Characteristics of Academically Talented Minority Students

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Although there is often fierce competition among schools and universities for the recruitment of academically talented minority students, little is known about their needs, interests, and future plans. This article provides insights into the concerns of talented young minority people by describing the profiles of approximately 3,545 minority students who scored in the top 5% on the American College Test Assessment. The authors examine the relationship of specific minority group membership and gender, postsecondary educational plans, career interests, needs for services, desires for extracurricular activities, and satisfaction with educational experiences. Implications are drawn for counselors, advisers, and administrators striving to improve their ability to serve academically talented minority students.

Research on gifted minority students in the United States has focused on three main issues: nontraditional methods of identification, programming that emphasizes the particular strengths of minority students (such as creativity and leadership), and specialized guidance, which helps students to overcome barriers of disadvantagement or deal with conflicts related to their ethnic identity. The area of nontraditional methods of identification has received by far the most attention (Kitano & Kirby, 1986); in fact, extraordinary effort has been given to developing "culture-fair" and "culture-free" intelligence tests and identification procedures. The assumption behind the efforts to identify talented minority students through these tests has been that the intellectual abilities of minority groups, particularly disadvantaged groups, have been obscured by cultural barriers and test bias. Traditional measures of intellectual ability typically yield small numbers of minority students among the highest scorers. The minority groups most commonly underrepresented are often the most economically disadvantaged: Blacks, Native Americans, and Chicanos (Van Tassel-Baska, 1987).

Another major area of research regarding minority gifted students includes curriculum and programming, which build on these students' strengths. Suggestions for curricular modifications for minority gifted students have been provided by the National/State Leadership Training Institute on Gifted and Talented (1981), Strobert and Alvarez (1982), and Maker (1983). Nevertheless, specialized programs or curricular modifications for minority gifted students are, in actual practice, few and far between (Bruch, 1978; Van Tassel-Baska, 1987).

Colangelo (1985) developed strategies for counselors working with minority gifted students in order to help these students overcome conflicts between ethnic identity and development of giftedness. Counselors must help their minority gifted clients understand what their identification as "gifted" means, build the family members' awareness and support for their child's achievement, and help their clients develop a distinct ethnic identity while fostering academic and socioemotional development.

The emphasis in the literature on nontraditional measures for identification, the need for adapted curriculum, and the importance of counseling sometimes seems to deny that minority students can ever be identified by traditional measures of academic achievement and that even minority groups identified by nontraditional means require considerable support if they are to survive and achieve. This, however, may not necessarily be the case. A sizable proportion (15.8%) of economically disadvantaged persons—many of them from minority groups—are found in talent searches for seventh graders, using standardized tests of academic achievement (Van Tassel-Baska, 1987). Second, not all ethnic minority groups are underrepresented among the highest scorers on standardized achievement tests; in fact, Asian American students are greatly overrepresented among the top scorers on these measures (Colangelo & Kerr, 1990; Gallagher, 1985). Academically talented minority students who achieve high test scores do indeed exist, and in many cases are thriving. Much can be learned from the study of these students that may be useful for an understanding of bright minority students in general. That is the subject of the current study, which profiles the characteristics, needs, and plans of those minority students who have achieved a 95th percentile composite score on the American College Test (ACT) Assessment.

METHOD

Participants

Participants in this study were the 55,335 high school juniors and seniors who scored at or above the 95th percentile on the comprehensive score for the ACT Assessment in the spring of 1988.

Instrument

The ACT Assessment (1988) is the second most widely used college admissions exam in the United States, with more than 1,000,000 students taking the test each year. The ACT is more commonly administered to students and accepted by colleges in the midwest than in the east, west, or south (ACT, 1988). The ACT had four subtests: English, Mathematics, Social Studies, and Natural Sciences (ACT made revisions of these subtests in 1989). Scores on each of these subtests are averaged to create the ACT composite score. Besides the achievement tests, all students are administered the Student Profile Section (SPS) of the ACT and an

TABLE 1
Ethnicity, Gender, and Achievement of 95th Percentile on ACT (≥28)

Ethnic Group	Test Takers				Comp on ACT			Percent of Ethnic Group >28	Percent of Total >28
	Total *N*	Male	Female	Percent of All	Total Number >28	Male Number >28	Female Number >28		
Black	69,509	27,995	41,514	9.0	443	231	212	.6	.8
Native American	8,096	3,688	4,408	1.0	162	103	59	2.0	.3
White	650,999	296,579	354,420	81.0	50,314	30,721	19,593	7.7	90.9
Mexican American	19,717	8,915	10,802	2.5	413	271	142	2.1	.7
Asian/Pacific Islander	15,854	8,019	7,835	2.0	2,159	1,317	842	13.6	3.9
Puerto Rican/Hispanic	8,622	3,761	4,861	1.1	368	231	137	4.3	.7
Other/not available	27,088	NA	NA	3.4	1,476	938	538	5.4	2.7
Total	799,885	NA	NA	100.0	55,335	33,812	21,523	35.7	100.0

Note. NA means not available.

interest inventory, The Unisex Edition of the ACT Interest Inventory (UNIACT) (American College Test Assessment, 1988). The SPS contains questions on demographics, high school course work and activities, educational and career plans, needs for services, and questions pertaining to academic attitudes and concerns. The UNIACT is a brief interest inventory that yields scores for vocational interests in six areas paralleling Holland's (1985) six interest types. The UNIACT labels (corresponding Holland interest types in parentheses) are Science (Investigative), Arts (Artistic), Social Service (Social), Business Contact (Enterprising), Business Operations (Conventional), and Technical (Realistic).

Procedure

The entire data tape for all students scoring in the 95th percentile and above on ACT composite scores in spring of 1988 was analyzed for this study. Items were selected based on their relevance to the general description of the population and to academic and career planning. Responses to selected items from the SPS were analyzed to establish descriptive profiles of talented students from the various American (United States) minority groups. The minority group labels used were those used by ACT: Black, Native American, White, Mexican American, Asian American, Hispanic, Other/No Response. The items selected from the SPS for analysis included gender, socioeconomic status (SES), college major, and need for services. Scores for each scale of the UNIACT were computed for each minority group. Because the data represented an entire population rather than a sample, inferential statistics were not used.

RESULTS AND DISCUSSION

Incidence of High Scores

Approximately 9% of those students scoring at or above the 95th percentile (ACT composite score of > 28) on the ACT composite score identified themselves as minority individuals (Table 1). This proportion is underrepresentative of ethnic minority groups who took the test (approximately 17% of the total). There was, however, great variation in test performance among ethnic groups, as has been observed frequently (Van Tassel-Baska, 1987). Asian Americans were overrepresented among high scorers. Nearly 14% of Asian Americans attained the overall 95th percentile score on the ACT (Kerr & Colangelo, 1988). Those ethnic minority groups who suffer the highest poverty rate were most underrepresented: Blacks (.8%), Native Americans (.3%), Mexican Americans (.7%), and Hispanics (.7%). This makes sense in light of the fact that in the United States, local socioeconomic conditions also determine the quality of education.

TABLE 2
Percent of Academically Talented Students' Choice of College Major by Ethnicity

Major	Black	Native American	White	Chicano	Asian	Hispanic
Biological sciences	5.6	3.7	4.9	4.1	8.2	5.9
Business	13.1	11.1	12.6	8.1	12.3	10.8
Communications	3.6	2.4	3.9	1.6	2.3	4.3
Computer science	3.4	4.9	3.5	4.3	2.7	3.5
Education	1.1	3.1	3.8	2.4	1.0	1.9
Engineering	35.4	20.9	21.8	25.4	12.2	23.1
Arts	2.1	3.7	2.9	2.0	1.6	2.1
Health	15.1	8.0	10.3	9.2	29.5	12.8
Letters	1.8	3.7	2.6	1.5	1.1	2.7
Math	1.1	3.1	2.4	1.0	1.0	2.4
Physics	3.8	4.3	10.6	5.6	4.4	4.1
Social sciences	14.6	12.3	11.9	15.3	7.3	13.0
General studies	0.0	2.5	1.0	1.0	1.3	1.0
Undecided	4.3	8.6	6.7	6.3	5.1	6.5

TABLE 3
Percent of Ethnic Groups' Desire for Services

Service	Black	Native American	White	Chicano	Asian	Hispanic
Help in educational and occupational plans	48.0	46.9	51.4	49.1	53.6	48.9
Help improving study skills	30.9	27.1	21.3	26.6	24.4	23.6
Help with personal concerns	11.7	7.4	7.3	10.9	12.8	10.1
Independent study	69.0	65.4	65.3	68.0	77.8	72.5
Freshman honors courses	80.8	66.6	73.2	78.0	88.7	81.2
Financial aid	92.3	88.8	84.2	92.3	82.8	88.5
Employment	66.1	67.2	67.2	70.9	60.6	65.2

Characteristics of High-Scoring Minority Students

Despite the close relationship between SES and ACT scores, a surprising number of very poor minority students did attain the 95th percentile on the ACT. Of the high scorers, a total of 15% of Blacks, 24% of Native Americans, 17% of Mexican Americans, 10% of Hispanics, and 8.7% of Asian Americans lived in families that earned less than $18,000 a year, which is below the poverty level for American families. Another 23% of Mexican Americans, 19% of Hispanics, 25.0% of Blacks, 8.3% of Native Americans, and 13.8% of Asian Americans had family incomes between $18,000 and $30,000, still very low incomes for families.

The patterns of gender and achievement for minority groups were similar to patterns of achievement in the White majority: The majority of high scoring students were boys. Only among Black students did girls approach the number of male high achievers; boys represented 52% of Black high scorers. Boys represented 63% of Native American high scorers, 66% of Mexican American high scorers, 61% of Asian American high scorers, 63% of Hispanic high scorers, and 61% of White high scorers.

College Major

In general, the academic plans of high-scoring ethnic minority students did not diverge greatly from the patterns of interests of the majority (White) students, as described by Kerr and Colangelo (1988) (Table 2). That is, like most of their generation, they shied away from liberal arts majors such as Letters, Arts, Mathematics, and General Studies, and overwhelmingly preferred the applied or vocational academic majors: Business, Engineering, Pre-Medicine, and Pre-Law (included in Social Sciences). Like the majority of talented students, they had little or no interest (fewer than 1% of any ethnic group) in agriculture, architecture, education, home economics, community service, or trades. There were, however, some striking exceptions to this uniformity. There was an extraordinary proportion of Black students (35.4%) interested in engineering specialties; more than one third of this group chose this major over 195 other choices. Interest in engineering was very high among all ethnic minority groups except Asian Americans; this is unusual only in the light of popular stereotypes of Asians as being predominantly interested in engineering. It may be that economic conditions among most ethnic minority groups demand a college major in which a 4-year investment has strong chances of yielding a high-paying job upon graduation. Alternatively, colleges of engineering in the United States may be engaged in extremely successful recruiting efforts among academically talented minority groups.

Another surprising finding was the strong preference of Asian American students (29.5) for health science (medicine, mainly) as a college major. When this group is combined with the 8% entering biological sciences, the result is more than one third of Asian American students entering life sciences, and very likely medical school. The forces behind this trend are unknown; Asian Americans may see this field as one that is particularly open and welcoming to them.

Social science, including pre-law, seems to be preferred more by minority students from poverty backgrounds than by other students; perhaps a greater concern for social justice motivates these choices.

It seems unfortunate that fewer than 1% of all minority groups indicated a preference for elementary or secondary education majors and that only small percentages seem to be entering majors likely to lead to college teaching. A cohort of role models may be lost to the next generation of minority students.

Needs for Services

Overall, ethnic minority high-scoring students expressed somewhat higher degrees of preference for various services and special programs than did the majority (White) students (Table 3).

TABLE 4
Percent of Academically Talented Students' High Vocational Interests by Ethnicity

Vocational Interest	Black	Native American	White	Chicano	Asian	Hispanic
Science	36.0	32.7	38.2	46.2	52.3	39.7
Arts	35.0	35.8	30.9	36.1	39.2	33.4
Social service	24.4	23.5	19.0	25.2	22.8	23.4
Business contact	24.2	22.8	17.1	22.5	18.0	17.4
Business operations	24.4	27.2	22.2	27.8	20.6	19.0
Technical	9.9	14.8	10.1	12.1	12.1	11.1

Note. High vocational interests means at least one standard deviation above mean.

Although Black students expressed about the same level of interest in educational and career counseling as did majority students, they had higher levels of desires for study skills, personal counseling, independent study, honors courses, financial aid, and employment. Native Americans were less interested in educational and career counseling and personal counseling, but more interested in study skills, independent study, honors programs, financial aid, and employment than were other ethnic groups. Chicano and Hispanic students exceeded the majority students mainly in their desires for independent study and honors, and for financial aid and employment. Asian American students scored higher than did any other ethnic group in their desires for both educational and career counseling and personal counseling. Their desires for independent study and honors courses were somewhat higher than were those for other groups, and their desires for study skills, financial aid, and employment were somewhat lower. Therefore, admissions counselors for colleges and universities wishing to attract academically talented minority students should be aware of these students' preferences for services, as well as aware of differences among groups in their desire for services.

Vocational Interests

Table 4 indicates the percentage of students scoring high in vocational interest areas. High interest was determined by scores that were at least one standard deviation above the mean. Only high interest scores are reported because they seem to be the most useful indicator of vocational interest (Holland, 1985).

Few differences emerged among ethnic groups in the areas of vocational interests (see Table 4). Asian Americans scored higher than did the other groups in their interests in careers and in the arts. Ethnic minority students indicated higher interests in arts and social service than did Whites. The technical area (e.g., working with tools, instruments, repairing machinery, raising crops/animals) was uniformly the least desired area. Overall, minority and majority students resembled one another in their vocational interests.

CONCLUSION

The data presented here have provided a glimpse into the characteristics and concerns of academically talented minority students. The picture of these students that emerges is one of an ambitious group. They are achieving despite societal stereotypes and racial barriers. Many are overcoming the restrictions of poverty on academic success. As a group, they seem concerned about making "practical" choices of college majors. They have expressed desires for support services and special academic programs that will increase their chances of success as well as their chances of a rich educational experience. It is likely that colleges and universities that emphasize these kinds of support services and special academic programs will be attractive to highly talented minority students. It may also be that these support services and special programs can bring many more talented minority students into the ranks of those who receive recognition and reward for their academic achievement.

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