# Achievement of African American and Caucasian Students Referred and Placed or Not Placed in Gifted Programs

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*The identification of students who are gifted traditionally has been grounded in criteria with an emphasis on unitary measures of intellectual ability. The purpose of this research was to evaluate the performance of elementary school children in a Southeastern state identified as gifted using an assessment process based on MI theory, the Problem Solving Assessment, with a comparable group of students referred for assessment but not identified as gifted. We compared scores on statewide end-of-grade reading and math tests to evaluate the performance of African American and Caucasian students. Although scores for African American students were below those for the Caucasian peers in both groups, the difference between the groups was smaller in reading and mathematics for students identified and placed in gifted programs. We discuss the implications of our findings as they related to identification and program development.*

If it is a reasonable goal to meet the educational needs of all children, then it is appropriate and expected to provide services to nurture children who are gifted and talented as well; however, public schools chronically underserve these youngsters (Baldwin, 2004, Donovan & Cross, 2002; Ford, 2006; Frasier, Garcia, & Passow, 1995; McBee, 2006). This is especially true for low-income and minority groups, such as African American, American Indian, and Hispanic students

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(Baldwin, 2004; Coleman & Gallagher, 1995; Ford, 2006; Frasier et al., 1995; McBee, 2006). Commonly, the proportion of African American and Hispanic students in gifted education is less than half of that in the wider school population (Donovan & Cross, 2002; U.S. Department of Education, 1993). The problem was so widespread that gifted programs were seen by some as "the most segregated educational programs in the United States" (Ford, 1995, p. 52).

The underrepresentation of minority and/or culturally diverse groups in programs for gifted and talented students often is viewed as an outcome of the identification process (Callahan, Tomlinson, & Pizzat, 1994; Coleman, 2003; Donovan & Cross, 2002; Fordham & Ogbu, 1986; Frasier, 1980; Frasier et al., 1995; Johnsen, 2004; Maker, 1992; Maker, Nielson, & Rogers, 1994; McBee, 2006; National Research Council, 2002; Reid & Romanoff, 1997a; Reid, Udall, Romanoff, & Algozzine, 1999, Renzulli, 1986; Sarouphim, 1999b; VanTassel-Baska, 2002; VanTassel-Baska, Johnson, & Boyce, 1996; VanTassel-Baska & Little, 2003; VanTassel-Baska, Zuo, Avery, & Little, 2002). The potential for bias and arguments about human cognition provide the basis for interest in using more authentic assessments in identification and placement practices. Accordingly, human knowledge and skill manifest in particular activities, contexts, and cultures (Resnick, Levine, & Teasley, 1991). Data on the effects of alternate assessment practices are sparse and in an extensive review of available research, we found few longitudinal investigations.

According to the National Association for Gifted Children (NAGC; 2006, para. 2),

> In 2002, the National Research Council published *Minority Students in Special and Gifted Education*. The volume contains information about the striking overall pattern of underrepresentation of CLED students in programs and services for the gifted and talented. The Committee on Minority Representation in Special Education, the task force that authored the work, drew several conclusions and generalizations:
>
> - The limited minority presence among top students is found using virtually all traditional measures of academic achievement, including school grades, standardized test scores, and class rank.

- Extensive underrepresentation is present at all levels of the educational system, beginning in kindergarten.
- The limited presence of several minority groups among high achieving students cuts across class lines, that is, "substantial minority-majority achievement gaps exist at all social class levels as measured by parent education and family income." (National Research Council, 2002, p. 81)

NAGC went on to say:

> These conclusions are a call to arms for every practitioner in our field. If we are to provide equitable access to high-level services and programs, we must address the striking patterns of disproportionality that exist in gifted programs and services in all parts of our country. (para. 3)

Our research adds to the knowledge base on alternate and authentic assessment procedures in gifted education. We believed that following students identified through an alternative assessment for several years and comparing their state test scores and student progress made in the gifted classroom at every grade level was essential to moving forward in efforts to include underrepresented groups in programs for the gifted. In our view, outcomes from the alternate identification processes are vulnerable to criticism without looking at identified students' progress over a period of time. These elements are essential in any assessment to allocate educational opportunities equitably. Those who are not in favor of equity or new approaches to identification could easily criticize support for alternative assessments that do not meet fundamental conditions, such as validity and reliability. If one truly holds that talent and ability exist abundantly in children across all economic and racial lines and that exact methods discriminate against some groups, then there should be little hesitation about using alternative assessments to identify students for gifted and talented programs. Our research represents an important point of departure in efforts to alter the long-standing problems related to representation of diverse students in gifted and talented education programs.

## Method

The purpose of this study was to compare the achievement, over a 4-year period, of African American and Caucasian students identified and placed in a gifted program using an authentic process with that of their peers who were referred because of comparable high achievement but not identified as gifted. Scores on high-stakes annual assessments, the North Carolina End-of-Grade Tests, were available for all students to measure classroom progress. The research addressed two hypotheses:

- End-of-grade scores on high-stakes reading assessments for African American and Caucasian children identified using authentic assessment will not differ from those of peers referred but not selected in programs for the gifted.
- End-of-grade scores on high-stakes mathematics assessments for African American and Caucasian children identified using authentic assessment will not differ from those of peers referred but not selected in programs for the gifted.

### Participants

Students from a large school district in the Southeastern region of the United States participated in this study. The district was the 25th largest school district in the United States with 86 elementary schools, 28 middle schools, 14 high schools, and 11 special schools at the time of the study. The district is primarily urban, although visits to schools in the county reveal inner city, suburban, and even rural areas. Approximately 42% of the students were African American, 50% were Caucasian, and 8% Asian, Hispanic, or American Indian. Busing was evident throughout the county for desegregation purposes. Magnet schools offering specialized programs were available by lottery application in the spring of each school year.

Initially, all data from the assessments over the 4 years from the 14 sites were reviewed for 230 students previously randomly selected by university partners to be part of an evaluation of classroom progress in the gifted program. For consistency, a decision was made to include only those children with data for all 4 years ($N = 198$). The groups in this study included 103 (52%) students who participated in the gifted

program for 4 years and 95 (48%) students with comparable initial screening scores who were referred for the program but not selected and instead participated in the general education program at their school for 4 years. The general ethnic and gender characteristics of the included students were similar across groups (see Table 1).

## Procedure

The evaluation took place over a 4-year time frame with the same process followed after each year of testing. In their first year as second graders, high-achieving students were referred by their teachers for possible placement in gifted programs using the Problem Solving Assessment (Reid & Romanoff, 1997b). At the end of third, fourth, and fifth grades, the students were given the North Carolina End-of-Grade Reading Comprehension and Math Tests and the scores were recorded in the cumulative records. Collection of data required a visit to middle school and cooperation of the students' current guidance counselor. Participants were coded with identification numbers to maintain confidentiality.

**Assessment for identification.** After being referred by classroom teachers because of high academic achievement in core reading and mathematics programs, each student was administered the Problem Solving Assessment as part of a district-wide effort to evaluate identification procedures for students who are gifted. Each measure was administered by a trained professional with responsibilities and experience in the area of gifted assessment. The assessment process began in the fall and was completed by March. In the fall, the gifted resource teachers were offered an in-service on multiple intelligence (MI) characteristics and Problem Solving Assessment training. The resource teachers also were on the assessment team at each of their respective schools.

The gifted resource teachers consulted with the second-grade classroom teachers, who began to identify high-achieving students they thought might be extraordinary problem solvers according to the system definition. Simultaneously, creative, hands-on, open-ended preassessment lessons in linguistics, logical-mathematical, and spatial problem solving were taught by the resource teachers in all second-grade classrooms. Work samples were collected, intellectual behaviors

Table 1

*Demographic Comparison of Included Students With Composite Reading and Math Score Means and Standard Deviations*

| | | | Group | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Identified ($n$ = 103) | | | Not Identified ($n$ = 95) | | |
| Gender | Ethnicity | Total ($N$ = 198) | $n$ (%) | Reading $M$ $(SD)$ | Math $M$ $(SD)$ | $n$ (%) | Reading $M$ $(SD)$ | Math $M$ $(SD)$ |
| Male | Caucasian | 45 (23%) | 24 (24%) | 82.38 (12.59) | 89.68 (7.68) | 21 (22%) | 61.03 (18.22) | 66.65 (22.05) |
| | African American | 45 (23%) | 26 (25%) | 76.42 (18.84) | 82.50 (16.85) | 19 (20%) | 54.33 (19.45) | 56.73 (22.66) |
| Female | Caucasian | 47 (24%) | 26 (25%) | 89.38 (8.21) | 86.10 (10.40) | 21 (22%) | 72.96 (14.90) | 68.39 (19.53) |
| | African American | 61 (31%) | 27 (26%) | 76.43 (16.15) | 78.51 (16.10) | 34 (36%) | 48.39 (19.90) | 48.00 (24.03) |

were observed, students were referred, and parent information meetings were held at each school.

Meanwhile, certified substitutes and retired teachers were carefully trained to assist in the assessment. Each was provided a one-day training in-service focused on understanding MI theory and its relation to the Problem Solving Assessment, observing model administrations, and providing hands-on practice conducting each component of the process under supervision. These teachers also completed supervised administrations of the assessment subsequent to the in-service sessions before conducting actual sessions with children. The goal of the preparation activity was to establish and maintain quality conditions for teams of professionals responsible for conducting the assessments. After the training, these individuals joined with similarly prepared resource teachers of the gifted to form the Problem Solving Assessment team, which conducted the problem-solving activities in each elementary school between November and March.

Trained observers conducted the assessments, rotating among groups of five children in a day of activities that were novel, fun, and versatile. Observers recorded student performance (e.g., right/wrong responses, number of puzzle parts used) during each problem-solving activity and made anecdotal notes reflecting strengths or weaknesses that were evident. They also monitored the performance of quiet and shy children to ensure that their abilities were not overlooked. At the end of each day's observations, the team discussed each child's performance and recommended an appropriate placement.

The authentic assessment included seven activities, most of which had several tasks, all completed on a single day by an assessment team visiting the school. The Problem Solving Assessment activities fall along a continuum from traditional, standardized, paper-and-pencil tests to more alternative activities. Some of the alternative activities (e.g., Pablo and Tangrams) were borrowed and adapted from DISCOVER (Maker, 2005; Maker, Rogers, & Nielson, 1992; Sarouphim, 1999a, 2000, 2001, 2002, 2004). During the activities with the assessment teams, four or five children worked at single table (or cluster desks) with one observer. Typically after an activity or group of activities related to a particular intelligence was completed, the observers rotated, so that different adults observed each child. The

assessment team's activities began in the morning and continued after lunch, for a total of about 4 hours.

The team of observers scored the Problem Solving Assessment tasks on the same day as they administered them. Following the storytelling task, the observer team found space in the school to confer with each other. Observers spent about 15 minutes organizing materials and checking and grading student work. These materials included the student answer booklets, samples of work from the preassessment lessons, their pretesting work, and any other scores available from previous assessments.

After each cluster of tasks (i.e., logical-mathematical, linguistic, spatial) was discussed, the child's performance in that area was rated on the 4-point scale: *always evident*, *strongly evident*, *evident*, or *not evident*. If a student received scores of strongly or always evident in two out of the three areas, the program officially identified him or her for services for the gifted.

**Assessment of achievement.** High-stakes outcome tests were administered once a year in the first or second week of May to grades 3–5 in elementary schools. The purposes of these state-mandated tests are similar to those in other high-stakes assessment programs: (a) to assure that all high school graduates possess those minimum skills and knowledge thought necessary to function as a member of society; (b) to provide a means of identifying strengths and weaknesses in the education process in order to improve instructional delivery; and (c) to establish additional means for making the education system at the state, local, and school levels accountable to the public for results. Scores available from these assessments reflected percent of items correct across the content included in the test.

The End-of-Grade Reading Comprehension Tests assess components of the North Carolina Standard Course of Study and consist of literary selections (e. g., fiction, nonfiction, drama, poem) and informational selections (e. g., content and consumer) reading selections with associated questions used to measure four categories of comprehension skills: cognition (38%), interpretation (37%), critical stance (19%), or connections (6%); similar content and focus is reflected in the fourth- and fifth-grade tests. A complete description of the purpose of the assessment, the development process, administration and scoring procedures, and the content of each skill category is available from the North Carolina

Department of Public Instruction (http://www.ncpublicschools.org/docs/accountability/testing/eog/TISG3.pdf).

On the End-of-Grade Mathematics Tests students are expected to demonstrate knowledge of important principles and concepts and relate mathematical information to everyday situations reflected in the goals and objectives of the North Carolina Mathematics Standard Course of Study. To align with the mathematics curriculum's focus on inquiry instruction and higher order thinking, the mathematics assessments have an increased focus on processing information and higher order thinking and many of the items assess whether a student can move beyond memorization and apply process skills to the investigation of mathematics. The test was designed to assess computation (40%), geometry and measurement (30%), classification, patterning, and seriation (15%), and data collection, display, and interpretation (15%); similar content and representation of skills was reflected in the fifth-grade test. A complete description of the purpose of the assessment, the development process, administration and scoring procedures, and the content of the test is available from the North Carolina Department of Public Instruction (http://www.ncpublicschools.org/docs/accountability/testing/eog/g3/RevisedGr3mathTIS.pdf).

## Design and Data Analysis

The research design was a *post-hoc* causal-comparative quasi-experimental study of data collected on two equivalent groups of students referred for assessment based on extant achievement records: (a) those identified using an alternative assessment who received services through the district program for the gifted, and (b) peers who were not identified using an alternative assessment and who did not receive services through the district program for the gifted. The initial question driving this research was: To what extent do North Carolina End-of-Grade Tests scores reflecting mastery in reading and math differ for students in programs for the gifted and their high-achieving peers referred for assessment but not selected for programs for the gifted? A secondary question was: To what extent do scores reflecting content mastery of African American students, identified as gifted through an alternative assessment, differ from those of Caucasian

students, identified as gifted through the same assessment and who received the same services?

Data covering a 4-year period were categorized by ethnicity and gender. In addressing the first hypothesis, analysis of variance tests were used to compare the mean end-of-grade scores in reading for students in the gifted programs and students referred but not selected in the programs for the gifted. For the second hypothesis, analysis of variance tests were used to compare the mean end-of-grade scores in math for students in the gifted programs and students referred but not selected in the programs for the gifted.

Objective data were available over a period of 3 years from 198 participants. Data represented each child's reading and math scores at the end of third, fourth, and fifth grades. The independent variables were ethnicity, gender, and program; the dependent variables were reading and math scores on the North Carolina End-of-Grade Tests averaged across grades.

## Results

As participants in a project designed to increase ethnic minority representation in programs for the gifted in a large Southeastern school district, the major purpose for this research was to compare the performance of elementary school children from two groups over a period of several years: Students who were identified as gifted were compared with children who were referred but not identified with an assessment process based on MI theory. Reading and math scores on North Carolina's statewide mandatory end-of-grade tests across grades 3, 4, and 5 served as measures of students' achievement.

### Reading Outcomes

Means and standard deviations for reading performance of students identified for gifted programs and their nonidentified peers are presented in Table 1. Analysis of variance summary is presented in Table 2. Significant main effects are indicated for program ($F_{1, 190} = 84.85, p < 0.01$) and ethnicity ($F_{1, 190} = 27.66, p < 0.01$). North Carolina End-of-Grade Reading Comprehension performance scores for students

Table 2

*Analysis of Variance Summary Table for Composite Reading Scores*

| Source | *MS* | *df* | *F* |
|---|---|---|---|
| Program | 23210.51 | 1 | 84.85* |
| Ethnicity | 7567.61 | 1 | 27.66* |
| Gender | 507.65 | 1 | 1.86 |
| Program x Ethnicity | 458.61 | 1 | 1.68 |
| Program x Gender | 3.06 | 1 | 0.01 |
| Ethnicity x Gender | 1857.08 | 1 | 6.79 |
| Program x Ethnicity x Gender | 356.30 | 1 | 1.30 |
| Error | 273.56 | 190 | |

*$p < 0.01$.

identified using an alternative assessment and receiving services in the gifted program ($M = 81.09$, $SD = 15.33$) were higher than those of their peers who were screened but not identified ($M = 57.81$, $SD = 20.44$). Additionally, End-of-Grade Reading Comprehension scores were higher for Caucasian students ($M = 77.34$, $SD = 17.16$) than for African American students ($M = 63.47$, $SD = 22.63$). As illustrated in Figure 1, scores for Caucasian students identified using an alternative assessment and receiving services in the district's gifted program ($M = 85.88$) were higher than those for African American students ($M = 76.43$); however, the gap between their performance (9.45) was less than that (15.64) between scores for their Caucasian ($M = 67.00$) and African American peers ($M = 51.36$) who were not identified using an alternative assessment and who did not receive services through the district's program for the gifted.

## Math Outcomes

Means and standard deviations for math performance of students who are gifted and their nonidentified peers are presented in Table 1. Table 3 presents the analysis of variance summary. Significant main effects are indicated for program ($F_{1, 190} = 84.48$, $p < 0.01$) and ethnicity ($F_{1, 190} = 18.24$, $p < 0.01$). North Carolina End-of-Grade Math performance

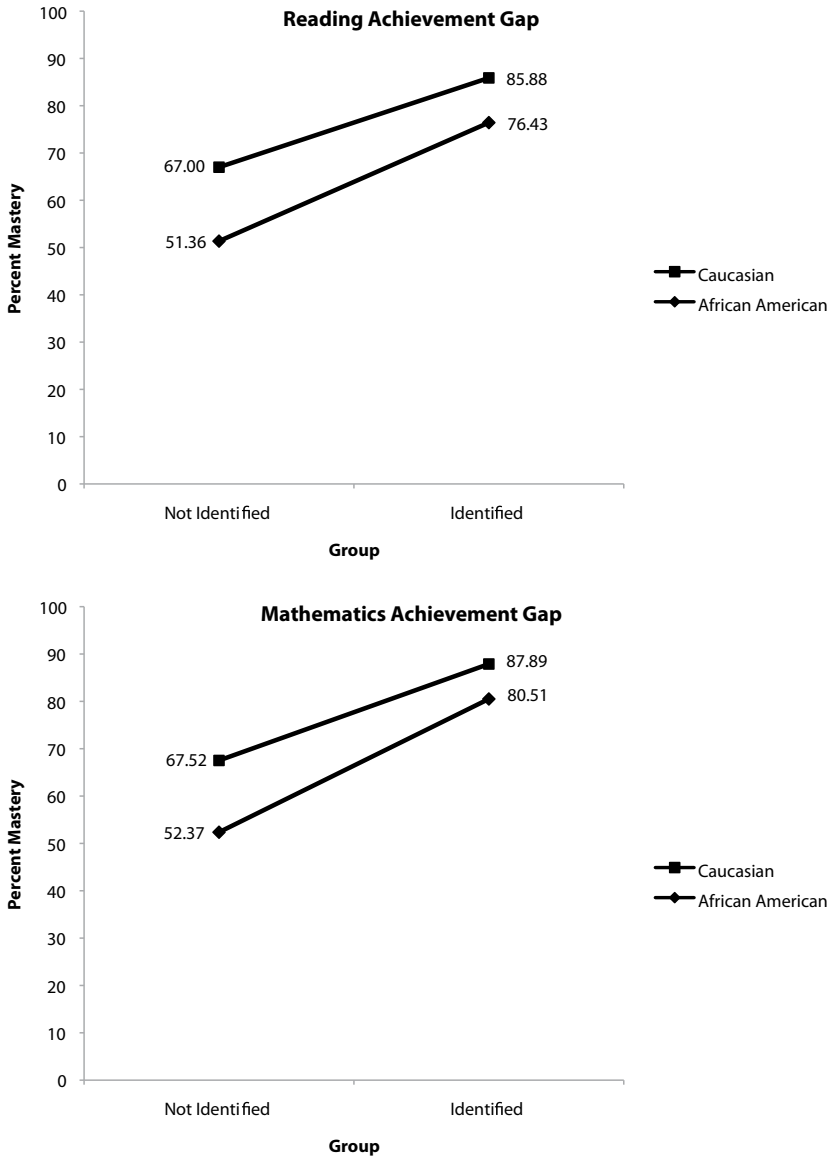


*Figure 1*. Achievement gap in reading and mathematics.

Table 3

*Analysis of Variance Summary Table for Composite Math Scores*

| Source | *MS* | *df* | *F* |
|---|---|---|---|
| Program | 28273.056 | 1 | 84.48* |
| Ethnicity | 6103.153 | 1 | 18.24* |
| Gender | 635.943 | 1 | 1.90 |
| Program x Ethnicity | 725.977 | 1 | 2.17 |
| Program x Gender | .971 | 1 | 0.00 |
| Ethnicity x Gender | 355.993 | 1 | 1.06 |
| Program x Ethnicity x Gender | 305.171 | 1 | .91 |
| Error | 334.684 | 190 | |

*$p < 0.01$.

scores for students in gifted programs ($M = 84.03$, $SD = 13.88$) were significantly higher than those of their peers who were not in gifted programs ($M = 58.37$, $SD = 23.73$). Additionally, End-of-Grade Math scores were higher for Caucasian students ($M = 78.55$, $SD = 18.46$) than for African American students ($M = 65.80$, $SD = 25.09$). As also illustrated in Figure 1, scores for Caucasian students identified using an alternative assessment and receiving services in the district's gifted program ($M = 87.89$) were higher than those for African American students ($M = 80.51$); however, the gap between their performance (7.38) was also less than that (15.15) between scores for their Caucasian ($M = 67.52$) and African American peers ($M = 52.37$) who were not identified using an alternative assessment and who did not receive services through the district's program for the gifted.

## Discussion

The low proportion of minority membership in gifted programs has been and continues to be a serious professional and political issue (Baldwin, 2004; Coleman, 2003; Coleman & Gallagher, 1995; Donovan & Cross, 2002; Ford, 2006; Ford & Harris, 1992; Frasier, 1991; McBee, 2006; National Research Council, 2002). Most school districts assess students for the gifted programs using

only standardized tests, such as the Test of Cognitive Skills or the Wechsler Intelligence Scale for Children-III, and achievement tests, such as the California Basic Educational Skills Test and the Iowa Tests of Basic Skills. These measures use pencil and paper to evaluate linguistic and mathematical abilities, and consequently identify a very narrow population of students; most professionals agree they are flawed from cultural and gender perspectives (cf. Maker, 2005; McBee, 2006). Historically, although minority students comprised 42% of the student population, they make up only 5% to 7% of the students who qualified for the gifted programs (cf. Callahan, Tomlinson, Hunsaker, Bland, & Moon, 1995; Council for Exceptional Children, 2001; Frasier, 1991; Mills & Tissot, 1995; National Research Council, 2002; Reid & Romanoff, 1997a).

The calls for more authentic assessment are based in part on arguments that human knowledge and skill are manifested in particular activities, contexts, and cultures (Baldwin, 2004; Brown, Collins, & Duguid, 1989; Coleman, 2003; Ford, 2006; National Research Council, 2002; Resnick et al., 1991). Following from this situated view of cognition are observations that traditional test situations—which are devoid of conversation, computers, books, and other problem-solving resources—provide very limited insights into what children know and can do (Coleman, 2003; Gardner, 1983, 1991, 1994; McBee, 2006; National Research Council, 2002; Wiggins, 1989). Advocates of authentic assessment assert that it is necessary to test students with engaging problems using a range of problem-solving resources to ascertain their knowledge and abilities (Gardner, 1991; Wiggins, 1993). Such assessments tend to be less biased and allow students to draw on a range of media and materials rather than represent their abilities exclusively in written language and mathematical notation.

Our findings have broad implications for improving practices. Concepts grounded in theories of multiple intelligences can be operationalized and assessed. Clearly, using a standardized measure for identification is limiting when compared to assessing performance in more than one or two areas predictive of school success. Assessing components of intelligence is not particularly tedious or difficult for students to endure. Schools faced with disproportionate assignment of students to programs for the gifted and talented may find it helpful to use multiple

data sources in identification practices. Anecdotal records of performance during typical school activities, classroom observations gathered during classroom instruction, and reports from parents regarding school and outside activities can provide a rich portfolio of information typically unavailable when unitary test scores drive assessment practices.

The findings from this longitudinal study demonstrate that students selected as a result of the Problem Solving Assessment and placed in a program for the gifted score on end-of-grade tests in reading and math significantly higher than students referred for assessment but not selected. Our findings also speak to benefits of authentic assessment and enrollment in gifted programs with regard to the persistent and consistent gap in the achievement of majority and minority groups of students (cf. Donovan & Cross, 2002). Although scores for African American students were below those for the Caucasian peers in both groups evaluated in this study, the difference between the groups was smaller in reading and mathematics for students identified and placed in gifted programs. The potential benefits here require additional study, but the promise of change as a result of placement for typically underrepresented groups is encouraging.

If our country is to remain competitive in the world economy, we must actively promote minority participation in all educational opportunities (Baldwin, 2004; Ford, 2006; McBee, 2006; National Association for Gifted Children, 2006). One method to increase minority participation at the highest level of production and performance is to increase student enrollment in educational programs for the gifted and help them gain the thinking dispositions that lead to improved performance. Increasing minority participation in these programs is a national priority. The Problem Solving Assessment is one means to identify more minority students as gifted by looking at all students with new eyes. Seeing students' strengths utilized in open-ended, hands-on problem solving, as opposed to restating information with paper-and-pencil testing, leads to significantly different evaluation results. Trained observers with standards and rubrics to follow also produce more substantiated results than open-ended portfolio collections and classroom observations alone. Subjective professional judgment is the cornerstone of many professions; the Problem Solving Assessment is an assessment that offers a foundation in support of those judgments in gifted education.

The Problem Solving Assessment, based on a contemporary theory of human ability, is a useful indicator of students' complex thinking, problem-solving, and problem-finding abilities. Thus, the standardized tests are not comparable to the Problem Solving Assessment for identifying gifted ethnic minority students for placement in programs for the gifted. As the definitions of giftedness are revised and reconceptualized, the methods of assessment also require attention. Educators and administrators cannot embrace the new paradigms and definitions without embracing assessment methods designed to tap into these varied and multiple intellectual strengths. Minority students will continue to be underrepresented in programs for the gifted as long as there are inconsistencies between the definitions of giftedness and the instruments used to identify giftedness. Therefore, we believe that the use of the Problem Solving Assessment will result in more equitable identification of highly competent students and should be used more widely among ethnic minority populations.

A service delivery model designed to be congruent with these identification procedures would be concerned with raising the performance of gifted underserved populations by incorporating problem solving in the multiple intelligences in all classroom activities. Within a rigorous interdisciplinary thematic approach, curriculum would challenge students by building on local performance standards and require the creation of sophisticated products. Furthermore, this research study answers some of the calls for evaluating student performance. Although minority students in the program scored slightly lower than Caucasian students on achievement measures, they scored far above grade level on these tests. These students are a high-achieving group who merit differentiated education—education more closely attuned to their high abilities than they would otherwise receive in a regular classroom. Moreover, in this research the African American students selected for gifted programs, in fact, scored higher than either comparable African American or Caucasian students not identified or participating in the programs. Although Caucasian students in the gifted programs are scoring higher than the minority students in the gifted programs, the gap between ethnic groups is narrowing. The results of this study clearly demonstrate that minority children identified as gifted through the use of an alternative assessment meet the high expectations of teachers in programs for gifted students and

achieve at levels higher than those of their peers who remain in general education programs.

Although our research was limited largely by the quasi-experimental comparisons of extant data, it represents a solid point of departure for continued study of the effects of alternate assessments on the identification and progress of underrepresented students in gifted programs. Rather than making an assumption that minority students do not qualify for these programs because of low performance on standardized tests, educators should adopt more authentic assessment models for identification of gifted children. The Problem Solving Assessment process is not an end in itself. It is a process that facilitates appropriate instructional decision making by providing information on two fundamental questions: "How are we doing?" and "How can we do it better?" The best way to answer these questions is to sit beside the learner and watch.

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