Comparisons Between Talent Search Students Qualifying via Scores on Standardized Tests and via Parent Nomination

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This study examined differences between students who qualified for talent search testing via scores on standardized tests and via parent nomination in their performances on the SAT or ACT and some demographic characteristics. Overall, the standardized testing group earned higher scores on the off-level tests than the parent nominated group. Asian students used parent nomination more than standardized tests for talent search testing, and Hispanic/Latino students in the parent nominated group but not in the standardized testing group were among the top performers on the off-level tests. Parent nomination as a feasible alternative to standardized achievement tests is suggested for talented students who are not native English speakers or would not be identified as gifted using traditional qualification methods.

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Issues in the Identification of Gifted Students

The issue of identifying gifted students has been a central topic in the field and the focus of a large body of literature since it is intertwined with the definition of giftedness, and has implications for decisions regarding subsequent educational programming for talent development (Ackerman, 1997; Boyd, 1992). Typical identification processes have been criticized for being overly reliant on cognitive measures such as IQ or achievement test scores which are often heavily verbally loaded and may not be the best source of evidence regarding ability or potential for all gifted learners. Research by Tyler-Wood and Carri (1991) found that 21 students (ages 7 to 12 years) who were selected for a gifted program scored significantly differently on a battery of four similar tests of ability such as the Stanford-Binet (LM), the Stanford-Binet (Fourth Edition), the Otis-Lennon School Abilities Test, and the Cognitive Abilities Test. This suggests that the identification of gifted students can vary greatly across different cognitive tests.

Many researchers and educators assert that an exclusive reliance on standardized test scores for identification will exclude a large body of gifted students, including those who are culturally and ethnically different from the mainstream gifted population. These gifted students may include those who are not native English speakers, those who are from families with low socioeconomic status, or those who live in geographically isolated locations (Ford, Harris, Tyson, & Trotman, 2002; Hadaway & Marek-Schroer, 1992; MacRae & Lupart, 1991; Passow & Frasier, 1996). Indeed, empirical evidence indicates that children of color are under-represented in gifted programs in part due to inadequate identification measures and/or procedures (see Baldwin, 1991; Bernal, 2002; Borland & Wright, 1994; Ford, 1996; Ford & Harris, 1999; Gallagher, 1994; Grantham, 2003; Maker, 1996; Morris, 2002).

In order to solve the under-identification and under-serving of many gifted students, researchers urge the use of multiple measures and varied types of instruments as part of the identification process (Hadaway & Marek-Schroer, 1992; Tyler-Wood & Carri, 1991). According to Hadaway and Marek-Schroer, standardized intelligence tests or achievement tests are not efficient in measuring multidimensional human intelligence because the tests are basically unidimensional and ethnocentric, which cannot benefit nonmainstream ethnic groups. They suggest that teacher nominations and grades are also not good predictors of students' academic potential because they are either determined primarily by students' performance in class, class attendance, and motivation, or by conformity to teachers' demands and expectations in the classroom. Some advocate the use of other types of nontraditional measures for identification, such as student portfolios (Reyes, Fletcher, & Paez, 1996), checklists, or observation forms (Passow & Frasier, 1996), to incorporate the diversity of cultural and environmental contexts in the identification process. Portfolios, a type of context-based measure, which consist of writing samples, journals, artwork, special projects, recordings of oral communication, etc., are suggested as an alternative for assessing students' academic potential (Hadaway & Marek-Schroer).

Recently, researchers and educators have looked to nonverbal ability tests (e.g., the Raven's Progressive Matrices, the Naglieri Nonverbal Ability Test) as another option particularly for identifying gifted minority students in lieu of typical verbal or quantitative tests that heavily depend on language (e.g., English) skills or mastery levels in certain academic subject areas. It should be noted, however, that while there is ongoing controversy regarding the use of nonverbal ability tests as an "appropriate" measure of academic aptitude and as a substitute for verbal ability tests (see Bittker, 1991; Esquivel & Lopez, 1988; Lohman, 2004a, 2004b, 2005; Matthews, 1988), there is some empirical evidence that the nonverbal tests are more culturally

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fair across diverse ethnic groups (Baska, 1986; Naglieri, 1985; Naglieri & Ford, 2003; Naglieri & Ronning, 2000a, 2000b). For example, on the Naglieri Nonverbal Ability Test (NNAT) only small mean differences were found between the scores of White and Black, White and Hispanic, and White and Asian children who were included in the NNAT standardized sample (Naglieri & Ronning, 2000a). Another recent study (e.g., Naglieri & Ford) showed that the NNAT yielded only small (ranges 2.0 to 3.2) mean differences between White and minority (Black and/or Hispanic) students who were representative of the school population nationwide, in terms of socioeconomic status, ethnicity, and urbanicity; the proportions of students who scored a standard score of 125 on the NNAT and/or above were also equivalent across racial/ethnic groups. However, Lohman (2005) has recently questioned these findings based on his assertion that Naglieri and Ford's African American sample is not representative of the U.S. population.

Some researchers have suggested that identification processes need to involve assessments of personality characteristics such as motivation and task persistence (Renzulli, 1978). For example, Ackerman (1997) proposed that for gifted adolescents, Dabrowski's (1964, 1972) overexcitabilities, particularly psychomotor, emotional, and intellectual overexcitabilities, need to be considered in the identification process, and there have been some attempts to do this (e.g., Ackerman; Gallagher, 1986; Miller, Silverman, & Falk, 1994; Piechowski & Colangelo, 1984; Piechowski & Cunningham, 1985; Piechowski & Miller, 1994; Piechowski, Silverman, & Falk, 1985). Stinespring (1991) and others (Slocumb & Payne, 2000) also assert that using culture-specific tests based on unique characteristics of each ethnicity can improve identification methods and reduce "test bias," which results in over- or under-representation of certain ethnic groups in gifted programs. For example, for African American students, "tactuality" characterized as emotional intensity (e.g., use of feeling, intense emotional responses), flexibility and open-endedness, holistic perception (e.g., perceiving things through the whole picture), and tactile sensitivity (e.g., preference for hands-on physical activities) should be included in identifying the artistic talents of African American students (Stinespring).

Identifying Gifted Students via Talent Search

Over the past three decades, talent search programs using out-of-level testing have emerged as a major means of identifying academic ability among middle school students. A large body of research about talent search testing and its educational programs has accumulated (e.g., Ablard, Mills, & Hoffhines, 1996; Assouline & Lupkowski-Shoplik, 1997; Barnett & Durden, 1993; Bartkovich & Mezynski, 1981; Benbow, 1992a, 1992b; Benbow & Arjmand, 1990; Benbow, Perkins, & Stanley, 1983; Brody, 1998; Burton, 1988; Enersen, 1993; Jarosewich & Stocking, 2003; Kolitch & Brody, 1992; Lee, Matthews, & Olszewski-Kubilius, in press; Lynch, 1992; Mills, Ablard, & Lynch, 1992; Olszewski-Kubilius, 1998a, 1998b; Olszewski-Kubilius & Grant, 1996; Olszewski-Kubilius & Lee, 2005; Swiatek & Benbow, 1991; Swiatek & Lupkowski-Shoplik, in press; VanTassel-Baska, 1998; Wilder & Casserly, 1988). Talent search was developed by Dr. Julian Stanley at Johns Hopkins University as part of the Study of Mathematically Precocious Youth (SMPY) in the early 1970s. The original goal of talent search testing was to identify mathematically talented pre-high school aged students based on their tests scores on the Scholastic Aptitude Test-Math (SAT-M). Underlying talent search is the belief that gifted children should be assessed with tests appropriate for their ability levels, developmental rates, and mastery of academic knowledge and skills, not chronological ages (Olszewski-Kubilius, 1998a). Talent search testing embodies the practice of out-of-level testing, in which a test typically used with older students, is used with younger students, to avoid the ceiling problems inherent in in-grade or on-level achievement or ability tests.

Research has shown that the effects of talent search testing and subsequent educational programs on students' academic achievement are positive and strong. Participation in talent search testing enhanced students' knowledge about the nature of their academic abilities (Ablard, Mills, & Hoffhines, 1996; Assouline & Lupkowski-Shoplik, 1997; Brody, 1998; Jarosewich & Stocking, 2003; VanTassel-Baska, 1989) and educational and career aspirations (Benbow & Arjmand, 1990; Brody; Burton, 1988; Wilder & Casserly, 1988; VanTassel-Baska). Talent search educational programs provided students with opportunities to experience greater academic challenge (Enersen, 1993; Mills, Ablard, & Lynch, 1992), to take more rigorous advanced courses including AP and honors levels (Barnett & Durden, 1993), to have greater acceleration during high school (Barnett & Durden; Olszewski-Kubilius & Grant, 1996), and to increase their educational aspirations (Olszewski-Kubilius & Grant). Greater participation in math-related extracurricular activities (Olszewski-Kubiliu & Grant), a higher likelihood of getting a National Merit Letter of Commendation, and pursuing professional degrees or careers in math (Kolitch & Brody, 1992; Olszewski-Kubilius & Grant), more awards and honors in high school (Barnett & Durden), selection of more academically rigorous institutions for higher education (Barnett & Durden; Swiatek & Benbow, 1991), and greater feelings of acceptance by peers and increased positive self-image (Enersen; VanTassel-Baska, Landau, & Olszewski, 1984) were other documented benefits from participation in the talent search educational programs. Thus, participation in talent search programs has many positive consequences for students.

Students (in grades 3 through 9 but mostly in grades 7 or 8) who want to participate in talent search testing through regional or state talent search institutions, such as the Center for Talent Development at Northwestern University, the Talent Identification Program at Duke University, the Center for Talented Youth at Johns Hopkins University, and Rocky Mountain Talent Search at the University of Denver, qualify on the basis of scores on nationally normed, standardized in-grade achievement, aptitude, or ability tests. Most students submit their scores on one of the acceptable tests including the California Achievement Test (CAT), the Comprehensive Test of Basic Skills (CTBS), the Iowa Test of Basic Skills (ITBS), or the Stanford Achievement Test (SAT), and need to score at or above the 95th percentile. Some children do not have standardized test scores either because their schools do not use such tests (often due to financial constraints) or because they only use state mandated tests which are usually criterion-referenced. For other students and for a variety of reasons, scores on standardized tests are not representative of their true ability or potential. For students participating in talent search testing through the Center for Tal-

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ent Development who do not have or cannot provide standardized test scores, parent nomination has been used as an alternative qualifying criterion.

Once students apply for talent search testing, they take one of three off-level tests, the American College Testing Program (ACT), the Scholastic Aptitude Test (SAT), or the EXPLORE (a test developed by ACT for 8th graders), depending on their grade levels. For example, Midwest Academic Talent Search through the Center for Talent Development at Northwestern University allows students in grades 3 through 6 to take the EXPLORE test (sixth graders may also choose either the SAT or ACT), while students in grades 7 through 8 can take either the SAT or ACT and students in grade 9 can take the ACT only. After testing, students and parents receive information about specialized curricula, enrichment programs, and accelerated courses of study, which assist families in using students' off-level test scores to plan an individualized educational program.

Off-Level Testing in Talent Search

Off-level test scores from talent search testing have been vastly instrumental in diagnosing and evaluating the area and level of students' academic abilities (Olszewski-Kubilius, Kulieke, Willis, & Krasney, 1989). Research supports the validity of using off-level test scales as a tool for discerning students' academic abilities and talents and placing them in appropriate educational programs. Talent search students scored comparably to college-bound students on the SAT or the ACT (Bartkovich & Mezynski, 1981; Benbow, 1992a; Olszewski-Kubilius, 1998b). The proportions of talent search participants who scored at the low end of the SAT or the ACT are about the same as those of regular high-school students (e.g., for 2003-2004 participants in the Midwest talent search, below 300 on SAT-M = 16.6% vs. 14.0%; below 300 on SAT-V = 20.1% vs. 15.0%; below 15 on ACT-Reading = 15.3% vs. 21.0%; below 15 on ACT-Math = 8.8% vs. 15.0%; below 15 on ACT-Composite = 7.4% vs.14.0%), suggesting most younger students are not overwhelmed by the tests (Center for Talent Development, 2003-2004). Also, the SAT and ACT mean scores of the talent search participants are lower than those of college-bound seniors but comparable to the scores of the general high school population. Average SAT and ACT scores for 2003-2004 Midwest Talent Search participants versus 2003 college-bound seniors were as follows: SAT-M = 491 vs. 519; SAT-V = 468 vs. 507; ACT English = 19.8 vs. 20.3; ACT Math = 18.7 vs. 20.6; ACT Reading = 20.6 vs. 21.2; ACT Science = 19.9 vs. 20.9; ACT Composite = 19.9 vs. 20.9 (M. Hanrahan, personal communication, July 2, 2004). Burton (1988) reported a substantial degree of correlation (.75 for verbal and .65 for math) between students' SAT scores obtained at or below the eighth grade and those received three to five years later in high school.

There is considerable evidence regarding the predictive validity of talent search scores. SAT scores in middle school predict academic achievement in high school and college (Barnett & Durden, 1993; Benbow, 1992a, 1992b; Benbow & Arjmand, 1990; Burton, 1988) and have predictive validity within the gifted population, discriminating different patterns of achievement for students scoring at the top versus bottom quartile of the top 1% (Benbow, 1992a, 1992b). Finally, the validity of the use of SAT scores for entrance into accelerated courses has been documented for fast-paced summer classes in math, science, and language arts (Olszewski-Kubilius, Kulieke, Willis, & Krasney, 1989).

Critique of Identification Process in Talent Search

One of the major goals of talent search testing is to provide gifted students with various educational opportunities commensurate with their academic capabilities (Assouline & Lupkowski-Shoplik, 1997; Olszewski-Kubilius, 1998a). Thus, it is important to involve as many prospective students as possible in the program. Approximately 150,000 middle-school-aged students take off-level tests through the major university-based talent search program every year, but a considerable portion of students cannot take advantage of the program due to its exclusive reliance on standardized test scores for qualification (VanTassel-Baska, 1998). Talent search programs suffer from the problems that plague other gifted programs—under-representation of low-income students and students of color. Given the benefits of talent search participation, it is crucial that good alternative means of qualifying students be found.

The purpose of this study was to examine the feasibility and validity of using parent nomination as a means to qualify students for talent search participation. Specifically, we sought to assess the following issues:

1. The demographic characteristics (e.g., gender, grade levels, ethnicity, household income, state of residence) of students who entered talent search testing via qualification tests versus parent nomination to determine whether the use of parent nomination brings in students who traditionally have not been served in the talent search program.
2. Performance differences on the SAT and the ACT for students who entered talent search testing by virtue of qualifying scores on traditional standardized tests versus parent nomination.
3. The factors associated with performance differences for talent search students qualifying via standardized tests versus parent nomination and for students within each group.

Method

Midwest Talent Search Program

(After 23 years as Midwest Talent Search/Midwest Talent Search for Young Students, the name of the program has recently changed to Midwest Academic Talent Search.)

Since 1981, the Center for Talent Development (CTD) has tested hundreds of thousands of students through its talent search program using off-level tests. In 2003-2004, 32,000 students took either the ACT, the SAT, or the EXPLORE through CTD.

Students who are eligible for participation in talent search testing need to score at the 95th percentile or higher (except third graders who must perform the 97th percentile or higher) on their most recent nationally normed, standardized achievement, aptitude, or ability test in one of the following areas: math total, verbal total, composite, math sub-tests, or verbal sub-tests. Students who have not taken any of the acceptable standardized tests or who do not have qualifying scores available can participate in the program by submitting a parent nomination form (see Appendix A). CTD recommends that parents nominate their children (grades 3 to 9) to enter the talent search program by verifying that the child has: demonstrated unusually advanced aptitude in verbal or mathematical reasoning; consistently

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performed in the top five percent (3% for sixth graders) relative to his/her age equivalent peers; performed exceptionally well in academically demanding coursework in school; and has been usually and consistently frustrated by a lack of challenge from his/her school experience. Parents also need to fill out the "Standardized Testing Waiver Agreement" and send this form to the Center with their children's talent search application for parent nomination (see Appendix B).

Midwest Talent Search Participants in Year 2003-2004

A total of 26,564 students in grades 6 to 9 took the SAT or ACT through the Center for Talent Development in the academic year of 2003-2004. Students were almost equally distributed by gender: 52% male and 48% female. Most students were in grades 7 (40%) and 8 (44%), while less than 10% of students were in grades 6 (9%) or 9 (6%). Overwhelmingly, students were Caucasian/White (84%), 7% percent Asian, 4% African American/Black, 2% multiracial, and 2% Hispanic/Latino. About 30% of students came from the state of Michigan, 21% from Ohio, 17% from Indiana, 15% from Illinois, 15% from Wisconsin, and four percent from Minnesota. More than half (55%) of the students reported family incomes of $80,000 and above, while only 4% reported family incomes of under $20,000.

In terms of qualification tests taken by students before participation in talent search testing, the Terra Nova (20.2%) and Iowa Tests of Basic Skills (17.1%) were the two most frequently taken tests followed by the Stanford Achievement Test (10.6%). Almost 20% (17.9%) of students referred to "other" normed, standardized in-grade achievement, aptitude, or ability tests, 10% took the Indiana Statewide Testing for Educational Progress (ISTEP), and 7% of students qualified for talent search testing via parent nomination. A larger proportion of students took the SAT than the ACT (55.1% vs. 44.9%). The average scores on the SAT and the ACT of all talent search students were as follows: SAT-Combined 939 (SD = 156.2), SAT-Verbal 463 (SD = 85.5), SAT-Math 475 (SD = 90.7), ACT-Composite 20.0 (SD = 4.1), ACT-English 19.7 (SD = 5.1), ACT-Math 19.2 (SD = 4.3), ACT-Reading 20.4 (SD = 5.6), and ACT-Science 20.2 (SD = 4.2). Medians of percentile ranks (compared to the national norms for older students who typically take these tests) for the SAT and ACT were all around 45 to 60 percentiles: SAT-Combined 44.9 percentile, SAT-Verbal 47.5 percentile, SAT-Math 44.1 percentile, ACT-Composite 54.9 percentile, ACT-English 53.6 percentile, ACT-Math 64.7 percentile, ACT-Reading 50.7 percentile, and ACT-Science 59.9 percentile.

Data Collection and Analysis

Data from the Midwest Talent Search program application for the 2003-2004 academic year consisting of demographic information and SAT or ACT scores, were analyzed for this study. Using SPSS 11.0, data analysis consisted of descriptive statistics, cross tabulation analysis (for nominal or ordinal variables), one-way multivariate analysis of variance (MANOVA), and independent sample t-tests. The major strategy was to first use MANOVA to access between group differences (e.g., qualifying via standardized test scores versus parent nomination) on correlated dependent variables (e.g., ACT or SAT scores), followed up by ANOVAs to explore significant differences on subtests. Between group comparisons based on demographic characteristics (e.g., gender, grade, ethnicity) were also conducted using independent sample t-tests. Alpha levels were adjusted to .025 or .017 for comparisons on the SAT and .013 or .01 on the ACT by dividing .05 by the number of dependent variables or the number of comparisons to control the Type I error (see Green, Salkind, & Akey, 2000).

Results

Comparisons by Demographic Characteristics

Students who were involved in talent search testing via traditional qualifying tests versus parent nomination were similar in terms of gender and household income but were significantly different in terms of grade, state from which they originally came, and ethnic background. Specifically, the gender distribution was equivalent for students who entered talent search testing via test scores or parent nomination (e.g., male 52.3% vs. 51.5%), and the majority (80.2% vs. 78.7%) of both groups of students reported a $50,000 or above household income followed by $20,000-$49,999 (16.1% vs. 17.5%). For students qualifying via test scores, almost all were either in eighth (44.1%) or seventh (41.0%) grade, while there were more eighth graders (48.4%) than seventh graders (32.1%) for students qualifying via parent nomination [χ^2 (3, N = 25,912) = 68.0, p = .00, Cramer's V = .05]. However, the value of Cramer's V (.05) for the test of association between grade and nomination type was very small and considered negligible; thus, the statistical significance we found was most probably due to the very large sample size.

Differences in terms of the states students originally came from were large [χ^2 (33, N = 25,991) = 1530.4, p = .00, Cramer's V = .24]. Specifically, for talent search students qualifying via test scores, proportions were similar across states: 25.3% Michigan, 21.4% Ohio, 17.9% Indiana, 15.3% Illinois, and 14.9% Wisconsin. In contrast, for students qualifying via parent nomination, a considerably larger proportion (65.9%) of students came from Michigan than from any of the other states: 10.9% Wisconsin, 9.1% Ohio, 8.5% Illinois, and 3.7% Indiana.

A statistically significant difference was also found for ethnic background although the difference was negligible considering the small value of Cramer's V [χ^2 (6, N = 23,254) = 15.30, p = .02, Cramer's V = .03]. Almost all the student participants who qualified for the program either by tests or parent nomination were Caucasian/White (84.7% vs. 83.0%), but among students of Asian/Oriental/Pacific Islander ethnicity, a larger proportion of the students qualified via parent nomination than via test scores (9.3% vs 7.0%). Also, a significant difference was found for the tests the students chose but with the small Cramer's V [χ^2 (1, N = 25,989) = 45.5, p = .00, Cramer's V = .04]. Students who qualified for talent search via test scores were more likely to take the SAT (55.9%) than the ACT (44.1%), while students who qualified for the program via parent nomination were fairly evenly distributed across the two tests (SAT 47.9% vs. ACT 52.1%).

Performances on the SAT or the ACT

A one-way multivariate analysis of variance (MANOVA) showed that students who qualified for talent search testing via scores on standardized tests versus parent nomination were significantly different in their scores on both SAT and ACT: SAT [Wilks' Lambda = 1.00, F (2, 13,072) = 30.49, p = .00, Eta^2 = .005] and ACT [Wilks' Lambda = .99,

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F (4, 10,579) = 20.98, p = .00, Eta^2 = .008]. However, the values of Eta^2 were small suggesting that the type of nomination accounted for less than 1% of the variation in the test scores. The Box's M test of equality of covariance matrices was not significant for either SAT (p > .025) or ACT (p > .013), which means that the covariances among the dependent variables were equal across students in the standardized testing and parent nominated groups. Follow-up ANOVAs identified the following significant differences between the two groups of students: SAT-Verbal [F (1, 13,073) = 57.73, p = .00], SAT-Math [F (1, 13,073) = 33.63, p = .00], ACT-English [F (1, 10,582) = 78.34, p = .00], ACT-Math [F (1, 10,582) = 24.17, p = .00], ACT-Reading [F (1, 10,582) = 37.79, p = .00], and ACT-Science [F (1, 10,582) = 16.45, p = .00]. In general, talent search students qualifying via standardized test scores had higher scores both on the SAT and the ACT than talent search students qualifying via parent nomination (see Table 1 for details). However, the effect sizes (based on Cohen's d) for these group differences were within the small category (d < .31).

The percentage of students scoring at various levels of the verbal and math subtests on the SAT and the ACT were generally similar for students who qualified via standardized testing versus parent nomination. Some differences were that the percentage of the standardized testing group who scored at the low end of the verbal and math subtests on the SAT and the ACT were smaller than those of the parent-nominated group: SAT-V 200–390 9.2% vs. 28.6%; SAT-M 200–390 16.1% vs. 24.2%; ACT-Reading 1–14 14.7% vs. 21.2%; ACT-Math 1–14 8.5% vs. 11.4 with the largest difference obtained for SAT-V. In contrast, the proportions of students scoring at the high end on the SAT and the ACT subtests were only slightly larger for the standardized testing group than the parent nominated group: SAT-V 600–790 7.2% vs. 4.8%; SAT-M 600–790 9.5% vs. 7.3%; ACT-Reading 25–36 24.7% vs. 18.7%; ACT-Math 25–36 13.8% vs. 9.4%. Thus, more students who entered the talent search program via parent nomination obtained low scores but about the same earned high scores on the SAT or the ACT subtests.

Scores for various demographic groups (e.g., male, female, 7th graders, 8th graders, etc.) were compared for students who qualified via test

SAT and ACT Scores for Students Qualifying via Standardized Test Scores versus Parent Nomination

Source	Mean *(SD)*		*df*	*t*	Cohen's *d*
SAT	Standardized tests (n = 12,265)	Parent nomination (n = 810)			
Combined	941.6 (155.4)	899.1 (156.8)	13,073	7.54*	.27
Verbal	465.1 (85.1)	441.6 (86.7)	13,073	7.60*	.27
Math	476.5 (90.2)	457.5 (91.4)	13,073	5.80*	.21
ACT	Standardized tests (n = 9,692)	Parent nomination (n = 892)			
Composite	20.1 (4.1)	19.1 (4.0)	10,582	7.07*	.25
English	19.9 (5.1)	18.3 (5.2)	10,593	8.82*	.31
Math	19.3 (4.3)	18.5 (4.0)	10,593	4.80*	.17
Reading	20.5 (5.6)	19.3 (5.4)	10,584	6.16*	.22
Science	20.2 (4.2)	9.6 (4.1)	10,582	4.06*	.10

Note. *p < .001.

Table 1

SAT Scores by Demographic Characteristics for Talent Search Students Qualifying via Standardized Test Scores versus Parent Nomination

Source	Mean *(SD)*		*df*	*t*	Cohen's *d*
	Standardized tests	Parent nomination			
Male	n = 6,399	n = 412			
SAT-Combined	950.1 (159.1)	908.4 (161.1)	6,809	5.16*	.26
SAT-Verbal	461.3 (85.9)	439.0 (87.8)	6,809	5.10*	.26
SAT-Math	488.9 (93.2)	469.4 (92.9)	6,809	4.11*	.21
Female	n = 5,857	n = 398			
SAT-Combined	932.2 (150.6)	899.4 (151.8)	6,253	7.54*	.28
SAT-Verbal	469.2 (84.1)	444.2 (85.5)	6,253	7.60*	.29
SAT-Math	463.0 (84.8)	445.2 (88.4)	6,253	5.80*	.21
6th graders	n = 1,177	n = 111			
SAT-Combined	840.4 (141.1)	803.4 (134.7)	1,286	2.65*	.27
SAT-Verbal	415.7 (79.2)	385.2 (78.6)	1,286	3.88*	.39
SAT-Math	424.7 (84.5)	418.2 (86.3)	1,286	.77	.08
7th graders	n = 5,251	n = 270			
SAT-Combined	905.0 (142.3)	863.9 (147.0)	5,519	4.63*	.28
SAT-Verbal	446.2 (79.2)	423.4 (79.8)	5,519	4.61*	.29
SAT-Math	458.8 (84.0)	440.4 (88.0)	5,519	3.50*	.21
8th graders	n = 5,802	n = 428			
SAT-Combined	995.6 (149.4)	946.4 (151.4)	6,228	6.57*	.33
SAT-Verbal	492.3 (82.3)	467.7 (83.0)	6,228	6.00*	.30
SAT-Math	503.3 (88.4)	478.7 (89.4)	6,228	5.55*	.28
Caucasian/White	n = 8,986	n = 560			
SAT-Combined	934.7 (148.1)	889.1 (152.4)	9,544	7.06*	.30
SAT-Verbal	463.7 (83.6)	440.6 (85.2)	9,544	6.32*	.27
SAT-Math	471.1 (84.2)	448.5 (85.6)	9,544	6.15*	.27
Asian/Pacific Islander	n = 1,022	n = 96			
SAT-Combined	1041.2 (172.9)	964.2 (168.3)	1,116	4.18*	.45
SAT-Verbal	488.3 (92.1)	448.4 (90.6)	1,116	4.06*	.44
SAT-Math	552.9 (102.6)	515.7 (101.2)	1,116	3.40*	.36
Hispanic/Latino	n = 140	n = 10			
SAT-Combined	900.9 (147.6)	885.0 (151.6)	148	.33	.11
SAT-Verbal	453.5 (80.3)	441.0 (54.1)	148	.48	.18
SAT-Math	447.4 (84.3)	444.0 (120.2)	148	.12	.03
Under $20,000	n = 248	n = 19			
SAT-Combined	853.8 (159.6)	813.2 (169.8)	265	1.06	.25
SAT-Verbal	431.0 (87.4)	399.0 (103.1)	265	1.52	.34
SAT-Math	422.7 (92.7)	414.2 (86.6)	265	.39	.10
$20,000-49,999 income	n = 1,153	n = 79			
SAT-Combined	894.3 (152.8)	836.5 (146.7)	1,230	3.26*	.39
SAT-Verbal	445.5 (84.7)	417.9 (81.4)	1,230	2.81*	.33
SAT-Math	448.8 (87.6)	418.6 (84.3)	1,230	2.97*	.35
$50,000-79,999 income	n = 1,706	n = 156			
SAT-Combined	918.3 (146.0)	878.9 (157.5)	1,860	3.21*	.26
SAT-Verbal	457.2 (82.4)	434.0 (84.3)	1,860	3.35*	.28
SAT-Math	461.1 (85.3)	444.8 (90.2)	1,860	2.27	.19
$80,000-119,999 income	n = 1,816	n = 128			
SAT-Combined	942.6 (149.8)	893.3 (141.0)	1,942	3.62*	.34
SAT-Verbal	463.1 (82.1)	436.7 (83.0)	1,942	3.52*	.32
SAT-Math	479.5 (88.5)	456.6 (82.3)	1,942	2.85*	.27

Note. Only the three largest samples were presented for grade and ethnicity.
*p < .017.

Table 2

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ACT Scores by Demographic Characteristics for Talent Search Students Qualifying via Standardized Test Scores versus Parent Nomination

Source	Mean (*SD*)		*df*	*t*	Cohen's *d*
	Standardized tests	Parent nomination			
Male	*n* = 5,054	*n* = 466			
ACT-Composite	20.1 (4.2)	19.2 (4.0)	5,518	4.22*	.21
ACT-English	19.3 (5.0)	18.0 (5.0)	5,522	5.29*	.26
ACT-Math	19.8 (4.5)	19.1 (4.2)	5,522	3.15*	.16
ACT-Reading	20.2 (5.6)	19.1 (5.3)	5,518	3.81*	.19
ACT-Science	20.5 (4.4)	20.1 (4.3)	5,518	2.09	.11
Female	*n* = 4,628	*n* = 426			
ACT-Composite	20.1 (4.0)	19.0 (4.0)	5,052	5.88*	.30
ACT-English	20.5 (5.2)	18.6 (5.4)	5,059	7.27*	.36
ACT-Math	18.7 (3.9)	18.0 (3.7)	5,059	3.78*	.20
ACT-Reading	20.9 (5.5)	19.6 (5.5)	5,054	4.93*	.25
ACT-Science	19.9 (4.0)	19.2 (3.9)	5,052	3.82*	.19
6th graders	*n* = 699	*n* = 83			
ACT-Composite	17.0 (3.2)	15.9 (2.9)	780	3.10*	.37
ACT-English	16.8 (4.4)	15.1 (4.3)	780	3.34*	.39
ACT-Math	16.1 (2.9)	15.7 (2.5)	781	1.09	.13
ACT-Reading	17.2 (4.6)	15.5 (3.7)	780	3.17*	.40
ACT-Science	17.3 (3.8)	16.4 (3.7)	780	1.98	.23
7th graders	*n* = 3,722	*n* = 269			
ACT-Composite	18.5 (3.4)	17.4 (3.4)	3,981	5.39*	.34
ACT-English	18.3 (4.7)	16.5 (5.0)	3,989	6.24*	.38
ACT-Math	17.5 (3.2)	16.8 (2.9)	3,989	3.24*	.22
ACT-Reading	18.9 (5.0)	17.5 (4.8)	3,982	4.44*	.28
ACT-Science	18.9 (3.8)	18.2 (3.9)	3,981	3.18*	.20
8th graders	*n* = 3,925	*n* = 422			
ACT-Composite	20.8 (3.7)	19.8 (3.5)	4,342	5.26*	.27
ACT-English	20.5 (4.8)	18.9 (4.6)	4,345	6.44*	.33
ACT-Math	20.0 (3.9)	19.2 (3.8)	4,344	3.75*	.20
ACT-Reading	21.2 (5.3)	20.1 (5.1)	4,343	4.22*	.22
ACT-Science	20.9 (3.8)	20.4 (3.7)	4,342	2.54	.13
Caucasian/White	*n* = 7,701	*n* = 694			
ACT-Composite	20.1 (4.0)	19.0 (3.8)	8,393	7.12*	.29
ACT-English	19.9 (5.0)	18.2 (5.0)	8,404	8.52*	.34
ACT-Math	19.2 (4.1)	18.4 (3.8)	8,404	5.07*	.21
ACT-Reading	20.6 (5.5)	19.3 (5.3)	8,395	6.03*	.24
ACT-Science	20.3 (4.1)	19.6 (4.1)	8,393	4.18*	.17
Asian/Pacific Islander	*n* = 415	*n* = 50			
ACT-Composite	22.5 (4.7)	21.6 (4.3)	463	1.28	.20
ACT-English	22.1 (5.5)	21.1 (5.3)	463	1.19	.18
ACT-Math	22.7 (5.4)	21.9 (4.4)	463	1.01	.16
ACT-Reading	22.6 (6.2)	22.0 (5.7)	463	.69	.11
ACT-Science	21.8 (4.4)	20.8 (4.2)	463	1.58	.24
Hispanic/Latino	*n* = 128	*n* = 14			
ACT-Composite	18.7 (4.0)	20.9 (4.6)	140	-1.97	-.52
ACT-English	18.0 (5.1)	20.8 (6.4)	140	-1.93	-.49
ACT-Math	18.0 (3.8)	19.8 (5.2)	140	-1.64	-.39
ACT-Reading	19.2 (5.2)	21.7 (5.4)	140	-1.74	-.48
ACT-Science	19.0 (4.1)	20.6 (3.4)	140	-1.39	-.42
Under $20,000 income	*n* = 187	*n* = 16			
ACT-Composite	17.4 (4.1)	17.4 (3.7)	201	.50	.01
ACT-English	16.5 (5.5)	15.6 (5.0)	201	.60	.16
ACT-Math	16.8 (3.5)	16.7 (3.6)	201	.11	.03
ACT-Reading	17.9 (5.5)	17.0 (4.5)	201	.64	.18
ACT-Science	18.0 (4.0)	19.2 (4.1)	201	-1.07	-.27
$20,000-49,999 income	*n* = 913	*n* = 101			
ACT-Composite	18.7 (3.6)	17.8 (3.8)	1,010	2.38	.24
ACT-English	18.3 (4.7)	16.8 (5.0)	1,010	3.14*	.32
ACT-Math	17.7 (3.5)	17.3 (3.6)	1,010	1.26	.13
ACT-Reading	19.1 (5.1)	18.2 (4.9)	1,010	1.65	.18
ACT-Science	19.1 (3.8)	18.4 (4.0)	1,010	1.77	.18
$50,000-79,999 income	*n* = 1,540	*n* = 176			
ACT-Composite	19.7 (3.8)	18.7 (3.7)	1,712	3.11*	.25
ACT-English	19.4 (5.0)	18.0 (4.7)	1,714	3.46*	.28
ACT-Math	18.7 (3.9)	18.4 (3.8)	1,714	.80	.06
ACT-Reading	20.1 (5.3)	18.5 (5.1)	1,712	3.77*	.31
ACT-Science	19.9 (4.1)	19.4 (4.0)	1,712	1.68	.14
$80,000-119,999 income	*n* = 1,610	*n* = 140			
ACT-Composite	20.2 (3.9)	18.9 (3.4)	1,744	3.83*	.36
ACT-English	20.0 (4.9)	18.2 (4.7)	1,747	4.21*	.38
ACT-Math	19.4 (4.2)	18.0 (3.4)	1,748	3.70*	.35
ACT-Reading	20.7 (5.5)	19.1 (5.2)	1,744	3.28*	.29
ACT-Science	20.4 (4.0)	19.8 (3.6)	1,744	1.54	.14

Note. Only the three largest samples were presented for grade and ethnicity.
*$p < .01$.

Table 3

scores versus parent nomination using independent sample *t*-tests. Overall, talent search students qualifying via standardized test scores outscored talent search students qualifying via parent nomination on both the SAT and the ACT across demographic groups with the exception of some grade levels (grade 6), some categories of household income (e.g., under $20,000, over $120,000), and some ethnic/racial groups (e.g., African American, Hispanic). Effect sizes for differences between groups were all in the small range according to Cohen (1988). The largest effect sizes we found were for Hispanic students on the ACT-English and ACT-Reading favoring parent nominated students and for Asian students on the SAT-V favoring students qualifying via test scores (see Tables 2 and 3).

Of the parent-nominated students, between 40% (ACT-Math) and 49% (ACT-Reading) obtained scores above 18, which would qualify them for many summer programs. On the SAT, 23% (SAT-V) to 29% (SAT-M) would have qualified for summer programs based on getting SAT scores above 500 on a subtest. Comparable percentages for the students qualifying on the basis of standardized test scores were 46% to 60% for the ACT and 30% to 34% for the SAT. Thus, parent nomination allowed many students to enter talent search programs and subsequently qualify for special educational programs which the talent search program and other universities offer.

Within Group Comparisons by Demographic Characteristics

SAT and ACT score differences as a function of gender, grade, ethnicity, and household income were examined within each group of students (see Table 4 for the multivariate test). Patterns of differences were similar across groups for gender, grade, and household income; male students scored higher than females on the SAT-Combined, SAT-Math, ACT-Math, and ACT-Science; female students scored higher than males on the SAT-Verbal, ACT-English, and ACT-Reading; students in higher grades had higher scores both on the SAT and the ACT than students in lower grades; students of household incomes of $80,000 or above also had higher scores on the SAT and the ACT than students of other household incomes.

A different pattern of scoring differences as a function of ethnicity was

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MANOVA on SAT and ACT Scores Within Groups of Students

Source	Wilks' *Lambda*	*df*	Error *df*	*F*	*Eta²*
SAT (Talent search students qualifying via standardized tests $n = 12,265$)					
Gender	.96	2	12,253	288.41*	.045
Grade	.88	4	2,4452	414.17*	.063
Ethnicity	.91	12	21,758	92.04*	.048
State	.98	16	24,510	17.32*	.011
Household income	.96	8	14,326	37.76*	.021
SAT (Talent search students qualifying via parent nomination $n = 810$)					
Gender	.97	2	807	13.71*	.033
Grade	.87	4	1,610	28.42*	.066
Ethnicity	.90	10	1,398	7.39*	.050
State	.97	12	1,604	2.33*	.017
Household income	.94	8	974	4.03*	.032
ACT (Talent search students qualifying via standardized tests $n = 9,692$)					
Gender	.91	5	9,676	183.65**	.087
Grade	.69	15	26,650	251.63**	.115
Ethnicity	.94	30	34,978	19.18**	.013
State	.98	40	42,192	6.24**	.005
Household income	.94	20	18,756	16.31**	.014
ACT (Talent search students qualifying via parent nomination $n = 892$)					
Gender	.93	5	886	12.86**	.068
Grade	.72	15	2,429	20.38**	.103
Ethnicity	.90	30	3,186	3.00**	.022
State	.92	35	3,704	2.21**	.017
Household income	.91	20	1,752	2.65**	.024

Note. $*p < .025$. $**p < .013$.

Table 4

Summary of Within Group Comparisons on the SAT by Demographic Characteristics

Group	Standardized Tests ($n = 12,265$)	Parent Nomination ($n = 810$)
	by Gender	
SAT-C	Male > Female*	Male > Female
SAT-V	Female > Male*	Female > Male
SAT-M	Male > Female*	Male > Female*
	by Grade	
SAT-C	grade 8 > grade 7 > grade 6*	grade 8 > grade 7 > grade 6*
SAT-V	grade 8 > grade 7 > grade 6*	grade 8 > grade 7 > grade 6*
SAT-M	grade 8 > grade 7 > grade 6*	grade 8 > grade 7 > grade 6*
	by Ethnicity	
SAT-C	Asian > Multiracial > Caucasian*	Asian > Caucasian > Hispanic*
SAT-V	Asian > Alaskan/Indian > Multiracial*	Asian > Hispanic > Caucasian
SAT-M	Asian > Other > Caucasian*	Asian > Caucasian > Hispanic*
	by Household income	
SAT-C	$120,000+ > $80,000-119,999*	$120,000+ > $80,000-119,999*
SAT-V	$120,000+ > $80,000-119,999*	$120,000+ > $80,000-119,999*
SAT-M	$120,000+ > $80,000-119,999*	$120,000+ > $80,000-119,999*

Note. Only the top three subgroups for grade and ethnicity and the top two subgroups for household income were presented. Standardized tests = Students who qualified for talent search via standardized test scores; Parent nomination = Students who qualified for talent search via parent nomination. SAT-C = SAT-Combined; SAT-V = SAT-Verbal; SAT-M = SAT-Math.

$*p < .017$.

Table 5

found within each group. Of students qualifying via standardized test scores, Asian/Oriental/ Pacific Islander, Multiracial, and Caucasian/White students scored higher than students of other ethnicities. For students qualifying via parent nomination, Hispanic/Latino, Asian/Oriental/Pacific Islander, and Caucasian/White students scored higher than other ethnic/racial groups. See Tables 5 and 6 for summary of the within group comparisons.

Discussion

This study involved a fairly large sample, and findings were consistent in showing that students who entered talent search programs qualifying via scores on standardized tests earned slightly higher scores on the SAT or the ACT than students qualifying via parent nomination, athough the effect sizes for these differences were small. This pattern of performance differences between the two groups of students held regardless of gender, grade, ethnicity, or household income.

As for demographic profiles, the groups of students were similar in terms of gender and household income. There were more 8th graders than 7th graders in the parent nominated group, and we speculate that this is because parents want their children to experience the SAT or the ACT prior to having them take it for college, and the 8th-grade year is the last year they can have them take the test for practice.

Although the majority of both groups of students were Caucasian/White, there were more Asian students (including Pacific Islanders) in the parent nominated group than the standardized testing group. Yet, the difference between the percentage of Asian students in either of the two methods of nomination was only 2.3%. We do not know what percentage of the Asian students were not native English speakers and perhaps had problems qualifying for talent search testing via in-grade standardized achievement tests and thus came in via parent nomination. The mean difference on the verbal subtest of the SAT between Asian students qualifying via standardized test scores versus parent nomination was 40 points, the largest difference we observed, suggesting perhaps that the parent nominated Asian students were more likely to be non-native English speakers. There were no differences between Asian stu-

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Summary of Within Group Comparisons on the ACT by Demographic Characteristics

Group	Standardized Tests (n = 9,692)	Parent Nomination (n = 892)
	by Gender	
ACT-C	Male > Female	Male > Female
ACT-E	Female > Male*	Female > Male
ACT-M	Male > Female*	Male > Female*
ACT-R	Female > Male*	Female > Male
ACT-S	Male > Female*	Male > Female*
	by Grade	
ACT-C	grade 9 > grade 8 > grade 7*	grade 9 > grade 8 > grade 7*
ACT-E	grade 9 > grade 8 > grade 7*	grade 9 > grade 8 > grade 7*
ACT-M	grade 9 > grade 8 > grade 7*	grade 9 > grade 8 > grade 7*
ACT-R	grade 9 > grade 8 > grade 7*	grade 9 > grade 8 > grade 7*
ACT-S	grade 9 > grade 8 > grade 7*	grade 9 > grade 8 > grade 7*
	by Ethnicity	
ACT-C	Asian > Multiracial > Caucasian*	Asian > Hispanic > Caucasian*
ACT-E	Asian > Multiracial > Caucasian*	Asian > Hispanic > Caucasian*
ACT-M	Asian > Other > Caucasian*	Asian > Hispanic > Caucasian*
ACT-R	Asian > Multiracial > Caucasian*	Asian > Hispanic > Caucasian*
ACT-S	Asian > Caucasian > Multiracial*	Asian > Hispanic > Caucasian*
	by Household income	
ACT-C	$120,000+ > $80,000-119,999*	$120,000+ > $80,000-119,999*
ACT-E	$120,000+ > $80,000-119,999*	$120,000+ > $80,000-119,999*
ACT-M	$120,000+ > $80,000-119,999*	$120,000+ > $50,000-79,999*
ACT-R	$120,000+ > $80,000-119,999*	$120,000+ > $80,000-119,999*
ACT-S	$120,000+ > $80,000-119,999*	$120,000+ > $80,000-119,999

Note. Only the top three subgroups for grade and ethnicity and the top two subgroups for household income were presented. Standardized tests = Students who qualified for talent search via standardized test scores; Parent nomination = Students who qualified for talent search via parent nomination. ACT-C = ACT-Composite; ACT-E = ACT-English; ACT-M = ACT-Math; ACT-R = ACT-Reading; ACT-S = ACT-Science.

*$p < .01$.

Table 6

dents for those who took the ACT on either the ACT-English or Reading. We suspect, however, that the SAT-Verbal would be more difficult for non-native English speakers than the ACT verbal subtests with its emphasis on verbal analogies. The parent nominated Asian students had comparable SAT-M scores to the students who entered via standardized test scores. Our finding also probably reflects the strong emphasis of Asian cultures on education and educational opportunities (Asakawa & Csikszentmihalyi, 1998; Goyette & Xie, 1999; Sorensen, 1994). Although Asians are in fact over-represented (compared to their representation in Midwestern population) among talent search participants, gifted students including those who are not native English speakers are vulnerable to being under-identified for placement in gifted programs (see Ford, Harris, Tyson, & Trotman, 2002; Hadaway & Marek-Schroer, 1992; MacRae & Lupart, 1991; Passow & Frasier, 1996). Parent nomination was adopted by CTD as a means to accommodate students who did not have standardized testing in their schools or whose scores did not reflect their true ability. From our data, this alternative venue did not bring in more lower-income students nor more under-represented minorities. It did possibly bring in more non-native English speakers although the data are not definitive on this. Thus, our finding suggests that parent nomination is potentially enabling students to participate in talent search testing who would not otherwise be identified by schools to do so, and that many of these students are obtaining scores high enough to qualify them for participation in subsequent educational programs.

Within group comparisons showed typical performance differences in the SAT and the ACT based on demographic characteristics. For example, male students had higher scores than females on math (on the SAT and the ACT) and science subtests (on the ACT), while female students had higher scores than males on verbal (on the SAT and the ACT) regardless of the method for entering talent search testing (via standardized test scores versus parent nomination). The pattern of gender differences observed in this study is somewhat consistent with those found by Olszewski-Kubilius and Turner (2002) for elementary school age (4th through 6th graders) talent search participants on the EXPLORE test (8th grade version of the ACT), for middle school talent search participants (see Achter, Lubinski, & Benbow, 1996; Benbow, 1992a, 1992b; Benbow & Lubinski, 1994; Benbow & Stanley, 1980; Stanley, Stumpf, & Cohn, 1999), and for college-bound high-school students (Stanley, Benbow, Brody, Dauber, & Lupkowski, 1992) on the SAT or the ACT. As expected, we found that students in higher grades performed better than students in lower grades, and higher scores were associated with a higher household income.

Asian students (including Pacific Islanders) generally performed better than any other ethnic/racial group regardless of how they qualified for talent search participation. An interesting finding was that among students qualifying via parent nomination, Hispanic/Latino students were among the highest scoring groups on the SAT and the ACT, while this was not the case for Hispanic/Latino students who qualified via standardized test scores. Although parent nomination, as an alternative to the use of standardized test scores, did not bring more Hispanic/Latino students into the talent search, it did bring in some very talented students of this ethnicity who performed well on the off-level tests. As with Asian students, our data suggest that parent nomination might be a reasonable alternative to standardized tests for non-native English speakers to enter talent search programs.

In summary, parent nomination may be a viable, efficient alternative to standardized testing for identifying children for participation in talent search testing. Students who qualified via parent nomination had SAT or ACT scores that were only slightly lower than other students. These differences have little practical significance. Also, at least one group of parent nominated students (Hispanic/Latino students) performed better than students who came into talent search

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testing by traditional means. Unfortunately, parent nomination did not significantly increase the participation of students who are under-represented in talent search testing and gifted programs in general, although it potentially could if talent search programs conduct outreach into the schools and communities to garner those students.

Schools act as gatekeepers for talent search programs. Materials about participation are sent to them and typically, they identify and invite students to apply. Schools do this differently. Some identify their students who meet qualifying criteria on in-grade achievement tests and send invitation letters to them. We suspect that many schools do not even inform parents about the option of entering talent search programs via parent nomination. We cannot discern this with our data, but believe that most students who entered talent search testing via parent nomination did so on their own (via the Internet or word of mouth from other parents) and not through their schools. One of the challenges of increasing the number of under-represented students in talent search programs will be not only finding appropriate and valid methods of nominating students, but getting schools to use them. Although educators typically devalue parents' judgments about students' abilities (Hadaway & Marek-Schroer, 1992; Mathews, 1984; Woods & Achey, 1990), parent nomination can be very useful in the identification of gifted students because parents are most knowledgeable about the strengths and weaknesses of their children, particularly young children (Mathews), provide different views of giftedness (e.g., related to valued social skills) from teachers (Galloway & Porath, 1997), or support early identification and acceleration for gifted students more than teachers (Sankar-DeLeeuw, 1999).

Limitations and Future Research

As overwhelmingly underrepresented in the talent search program in general, very small numbers of Hispanic/Latino (about 2% across groups) and African American (about 4% across groups) students were involved in the present study, and this is a major limitation. Thus, results related to ethnic/racial groups need careful interpretations.

Our data showed differences among ethnic groups either in the use of parent nomination versus standardized test scores for qualifying for talent search testing (e.g., Asian) or in the SAT and the ACT scores of students qualifying via parent nomination (e.g., Hispanic/Latino). Future research should examine in-depth the use of parent nomination by various ethnic groups with large samples, particularly the reasons for using this method and how to increase its use in identifying academically talented students among certain ethnic/racial groups. Further information about other characteristics (e.g., homeschoolers) of the parent nominated group is needed. Also, a study of how school officials view and use parent nomination would assist talent search organizations in refining the method so as to include more students who could benefit from the program.

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Appendix A

Parent Nomination Form

Qualifying scores are not available, but my child might benefit from the Talent Search.

State and local policies have sometimes eliminated standardized testing in schools, so some students do not have test scores which qualify them for the Talent Searches.

If your school cannot provide scores for your child, the parent, may nominate your child to participate in the Talent Search. We recommend that you consider the following questions. Has your child:

- demonstrated usually advanced aptitude in verbal or mathematical reasoning?
- consistently performed in the top five percent relative to his or her age mates?*
- performed exceptionally well in academically demanding course work in school?
- been usually and consistently frustrated by a lack of challenge from his or her school experience?

If you wish to nominate your child for the talent search, indicate that on your Talent Search application, complete the form below and mail it to: Midwest Talent Search, 617 Dartmouth Place, Evanston, IL 60208.

Note. *Sixth graders should perform in the top three percent.

Appendix B

Standardized Testing Waiver Agreement

For Students Without Test Scores, send this from with your Talent Search application

Qualifying standardized test scores are not available for my child. I understand that the Talent Searches offer activities and opportunities which are targeted to students whose abilities place them in the top five percent of their age mates nationwide (Top 3% for sixth graders). I understand that out-of-level testing is challenging for the very best students and may be frustrating for students of lesser abilities. I have discussed my child's abilities with his or her teachers and counselors, and I believe my child would rank at or above the ninety-five percentile if standardized test results were available.

I recommend my child for participation in the Talent Search

Child's name: _____

Child's school: _____

Child's grade: (check one)

Sixth Seventh Eighth Ninth

Parent's signature: _____

Date: _____

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