NRC/GT Offers a Snapshot of Intelligence

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The more we learn about intelligence the more we need to know. Intelligence is a complex construct. We all think we know what it is; we can describe the characteristics of intelligent people and intelligent behaviors. We also recognize the quality of “products of mind” that may lead to inventions, poetry, essays, musical compositions, original dance composition, or paintings. Abstract and concrete notions of intelligence point to reasons why it is studied by researchers, educators, and the community at large. In 1996, an august group of 11 researchers and scholars associated with the American Psychological Association were charged with the responsibility of studying intelligence and preparing a “dispassionate survey of the state of the art: to make clear what has been scientifically established, what is presently in dispute, and what is still unknown” (Neisser et al., p. 78). As stated in the resulting article, we recognize that “individuals differ from one another in their ability to understand complex ideas, to adapt effectively to the environment, to learn from experience, to engage in various forms of reasoning, to overcome obstacles . . .” (Neisser et al., p. 77). The extent of these differences may be considerable; however, the extent is never exactly the same among individuals. The activation of one’s intelligence varies by time, place, circumstances, content areas, and the criteria by which it is assessed. Renzulli (1988) asserts that intellectual abilities vary “in certain people, at certain times, and under certain circumstances” (p. 21).

Is there one intelligence or many intelligences? How does one’s culture affect the recognition and nurturance of intellectual abilities? Are there developmental milestones that mark the growth of intellectual abilities of children? As educators and researchers we often lean towards the psychometric evaluation of intelligence. In the field of gifted and talented education, we reflect on Alfred Binet’s experimental work in developing a test that would clearly delineate the skills and abilities of children. The results from this test and many others developed by renowned researchers and scholars yield scores or IQs with a typical mean of 100 and a standard deviation of 15 points. There is a sense of understanding upon hearing or seeing a child’s test results. The question remains, however, do we truly understand what the results mean? Does the number blind us from the recognition of a panoply of abilities (e.g., creativity, motivation, wisdom, and perseverance), which may be equally important, but harder to quantify, predict, or compare on a consistent basis.

In the 1990s, a group of scholars and researchers convened several times to study, debate, and discuss terms associated with intelligence (e.g., talents, abilities) and how they manifest in children and youth. Their work resulted in National Excellence: A Case for Developing America’s Talent (U.S. Department of Education, 1993). This publication was the second report released by the federal government that made a statement about what we know about children’s talents and abilities. The first is known as the Marland Report (1972) that documented a consensus definition that illuminated the complexity of behaviors in multiple domains. The 1993 definition honored many of the words first used in the Marland Report and extended it in several ways:

Children and youth with outstanding talent perform or show the potential for performing at remarkably high levels of accomplishment when compared to others of their age, experience or environment.

These children or youth exhibit high performance capability in intellectual, creative, and/or artistic areas, possess an unusual leadership capacity, or excel in specific academic fields.
They require activities not ordinarily provided in the school.

Outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor. (United States Department of Education, 1993, p. 26)

Word choice and phrases were vetted carefully for meaning, relevance, and importance. Outstanding talent, as performance or potential, at high levels compared to age peers, experience, or environment made it evident that intelligence(s), talents, or abilities cannot be summarized by a number. The complexity of human abilities is still being investigated, as is the ability to measure what we think we know about intelligence. In an attempt to visualize talents and abilities, the National Research Center on the Gifted and Talented (NRC/GT) created the graphic representation below for our professional development module (Burns et al., 2002).

This visualization may be an over-simplification of talents and abilities, but it emphasizes that sometimes talents and abilities are obvious. We do not question the abilities of young children who read and understand text that is usually appropriate for middle or high school students, who demonstrate mathematical prowess and problem solving abilities that continually need to be challenged, or who create original musical compositions applauded by professional composers. Other talents and abilities may be at the early stages of emergence and need attention and nurturance to help children fully develop the requisite advanced knowledge and skills; and still other talents and abilities may be latent due to developmental levels or exposure to the domains.

Hopefully, this brief snapshot will spark further conversation about intelligence and how each of us can contribute to the recognition, understanding, and nurturance of manifest, emergent, and latent talents and abilities among children, youth, and adults with whom we interact. The potential of human beings is still being studied and the Jacob K. Javits Gifted and Talented Education Act reminds us that “Outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor.” The snapshot of intelligence is still coming into focus for many people and future scientifically-based studies will benefit all of us.

References


Intelligence Testing and Cultural Diversity: Pitfalls and Promises

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Background: Confusion and Controversy

There is a great deal of concern and debate about the low performance of racially and linguistically diverse students—African Americans, Hispanic Americans, and Native Americans—on standardized tests, as well as their under-representation in gifted education. Nowhere are the debates and controversies surrounding intelligence more prevalent than in gifted education and special education. These two educational fields rely extensively on tests to make educational and placement decisions. In gifted education, low test scores often prevent diverse students from being identified as gifted and receiving services; in special education, low test scores often result in identifications such as learning disabled, mentally retarded, and so forth. Racially and linguistically diverse students (African Americans, Hispanic Americans, and Native Americans) are under-represented in gifted education and over-represented in special education (see Council of State Directors of Programs for the Gifted and National Association for Gifted Children [NAGC], 2003; U.S. Department of Education, 2003).

There are two persistent, major debates or controversies surrounding minority students’ intelligence test performance. In one camp, scholars argue that the low test performance of minority students can be attributed to cultural deprivation or disadvantage(s); connotatively, this refers to the notion of diverse students being inferior to other students (see Rushton, 2003). Unfortunately, deficit thinking orientations are present even today (e.g., Ford, Harris, Tyson, & Frazier Trotman, 2002). For instance, Frasier, García, and Passow (1995), and Harmon (2002) argued that teachers tend not to refer racially and culturally diverse students to gifted programs because of their deficit thinking and stereotypes about diverse students. When the focus is on what diverse students cannot do rather than what they can do, then they are not likely to be referred for gifted education services.

In a different camp, scholars argue that minority students are culturally different, but not culturally disadvantaged or deficient (e.g., Boykin, 1986; Delpit, 1995; Erickson, 2004; Nieto, 1999; Rodriguez & Bellanca, 1996; Shade, Kelly, & Oberg, 1997). These individuals acknowledge that culture impacts test performance, but they do not equate or associate low performance with inferiority.

Beyond the ongoing debates about the source in intelligence, there are equally spirited and rigorous debates about the use of standardized tests with diverse groups, with the greatest attention to issues of test bias (Armour-Thomas, 1992; Helms, 1992). Publications on test bias seem to have waned in the last decade, although the Bell Curve (Herrnstein & Murray, 1994) generated renewed debates and controversy. Many test developers have gone to great length to decrease or eliminate (if this is possible) culturally biased (or culturally-loaded) test items (Johnsen, 2004). Accordingly, some scholars contend that test bias no longer exists (e.g., Fancher, 1995; Jensen 1998; 2000; Rushton, 2003). Others contend that tests can be culturally-reduced, that bias can be decreased; still others contend that tests can never be bias free or culturally neutral because they are developed by people, they reflect the culture of the test developer, and absolute fairness to every examinee is impossible to attain, for no other reasons than the fact that tests have imperfect reliability and that validity in any particular context is a matter of degree (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, hereafter referred to as “Joint Standards,” 1999).

In sum, there is little consensus in education (and psychology) about the reasons diverse students score lower on standardized tests of intelligence than do White students. Further, there is little consensus regarding the definition of intelligence, the definition of test bias, the existence of test bias, the types of test biases, the impact of test bias on diverse students, and the nature and extent of test bias in contemporary or newly re-normed tests.

With so many unanswered questions and controversies regarding intelligence, testing in general, and testing diverse students in particular, what can educators in gifted education do to ensure that these students have access to and are represented in gifted education programs and services?

Testing Issues and Diverse Populations

There is a longstanding and persistent debate regarding the equitable use of tests and assessment strategies with diverse populations. This debate and related concerns are especially prevalent in cases of high-stakes testing, where tests are used to make important and long-term educational decisions about students. As Lam (1993) observed, once test scores become numbers in students’ files, they provide the basis for high-stakes decisions.

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concerning placement, selection, certification, and promotion that are made without consideration of the inequities surrounding testing in general and testing culturally diverse students in particular.

Psychological and psychoeducational assessment is an area that has been heavily subjected to complaints about the differential treatment of diverse groups. Korchin (1980), and others contend that standardized tests have contributed to the perpetuation of social, economic, and political barriers confronting diverse groups (Padilla & Medina, 1996; Suzuki, Meller, & Ponterotto, 1996). Specifically, questions have been raised regarding whether standardized intelligence tests are biased. Tests can be biased in terms of impact (e.g., how they are used) and statistically. Tests can be biased if they treat groups unfairly or discriminate against diverse groups by, for example, “underestimating their potential or over-pathologizing their symptoms” (Suzuki et al., 1996, p. xiii). This concept is referred to as disparate impact (Office for Civil Rights [OCR], 2000) and may not be associated with statistical biases, defined next. The Joint Standards (1999) defined statistical bias as a systematic error in a test score. In discussing test fairness, statistical bias may refer to construct underrepresentation or construct-irrelevant components of test scores that differentially affect the performance of different groups of test takers. Thus, it is important to note that when tests are used for selecting and screening, the potential for denying diverse groups access to educational opportunities, such as gifted education programs, due to bias is great.

The consequences of interpretation bias are grave. For instance, because many school districts rely on a single test score to place students in gifted education programs, and given the lower performance of diverse groups on tests, this practice serves as an effective gate-keeping mechanism. Interpreting test performance—high or low—based on one test or measure must be avoided due to the limited data provided from a single score. NAGC (1997), OCR (2000), and Joint Standards (1999) have noted the serious limitations and negative consequences (e.g., disparate impact) of using one test score to identify students as gifted and to determine their need for placement in gifted education programs. In other words:

Tests are not perfect. Test questions are a sample of possible questions that could be asked in a given area. Moreover, a test score is not an exact measure of a student’s knowledge or skills. A student’s scores can be expected to vary across different versions of a test—within a margin of error determined by the reliability of the test, and as a function of the particular sample of questions asked and/or transitory factors, such as the student’s health on the day of the tests. Thus, no single test score can be considered a definitive measure of a student’s knowledge. (OCR, 2000, p. 14)

Our basic obligation as educators is to meet the needs of students as they come to us—with their different learning styles, economic backgrounds, cultural backgrounds, and academic skills. In Larry P. v. Riles (1979), the court argued:

If tests predict that a person is going to be a poor employee, the employer can legitimately deny the person the job, but if tests suggest that a young child is probably going to be a poor student, a school cannot on that basis alone deny that child the opportunity to improve and develop the academic skills necessary to succeed in our society.

Stated differently, gifted education must not only teach gifted students who demonstrate their gifts and talents, they must also address student potential and, thus, create talent development models (Callahan & McIntyre, 1994; USDE, 1993, 1998).

The Influence of Culture on Test Performance: African-American Students as a Case in Point

Culture can be defined as the collective beliefs, attitudes, traditions, customs, and behaviors that serve as a filter through which a group of people view and respond to the world (Erickson, 2004; Ford & Harris, 1999; Ford et al., 2002; Hall, 1976). Culture is a way of life, a way of looking at and interpreting life, and a way of responding to life. This definition becomes clearer when one thinks of “the terrible twos,” the teen or adolescent culture, the culture of poverty, and so forth. Members of these groups have in common beliefs, attitudes, traditions, customs, and behaviors (e.g., Storti, 1998).

In a thoughtful and compelling monograph entitled A New Window for Looking at Gifted Children, Frasier et al. (1995) state, “Manifestation of characteristics associated with giftedness may be different in minority children, yet educators are seldom trained in identifying those behaviors in ways other than the way they are observed in the majority culture” (p. 33). This statement was confirmed in a study that included teachers’ perceptions of giftedness among diverse students (Frasier et al. 1995). Likewise, Helms (1992) asks:

1. Is there evidence that the culturally conditioned intellectual skills used by Blacks and Whites generally differ and that these differences

According to the most recent report by the Council of State Directors of Programs for the Gifted and the National Association for Gifted Children (2003), in 2001-2002, only 24 states mandate non-discriminatory testing in their gifted education policies and procedures, while 18 report no such mandate (pp. 53-54). Further, several states report using one score to make placement decisions (e.g., Arizona, Oregon, Ohio).
have been equivalently incorporated into the measurement procedures?

2. Do Blacks and Whites use the same test-taking strategies when ostensibly responding to the same material, and do these strategies have equivalent meaning?

3. If different strategies are used by the racial groups, to what extent are these differences an aspect of test predictors and test criteria?

4. How does one measure the cultural characteristics of intelligence tests? (p. 1097)

The implications of these questions for educators are that, when differences in performance on intelligence tests are attributed to racial or ethnic differences, educators must recognize this explanation for the non sequitur that it is. Instead of continuing to use such measures until something better comes along, educators must challenge the scientists on whose work their test usage is based to find culturally defined psychological explanations (e.g., culture-specific attitudes, feelings, and behaviors) for why such racial and ethnic differences exist (Helms, 1992, p. 1097).

Lam (1993) discussed five assumptions (or misassumptions) that summarize the many concerns that persist relative to intelligence testing and diverse groups:

1. Test developers assume that test takers have no linguistic barriers (or differences) that inhibit their performance on tests.

2. Test developers assume that the content of the test at any particular level is suitable and of nearly equal difficulty for test takers.

3. Test developers assume that test takers are familiar with or have the test sophistication for taking standardized tests.

4. Test developers assume that test takers are properly motivated to do well on the test.

5. Test developers assume that test takers do not have strong negative psychological reactions to testing.

Promising Practices and Considerations

Intelligence tests are here to stay. However, educators are not bound by their exclusive use. Educators do not have to be “slaves” to tests; instead, they can work to ensure that tests, policies and procedures, as described below, are valid, reliable and fair. The first step is to develop culturally sensitive assumptions.

Culturally Sensitive Assumptions

The accuracy and appropriateness of the intellectual assessment process is based on a number of assumptions, a few of which were discussed earlier. Kaufman (1990, 1994) suggested alternative assumptions worthy of adoption because they offer promise in making testing more culturally sensitive:

1. The focus on an assessment is the person being assessed, not the test (Kaufman, 1990). Professionals should not become preoccupied with the IQ scores to the detriment of the individual being assessed.

2. The goal of any examiner is to be better than the tests he/she uses (Kaufman, 1990). It requires knowledge, skills, and cultural competence to make a complete and comprehensive assessment of diverse groups.

3. Intelligence tests measure what the individual has learned (Kaufman, 1990). The content of all tasks, whether verbal or non-verbal, is learned within a culture (Miller, 1996). Therefore, all tests are culturally-loaded.

4. The tasks composing intelligence tests are illustrative samples of behavior and are not meant to be exhaustive (Kaufman, 1994). Collateral information (e.g., learning styles, motivation, interests, health) must be collected to develop a profile of an individual’s strengths and weaknesses and to, then, develop educational interventions and opportunities.

5. Intelligence tests measure mental functioning under fixed experimental conditions (Kaufman, 1990). As such, how individuals will demonstrate their intelligence in other settings cannot be accurately predicted without gathering extensive information—test information and non-test information—on individuals in other settings.

6. IQ tests must be interpreted on an individual basis by a “shrewd and flexible detective” (Kaufman, 1990, p. 27). Professionals must investigate all information collected on students in order to provide a comprehensive picture of the individual in his/her cultural context.

7. Intelligence tests are best used to generate hypotheses of potential help to the person; they are misused when the results lead to harmful outcomes (Kaufman, 1990). Too often, data obtained from intelligence tests have been used to indicate the inferiority of culturally diverse groups (see lengthy discussions on this topic by Gould, 1995 and Fancher, 1995). Professionals need to move beyond deficit thinking when assessing diverse populations (Ford et al., 2002; Samuda, 1998).

8. Validity and reliability are not only established by test developers, they are also established by test users and interpreters. Sandoval, Frisby, Geisinger, Scheuneman, and Grenier (1998) offered the following recommendations relative to promoting equitable assessments with diverse groups; these recommendations focus primarily on ways to improve interpretations of diverse students’ scores.

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a. Identify preconceptions—professionals must identify their conceptions and viewpoints—negative and positive—about diverse groups, and recognize that these perceptions influence their assessment of diverse groups.
b. Develop complex schemes or conceptions of groups—A major problem with interpreting the test scores of diverse groups is that results are examined with little regard to the many factors that affect the lives and performance of these groups.
c. Actively search for disconfirmatory evidence—When using and interpreting test scores, especially low test scores, of diverse groups, professionals must constantly search for alternative explanations. For example, central questions are: “Did the individual have the opportunity to learn the information or to express it on the test?” “How does the individual’s culture affect his/her test performance?”
d. Resist a rush to judgment—Professionals must be reflective, thoughtful, inquisitive in their practice of interpreting and using test scores with diverse groups. In order to avoid rushing to judgment, Kaufman (1994) recommended that professionals spend time interacting in the neighborhoods that are serviced by their schools as a firsthand means of learning local cultural values, traditions, and customs.

Summary—Guiding Principles for Equitable and Culturally Responsive Assessment

Regardless of whether one is using traditional intelligence tests or tests considered to be less culturally-loaded, testing, assessment, test interpretation, and test use must be guided by sound, defensible, and equitable principles and practices. The following guiding principles are offered for consideration:

1. Every school system must be committed to equity in finding potentially gifted students; this goal is non-negotiable (Frasier et al., 1995).
2. In addition to examining test bias, we must examine test fairness (Gregory, 2004). We must not become complacent in the belief that finding a test to be unbiased means that the test is fair—an unbiased test can still be unfair (Gregory, 2004). Test bias and test fairness should be explored.
3. The effects of threats to a test’s validity and reliability must be examined and considered when interpreting and using test scores (Joint Standards, 1999).
4. A given pattern of test performances represents a cross-sectional view of the individual being assessed within a particular context (i.e., ethnic, cultural, familial, social) (Joint Standards, 1999).
5. There is no test score that can tell, ex post facto, the native potential that a student may have had at birth (Samuda, 1998); Do not overvalue IQs or treat them as a magical manifestation of a child’s inborn potential (Kaufman, 1994); do not over-interpret test scores by assigning them undue power.
6. Test scores should not be allowed to override other sources of evidence about test takers (Joint Standards, 1999).
7. In educational settings, a decision or characterization that will have major impact on a student should not be made on the basis of a single test score (NAGC, 1997). Other relevant information should be taken into account if it will enhance the overall validity of the decision (Joint Standards, 1999).
8. Comprehensive assessment, the gathering of a wide range of information about test takers, helps to place test scores into a socio-cultural context by considering how an examinee’s performance is influenced by acculturation, language proficiency, socioeconomic background, and ethnic/racial identity (Samuda, Feuerstein, Kaufman, Lewis, & Sternberg, 1998) . . . comprehensive assessment is a continuous process and the assessor must learn as much as possible about the test taker’s culture . . . and level of acculturation.
9. It is the responsibility of those who mandate the use of tests to identify and monitor their impact and to minimize potential negative consequences. Consequences resulting from the uses of the test, both intended and unintended, should also be examined by the test user (Joint Standards, 1999).
10. In cases where a language-oriented test is inappropriate due to the test takers’ limited proficiency in that language, a non-verbal test may be a suitable alternative (Joint Standards, 1999). Both verbal and non-verbal tests can provide balanced and important information about diverse students (Samuda et al., 1998).
11. When interpreting test scores, the examiner or tester must take into account that many traditional tests have not been normed adequately with various cultural groups (Samuda et al., 1998); test users must be constantly aware of the limitations of standardized tests (Kaufman, 1994).
12. The ultimate responsibility for appropriate test use and interpretation lies predominantly with test users (Joint Standards, 1999); they must gain experience in working with culturally diverse groups in order to improve their ability to interpret and effectively use test scores (Kaufman, 1994).
13. Tests selected should be suitable for the characteristics and background of the test taker (Joint Standards, 1999). Test scores must not be interpreted and used in a color-blind or culture-blind fashion (Ford, 1996).

14. Every effort must be made to eliminate prejudice, racism and inequities and to provide accurate and meaningful scores linked to appropriate intervention strategies (Samuda et al., 1998). Essentially, test scores should be used to help students, not to hurt them.

Conclusion

Selecting, interpreting and using tests are complicated endeavors. When one adds student differences, including cultural diversity, to the situation, the complexity increases. A discussion on the nature-nurture debate was discussed briefly. Little attention was given to this controversy because the discussion is convoluted—for every publication that convincingly argues for the heredity position, an equally compelling publication argues for the environmental position. Likewise, for every publication that argues persuasively against the existence of test bias, a counterargument convincingly contends that tests continue to be biased against diverse groups.

There is no debate, however, that culturally and linguistically diverse students are consistently underrepresented in gifted programs. Under-representation exists primarily because of diverse students’ performance on traditional intelligence tests. These tests have served as gatekeepers for diverse students. Suggestions for ensuring equitable, culturally responsive assessment practices were provided, along with attention to alternative tests—non-verbal ability tests. Professionals must be vigilant about finding and solving factors that hinder the test performance of diverse students. Tests are tools. The ultimate responsibility for equitable assessment rests with those who develop, administer, interpret, and use tests. Tests in and of themselves are harmless; they become harmful when misunderstood and misused. Historically, diverse students have been harmed educationally by test misuse. The pedagogical clock is ticking. What better time than today to be more responsible in eliminating barriers to the representation of diverse students in gifted education. A mind is a terrible thing to waste; a mind is a terrible thing to erase (Ford & Harris, 1999).

References


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**Bilingual—LEP Students**


The Challenge of Bilingual and Limited English Proficient Students

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Salina is an attractive blond and blue-eyed 13-year-old seventh grader who hardly ever says a word in school. When she does, people have difficulty understanding her heavily accented English. The other Spanish speaking students do not accept her readily because of her fair skin and blue eyes, and they laugh at her Spanish accent, too. She comes from Chile. There, Salina was a popular student with many friends and highly regarded by her teachers. She had been in the top 10% of her class—bright and curious, a talented artist. In this country things are very different for her.

Because the Chilean school year ranges from January to December, Salina had to leave her friends and her school in the middle of the year to start the US school year in August. The family had seen the move as an adventure, an opportunity to improve their circumstances and provide a better future for the children. Salina soon found her new middle school a confusing place where teachers were annoyed when she asked questions and students did not like her showing her intellectual ability. Salina was put in a low level academic class because of her limited proficiency in English. She found the work boring—basic facts she already knew, reams of worksheets and endless rote vocabulary practice. She feels she can not tell her family at home how lonely she is and how much she dislikes school.

Salina is one of a projected 48.2 million children attending school in the United States in 2004 (National Center for Educational Statistics, 2004). She is also one of 18% of the population over age 5 who speak a language other than English at home (U.S. Census Bureau, 2003), and one of 8% of the same population who speaks English “less than well” (National Center for Educational Statistics [NCES], 2003). Salina has the misfortune to attend one of the 13% of public schools in the United States that offers neither an English as Second Language nor a bilingual program (NCES, 2003, 1997) and is more likely to be placed in special education classes and, as a Hispanic, less than half as likely as a White student to ever be placed in a program for high achieving and gifted students (Donovan & Cross, 2002).

These facts are important because our society needs well educated citizens to preserve our liberty and well being (Jefferson, 1787). Therefore it is crucially important to educate each child for the benefit of society and the future of the United States, and this includes English Language Learners, this rapidly growing segment of the school population (see Figure 1). From the above statistics, it is clear to see that high ability students who speak a language other than English is no longer a challenge only for selected school districts in isolated states with high immigration numbers. As those in education struggle to come to terms with changing federal and state policies, we have to take the education of bilingual and limited English proficient students very seriously.

Stakeholders are in conversation about the issue. At the Education Summit in Charlottesville, Virginia in 1989, then President Bush and the nation’s governors declared the need to work to “ensure that a significant number of students from all races, ethnic groups, and income levels are among our top performers” (Castellano, 2002, p. 95). In 1997, the first partnership meeting between leaders of bilingual/ESL education and gifted education came together under the auspices of the United States Department of Education Office of Bilingual Education and Minority Language Affairs and the Office of Educational Research and Improvement to discuss on a national level how to best develop the talents of high ability students who speak English as a second language (Varoz Rogers, 2001). Policy is not enough. Teachers are in the frontlines of educating the youth of America.

<table>
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<tr>
<th>Rank (estimate*)</th>
<th>Language</th>
<th>LEP Students (estimate*)</th>
<th>% of LEPs (estimate*)</th>
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<tbody>
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<tr>
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<td>Navajo</td>
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From: http://www.ncela.gwu.edu/stats/toplanguages/rank.xls

Figure 1. Top ten languages spoken by linguistically diverse populations in the United States.
Teachers can be instrumental in developing the talents and skills of this group of underserved students who will have to take leadership roles in a diverse United States of the future. Teachers have to look at the Salinas and other culturally diverse students in their classrooms, recognize their potential, and support their talent development.

There are students like Salina in many classrooms across the country, and some teachers are learning to recognize their potential through eye opening experiences. Carla was a fourth grader from Honduras who had been learning English for only 2 years when her teacher, Jo Ann Robisheaux, assigned acrostic poems to her class of limited English proficient students for a writing project. Ms. Robisheaux confesses that she had doubted her students’ ability to communicate in their second language. This is what Carla wrote:

How wonderful it was
On the boat
Near the mouth of the river at
Dawn. The sun was pointing at me
Under the roof of the boat. The
River was wonderful when the sun was pointing at me
And the boat was soft in the water;
Soft, very soft in the water.

Carla 4th grader

From this experience, Ms. Robisheaux recognized that Carla was imaginative and showed the cultural sensitivity of her language in her writing. It gave Ms. Robisheaux a new understanding of students with diverse linguistic backgrounds. She started paying attention to procedures at her school so that limited English proficient students would not automatically be labeled “slow learners,” and she began investigating the teaching strategies that were recommended for gifted students and adapted those strategies for LEP students (Robisheaux, 1997).

Gifted and Talented Students

Gifted education innovations have often lead the general education world in devising best practices for educating the youth of America (Renzulli, in press). There is no federal legislation governing the definition of, or services for, gifted and talented students (Donovan & Cross, 2002). The first federal definition of giftedness (Marland, 1972) suggests 6 different categories of students that qualify for services as gifted students. It includes athletically talented students. The federal definition currently in operation was formulated in 1993.

These children and youth exhibit high performance capability in intellectual, creative, and/or artistic areas, possess an unusual leadership capacity, or excel in specific academic fields. They require services or activities not ordinarily provided by the schools.

Outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor (Emphasis added) (U.S. Department of Education, 1993, p. 26).

This definition is a guideline only. Each state has the prerogative of defining giftedness and designing its identification procedures and services. The literature suggests that most gifted programs serve students who are White, middle class, easily identifiable by “objective” means such as standardized tests (Frasier, 1995; Karnes, 2003). Despite the last sentence in the current definition, only seven state definitions specifically mention culturally diverse groups by name, including Native Americans, Hispanics, Asians, and African Americans, two states include an “English as Second Language/English Language Learners” category, and two states specifically include a “culturally diverse” category (Karnes, 2003).

The identification procedures for gifted programs used in the majority of school districts in the country are still heavily weighted in favor of IQ and standardized test scores (Castellano, 2002; Kogan, 2001). If test scores are the primary method of identifying students for gifted programs, diverse students, and especially students with limited English proficiency are at a serious disadvantage. The test bias and cultural aspects of tests have been adequately discussed elsewhere (Castellano, 2002; Eels, Davis, Havighurst, Herrick, & Tyler, 1951; Richert, Alvino, & McDonnel, 1982). Few people dispute these findings and the negative effect these identification practices have on the identification of a diverse population of students for special services.

Many districts are utilizing a variety of measures such as teacher nominations, parent nominations, self nominations, and portfolios (Kogan, 2001; Frasier et al., 1995; Renzulli, 1983) in an effort to bring more equity to the identification process. What is not often discussed is the cumulative effect of teacher bias when using a matrix of measures as identification procedures for gifted programs (Castellano, 2002; Kogan, 2001). Three types of bias may diminish teachers’ ability to recognize high ability: linguistic bias, communication style bias, and cognitive style bias (Tomlinson et al., 2003). Linguistic bias refers to the fact that students’ knowledge may not be recognized because of language errors they make in testing situations, academic settings, and/or social conversation. Communication style bias refers to teachers who are not familiar with expression styles of different ethnic groups and therefore misjudge the intent and gist of
communication by their diverse students. Cognitive style bias may influence identification of high ability students when they express their ability in ways not matching standardized test performance requirements, or teachers’ expectations of how ability should look. Additionally, lack of fluency in English is often erroneously equated with lack of ability in higher order and critical thinking skills (Shaklee & Hansford, 1992). It is no wonder that teachers are unable to recognize high ability in ELL students, since only 30% of public school teachers who are instructing ELL students have received any training for teaching such students and fewer than 3% of teachers with ELL students in their classes hold a degree in ESL or bilingual education (NCES, 1997, 2003).

A variety of factors apart from the cultural ones mentioned above, can prevent children from fully demonstrating their intellect. Poverty is often found in conjunction with cultural diversity (Donovan & Cross, 2002; Myers & Curtiss, 2003). The difficulties experienced by economically disadvantaged students are similar to those experienced by culturally and linguistically diverse students. A lack of access to stimulating educational materials and experiences can hinder children’s early intellectual development (Bainbridge, 2002), nutritional deficiencies can compromise their ability to concentrate, interpersonal skills can be delayed by social isolation, and trauma from the immigration process and their country of origin experiences can depress their overall functioning (Schwartz, 1997). Not all students who live in poverty perform poorly academically, but poverty seems to be one of the factors that best predicts low academic performance (Dorman, 2001). Another factor in the lack of student achievement is teacher expectation (Educational Research Service, 1998). Rather than establishing a demanding, yet nurturing environment for LEP students, teacher expectations are lower for these students.

In the meantime, many students like Salina and Carla come to our schools hopeful of an education that will enable them to take their place as knowledgeable citizens of the United States. They continue to find, however, little recognition of their culture, language and “funds of knowledge.” The question remains: What can be done to give these LEP students the opportunity to develop their talents and help them rise to the top?

**Where Do We Begin?**

Many schools and districts seem to approach talent development from a programming perspective: We have a program. Which students qualify for these services? A better approach might be to look at talent development from a student perspective: We have students with strengths and weaknesses. How can we best serve them?

Several studies have highlighted exemplary programs to serve diverse populations of students (Delcourt, 1994; Tomlinson et al., 2003). These programs have the following philosophical approaches in common: They focused on

- recognition that a problem of underrepresentation of diverse students exists, and the inclusion in their written policies of intent to identify underserved populations,
- increasing awareness among faculty of cultural impact on student academic performance, and focusing on individual needs of all students, with specific reference to characteristics of diverse populations of students,
- the establishment of program support to help program coordinators and teachers make necessary changes to help develop the talent of these students, and
- parental and community involvement, which is seen as vital to the success of these programs and each child’s education.

Many scholars have addressed the issue of identification of diverse students for gifted programs. Some of their suggestions appear in Table 1.

Paying attention to these potential characteristics will be helpful in identifying diverse students for gifted services. It makes no sense, however, to adjust the identification procedures for these students and not adjust the content of gifted education programs to the needs of these students. Many gifted education programs use language-rich curriculum and teaching strategies, with advanced reading and advanced writing expected. There are very few gifted programs that even consider the English language difficulties experienced by minority students or the benefits of their bilingualism. Just as the merits of gifted education continue to be debated, so do the benefits of bilingualism. There is a significant body of research that shows that bilingualism is associated positively with greater cognitive flexibility (Hakuta, 1990), yet there is a lingering belief in many quarters that bilingualism constitutes a deficit, rather than a strength.

In teaching students from diverse backgrounds, one has to consider three issues: (a) language, (b) culture unique to each student, and (c) asynchronous development common to all gifted students.

**Language**

A teacher of English language learners needs to consider the student’s literacy in both his/her primary language (L1), and in English (L2). There is a difference between conversational or social literacy and academic literacy. Many students are quite proficient in social situations that require verbal language skills, but have no experience with academic language and academic skills. The higher they
Culture
Culture impacts all students and teachers. The cultural mix influencing people shapes their perceptions, the way they interact with peers and authority figures, and the way they interpret what they read and learn (Soltero, 2004). Culture as defined in anthropological terms, includes all the ways of living a group of human beings builds up and then transmits to the next generation (Cross, Baker, & Stiles, 1977). The heritage culture of immigrants, the home culture and customs, the community in which a student lives, and the influences of school culture and popular culture all contribute to the varied tacit knowledge and background knowledge of students. If this knowledge and background differs from that of the teacher, it creates potential for misunderstandings. Teachers who are sensitive to student needs may often find answers to perplexing questions about their students in the mix of cultures these students experience (Granada, 2002). Parental and community involvement is critical to help teachers understand their students. Community members can also make valuable contributions to the multicultural knowledge base in the school by sharing their experiences and resources and acting as mentors.

Asynchronous Development
The final issue that creates great complexity in teaching diverse gifted students is that of asynchronous development. This refers to a student’s development at a pace different from his/her peers or when a student develops intellectually beyond his/her chronological age. It is generally recognized as being a clue to giftedness. When dealing with culturally diverse students, there is another level of asynchronicity to consider – the cultural difference, and the linguistic difference (Soltero, 2004). Teachers have to understand the characteristics used for identifying gifted students, but they must also learn to

Table 1

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Indicators of Superior Ability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Skills</strong></td>
<td><strong>General descriptions</strong></td>
</tr>
<tr>
<td>Communication</td>
<td>The ability to manipulate a symbol system</td>
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<tr>
<td>Skills</td>
<td>The ability to communicate fluently with peers and within community, even if using nonstandard English</td>
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<tr>
<td></td>
<td>Verbal aggressiveness, often inhibited in females</td>
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<tr>
<td>Imagination/creativity</td>
<td>Creativity and artistic ability</td>
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<td></td>
<td>Is good at finding other uses for things</td>
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<tr>
<td>Humor</td>
<td>The ability to see ambiguities and disparities</td>
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<td></td>
<td>The ability to see the ridiculous, absurd</td>
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<tr>
<td>Inquiry</td>
<td>Likes to try new things</td>
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<tr>
<td></td>
<td>Is observant</td>
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<tr>
<td></td>
<td>Is curious</td>
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<tr>
<td></td>
<td>Likes to read</td>
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<tr>
<td>Insight</td>
<td>Independent thought</td>
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<tr>
<td></td>
<td>Grasping new ideas quickly</td>
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<tr>
<td></td>
<td>Making jumps in understanding</td>
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<td></td>
<td>Coping with abstract concepts before peers</td>
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<tr>
<td>Memory</td>
<td>The ability to store and retrieve large amounts of information</td>
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<tr>
<td></td>
<td>The ability to manipulate concepts to aid memory</td>
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<tr>
<td>Problem Solving</td>
<td>The ability to use stored knowledge to solve problems</td>
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<td></td>
<td>Finds many solutions to a problem</td>
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<td>Motivation</td>
<td>Has a strong sense of self, pride, and worth</td>
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<td></td>
<td>Shows personal initiative, leadership ability and an independent mind</td>
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<tr>
<td>Reasoning</td>
<td>The ability to think logically</td>
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<tr>
<td></td>
<td>The ability to reason by analogy</td>
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<tr>
<td></td>
<td>The ability to extrapolate knowledge to different circumstances</td>
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<tr>
<td>Affective Skills</td>
<td>Nuclear and extended family closeness is highly valued</td>
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<td></td>
<td>Resiliency, or the ability to cope with school while living in poverty with dysfunctional families</td>
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<td></td>
<td>The ability to take on adult roles at home, such as managing the household and supervising siblings, even at the expense of school attendance and achievement</td>
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<tr>
<td></td>
<td>Requires touching, eye contact, feeling of support to achieve maximum academic productivity (affective needs)</td>
</tr>
<tr>
<td>Cultural Skills</td>
<td>An understanding of one’s cultural heritage</td>
</tr>
<tr>
<td></td>
<td>Able to function successfully in two cultures</td>
</tr>
<tr>
<td>Collaboration</td>
<td>Accomplishes more, works better in small groups than individually</td>
</tr>
</tbody>
</table>

understand how gifted behaviors may differ in a cultural context (Briggs & Reis, 2004).

**Curricular Considerations**
Economically disadvantaged children respond to special instructional techniques and curricular considerations that reinforce their talents (Baldwin, 1985). Recommended practices include use of mentors, community involvement, use of concrete examples of abstract concepts, development of creative skills, and focus on affective needs (Udall, 1989). By giving students the opportunity to participate in appropriately challenging enrichment experiences while taking into account language and cultural differences, teachers allow students to demonstrate their abilities within the context of instruction (Renzulli & Reis, 1985; 1997).

Several authors have suggested best practices for bilingual and limited English proficient students of high intellectual ability. These authors are in agreement about the following: Use concrete materials and examples as well as hands-on learning experiences to teach abstract concepts; build on student strengths and what they can do well, while incorporating basic skills when necessary; concentrate on affective needs; and encourage mentors. The remaining suggestions are summarized in Table 2.

**Instructional Strategies**
Teachers could make simple adjustments in instruction to increase the understanding of limited English proficient students like Salina. Give them a preview of important vocabulary to be used in the lesson, not only basic words, but also conceptual vocabulary. Use pictures and concrete examples to make vocabulary comprehensible. Make a habit of using graphic organizers and concept mapping. Allow Salina to do her thinking and processing in Spanish.

Encourage her to use graphics and pictures to demonstrate what she has learned. Work with mentors and community members to provide resources in her heritage language. Find a study buddy for Salina who can collaborate with her, especially in translating her thinking into English.

Imagine the following scenario: Salina’s seventh grade social studies class is studying South America. Salina and her family can be utilized as resources for information on Chile. Her parents could be asked to speak to her class about their experiences in Chile. They could bring artifacts to school for students to explore. Their family photos could make a strong connection between the theory they are learning in their class, and the reality of people who have first hand knowledge of life in that country. Getting to know Salina and her family might mitigate the rejection she is experiencing from her classmates. Perhaps there are more students in the class from other countries in South America. Imagine a round table discussion between students and their parents about the economic systems in their respective countries, about cultural values important in their home countries, about the similarities and differences in language, food, clothing, music, even political systems! Imagine a South American fiesta where students from various countries bring food and music they love, and perhaps make oral presentations about their countries. There might be a student in class who is linguistically gifted and who would be willing to interpret for Salina if she makes her presentation in Spanish. The richness of the learning that would take place as compared to information in a textbook, is exciting and would energize all students in class. It would also show these students (and their parents) that their contributions are valued.

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**Table 2**
*Suggested Best Practices in Curriculum for High Ability English Language Learners*

| Use Strengths | Use creative and problem-solving strengths  
| Aim instruction and language development at students’ ability level, both linguistically and conceptually |
| Curriculum | Use content-rich curriculum that increases challenge and interest  
| Use instructional examples relevant to students’ culture and experience |
| Build on students’ prior knowledge |
| Develop oral and written language |
| Include leadership training as an important part of the curriculum |
| Community | Use community members and parents as mentors and resources |
| Affective Component | Promote students’ self-esteem through valuing them, their strengths, languages, cultures, and experiences |
| Emphasize counseling services as a central part of the program |
| Instructional Sequencing | Sequence information, presenting information and skills in developmental order |
| Cluster information. It enables students to determine connections among ideas and skills |
| Encourage student use of prior concepts and skills in the acquisition of new concepts and skills by paralleling information |
| Teach backwards: students learn from unknown and abstract—inductive learning |

Udall (1989); Kaplan (1999); Granada (2002); Kogan (2002)
Assessment Considerations

Any assessment should be clearly linked to learning objectives to be useful (Hales & Marshall, 2004). Both teachers and students are consumers of assessments. By using assessment tools wisely, these assessments can inform Salina’s learning and the teacher’s instruction. When selecting assessments for use with high ability students with linguistic difficulties, consider the following: Selected response measures or multiple choice questions are heavily impacted by language difficulties. These questions and possible answers are often densely and concisely constructed. Salina would have great difficulty understanding the difference between the available options on the following question unless she had been coached well in vocabulary:

As viewed from above the Northern Hemisphere, the Earth’s orbit is _______________________. (4)
A. Counter-clockwise  B. Circumferencable
C. Diometrical  D. Clockwise

It might be a good idea to include a diagram with each option to illustrate the meaning of the words.

Performance assessments, such as rubrics and checklists can also be used as teaching tools. It is important to delineate the essential components of the task clearly. Consider this example from a poetry project where students had to collect their favorite published poems and also poems they have written during the span of the poetry unit (De Wet, 2002).

This rubric is simple and clearly stipulates the components of the task. It can be used to explain what will be expected beforehand. For English as Second Language students, the teacher may consider allowing favorite poems in the portfolio, and provide a base for communication between students, teachers, and parents (Granada, 2002). Salina’s portfolio might contain information about her style preferences such as My Way: An Expression Style Inventory (Kettle, Renzulli, & Rizza, 1998). This inventory is available on http://www.gifted.uconn.edu/sem/exprstyl.html and forms part of a Total Talent Portfolio as described by Renzulli (1985). Including examples of her work in all subjects at various times during the semester provides a basis for discussion among Salina’s teachers about her strengths and needs. It also provides demonstrable evidence of her development to her parents. By involving Salina in the conversation about which pieces to include in the portfolio, her teacher has the opportunity for meaningful discussion with Salina about her needs, her strengths, and her emotional well being.

Poetry Portfolio Rubric

Table of contents properly organized and complete: ……. /10 points
Five favorite poems properly presented, spelling correct ……. /15 points
Ten self-created poems, correctly written and laid out ……. /20 points
Illustrations for any five poems ……. /5 points
Total points ……. /50 points

Conclusion

Salina’s parents brought her to this country to maximize her chances at a prosperous future. Unless her teachers help her develop her strengths and compensate for her needs, that chance will always remain a dream. It takes a small adjustment in how teachers view their limited English proficient students. Rather than seeing them as blank slates with no or very little knowledge to help them through school, teachers could view them as contributors of knowledge not usually part of the curriculum. Rather than seeing their lack of proficiency in English as a deficit, see them as people who have a skill many of us do not have – the capacity to communicate in more than one language. Rather than seeing them as a drain on our limited resources, see them as bringing a wealth of experience, cultures and languages to our classrooms. See them as a precious commodity—talent in need of developing.

Perhaps you have a student like Salina in your classroom. Perhaps there is a Carla who will surprise you around the next bend with a talent you had not noticed before.

Remember that you are all people and that all people are you.
Remember that all is in motion, is growing, is you.
Remember that language comes from this.
Remember the dance that language is, that life is.
Remember.
—From “Remember” by Joy Harjo

References


(continued on page 8)