifted programs is still dependent in many places on scoring 130 or above on an IQ test or above a given percentile on a standardized achievement test (generally, 2 standard deviations above the mean of the test). Sternberg (2015) points out that IQ tests, in assessing primarily analytical abilities, are limited in their effectiveness for selecting students for special programs. This type of admission requirement has historically favoured White children from high socio-economic status (SES) families over all other populations, leading to the term "historically under-represented groups" to describe both the children and the problem. Across the country, White and Asian students comprise the majority of the population in gifted classes, regardless of the composition of the rest of their school or district (Yoon & Gentry, 2009).

In this article, the authors use the term "historically under-represented groups" to mean students from low-income families, English learners, and students of Black, Hispanic/Latino, Native American, Native Alaskan, Native Hawaiian, and Pacific Islander origins, whose participation in gifted programming has been and continues to be disproportionately low in many U.S. schools. Many of the studies cited here focus on students of Black and Hispanic origin, and the authors acknowledge the need for further study into the status and needs of students of Native American, Native Alaskan, Native Hawaiian, and Pacific Islander descent, as well as those from the many, varied Asian subgroups. A number of articles (e.g., Erwin & Worrell, 2012; Ford, 2014; Ford & Whiting, 2016; Lakin, 2016) and literally dozens of commentaries in the popular press have called attention to the problem of under-representation. This article defines the general nature of the problem and offers suggestions that might be worthwhile in attacking this complex issue.

A persistent inability to address the continued under-representation in gifted programs of students from historically under-represented groups in practical and sustainable ways may place the field of gifted education in danger of program eliminations or cutbacks; however, further research is needed to determine the policy ramifications of a failure to find a reasonable solution.

It is, nevertheless, necessary to explore various options for providing services to a long neglected but rapidly growing segment of the American school population. Because of variations in local school demographics and state regulations for identification, funding, and the provision of services, there is probably no single best way to address the challenge of including diverse student groups in gifted and talented programs. In this article, the authors discuss the larger issues related to identification and programming and a broadened conception of the meaning of "data" when it comes to identifying under-represented students.

The authors describe general solutions recommended for improving the representation of diverse students in gifted programs and also provide an example of an award-winning school dealing with this challenge. The authors conclude with a description of how the Schoolwide Enrichment Model (SEM), an approach that been developed and refined over decades, shows promise of addressing the problem of under-representation.

The Problem in Perspective: Labelling versus Talent Development

Key Questions

The essence of addressing the under-representation issue concerns both how the field views the concept of giftedness for identification purposes and how it provides services for students in special programs. This twofold manifesto of gifted education can be brought into clearer perspective by the ways in which both educators and laypersons talk about both issues. A starting point is a hypothetical yet realistic set of key questions usually raised when discussing identification and programming al the local level, including an examination of the meaning of the word "gifted."

Imagine that you have been asked to address parents and teachers about planning (or revising) a gifted program in your school or district. Although the first question below is bound to be the main issue, further imagine that your audience has done some background reading and will "drill down" into identification and programming issues that are conceptually deeper than the "words on paper" of state and local regulations. Consider how you might respond to the following questions:

1. How does this district define and identify giftedness?
2. Must this district officially designate a student as "gifted" before providing any supplementary services?
3. Is the goal of the program to label students as "gifted" or "non-gifted" or is it to develop the strengths and talents of any young person who shows the potential for benefiting from supplementary services that are beyond the regular curriculum?
4. Can teachers use certain general enrichment activities (e.g., Thinking Skills, Creativity Training, and Problem-Based Learning) with all students and use their levels of response to determine for whom and in what way advanced level follow-up is warranted?
5. Does the program allow for gifted education services to be provided to certain students, at certain times, and within certain contexts or domains of their demonstrated potentials, regardless of whether or not they have the official label?

6. Would the program serve, for example, a young Steven Spielberg, who was doing exceptional things with a movie camera at a young age but was not a traditionally high-achieving student?

Although there are many other questions that might be raised, these questions should be examined by any state or school district that is developing or re-examining its policies and regulations, especially in light of the nation's changing demographics and the continuing and concerning under-representation of students from minority groups and low-income families. These questions are also appropriate for middle-class districts that are interested in providing services for the "Steven Spielberg" students of their population, who have potentials that don't show up through traditional identification criteria. The answers to these questions undoubtedly will be influenced by what people actually mean when using the word "gifted."

It's All a Matter of How the Word is Used

What is the goal in using the word "gifted"? A practical understanding of what the term "gifted" means raises the question of what heuristic purpose the term serves once it is deprived of the aura that surrounds its use in many professional education groups and lay communities. A heuristic technique is an approach to problem solving, learning, or discovery employing a practical systematic method. Although a heuristic technique is not necessarily optimal or perfect, it should be sufficient to pursue an immediate goal; in this case, to plan special programs and processes to determine which young people are eligible to participate.

When considering the heuristic meaning of the word, "gifted," one must first examine the parts of speech assigned to the g-word in the dictionary (Merriam-Webster, 2016). It is categorized as both a noun (giftedness) and an adjective (gifted). When used as a noun, the word refers to an *entity* or state of being, for example, "He or she is one of the gifted." Synonyms for the word as a noun are almost non-existent but "blessed" or "preordained" might come close. The noun "giftedness" often takes an adjective (such as scientific, or academic) to specify the area in which a person has achieved superior accomplishment.

When used as an adjective, it refers to high potential in a particular area of human performance and usually has reference to a criterion or comparison group (e.g., "She is a gifted writer for her age."). Synonyms frequently found when the word "gifted" is used as an adjective are also adjectives that usually take an object (e.g., superior mathematician, advanced reader, innovative designer, exceptional artist, persuasive speaker, compelling writer), all words that helpfully provide direction when talking about the types of services advocated when developing special programs and opportunities. Indeed, the word is even used as an adjective when the field is referred to as "Gifted Education," reminiscent of the root word, that a gift is something to be given rather than a state of being. The student receives the gift when the school provides opportunities, resources, and encouragement to transform his or her potential into gifted behaviours.

Persons advocating the entity perspective argue that someone must first officially label students as "gifted" before the students can receive any special services. One may contrast this with a responsive orientation, where students react to presented opportunities and teachers

respond to students' demonstrated talent potentials at any time. Those with an entity perspective may assert that they are using a "multiple criteria" approach; but oftentimes, the label will not be bestowed unless the student achieves a predetermined cut-off score on an IQ or ability test. In such cases, the preliminary nomination and screening serve as a ticket to take a test, and the strengths and evidence of talent potential that led to the nomination and/or screening are disregarded unless one hits the cut-off score. Thus, claims about a multiple criteria approach end up being a smokescreen for the same old test-based, entity-oriented approach.

A case in point is an article that discusses the impact of the nomination stage on identifying under-represented students (McBee, Peters, & Miller, 2016). Although an excellent analysis is made of issues related to nominations for gifted programs, referral to the "actually gifted" and the "not-actually gifted" clearly indicates an entity orientation, even at the very early nomination stage of identification. Use of terminology such as "truly" and "actually" gifted in scholarly publications, with or without whatever disclaimers may be noted, could easily lead the casual observer to believe that there are people who do indeed have "a gifted chromosome."

As a heuristic, "gifted education" conveys a process that *may* lead to the enhancement of abilities and skills. As a less than perfect heuristic, "gifted assessment" for identification *may* identify students who can benefit from enhanced programming, but it may also miss many who would benefit. Recent studies (Grissom & Redding, 2016; Lu & Weinberg, 2016; McCoach et al., 2016) provided evidence that students from historically under-represented groups continue to be less likely to be identified as "gifted." Grissom and Redding (2016) found that Black students are half as likely as other students with equal achievement to be assigned to a gifted program and that Black students are three times as likely to be assigned to a gifted program if taught by a Black teacher. Likewise, McCoach et al. (2016), in research that controlled for school characteristics, found that students who are Black, Hispanic, from low-SES families, or English learners whose achievement scores were just as high as students who were White, non-ELL, and not from low-SES families were significantly less likely to be identified as "gifted." Lu and Weinberg (2016) found that across all students, those who attended free public pre-kindergarten in New York City were 4.5 times as likely as those who did not attend public pre-kindergarten to be tested for admission to a gifted kindergarten. However, even though Black and Hispanic students were more likely to be enrolled in full-time public pre-kindergarten, these students were 35% and 45% (respectively) less likely to be tested than White students, and overall, low-SES students were 46% less likely to be tested than students not from low-SES families. Hamilton et al. (2017, ms under review) reported that students from historically under-represented groups are also less likely to attend schools that offer any sort of gifted program. In the absence of available programming, teachers may have less incentive to put time and effort into identifying students; conversely, without a population of students identified as having a need for special services, the school may have less incentive to expend resources on a gifted program. Naturally, these complexities influence the number of students from historically under-represented groups that will be represented in any actuarial analysis of the issue.

The traditional entity usage and primary reliance on teacher nominations and ability-test scores have resulted in remarkable under-representation of high potential students from historically under-represented groups in the United States, as previously cited (Erwin & Worrell, 2012; Ford, 2014; Ford & Whiting, 2016; Lakin, 2016; U.S. Department of Education. Office of

Civil Rights, 2016; see also National Research Council. 2002). This approach also leaves out students of all backgrounds who are highly creative, those who think and pursue tasks with a different approach to learning, and those who have highly specialized talents, interests, creativity, or motivation. S. Nicholson-Crotty, Grissom, Nicholson-Crotty, and Redding (2016) suggested that the reason that Black students are more likely to be assigned to gifted programs if a Black teacher teaches them (Grissom & Redding, 2016) may be because Black teachers may perceive (and rate) some Black students' behaviours, such as self-control and interpersonal skills, more positively than White teachers do. A dramatic example of a creative young scientist whose teacher overlooked his strengths follows in the teacher's comments about John Gurdon, winner of the 2013 Nobel Prize for medicine:

> His work has been far from satisfactory. His prepared stuff has been badly learnt and several of his test pieces have been torn over: one such piece of prepared work scored 2 marks out of a possible 50. His other work has been equally bad, and several times he has been in trouble, *because he will not listen, but will insist on doing his work in his own way.* I believe he has ideas about becoming a scientist: on his present showing this is quite ridiculous (Collins, 2012, October 8, emphasis added).

Some people who became creative producers as adults were not traditional high achievers in school. For example, although Oprah Winfrey was a precocious child, she suffered from extreme poverty, turbulent living arrangements, and abuse throughout her childhood; she became a troublemaker. She spent time in juvenile detention and became pregnant at age 14, after which she went to live with her disciplinarian father. In high school, Winfrey's talents were able to blossom and she joined the honour society, visited the White House, and participated in a contest that led to her first broadcasting job (Harris, 2005, November 19).

The authors believe that young people showing creative potential should also participate in programs for talent development. A quotation attributed to Albert Einstein, the personification of scientific (adj.) "giftedness," explained that "Not everything that can be counted counts, and not everything that counts can be counted." If decision-makers only base student placement on things that can be easily counted, how many John Gurdons, Steven Spielbergs, and Oprah Winfreys will society lose by failing to heed Einstein's advice?

The commentary sections of popular education news outlets have featured a number of point/counter-point articles about the usefulness of the term "gifted" over the years (e.g., see, for example, the Commentary section of Education Week: Samuels, C. A. 2008, October 14; Peters, S. J., Kaufman, S. B., Matthews, M. S., McBee, M .T., & McCoach, D. B., 2014, April 14). The following conclusion reached by Peters et al., (2014) represents the general direction the field is taking toward the under-representation issue and is compatible with the distinction made between the entity and talent development perspectives described above.

> The time has come to create K-12 models that consider how to properly challenge all students who—at any point in time—are ready for more advanced curricula; not just those we deem "gifted" in some global, unchanging fashion divorced from the educational needs of the child. By focusing less on the child's label and more on the

> child's needs, we will better serve those students in our schools who are ready and hungry for greater academic challenges. (para. 21)

Practitioners "can't wait" for theorists and researchers to agree on all possible ramifications of the identification challenge. Fortunately, much research has been conducted on possible solutions, so practitioners can draw from these to find a more equitable solution to identifying children who will benefit from special services. A brief review of general recommendations for change follows.

General Recommendations for Change

General discussions and commentary about under-representation fall into the areas discussed in this section. Although these areas of concern are important starting points and much has been written about them in the literature, the ways in which words are used in the identification process will determine if thoughtful answers are put forth to the questions raised above. It is easy to offer generalizations and make broadly sweeping comments about their importance, but the biggest challenge is in the ways scholars, commentators, and practitioners "drill down" to the actual practices that schools can use to implement one or a combination of the three general recommendations.

Non-Verbal Tests

One potential solution to address the problem of under-representation is the use of nonverbal measures of ability to identify students with high ability. Nonverbal tests are intended to be fair to test-takers with limited English proficiency and regardless of academic background, because they require students to solve abstract visual puzzles, rather than to define vocabulary words or to solve math problems. The Raven Progressive Matrices, the Naglieri Nonverbal Ability Test (NNAT), and the Nonverbal Battery of the Cognitive Abilities Test (CogAT) are popular, well-researched examples of this type of test that were normed and have been re-normed with large demographically representative samples (e.g., n>180,000 in Lohman, 2008; n=20,270 in Naglieri & Ford, 2003; n=1,407 in 1938, n=11,621 in 1952, n>60,000 between l983 and 1989 in Raven, 2000). Additional common nonverbal tests are the Test of Nonverbal Intelligence, 4th edition (Brown, Sherbenau, & Johnsen, 2010), the Leiter International Performance Scale-Revised (Roid & Miller, 1997), and the Universal Nonverbal Intelligence Test (Bracken & McCallum, 1998). These tests are sometimes used as alternatives to IQ tests for students with limited English proficiency on the assumption that by removing the requirement for students to produce verbal or written responses (and in some cases, to follow verbal or written directions), score variation that is due to cultural and linguistic differences will be reduced or eliminated (Pfeiffer, 2012).

Nonverbal tests alone, however, do not eliminate all disparity in identification between students from over- and under-represented groups. In a study comparing the NNAT and CogAT Composite tests and their relationship to the Wechsler Intelligence Scale for Children—Fourth Edition (WISC-IV), Giessman, Gambrell, and Stebbins (2013) found that using the NNAT to screen students for gifted programs increased identification of Hispanic, but not of Black students. In a sample of kindergarten students who took the NNAT as a screening test, Carman

and Taylor (2010) found that when controlling for ethnicity, students from low-income families (identified on the basis of free/reduced lunch status) were recommended for the next stage of gifted identification at about half the rate of other students. Another study by Lohman, Korb, and Lakin (2008) compared scores of 1,198 elementary-age children (40% ELL) on the CogAT Nonverbal Battery, NNAT, and Raven and found that ELL students scored .5 to .6 SD lower on average than non-ELL students on all three tests, even when controlling for ethnicity. In short, nonverbal tests do show score differences among subgroups, and so they are insufficient for mitigating representation differences, even though they may provide useful information, especially along with a broader portfolio. Space does not permit a full discussion of non-verbal tests; however, more information can be found in McCallum (2017), Pfeiffer (2012), and the discussions in Naglieri and Ford (2003), Lohman (2005a, b), Lohman and Gambrell (2012), and Naglieri and Ford (2015).

Universal Screening and Local Norms

Another popular suggestion currently being offered to solve the under-representation issue is the use of "automatic referrals" (McBee, 2006) or "universal screening" (Card & Giuliano, 2015; Lakin, 2016). McBee (2006) and Lakin (20l6) use the term *screening* to mean that a standardized test is used to gather data. In this article, the authors use the term *universal screening* to mean simply that some information that might be used to support a gifted identification or an assignment to participate in gifted programming is both gathered on everyone and considered in light of the question of whether each student might benefit from special programming. Clearly, any standardized measure selected for universal screening should have well-established reliability and validity for identifying students who would benefit from the offered program. In the U. S., for example, all states administer standardized achievement tests in math and reading or language arts to all public school students annually from third to eighth grade (Elementary and Secondary Education Act, 2016). Any district looking for students who might benefit from an advanced math program could use the state math test score as a universal screening measure. However, according to the National Association for Gifted Children's *State of the States in Gifted Education Report* (NAGC, 2015), this information is *not* often used as a screen through which students might move to an identification process, even though achievement data is sometimes used for gifted identification. Only two of the 42 states that responded to the NAGC (2015) questionnaire reported that gifted identification procedures are initiated based on scores from tests that students take for reasons other than gifted identification (e.g., state achievement tests), while 13 reported that they require achievement data to be used for identification.

Lohman (2005c), Renzulli (2005), and Pfeiffer (2015) recommended the use of local norms when using an ability or achievement test to assess students for special programs: "The need for special services depends not so much on a student's standing relative to age- or grade-mates nationally, but on the student's standing relative to the other students in the class" (Lohman, p. 13). In schools with highly varied populations, Lohman (2005c) demonstrated that this can mean not only comparing students to others in that local school, but also comparing students within subgroups, in order to compare each student to others with similar prior experiences, as recommended by the U.S. Department of Education's *National Excellence Report* (United States Department of Education [U.S. DOE], 1993). In this case, students

entering the program might be prepared for very different levels of challenge. Any school which identifies students for programming differentially by subgroup should also plan to differentiate supports and challenge for students who demonstrate needs well beyond others of their subgroup but whose ability or achievement scores are not as high as others who are also identified for special programming, as would be advisable in any classroom (Tomlinson, 2001). A program that uses local norms will always be able to find students whose educational needs are sufficiently different from the local average to benefit from special programming tailored to their needs.

Teacher-rating scales can also be the basis of universal screening. Researchers have found that teacher bias can lead to inequitable referrals when the referrals are based only on teacher impressions and not on valid and reliable scales with clear definitions (Fish, 2017; Powell & Siegle, 2000). However, several such teacher rating scales exist (e.g., Peters & Gentry, 2012a; Pfeiffer & Jarosewich, 2007; Renzulli et al., 2010; Sarouphim, 1999) and they can be used concurrently with locally-normed tests to identify students for special programming (Lohman & Renzulli, 2007; Peters & Gentry, 2012b).

In practice, IQ scores still dominate the identification process. NAGC (2015) reported that of the five states which require *identification processes* to take place after parent, teacher, or student referral, all require IQ scores for *identification,* and three of these states also require portfolio information. Seven states, including two of the above, require data on the student's behaviour or characteristics of giftedness (i.e., the type of information reported on teacher rating scales) for identification. These seven states all also require a "multiple measures" approach to identification for gifted services, and require IQ scores, achievement measures, or both in addition to the behavioural/characteristics data.

Only two states require screening to take place once at the elementary level, and only one of these also requires screening upon entering middle school. Eight states reported that identification processes for gifted services can begin at multiple points during K-12, but it is unclear whether this means that universal screening takes place at multiple time points or that a non-universal mechanism, such as nomination, is available at multiple time points. In 21 states, decisions about how and when to screen and identify students for gifted services are under local control, with or without guidance from the state (NAGC, 2015).

A "natural experiment" on the effect of universal screening on recommendation and identification for gifted services occurred in a large district in Florida (Card & Giuliano, 2015). The district implemented universal screening for five years by administering the Naglieri Nonverbal Ability Test (NNAT) to all second grade students as a screening tool. Students who met the cutoff score on the screening test proceeded to IQ testing that determined entrance to the gifted program. By Florida law, there are two eligibility levels for gifted services: Plan A, for students who are not English Language Learners (ELL) and who are not eligible for free or reduced lunch (FRL), and Plan B, which may be used by districts that develop a plan for increasing representation of students who are ELL or FRL in gifted programs (Special Instructional Programs for Students who are Gifted, 2002). Each district using Plan B to identify students may develop their own plan. In the district studied by Card and Giuliano, Plan A students needed an IQ score of 130 or higher, while Plan B students needed an IQ score of 116 or

higher, allowing for measurement error in both cases. Students with a qualifying score also had to be rated as showing evidence of "gifted indicators" including motivation, creativity, and adaptability, and Plan B eligibility also considered academic achievement and family background.

The district in question eliminated funding for follow-up IQ testing after the first two years due to budget difficulties. The district ended universal screening altogether three years later in response to continued budget problems. During the first two years of the program, referral rates and gifted identification of Plan B students increased by 180%, with a 130% increase for Hispanic students and an 80% increase for Black students. Within three years of ending universal screening, referral rates and identification of Plan B students returned to pre-implementation levels, while referral rates and identification of Plan A students continued to increase.

Card and Giuliano (2014, 2016) also examined the results of a policy in the same district which used state achievement tests to screen students for class placement. Each school placed students who scored the highest on state exams together in a class with identified gifted students and a teacher trained in gifted education pedagogy, but only if at least one student in the grade level was identified as gifted using an IQ test. Card and Giuliano (2014, 2016) found that placement in these "Gifted/High Achievers" (GHA) classes led to increased achievement growth among high-achieving students from historically under-represented groups who were not identified as gifted as compared to their academic peers in heterogeneous classrooms. Specifically, the achievement scores of high achieving students from historically under-represented groups were about 0.5 standard deviations higher in both reading and math, with persistent effects to at least 6th grade, if they were in a GHA class in fourth grade than if they were not. Additionally, placing the highest achievers (ranks 1–20) in a separate class with up to 4 Plan A gifted students had no effect on the performance of students in the next highest achievement cohort (ranks 25–44); that is, the benefit to the high achievers did not come with a detriment to the next-highest achievers who would have been their classmates in the absence of a GHA class.

In Total School Cluster Grouping (Gentry, 2014), another model that uses universal screening for class placement, all students are rated (screened) by their teachers as "high achieving," "above average," "average," "low average," or "low achieving" prior to placement in the next years' classrooms. Students identified as "high achieving" (including those identified as "gifted") are placed together in one classroom along with "average achieving" students but without students identified as "low achieving," with a teacher trained in gifted education pedagogy. Students identified as "low achievers" are placed in other classrooms with "average achieving" students.

In original and follow-up research on the model (Brulles, Peters, & Saunders, 2012; Gentry & Owen, 1999; Matthews, Ritchotte, & McBee, 2013), more students were identified as "high achievers" over multiple years of implementation, and overall achievement increased as teachers were better able to target instruction to the narrowed range of student ability in all classes.

Universal Screening is undoubtedly a potentially useful practice for identifying high potential students from historically under-represented groups, but the devil is in the details. Before implementing a universal screening procedure, decision-makers must first address the questions of when and what information will be gathered on all students and how this information will be used in making selection decisions.

Even the "when question" raises challenges. Most states don't begin any kind of standardized testing for all students until the third grade, but it is important to implement a universal assessment as early as possible because research has shown that with students from low-income families, the longer they stay in school, the more they fall behind (Parlady, 2008). However, testing young children is difficult. The inflexible format of IQ tests makes them less reliable for testing young children (Porter, 1999, p. 97), and kindergarten scores on early literacy tests show significant variability even among high-IQ student from middle-to-upper-class families, making them a poor choice for students from historically under-represented groups (Hernández Finch, Speirs Neumeister, Burney, & Cook., 2014). Additionally, a lack of opportunity to learn means these students often start out behind on academic measures (Magnuson & Duncan, 2016; Morgan, Farkas, Hillemeier, & Maczuga, 2016). For screening young students, Espinosa (2005) recommends that a series of observations and/or a portfolio assessment may be more appropriate. Additionally, she notes that children from cultural groups whose organizational and interactional styles, such as where a child looks when speaking to an adult or how quickly a child follows directions, are different from those of the dominant culture must adapt to the school environment. Until they learn the patterns of discourse used in school, they may not show their abilities in traditional ways, such as by readily answering questions. For young children from historically under-represented groups, she recommends that assessments be culturally and linguistically responsive and include evidence gathered over time.

Performance-Based Assessment and Providing Additional Support to Targeted Students

Performance-based assessment differs from the entity approach in that it predominately uses actual examples of students' performance to inform future decision making. Although the term performance-based assessment has been used to describe ability tests (Acar, Sen, & Cayirdag, 2016), in this article, it is used in a way similar to VanTassel-Baska's (2015) recommendation to assess gifted students through advanced, open-ended tasks that require students to think and to solve problems and that allow students to demonstrate their creativity. This method of assessment is a responsive approach because teachers observe how students react to opportunities to learn and to perform, and then respond to students' demonstrated talent potentials. As any good basketball coach knows, if team selection is based only on height, then good ball handlers, playmakers, defenders, passers, and those with a talent for sinking three pointers from beyond the arc will be overlooked. In a performance-based system of assessment, potentially gifted students are recognized for their aptitudes in particular areas of performance, motivation, creative behaviours, and executive function skills, which are all traits that may not show up on intelligence or achievement tests. In addition to, or in replacement of a standardized-ability test, teachers and content area specialists observe students interacting with conceptual rather than memory-oriented material in science, art, mathematics, theatre, writing, history, and other areas that lead to making *need-for-service decisions* based on actual performance.

Performance-based assessments have been developed and evaluated for reliability and validity with students from historically under-represented groups. The DISCOVER assessment (Maker, 1996), which is based on Multiple Intelligences Theory and a conception of giftedness that emphasizes problem solving, includes a series of performance tasks on which trained observers decide whether students show evidence of being superior problem solvers. After training, inter-rater reliability is between 75 and 100% (Griffiths, 1996, as reported in Sarouphim, 2000, April). Maker (2005) reported that the DISCOVER assessment has predictive validity to correctly identify students as having high potential in logical/mathematical, naturalistic, and verbal/linguistic intelligences . Students identified as gifted in the related intelligence in kindergarten went on to show higher scores on math, science, and reading assessments in the 4th and 6th grades than students who were not identified, even in the absence of a gifted program. However, in a study examining ethnic and gender differences in the use of the DISCOVER assessment, Sarouphim and Maker (2010) noted that while there was a great increase in the percent of students of all ethnicities identified as gifted, the proportions were still unequal. Although between 20 and 25% of students in most groups were identified as gifted (higher than the predicted 15–20% across the intelligences), African-American students were still identified with less frequency (14.5%) and South Pacific]slanders were still identified with greater frequency (37.5%). The DISCOVER assessment shows promise for use as a culture-fair assessment of potential, but further research is needed to determine why these differences in identification rates occurred and whether observer training might make a difference. It is also important to keep validity in mind: for DISCOVER to be a valid tool for gifted identification, the special programming for each identified student must align with the student's identified strengths (Sarouphim, 1999).

Structured auditions are another form of performance-based assessment that have been used to identify students from under-represented groups for special programming with results suggestive of predictive validity. In Oreck, Owen, and Baum's (2003) D/M/T TAP assessment[1], teachers and teacher-artists observed students as they participated in authentic arts training and improvisation activities, using a rubric to score the students on general and discipline-specific potentials, such as rhythm and pitch for the musical tasks. Inter-rater reliability was above .8 for all three categories. To assess validity, researchers followed students for two years. A two-year post-test revealed that selected students who participated in advanced programming received ratings significantly higher than non-selected students and wait-listed students (those whose initial scores were very similar to the selected students). Additionally, selected students went on to receive scholarships to elite arts programs, despite having had limited arts experience prior to the initial assessment (Oreck, 2005; Oreck, Owen, & Baum, 2003).

Project POTENTIAL (Delcourt, 2008) used a similarly structured audition process to identify students for follow-up targeted instruction in science, math, visual arts, or music. Selected students participated in small-group advanced instruction in their talent area in a pull-out class during the school day. Ninety-two to 100% of students who participated in Project POTENTIAL courses scored at or above mastery on state achievement tests in their talent area. More studies dealing with this approach would add immeasurably to the field's knowledge about identification procedures.

[1] Dance/Music/Theater Talent Assessment Process

Some districts have found success by providing targeted students with additional opportunities to learn (OTL) prior to assigning the gifted label or selecting students for special classes (see Peters & Engerrand, 2016, for a discussion of OTL). In the Young Scholars Model (YSM; Horn, 2015), an adaptation of the Schoolwide Enrichment Model (SEM; Renzulli & Reis, 2014) and Treffinger's (1998) Levels of Service Model (LSM) developed in collaboration with Fairfax County Public Schools, young students from historically under-represented groups who show high potential are placed in enrichment programs with teachers trained in gifted education pedagogy. In "Young Scholars" schools, a committee of teachers, administrators, and specialists identifies students as "Young Scholars" through a combination of student work samples, non-verbal ability tests, anecdotal records, and observations of students engaging with lessons on critical and creative thinking skills (Level I services, which all students receive). All "Young Scholars" receive Level II services, which consist of curricular modifications provided by the classroom teacher in consultation with the gifted specialist. Based on performance and additional screening, some "Young Scholars" move on to participation in pull-out programs featuring advanced academic services provided by the gifted specialist (Level III), and some qualify for full-time Gifted and Talented Centres for highly gifted students (Level IV). "Young Scholars" can also attend summer school programs that extend and enrich the regular curriculum.

Since its inception in 2002, the number and proportion of students from historically under-represented groups who have been identified for all levels of gifted services in Fairfax County Public Schools has increased. The representation of Black students receiving Levels II and III services increased from 475 (5.3% of all students in Level II and III) in the year 2000 to 2,064 (9.1%) in 2014, and the representation of Hispanic students increased from 311 (3.5%) to 4,079 (18%) students in the same timeframe. In Level IV centres, the representation of Black students increased from 76 students (2.2%) in the year 2000 to 928 students (4.8%) in 2014, and the representation of Hispanic students increased from 66 students (1.9%) to 1,419 students (7.4%) in the same timeframe (for full report, see Horn, 2015). When compared to the district demographics, the representation of Black and Hispanic students in gifted programs is much closer to proportional than it had been prior to implementing the Young Scholars Model. In 2000, Black students made up 10.7% of the district population, and Hispanic students made up 13%. In 2011, Black students made up I 0.5% of the total district population, and Hispanic students made up 21% (Fairfax County Public Schools, 2015, November).

Project EXCITE, a collaborative project between researchers at Northwestern University's Center for Talent Development and educators at local Evanston Township High School and its feeder K-8 school district, aims to improve Black and Hispanic students' achievement in math and science and to increase their enrolment in advanced math and science courses at the high school level (Olszewski-Kubilius & Steenbergen-Hu, 2017). The district invites all third-grade Black and Hispanic students, regardless of family SES, to take a test to qualify for participation. About 80% of Project EXCITE students come from low-income families. Students qualify with a score at the 75th percentile on the NNAT or Iowa Tests of Basic Skills. Students with scores just below the cutoff who have strong recommendations are also considered. Qualified students are required to participate in about 445 hours of after-school, Saturday, and summer enrichment and supplemental instruction in math, science, and reading throughout grades three to eight, with up to 180 additional optional hours available.

A longitudinal study of Project EXCITE (Olszewski-Kubilius, Steenbergen-Hu, Thomson, & Rosen, 2016) reported results that suggest this is an effective way to identify and to support high-potential students from historically under-represented groups. Over 13 years of implementation, Project EXCITE students, despite having initial (3rd grade) achievement scores equal to the district average in math and reading achievement, consistently scored higher than the district average after the first year (with effect sizes ranging from .21 to .53, at each grade level). Additionally, 76% of Project EXCITE students qualified for above-grade-level math in ninth grade, compared to 50% of all Black and Hispanic students in the school. Initial data on college enrolment for Project EXCITE students is also very positive. Over the first five cohorts, 84.5% of students whose college placement information is available enrolled in 4-year colleges.

The very challenge of examining under-representation should motivate practitioners to cast a wider net by looking at information beyond the easily-measured basic skills assessed by standardized tests. If these instruments "did the job" of identifying all students from historically under-represented groups who could benefit from advanced programming, then universal screening with traditional instruments would be sufficient and there would be no need to examine alternative or additional information. If any actual progress is to be made in addressing this challenge, it is necessary for educators in the field of gifted education to be more creative themselves in examining the identification issue. Less reliable but equally important considerations of students' potential for creative productivity (cf., Spielberg, Winfrey, and Gurdon) should take into account a broader range of characteristics. Such characteristics might include some non-cognitive factors such as creativity, motivation, and executive function skills, which may manifest in performance-based assessment. Casting a wider net does not mean that educators will overlook traditional measures. Rather, considering a portfolio of all available strength-based data enables educators to make personalized programming decisions for individuals.

Identifying Under-represented Assessment in the SEM Groups Using Performance-Based

The Schoolwide Enrichment Model (SEM; Renzulli, 1985; 1997; 2014) uses an identification system that integrates several of the above recommendations, and so it may be useful for addressing the under-representation issue. This model focuses on performance-based assessment, but also recommends universal screening and the use of local norms. The model has been used for more than three decades in schools ranging from high scoring and mainly white populations to schools with mixed populations and schools that serve predominantly students from historically under-represented groups. In the SEM, the category of "under-represented students" includes both students from historically under-represented groups *and* students who think and learn differently. These students may not be the highest-scoring students in their schools, but non-test score information and the ways they respond to various types of performance-based assessment clearly reveal that they are candidates for selected supplementary services (e.g., Baum, Renzulli, & Hebert, 1995; Baum, Schader, & Hebert, 2014; Oreck, Baum, & McCartney, 2000; Reis, Gentry, & Park, 1995).

Because of the variety of state regulations with which all identification systems must contend, the SEM's identification system was built to be flexible enough to deal with both differences in school populations and variations in state regulations (Figure 1). Three features of

the SEM are: (1) an identification system that uses both test score and non-test score information to identify a talent pool of high potential students who are candidates for supplementary services; (2) the use of local norms for any standardized measures that might be used; and (3) a programming model that provides general enrichment for all students and opportunities for advanced level follow up for students who show high motivation and creativity in response to general enrichment experiences, the regular curriculum, or non-school interests and activities (cf. Spielberg, Gurdon). This third feature is an example of the process described above of making individual programming decisions based on performance based assessment (VanTassel-Baska, 2015).

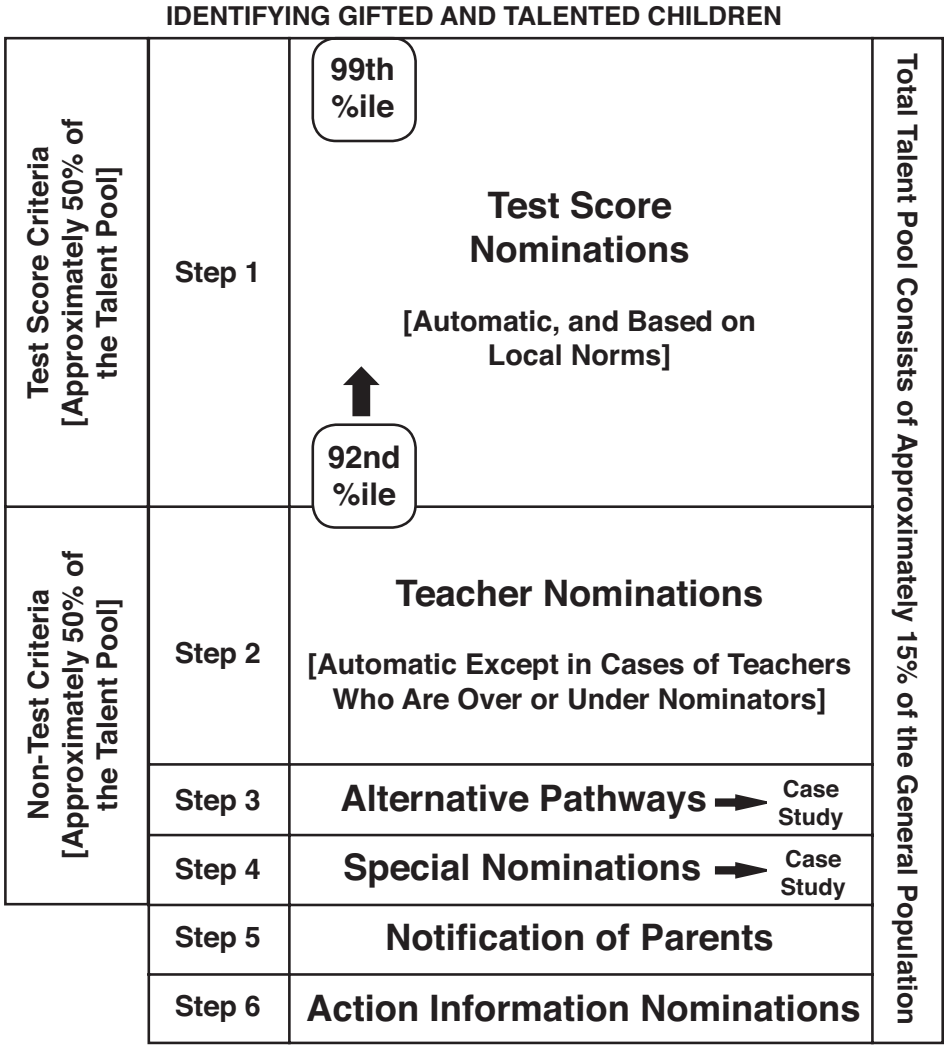

Figure 1: The Renzulli Talent Pool Identification System (Renzulli).

The SEM identification system (Renzulli, 2005) is grounded in the Three-Ring Conception of Giftedness (Renzulli, 1978) and the Enrichment Triad Model (Renzulli, 1977) and supported by both the broad usage and opinions of teachers, administrators, and leaders in the field (Brown et al., 2005) and a review of research dealing with identification practices (Gubbins, 1995). The system is flexible enough to accommodate talent potentials in different

domains and populations, and it attempts to respect regulations made by district policy makers and state departments of education, which is especially important at this time of greater concern about diversity in gifted programs. It takes into consideration the fact that there is no perfect identification system and it assumes that there should be congruence between the criteria used in the identification process and the goals and types of services that constitute the day-to-day activities that students will pursue. The accompanying service model also attempts to activate a much broader range of services and teaching practices, many of which are meant to develop creative and innovative talents in young people.

A Specific Application of This Identification Approach

In urban school districts with student populations predominantly from historically underrepresented groups, the SEM identification system that uses both local norms and universal screening can enable schools to provide highly-effective enrichment services. For example, most of the students selected for the academy described below would not have qualified for gifted programs in surrounding suburbs, most of which use an entity conception of giftedness based on an IQ cut-off score. The school's outcomes, both in terms of test scores and in terms of student portfolios of creative accomplishments, provide support for using this identification system, along with appropriate programming, to identify more students who could benefit from enriched school programs.

The Renzulli Academy, a small public school in Hartford, CT for students in grades 4–8 that opened in 2009, offers enrolment to rising 4th grade students in Hartford Public Schools (HPS) who achieve in the top 15% of the district on state-mastery tests. Many of these students are not those who scored at the highest level ("Exceeded") on the test; in HPS, the two passing score levels combined ("Met" and "Exceeded") include only 18.6% of 3rd graders in math and 24.1% of 3rd graders in reading. Invited students submit an application that includes school grades, teacher ratings, and short essays wherein the students demonstrate their interest in attending and their potential for creativity and task commitment. This identification method has resulted in selecting students representative of the overall population in the Hartford Public Schools. In HPS, 89% of students are Black, Hispanic, Asian, or of two or more races, (84% Black or Hispanic) and 90% of Academy students are members of these groups (78% Black or Hispanic). Similarly, 78% of students in HPS qualify for free or reduced lunch, as do 73% of Academy students (Connecticut State Department of Education, 2016). The school's programming is based on the Schoolwide Enrichment Model (SEM; Appendix A; see also Renzulli & Reis, 2014) and uses curriculum developed primarily for gifted learners: M^3 enriched mathematics units (Gavin et al., 2007), the Schoolwide Enrichment Model-Reading program (Reis, 2009), investigation-based science (e.g., Heilbronner & Renzulli, 2016), and project-based social studies (e.g., National History Day; see Sloan & Rockman, 2010), as well as fine arts and foreign languages are offered. Differentiated instructional strategies such as curriculum compacting and Response to Intervention strategies are used to support each student (for a detailed description, see Reis & Morales-Taylor, 2010). After the first year, 89% of students scored at goal or mastery level on state tests. By 2013, 98.6% of students scored at goal or mastery level. In 2014, the school was designated as a Connecticut School of Distinction for highest overall performance on state tests. Beyond test scores, the school's success is evident in students' performance in academic and creative competitions and exhibitions, including:

- Students have competed at the state level in the National Geography Bee and MathCounts competitions;
- Students have competed at the national level in the National History Day competition;
- Student art work has been selected for display in the Long Island Sound & Its Watershed drawing contest, Hartford Youth Art Renaissance Exhibition, Connecticut Association of Schools Celebration of the Arts Festival, and Districts Greeting Card;
- Students have won the state level Invention Convention;
- Students have won the City of Hartford Creative Youth Essay Contest;
- Students have placed and won in every category of the Hartford Public School District STEM Fair;
- Students have produced news clips for CT Public Television; and,
- Students have been selected to participate in the University of Hartford's Hartt School of Music ensemble.

https://sites.google.com/hartfordschools.org/renzulli-academy

This successful school's student body is composed primarily of students from historically under-represented groups and whose initial performance on state-mastery tests was below the threshold for identification in more traditional systems (i.e., below the top 5%). The school's excellent state test results and the many creative and competitive accomplishments of this school's students provide evidence that this identification system is a valid approach for schools with programming based· on the SEM. Students identified using this system can be successful in an advanced program that is designed to both challenge traditionally high achieving learners and to promote success in creative productive accomplishments. Additional research on the effectiveness of the SEM with various school populations can be found in Reis, Eckert, McCoach, Jacobs, and Coyne (2008) and Reis and Renzulli (2003). Because so many public school students are members of historically under-represented groups (cf. National Center for Education Statistics, 2016a, b, c; National Equity Atlas, 2016; Suitts, Barba, & Dunn, 2015), it is imperative that gifted identification procedures and follow-up programming in schools that serve these students be of a type that works for under-represented populations. When schools develop talents among more students from traditionally overlooked groups, the talent pool of the nation will grow accordingly.

How the Schoolwide Enrichment Model Offers Additional Opportunities for Talent Identification

The Schoolwide Enrichment Model (SEM) was originally developed in the 1980s and was revised and expanded during the last three decades (Renzulli & Reis, 2014). The focus of the SEM is on the development of thinking skills, creative productivity, and an investigative mindset on the parts of all students. In this model, the role of the student is transformed from that of a learner of lessons to one in which she or he uses the *modus operandi* of a firsthand inquirer to experience the joys and challenges of creative productivity, the application of knowledge and thinking skills, and the development of an investigative mindset. This work is based on developing individual strength-based profiles and providing advanced level targeted personalized services based on each student's profile. The SEM doesn't get rid of the word, "gifted," but the focus of services is on ***the development of gifted behaviours (e.g., Type III projects, see Appendix A)*** in any student who shows advanced levels of potential in one or more curricular or

special interest areas. In this section, the authors expand the discussion of identification to ways in which the SEM's pedagogical structures provide opportunities to identify more talented students than might be recognized in a more traditional system. For a more detailed description of the components of the Schoolwide Enrichment Model referred to below, see Appendix A or the book, *The Schoolwide Enrichment Model* (Renzulli & Reis, 2014).

When general enrichment is offered to all students, it provides them with the 21st Century skills necessary for academic and career advancement in today's rapidly changing knowledge economy, and it also serves as a form of performance-based assessment. The SEM approach is a comprehensive system of enrichment using Types I and II Enrichment for all students and all school/all student enrichment clusters to provide performance-based assessment opportunities for teachers to observe students as they participate in various types of enrichment activities. During these events, teachers and content area specialists can observe students interacting with more challenging thinking skills activities in all content areas. Teachers can subsequently make decisions about more advanced gifted or enrichment program opportunities based on actual performance as students interact with content in new contexts outside of the normal classroom routines. Enrichment clusters are a particularly valuable environment for observing opportunities for advanced follow-up, because they make use of highly engaging Types I and II activities rather than focusing mainly on received content.

Types I and II enrichment and enrichment clusters are essential parts of the SEM's potential for increasing the recognition of talented students from historically under-represented groups because they provide opportunities for problem-based learning to all students, regardless of whether the students have previously been identified for special services. These activities focus on recognizing potential and aptitude in a specific area rather than making judgments about advanced opportunities solely based on test scores. Additionally, by experiencing these enrichment opportunities throughout the school year and across grade levels, each student has many opportunities to become interested in a topic and to demonstrate his or her talents. This perspective is critical in locations where students have disadvantages that may be limiting their achievement on standardized tests or performance in required curricular areas. In a performance-based identification system, like the basketball coach conducting try-outs, classroom observations of challenging performance situations play an equal part to ability and achievement information for making decisions about advanced services. By recognizing and developing the unique strengths of children across and within domains, schools provide students with the opportunities to develop a sense of self-efficacy that promotes a growth mindset (Dweck, 2006), which often carries over to higher success rates in other areas. In other words, identification and nurturance of talents and special potentials may lead to the kinds of access to advanced opportunities that have been denied to students from historically under-represented groups and students who show their potentials in non-traditional ways that include learning and expression style differences.

The field of gifted education must become innovative enough to take the bold step of reassessing the labelling issue and defining itself as one that develops gifted behaviours and talents in any student whose performance-based assessment indicates the need for advanced opportunities, resources, and encouragement. This does not mean that continued support for the highest achievers is not a priority, that the field should minimize AP or honours courses or pull-out programs, or that there is no longer a need for highly-trained gifted education specialists in

schools. It simply means that the common-sense approach to identification routinely used by basketball coaches, band directors, arts teachers, and teachers directing school theatre productions should be a part of the overall talent development process.

Broadening the Definition of Data-Based Decision Making

One of the larger issues confronting all of education today is the way in which practitioners and scholars define and use data about students. Data-based decision making is a popular topic in today's education conversation and endless articles about "data-driven this..." and "data-driven that..." continuously appear in the education literature. A working definition of data is "recorded information on student learning," with a focus on what can be written down or systematically collected to inform instruction and the use of data in making decisions about student assessment (Emma, 2015). Most of the commentary on this topic focuses almost exclusively on things that can easily be counted (e.g., attendance, test scores, free and reduced lunch). But like others (Marsh, Pane, & Hamilton, 2006; Spillane, 2012), the authors believe that this definition is too narrow because it excludes softer data such as students' motivation, interests, learning preferences, creativity, executive functions, and the ways in which students like to express themselves. A broader definition would even legitimize softer observations like perpetual boredom or the joyful looks on students' faces when they are excited and highly involved in something that is personally meaningful (Renzulli & Reis, 2007). This observational data may be most valuable for decision making related to identifying students for talent development opportunities that may not fit neatly into traditional academic subject areas. Broadening the types of data that practitioners collect and consider to be potentially evidence of student strengths will have significant relevance to the issue of identifying students from historically under-represented groups who can benefit from special services for talent development. As the Donald Campbell quote at the beginning of this article suggests, researchers and practitioners need to examine both quantitative and qualitative information when making decisions about opportunities for identification and special service purposes.

Asking the Right Questions About Gifted Identification and Programming

As stated earlier, an intense interest in under-representation has caused the field to re-examine both the identification and services that will tap into the vast talent potential that is being lost when historically under-represented students are excluded or overlooked. America's school population is dramatically changing and society is losing out on the talent potential of people from historically under-represented groups, just as a talent loss occurred 100 years ago when young women with high potential had more limited opportunities for high-level education and employment. The recommendations described here are termed a "common sense" approach for three reasons. First, research has shown that teachers, administrators, and leaders in the field (Brown et al., 2005) are in general agreement that a broader look at what is considered to be meaningful talent identification data is necessary. Second, the key questions raised above make sense when it comes to the discussions that must take place among academics, practitioners, and policy makers. Finally, the recommendations are reasonable in terms of the amount of time, teacher training, and resources required to implement a more flexible system that will give a fairer opportunity for students from historically under-represented groups to participate in special programs.

Some Concluding Thoughts

Changing demographics mean that gifted educators must recognize that America's talent pool is also changing. If scholars and educators are to remain true to the purpose of producing the next generation of leaders, scholars, and creative innovators, then they must explore ways of providing equally high-level opportunities to anyone who can benefit from the advances in teaching and learning that have characterized the field of gifted education. From the abundance of discussions both in the popular press and special editions of academic journals, it is clear that both educators and scholars recognize the challenge. Resources, research, and flexibility in state and local regulations and guidelines are necessary next steps. The kinds of innovation and experimentation that have differentiated the field of gifted education must once again be brought to bear to the challenge of identifying and supporting these students. Validation of new and different approaches takes time, innovation, and experimentation; but both the challenge and the climate in the field show that the need to address the under-representation issue is critically important.

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Dr. Joseph S. Renzulli is a Distinguished Professor of Educational Psychology and director of the Renzulli Center for Creativity, Gifted Education, and Talent Development at the University of Connecticut. His research has focused on creative and investigative learning, talent development, and organizational models for total school improvement. Although the American Psychological Association named Dr. Renzulli among the 25 most influential psychologists in the world, he lists as his proudest accomplishment the numerous innovative applications of his Schoolwide Enrichment Model in schools around the world. He considers himself to be an on-the-ground communicator who always approaches his work from the practical perspectives of teachers. In 2018, Dr. Renzulli was listed as one of the world's top 30 International Education Professionals.

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Appendix A
The Schoolwide Enrichment Model

The SEM has three major service delivery components for students. The first is a Total Talent Portfolio that documents the academic strengths, interests, learning preferences, and preferred modes of expression. The instruments used (with all students) to identify these strengths include academic achievement tests, teacher ratings and student questionnaires across a broad range of potential talents including interests, creativity, high motivation to excel in a particular academic or artistic area, learning style preferences, and preferred modes of expression. Targeted services for individuals or small groups who share common strength-based profiles in one or more of these areas are provided with opportunities, resources, and encouragement by resource teachers with specialized training in developing gifted behaviours and whenever possible, with classroom teachers working in cooperation with the resource teachers.

The second component of the SEM is designed to promote acceleration and enrichment opportunities to students with advanced academic/lesson-learning strengths by using a differentiated teaching practice called Curriculum Compacting. This process allows high achieving students to cover regular curricular material at a faster pace at and a more advanced level of comprehension than other students (Reis, Renzulli, & Burns, 2016). This elimination or streamlining of curriculum enables above average students to avoid repetition of previously mastered work and guarantees mastery while simultaneously minimizing boredom and finding time for more appropriately challenging activities.

The third component is a series of enrichment opportunities organized around the Enrichment Triad Model (Renzulli, 2016). These three types of enrichment experiences are delivered in various organizational settings (regular classes, pull out programs, enrichment clusters, cluster groups within regular classes). Figure 1 illustrates how the model creates performance-based assessment opportunities for all students, and at the same time, allows highly interested and motivated students to pursue individual and small group investigative and creative projects at advanced levels of involvement. In schools in which supplementary personnel are available, teachers with special training in gifted education guide the development of these projects. This model differs from most other approaches to talent development in that general enrichment (Types I and II) and enrichment clusters are provided to all students through a process called infusion of enrichment activities into the regular curriculum (Renzulli & Waicunas, 2016).

Type I Enrichment is designed to expose students to a wide variety of disciplines, topics, occupations, hobbies, persons, places, and events that would not ordinarily be covered in the regular curriculum. In schools using this model, an enrichment team or parents, teachers, and students often organizes and plans Type I experiences by contacting speakers, arranging mini courses, demonstrations, or performances, or by ordering DVDs, video streaming services, or other print or non-print media. Type I experiences are designed to motivate students to such an extent that they will act on their interests in creative and productive ways. The major purpose of Type I enrichment is to include, within the overall school program, selected experiences that are purposefully developed to be motivational. This type of enrichment can also expose students to a

wide variety of disciplines, topics, ideas, and concepts. Typical Type I methods of delivery include bringing in a guest speaker, creating an interest centre, showing videos, directing students to websites, or hosting a debate.

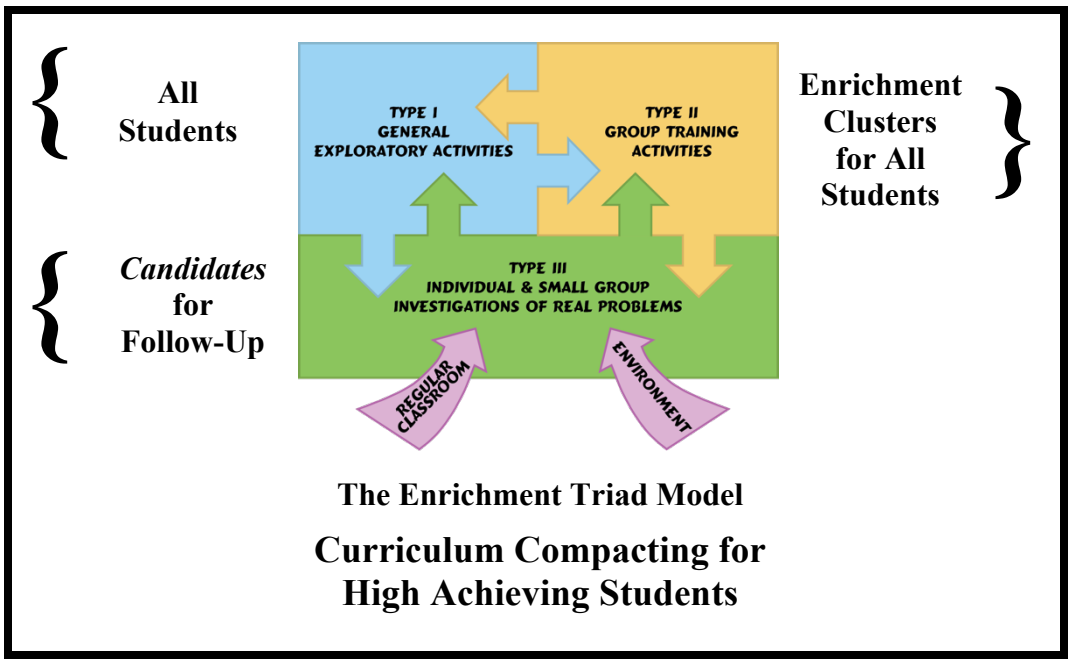

Figure 1: The Enrichment Triad Model.

Type I enrichment experiences can be based on regular curricular topics or innovative outgrowths of prescribed topics, or they can be stand-alone exposure topics in which teachers think students will have an interest. But in order to qualify as a bona fide Type I experience, any and all planned activities in this category must be designed to stimulate new or present interests that may lead to more intensive follow-up on the parts of individuals or small groups of students. Students are aware that successful Type I activities are *invitations* to various kinds and levels of follow-up. These engaging Type I experiences are dynamic in nature, include some hands-on activities rather than a "straight lecture" approach, and demonstrate investigative and creative opportunities in the topic area. A systematic debriefing of the experience will enable students to envision further involvement and the ways that follow-up might be pursued. During a Type I experience, teachers observe students' reactions to the opportunity to learn and respond by providing additional opportunities to interact with the topic to students who demonstrate interest in doing so.

Type II Enrichment includes group-training activities in the six areas listed in. Most educators agree about the need to blend into the curriculum more training in the development of higher order thinking skills and what are popularly being called 21st Century Skills. Type II enrichment includes materials and methods designed to promote the development of thinking and feeling processes. Some Type II enrichment is general, consisting of training in areas such as creative thinking and problem solving, learning-how-to-learn skills, classifying and analyzing data, advanced research, reference, and communication skills and meta-cognitive technology skills. Other Type II training is quite specific, focusing on a particular discipline or projects upon

which students may be working. Type II training is usually carried out both in classrooms and in Enrichment Clusters and includes the development of skills outlined in Figure 2. Type II experiences are often thought of as "How-To," active learning experiences, and teachers who are trained to notice and respond to the characteristics and behaviours that are indicative of high potential can use a Type II experience as a performance assessment to identify candidates for follow-up.

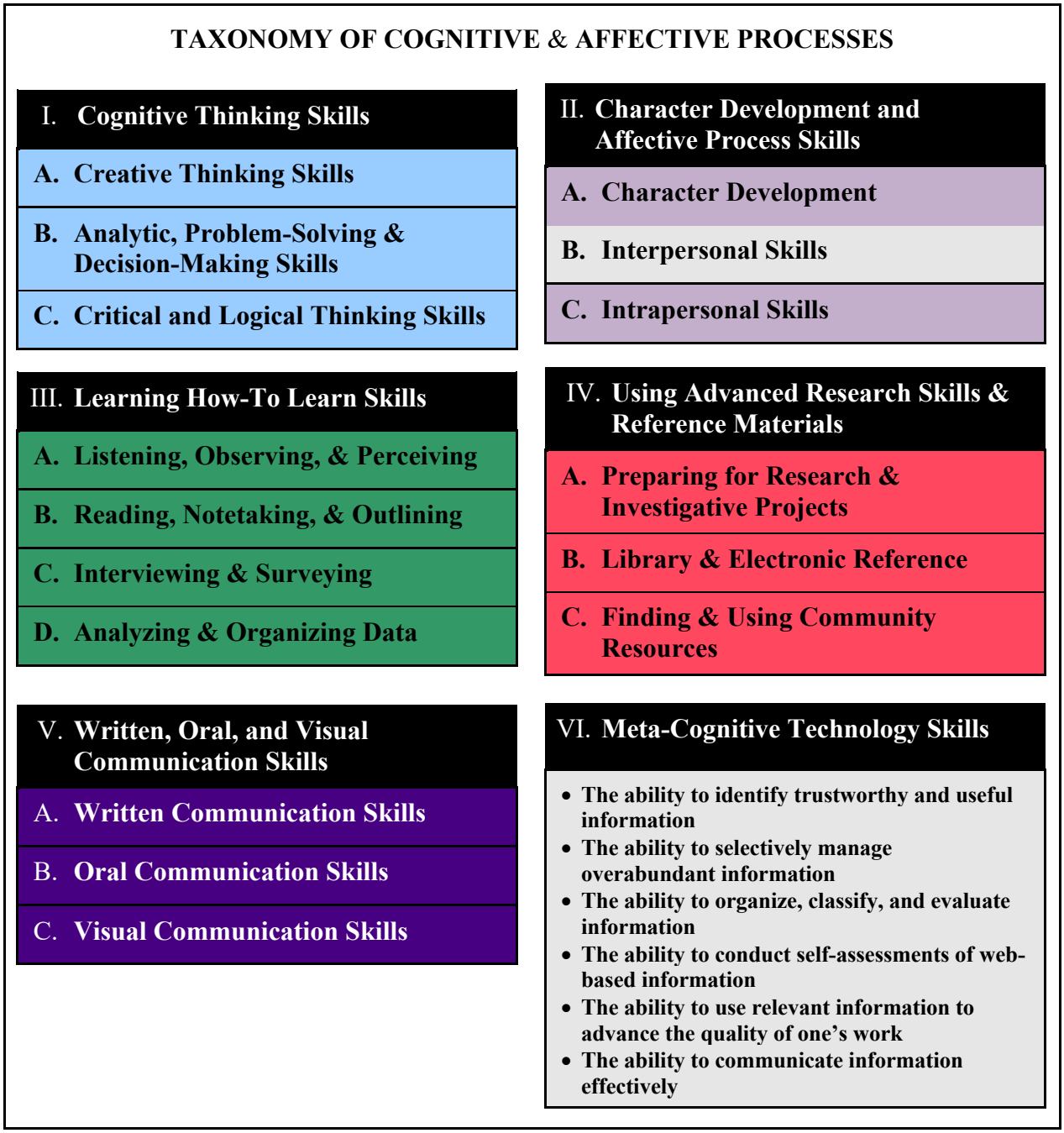

Figure 2: The Type II Enrichment Matrix.

Type III Enrichment provides enrichment opportunities for advanced level follow-up to any individual or small group based on their demonstrated motivation, abilities and interests. Students are identified for advanced learning opportunities based on their potential to demonstrate gifted behaviours as defined in the Three Ring Conception of Giftedness (Renzulli, 1978), which may be observed during or after a Type I or Type II experience, through a students' reaction to ordinary classroom activities, or outside of school (e.g., by taking the lead in a community service project or submitting a piece of personal writing to the local newspaper), and the specifications for a *bona fide* Type III Enrichment project (Renzulli, 1982). Essentially, these specifications require that the project be based on:

1. Personalization of Interest;
2. Use of Authentic Methodology;
3. No Existing Solution or "Right" Answer; and,
4. Designed To Have an Impact on an Audience Other Than or In Addition to the Teacher

The most important goal of Type III Enrichment is to create an investigative and creative mindset on the parts of students and to change the role of students from one of being a lesson learner to one of a young person thinking, feeling, and doing like a practicing professional, even if at a more junior level than adult professionals.

Another unique feature of the SEM model is a series of interest-based grouping arrangements called Enrichment Clusters that are open to all students. These clusters are planned and organized to accommodate various levels of cognitive ability and use all three types of the enrichment pedagogy mentioned above. The clusters have made SEM schools more exciting, enjoyable, and engaging places to such an extent that enrichment clusters have become the "growth stock" of the model.