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ABSTRACT

The purpose of the Minority/Majority Experiences Study was to secure baseline data on the status of the Montgomery County Public Schools (MCPS) as regards issues of educational equity. The present report examines services for the gifted and talented and advanced placement students. The study found that gifted and talented programs are available in about half the MCPS schools. The majority of the programs are less than two hours per week in duration and are limited in grade coverage. Raising serious questions regarding the sufficiency and equitability of program offerings. Analysis of participation data shows that blacks and Hispanics are severely underrepresented relative to whites and Asians in gifted and talented programs. The problem is especially noticeable for blacks. In addition, analyses suggest that the multicriterion selection procedure, intended to supplement selection based on test score performance, was not uniformly benefitting all groups of students. Participation data on advanced placement courses generally are consistent with that found for the gifted and talented program. Black and Hispanic students are underrepresented relative to whites and Asians. At all levels of the school system, therefore, the data show differential access to services as a function of racial group.  
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**MONTGOMERY COUNTY  
PUBLIC SCHOOLS**

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Experiences Study,  
1978-79:  
Gifted and Talented  
Services**

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**August 1980**

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MONTGOMERY COUNTY PUBLIC SCHOOLS  
Rockville, Maryland

THE MINORITY/MAJORITY EXPERIENCES STUDY, 1978-79:  
GIFTED AND TALENTED SERVICES

August, 1980

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## ABSTRACT

### THE MINORITY/MAJORITY EXPERIENCES STUDY, 1978-79: GIFTED AND TALENTED SERVICES

This is one of a series of reports of findings of the Minority/Majority Experiences Study, conducted in 1978-79. The purpose of this study was to secure baseline data on the status of the Montgomery County Public Schools (MCPS) as regards issues of educational equity. The present report examines services for the gifted and talented and advanced placement students. Although initially intended to focus primarily on equity issues, the study also provides an overview of the gifted and talented program per se because of the substantial and representative sample of schools examined.

The study found that gifted and talented programs are available in about half the MCPS schools. The majority of the programs (71 percent) are less than two hours per week in duration and are limited in grade coverage. These data raise serious questions regarding the sufficiency and equitability of program offerings as of the 1978-79 school year.

Analysis of participation data shows that blacks and Hispanics are severely underrepresented relative to whites and Asians in gifted and talented programs. While it appears that efforts are being made to include more of these minority students, large differences in participation rates still exist. The problem is especially noticeable for blacks. In addition, analyses suggest that the selection process requires additional examination. In 1978-79, the multicriterion procedure, intended to supplement selection based on test score performance, was not uniformly benefitting all groups of students. While this process appears to have slightly increased the percentage of whites, Hispanics and Asians selected for program participation over that predicted by test scores alone, the reverse was true for blacks.

Participation data on advanced placement courses generally are consistent with that found for the gifted and talented program, although discrepancies vary somewhat by subject area. Black and Hispanic students are underrepresented relative to whites and Asians. At all levels of the school system, therefore, the data show differential access to services as a function of racial group.

A more extensive study of the Gifted and Talented Program is planned for the 1980-81 school year. In this study many of the issues raised here will be more thoroughly examined.

THE MINORITY/MAJORITY EXPERIENCES STUDY, 1978-79:  
GIFTED AND TALENTED STUDENTS

INTRODUCTION

This is one of a series of reports of findings of the Minority/Majority Experiences Study which was conducted in 1978-79. The purpose of this study was to secure baseline data on the status of the Montgomery County Public Schools as regards issues of educational equity.

This report, the first in a series presenting study findings, presents a description of programs for gifted and talented students, as well as advanced placement courses offered to senior high school students. Although originally intended primarily to assess whether or not there are differences in services provided to minority and majority students, the data actually serve a dual function. In addition to meeting the goal of describing minority and majority participation in gifted programs, the study also provides a previously unavailable overview of programs for the gifted and talented and advanced placement students, pointing out areas for additional consideration. Future reports will address:

- o Programs for low achievers in reading, mathematics, and other subject areas
- o Student participation in extracurricular activities and student government
- o Multicultural emphases in the classroom and the total socioacademic life of the school
- o Teacher expectations for, and behaviors toward, students in the instructional setting
- o Schools' efforts to broaden student career awareness and to raise their career aspirations

PURPOSE OF THE PRESENT REPORT

This report presents the study findings for the 1978-79 school year on:

1. The availability and characteristics of gifted/talented programs among schools at the elementary, junior/middle, and senior high school levels
2. The characteristics of students selected for participation in gifted/talented programs
3. The distribution of programs and characteristics of students participating in advanced placement courses

METHODOLOGY OF THE MINORITY/MAJORITY EXPERIENCES STUDY

Ninety-one (91) schools--58 elementary, 4 middle, 15 junior high, and 14 senior high schools--were included in the study sample. These schools were selected from the 186 regular MCPS schools by a procedure of stratified random sampling designed to insure representation of administrative areas, minority enrollment, and achievement level (measured by median composite score on the Iowa Tests of Basic Skills and the Tests of Academic Progress). Table 1 illustrates this sample for the elementary schools studied. Appendix A presents a statistical description of the distribution of all 91 schools into the nine categories shown here for schools classified as elementary, middle/junior high, and senior high.

TABLE 1

Distribution of Elementary Schools Surveyed  
by Percentage of Minority and Achievement Level

School Minority Percentage	School Achievement Level			Total
	Low	Middle	High	
Low	1	8	9	18
Middle	3	9	10	22
High	13	5	0	18
Total	17	22	19	58

Survey data were secured from reports submitted by participating schools on program characteristics, grade placement, and student enrollments in gifted/talented programs; from information about program features provided by area-based teacher specialists for gifted/talented programs and by the Department of Instructional Planning and Development; and from computer-banked information on enrollments in advanced placement courses in senior high schools.

In addition, the principals of 43 of the participating schools were randomly selected to provide information, via structured interview, on the status and nature of the gifted/talented programs in their schools; the administrative support being provided; and the ways in which students were selected for participation. The principals whose schools were not sponsoring gifted/talented programs in 1978-79 were asked what plans they had for initiating programs and for their assessment as to why programs weren't available in their schools.

## FINDINGS

### THE CHARACTERISTICS OF GIFTED/TALENTED PROGRAMS

#### OVERVIEW

The survey found that during the 1978-79 school year officially approved gifted/talented programs were available to only a limited extent in the Montgomery County Public Schools and that, consequently, access to this kind of educational opportunity was not equitably distributed to students in all schools.<sup>1</sup> Only 42 percent of all 91 schools in the study sample conducted any type of gifted/talented programs; and within each of the school levels, the proportion of school conducting programs ranged from a low of 7 percent in the senior high schools, through 25 percent in the middle schools and 47 percent in the elementary schools, to a high of 60 percent in the junior high schools. Further, the grade placement of the students for whom the available programs were intended differed widely, particularly in the elementary schools. Finally, although the time scheduled for the programs in the secondary schools was typically 5 class periods per week, the schedules in the elementary level ranged from 1 hour a week for 41 percent of the schools to 7-1/2 hours or more per week for 14 percent of the schools, with the more extended programs being located in schools having low percentages of minority students (13.5 for the schools with extended programs vs. 23.0 for the overall sample).

These key findings raise questions as to the issue of equal accessibility, at this time, to viable gifted/talented programs for all cognitively gifted students, regardless of the school in which they happen to be enrolled. Details of the study findings on these topics follow.

#### AVAILABILITY OF PROGRAMS

Table 2 presents the distribution of gifted/talented programs by school level-- elementary, middle/junior, and senior high. Forty-seven percent of the elementary schools and 60 percent of the junior high schools in the study sample reported conducting gifted/talented programs during the 1978-79 school year.

TABLE 2  
Distribution of Gifted/Talented Programs Among the 91 Schools  
Participating in the Minority/Majority Experiences Study, 1978-79

School Level	Number of Schools Not Having G/T Programs	Number of Schools Having G/T Programs	Total Number of Schools	Percentage Having G/T Programs
Elementary	31	27	58	47
Middle	3	1	4	25
Junior High	6	9	15	60
Senior High	13	1	14	7
Total	<u>53</u>	<u>38</u>	<u>91</u>	<u>42</u>

<sup>1</sup>At the elementary level Gifted/Talented programs were included only if they used the MCPS selected criteria. Enrichment programs using other criteria are not included.

## INTENSITY OF PROGRAMS

Most of the gifted/talented programs in the elementary schools were scheduled for a very short amounts of time each week. Table 3 shows that 41 percent of the programs offered were scheduled for one hour or less per week. Conversely, only four programs (14 percent) were scheduled for more than over seven and one-half hours per week. While there are no generally accepted guidelines regarding the length of time a program or course must be offered for it to be of value to the student, it is clearly questionable whether a program offered for two hours or less per week is sufficiently intensive to have a significant impact on learning or attitudinal outcomes, and whether it represents a cost-effective use of resources.

TABLE 3  
Time Scheduled for Gifted/Talented Programs in the Elementary Schools  
Participating in the Study Which Conducted Programs in 1978-79

Time Scheduled Per Week	Number of Schools Scheduling for Time Indicated	Percentage of the 27 Schools Offering G/T Program with Schedule Indicated
45 minutes to 1 hour	11	41
1-1/4 to 2 hours	8	30
2-1/2 to 3 hours	4	15
7-1/2 to 15 hours	2	7
Full 30-hour school week*	2	7
Total	27	100

\*Minus time scheduled for nonacademic activities

At the secondary level, scheduling was more uniform; and the large differences among schools found at the elementary level were not observed. Five of the nine junior high school programs were scheduled for one class period daily. Two met for two daily "back-to-back" class periods. One program met for only one class period a week, and the other was a before-school activity. The one program in the middle schools and the one program in the senior high schools participating in the study met for one class period daily.

## CONTENT OF PROGRAMS

The survey indicates that the majority of programs available in the elementary schools last year focused on the basic skills area and were pull-out in format, as indicated in Table 4. Heaviest emphasis was given to reading/language arts, followed by creative thinking/problem solving.

TABLE 4  
Content and Areas Emphasized in Elementary School  
Gifted/Talented Programs in 1978-79

Content Emphasis or Focus of G/T Programs	Number of Schools With G/T Programs Having the Focus and/or Content Emphases* Indicated, in Which the Program Format Was:		Total Number Having the Focus and/or Content Emphases Indicated (N=27)	Percentage of the Total Sample of Schools Offering the Type of Program Indicated (N=58)
	Pull-Out (N=23)	In-Class (N=4)		
Primarily Reading/ Language Arts	22	2	24	40
Creative Thinking/ Problem Solving	13	2	15	26
All Major Subject Areas	9	2	11	19
Mathematics	1	1	2	7
Mathematics/ Social Studies	1	0	1	4
Social Studies, Alone	1	0	1	4

\*Programs can have more than one emphasis. Hence, the number of entries in the columns of this table exceed the number of schools.

At the secondary level, the content of most programs was academic, focusing on the development of the higher order cognitive skills of analysis, synthesis, and evaluation and on research in the context of language arts, social studies, and/or mathematics.

## GRADE PLACEMENT OF PROGRAMS

Table 5 shows the distribution of gifted/talented programs across Grades K through 6. The data show that the opportunity for participating in such programs increases as one moves up in the elementary grades. Overall, only 5 percent of the elementary schools reported offering programs at the kindergarten level during the 1978-79 school year. For Grades 4, 5, and 6, 36 to .38 percent of the schools offered such programs. Programs scheduled for seven and one-half, or more, hours also tended to be predominant at the higher elementary grade levels.

TABLE 5  
Distribution of Gifted/Talented Programs Among  
the Grades in Elementary Schools Surveyed

Grades	Number of Schools Offering G/T Programs for Students in the Grades Indicated Which Scheduled the Programs Weekly for:		Total Number of Schools Offering G/T Programs for Students in the Grades Indicated (N=27)	Percent of the Total Sample of Schools Offering Programs for Students in the Grades Indicated (N=58)
	Less than 7-1/2 Hours (N=23)	7-1/2 hours or more (N=4)		
K	3		3	5
1	8		8	16
2	11	1	12	20
3	14	1	15	26
4	18	4	22	38
5	18	4	22	38
6	17	4	21	36

\*Programs were multigraded in all but 4 of the 27 schools offering them. Therefore, the column entries exceed the number of individual programs examined.

## CHARACTERISTICS OF SCHOOLS SERVED

Examination of program placement indicates that when all programs are considered (those lasting 45 minutes per week as well as those scheduled for more than 7 1/2 hours), there is no correlation between program availability and school characteristics, such as size ( $r=.04$ ) and minority enrollment ( $r=-.03$ ). However, when schools having programs extending over seven and one-half hours are compared with those having shorter programs, a different pattern emerges: the more time-intensive programs were found in schools having the lower minority enrollments (13.5 percent vs. 23.0 percent).

## NUMBER OF YEARS PROGRAMS HAVE BEEN ACTIVE

Overall, most gifted/talented programs are relatively new to the county. Almost one-half (47.4 percent) of the interviewees who were sponsoring gifted/talented programs in their schools said that the programs had been initiated in the 1978-79 school year, and one-quarter more (26.3 percent) said that the programs had been initiated in 1977-78 or in 1976-77. Table 6 presents these findings.

TABLE 6  
 Length of Time Schools Offering Gifted/Talented  
 Programs in 1978-79 Have Had Those Programs

Number of Years	School Level of Principals Interviewed							
	Elementary (N=13)		Middle/Junior (N=5)		Senior High (N=1)		Total (N=19)	
	N	%	N	%	N	%	N	%
1	7	53.8	2	40.0	0	00.0	9	47.4
2	1	7.7	1	20.0	1	100	3	15.8
3	2	15.4	0	00.0	0	00.0	2	10.5
4	0	00.0	1	20.0	0	00.0	1	5.3
5	1	7.7	0	00.0	0	00.0	1	5.3
6	2	15.4	0	00.0	0	00.0	2	10.5
7	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-
9	0	00.0	1	20.0	0	00.0	1	5.3

ADDITIONAL COMMENTS

A sample of principals was interviewed in some detail regarding their plans for, and perceptions of, gifted/talented services. Their responses provide additional information on why programs are or are not provided.

Table 7 presents a summary of the reasons offered by principals for not having gifted/talented programs in their schools. The principals offered a variety of reasons, foremost being lack of personnel resources followed by lack of implementation of the identification process and accomodation in the regular classroom. Some principals said that they had few students meeting the guidelines or that they were giving priority in program support to low achievers.

TABLE 7  
Reasons Cited by Principals For Not Having  
Gifted/Talented Programs in 1978-79

Reason	School Level of Principals Interviewed							
	Elementary (N=13)		Middle/Junior (N=5)		Senior High (N=7)		Total (N=25)	
	N	%	N	%	N	%	N	%
Have few or no students who meet criteria for giftedness	3	23.1	2	40.0	0	00.0	5	20.0
Lack personnel resources needed	4	30.8	2	40.0	2	28.6	8	32.0
Giving priority to low achievers	3	23.1	1	20.0	0	00.0	4	16.0
Have developed but not yet implemented identification process	4	30.8	1	20.0	1	14.3	6	24.0
Have no identification procedures yet	2	15.4	0	00.0	2	28.6	4	16.0
Accommodate G/T by grouping in regular class	2	15.4	1	20.0	3	42.9	6	24.0
Don't want an elitist group	1	7.7	1	20.0	0	00.0	2	8.0

Table 8 presents principals' perceptions of the proportion of their parent communities who considered their children eligible for gifted/talented programs. The most frequent response, given by 38.9 percent of the interviewees, was that between 5 and 10 percent of the parents feel that their children should be in programs for the gifted and talented. The estimates then ranged widely, as Table 8 discloses, from "5 to 10 percent" to "100 percent (practically all)."

TABLE 8  
Principals' Estimates of the Percent of Parents Who Feel That  
Their Children Should Be Placed in Gifted/Talented Programs

Percentage Estimated	Proportion of Principals Making Estimates Indicated							
	Elementary N=12		Middle/Junior N=5		Senior High N=1		Total N=18	
	N	%	N	%	N	%	N	%
100 (Practically all)	0	00.0	1	20.0	0	00.0	1	5.6
At least 75 percent	0	00.0	1	20.0	0	00.0	1	5.6
Between 50 and 75 percent	2	16.7	0	00.0	0	00.0	2	11.1
About 50 percent	2	16.7	1	20.0	1	100.0	4	22.2
About 25 percent	1	8.3	1	20.0	0	00.0	2	11.1
11 to 20 percent	1	8.3	0	00.0	0	00.0	1	5.6
5 to 10 percent	6	50.0	1	14.3	0	00.0	7	38.9

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## WHO IS SERVED?

### OVERVIEW

At all school levels, whites and Asians are more likely to be placed in gifted/talented programs than are either blacks or Hispanics. Despite the fact that efforts are being made to include more minority students in these programs, the finding that the Asians and whites are three to four times more likely than blacks or Hispanics to be participating in gifted/talented programs raises serious questions about the selection process used during the 1978-79 school year.

In the 58 elementary schools surveyed, 6 percent of the enrolled students participated in gifted/talented programs. However, proportionate to the sizes of their respective populations, Asians and whites had nearly three times the representation of Hispanics and nearly four times that of blacks in the programs. Further, the participation rate of blacks was less than would be predicted by standardized test score performance alone. At the junior high level, 3 percent of the student population participated in the gifted/talented programs available last year in the 15 schools surveyed; and here the representation of Asians was one and one-half times that of whites, while Asians and whites had participation rates three to four times that of blacks and six to nine times that of Hispanics. Only 1 of the 4 middle schools and 1 of the 15 senior high schools surveyed offered gifted/talented programs; but in these levels, too, the same trend in participation rates among the racial groups was observed.

The study also ascertained that girls were more likely to be selected for gifted/talented programs than were boys. This was true overall, for all racial groups combined, and for the racial groups separately--except for the Asians, among whom male participation was greater than female participation.

#### ENROLLMENTS IN GIFTED/TALENTED PROGRAMS AT THE ELEMENTARY LEVEL

Data collected in the survey indicate that, during the 1978-79 school year, 1,233, or 6.0 percent, of the aggregate population of 20,993 whites, blacks, Hispanics, and Asians in the 58 participating elementary schools were enrolled in gifted/talented programs.

Table 9 shows the racial breakdown of enrollees by race at the elementary level. In this table, three types of data are presented: (1) the percentage of the enrollment of each racial group in the schools with gifted/talented programs, (2) the percentage of participants in the gifted/talented programs by racial group, and (3) the percentage of each racial group receiving gifted/talented services. The table shows that at the elementary level, black and Hispanic students are underrepresented relative to white and Asian students. The discrepancy is greatest for blacks. In 27 elementary schools surveyed which were providing gifted and talented programs, black students make up 10.6 percent of the school enrollments and only 2.9 percent of the enrollment in gifted and talented programs.

**TABLE 9**  
**Participation of Students into Gifted/Talented Programs by Race:**  
**Elementary Schools**

Race	Percentage of School Enrollment by Race in Schools Providing Gifted/ Talented Programs (N for Schools = 27)	Percentage of Enrollment in Gifted/Talented Programs by Race (N for Schools = 27)	Percentage of Each Racial Group Participating in the Gifted/Talented Programs (N for Schools = 27)
White	79.0	88.9	13.5
Black	10.6	2.9	4.2
Hispanic	4.7	2.0	6.8
Asian	5.1	6.0	16.0

**\*NOTE:** For this table and all other tables in this report which display data for students classified by race, the source of information on racial group membership was the schools surveyed. The schools attempt to secure accurate information in implementing the HEW classification system; but precision is difficult to achieve for all students, particularly for the category "Hispanic," which is a linguistic designation, and for the category "Asian," which is a geographical designation. The survey data, unavoidably, reflect any imprecision inherent in the classification system. In this study, a small number of misclassifications could materially affect percentage figures reported for Hispanics and Asians.

**THE IMPACT OF THE MULTICRITERION IDENTIFICATION PROCEDURE ON MINORITY STUDENT PARTICIPATION IN THE ELEMENTARY SCHOOL GIFTED/TALENTED PROGRAMS**

Selection for gifted and talented programs is intended to be based on multiple criteria. In addition to scores on standardized tests these criteria in 1978-79 included teachers' ratings of the student on observable cognitive and personal characteristics like creativity, intellectual inquisitiveness, and motivation to achieve; nominations of parents, peers, staff and the students themselves; and products or performance evidencing giftedness or talent. Analyses were conducted to attempt to determine the impact of this multicriterion procedure. Of specific interest was determining the degree to which participation rates appeared in 1978-79 to reflect the use of criteria other than standardized test scores.

Principals, as well as central office and area-based personnel familiar with the screening and placement practices in the elementary schools, reported that additional criteria were to some extent, being used, as distinguished from total upon students' scores on the standardized tests alone. Table 10 provides data which tend to corroborate partially this claim by demonstrating that a greater percentage of white, Hispanic, and Asian students were identified and placed in gifted/talented programs than would be predicted on the basis of their performance on the Cognitive Abilities Test-Verbal (CAT-V) alone.<sup>2</sup> However, for black students the reverse was true and a slightly lower percentage (2.9) were placed than appeared to qualify on the CAT-V alone (3.5).

<sup>2</sup>This analyses looked at the CAT rather than both the CAT and the Iowa Tests of Basic Skills because the former was given predominance in the selection procedure for selecting students in the year the data were collected.

TABLE 10  
 Percentage of Students by Participating in Gifted/Talented Programs  
 Compared to Percentage of Students Potentially Eligible  
 According to Performance  
 on the CAT-V

Race	Percentage of Enrollment in Gifted/ Talented Programs by Race (N for Schools = 27)	Percentage of Students Scoring at or Above the 89th Percentile in the CAT-V (N = All Students)
White	88.9	90.00
Black	2.9	3.5
Hispanic	2.0	1.8
Asian	6.0	4.8

These findings raise serious questions about the process used to select participants for gifted and talented programs. Since the 1978-79 school year, some changes have been made in the guidelines for selection of students but the impact of these changes is not, at the present, known. We do not know whether the new procedures have been implemented as designed or whether they result in a higher selection rate for minority, especially black, students. Additional studies on the gifted and talented program to be undertaken by DEA and the Department of Instructional Planning and Development in FY81 will further address these issues.

## ENROLLMENTS IN GIFTED/TALENTED PROGRAMS IN THE SECONDARY SCHOOLS

Programs intended to be the counterpart of those in the elementary schools have been emergent in the secondary schools, more so in the junior highs than in the middle or the senior high schools. In 1978-79, there were no official, published MCPS directives specifying uniform procedures and criteria for implementing programs for cognitively gifted students at the secondary level. However, 1 of the 4 middle schools, 9 of the 15 junior high schools, and 1 of the 14 senior high schools in the study sample were conducting programs, generally small in scale, for enrollees who had been identified as cognitively gifted on criteria sanctioned by the area specialists for pro tem use pending the issuance of official MCPS identification procedures.<sup>2</sup>

In those 11 of the 33 secondary schools surveyed which conducted gifted/ talented programs last year, there was a combined total of 417 students enrolled in the programs. Analysis by race indicates that this represents 3.2 percent of the white students, 5.5 percent of the Asians, 1.3 percent of the blacks, and (0.7) of 1 percent of the Hispanics. Details on the programs in the junior high schools are presented in Table 11 below.<sup>3</sup>

TABLE 11  
Racial Composition of the Enrollments in the Gifted/Talented Programs in Junior High Schools Participating in the Minority/Majority Experiences Study (N for Schools=15)

Race	Total Number of Students Enrolled in All Schools Surveyed	Number of Students Placed in G/T Programs	Percentage of the G/T Enrollment Contributed by Each Race	Percentage of Each Racial Group's Grade 7 Population Enrolled in the G/T Program
White	10,011	296	88.3	3.0
Black	1,412	16	4.8	1.1
Hispanic	399	2	0.6	0.5
Asian	467	21	6.3	4.5
	12,289	335	100.0	

<sup>2</sup>Official MCPS guidelines for identifying gifted/talented secondary school students were published in fall 1979.

<sup>3</sup>Breakdowns by race are not presented for the middle and senior high programs because of their small number.

## ADVANCED PLACEMENT COURSES IN THE SENIOR HIGH SCHOOLS

The study examined the distribution of and student participation in advanced placement courses (AP) offered in five subject areas; English, calculus, U.S. history, chemistry, and biology. The survey showed differences in the number of AP courses offered by individual schools with U.S. history being the least prevalent and calculus the most prevalent. Overall student enrollments also differed with English having the highest participation rate in schools surveyed (7.8 percent of students enrolled) and chemistry having the lowest (2.5 percent of students enrolled).

### ENROLLMENTS IN ADVANCED PLACEMENT COURSES

The sparsity of gifted/talented programs in the senior high schools reflected the lack of an MCPS procedure for formally identifying secondary school students as cognitively gifted, coupled with the fact that area teacher specialists for gifted/talented programs were concentrating their efforts in the secondary schools upon expanding the number of junior highs offering such programs. The traditional advanced placement courses, primarily intended to enable students to receive credits in college for qualifying coursework taken in high school, remained the major source of instructional programs for senior high school students who had demonstrated high achievement in the academics over the years. Table 13 summarizes the statistics on (a) the distribution, among the 14 senior high schools surveyed, of the advanced placement courses available in 1978-79 in English, mathematics, social studies, and science and (b) the proportion of the population of each racial group participating.

**TABLE 12**  
**Summary of Student Participation in 1978-79 in**  
**Advanced Placement Courses in the Four Major Subject**  
**Areas in Senior High Schools Participating in the**  
**Minority/Majority Experiences Study**

Subject of Advanced Placement Course	Number of the 14 Survey Schools Offering Course	Combined Enrollments in the Course in Schools Offering It	Average Number of Enrollees in Schools Offering Course	Percentage of Each Racial Group Enrolled*				
				White	Black	Hispanic	Asian	Total
English	10	305	31	8.7	1.5	4.6	7.8	7.8
Calculus	12	428	37	4.7	1.6	3.8	8.9	4.6
U.S. History	8	204	26	2.8	0.4	2.0	2.3	2.7
Chemistry	9	165	18	2.7	1.9	1.5	6.1	2.5
Biology	9	423	47	5.4	3.8	4.6	10.6	5.5

\*This figure includes students from only those schools offering the specific advanced placement course.

The number of schools among the 14 surveyed senior highs which offered each of the five AP courses considered here ranged from 8 offering advanced placement U.S. history to 12 offering calculus. The average number of enrollees per school ranged from 18 in advanced placement chemistry to 47 in advanced placement biology.

Analysis of course participation by race indicates that in all five course areas blacks and Hispanics were underrepresented relative to whites and Asians. The discrepancies were greatest for English and least for U.S. history. The highest participation rate for blacks was reported for biology. For Hispanics, the largest participation rates were found in English and biology. In addition, in three areas--calculus, chemistry, and biology--Asian participation was from two to three times that of whites.

Table 13 presents the male and female enrollments in advance placement courses.

TABLE 13  
Enrollment by Sex in Advanced Placement Courses

<u>Course</u>	<u>Male</u>	<u>Female</u>
English	39.0	61.0
Calculus	57.7	42.3
U.S. History	50.5	59.5
Chemistry	69.1	30.9
Biology	44.4	55.6

Boys outnumbered girls in calculus and biology girls outnumbered boys in English and biology and boys and girls had almost equal numbers in U.S. history. Tables 1B, 2B, 3B, 4B, and 5B in Appendix B provide more detailed data on enrollments by race and sex.

APPENDIX A

Schema Showing Number of Schools Drawn for Participation  
in the Minority/Majority Experiences Study, for School  
Classified by Percentage of Minority and by Achievement Level

A. Elementary Schools

Percentage Minority in School	School Median Score on ITBS Composite in Grade 5			Total
	Low (Scores 34-64)	Middle (Scores 67-78)	High (Score 80 and above)	
Low (2-14)	1	8	9	18
Middle (15-27)	3	9	10	22
High (28 & over)	13	5	0	18
<b>Total</b>	<b>17</b>	<b>22</b>	<b>19</b>	<b>58</b>

B. Middle/Junior High Schools

Percentage Minority in School	School Median Score on ITBS Composite in Grades 7 and 9			Total
	Low (Scores 45-56)	Middle (Scores 58-70)	High (Score 72 and above)	
Low (6-12)	0	1	4	5
Middle (13-19)	3	2	3	8
High (23 & over)	3	3	0	6
<b>Total</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>19</b>

C. Senior High Schools

Percentage Minority in School	School Mean Standard Score on Grade 11 TAP			Total
	Low (Scores 36-51)	Middle (Scores 55-63)	High (Score 71 and above)	
Low (5-11)	0	0	5	5
Middle (14-18)	2	2	0	4
High (23 & over)	3	2	0	5
<b>Total</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>14</b>

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**APPENDIX B**

**Tables Displaying Detailed Data  
on 1978-79 Enrollments in  
Advanced Placement Courses in  
English, Mathematics, Social Studies, and Science**

**Statistical Analyses of the Composition of the  
Courses and of the Proportions of the Populations  
of Students in the Target Grades Enrolled in  
Each Course, for Students Classified by Race and Sex**

TABLE B.1

Enrollments in Advanced Placement English in Senior High Schools  
Participating in the Minority/Majority Experiences Study, 1978-79  
(Number of Schools Offering Course = 10)

A Student Participants, Classified by Sex and Race										
Sex	Number of Students Enrolled in Course					Percentage of Enrollment for Students Classified by Sex and Race				
	White	Black	Hispanic	Asian	Total	White	Black	Hispanic	Asian	Total
Male	114	1	2	2	119	95.8	0.8	1.7	1.7	100.0
Female	172	5	3	6	186	92.5	2.7	1.6	3.2	100.0
Total	286	6	5	8	305	93.8	2.0	1.6	2.6	100.0

  

B Total Grade 12 Population, by Sex and Race, in Surveyed Schools Offering Course in 1978-79										
Sex	Total Grade 12 Population, by Sex and Race, in Surveyed Schools Offering Course in 1978-79					Percentage of Population of Each Sex and Race Who Were Enrolled in the Course				
	White	Black	Hispanic	Asian	Total	White	Black	Hispanic	Asian	Total
Male	1,635	195	51	52	1,933	2.0	0.5	3.9	3.2	6.2
Female	1,666	203	59	59	1,978	10.3	2.5	5.1	12.0	9.4
Total	3,301	298	110	102	3,911	8.7	1.5	4.6	7.8	7.8

TABLE B.2

Enrollments in Calculus in Senior High Schools  
 Participating in the Minority/Majority Experiences Study, 1978-79  
 (Number of Schools Offering Course = 12)

A Student Participants, Classified by Sex and Race										
Sex	Number of Students Enrolled in Course					Percentage of Enrollment for Students Classified by Sex and Race				
	White	Black	Hispanic	Asian	Total	White	Black	Hispanic	Asian	Total
Male	222	5	6	14	247	89.9	2.0	2.4	5.7	100.0
Female	164	5	2	10	181	90.61	2.7	1.1	5.5	100.0
Total	386	10	8	24	428	90.2	2.3	1.9	5.6	100.0

  

B Total Grade Population, by Sex and Race, in Surveyed Schools Offering Course in 1978-79										
Sex	Total Grade Population, by Sex and Race, in Surveyed Schools Offering Course in 1978-79					Percentage of Population of Each Sex and Race Who Were Enrolled in the Course in Schools Offering				
	White	Black	Hispanic	Asian	Total	White	Black	Hispanic	Asian	Total
Male	4,000	325	109	132	4,566	5.6	1.5	5.5	10.6	5.4
Female	4,174	288	101	139	4,702	3.9	1.7	2.0	7.2	3.8
Total	8,174	613	210	271	9,168	4.7	1.6	3.8	8.9	4.6

TABLE B.3

Enrollments in Advanced Placement U.S. History in Senior High Schools  
 Participating in the Minority/Majority Experiences Study, 1978-79  
 (Number of Schools Offering Course = 8)

A Student Participants, Classified by Sex and Race										
Sex	Number of Students Enrolled in Course					Percentage of Enrollment for Students Classified by Sex and Race				
	White '	Black '	Hispanic'	Asian '	Total '	White '	Black '	Hispanic'	Asian '	Total
Male	96	2	3	2	103	93.3	1.9	2.9	1.9	100.0
Female	94	1	2	4	101	93.0	1.0	2.0	4.0	100.0
Total	190	3	5	6	204	93.0	1.5	2.5	3.0	100.0

  

B Total Grade 12 Population, by Sex and Race, in Surveyed Schools Offering Course in 1978-79										
Sex	Total Grade 12 Population, by Sex and Race, in Surveyed Schools Offering Course in 1978-79					Percentage of Population of Each Sex and Race Who Were Enrolled in the Course				
	White '	Black '	Hispanic'	Asian '	Total '	White '	Black '	Hispanic'	Asian '	Total
Male	3,158	347	138	122	3,765	3.0	0.6	2.2	1.6	2.7
Female	3,211	376	105	143	3,835	2.9	0.3	1.9	2.8	2.6
Total	6,369	723	243	265	7,600	2.9	0.4	2.0	2.3	2.7

TABLE B.4

Enrollments in Advanced Placement Chemistry in Senior High Schools  
 Participating in the Minority/Majority Experiences Study, 1978-79  
 (Number of Schools Offering Course = 9)

A Student Participants, Classified by Sex and Race										
Sex	Number of Students Enrolled in Course					Percentage of Enrollment for Students Classified by Sex and Race				
	White	Black	Hispanic	Asian	Total	White	Black	Hispanic	Asian	Total
Male	95	8	1	10	114	83.3	7.1	0.9	8.7	100.0
Female	39	6	2	4	51	76.5	11.8	3.9	7.8	100.0
Total	134	14	3	14	165	81.2	8.5	1.8	8.5	100.0

  

B Total Grade 12 Population, by Sex and Race, in Surveyed Schools Offering Course in 1978-79						Percentage of Population of Each Sex and Race Who Were Enrolled in the Course				
Sex	White	Black	Hispanic	Asian	Total	White	Black	Hispanic	Asian	Total
Male	2,729	366	106	108	3,309	3.5	2.2	0.9	9.3	3.4
Female	2,736	388	91	120	3,335	1.4	1.5	2.2	3.3	1.5
Total	5,465	754	197	228	6,644	2.5	1.9	1.5	6.1	2.5

TABLE B.5

Enrollments in Advanced Placement Biology in Senior High Schools  
 Participating in the Minority/Majority Experiences Study, 1978-79  
 (Number of Schools Offering Course = 9)

A Student Participants, Classified by Sex and Race										
Sex	Number of Students Enrolled in Course					Percentage of Enrollment for Students Classified by Sex and Race				
	White '	Black '	Hispanic'	Asian '	Total '	White '	Black '	Hispanic'	Asian '	Total
Male	162	8	5	13	188	86.1	4.3	2.7	6.9	100.0
Female	217	8	4	12	235	89.8	3.4	1.7	5.1	100.0
Total	373	16	9	25	423	88.2	3.8	2.1	5.9	100.0

  

B Total Grade Population, by Sex and Race, in Surveyed Schools Offering Course in 1978-79										
Sex	Total Grade Population, by Sex and Race, in Surveyed Schools Offering Course in 1978-79					Percentage of Population of Each Sex and Race Who Were Enrolled in the Course in Schools Offering				
	White '	Black '	Hispanic'	Asian '	Total '	White '	Black '	Hispanic'	Asian '	Total
Male	3,372	206	101	116	3,795	4.8	3.9	5.0	11.2	5.0
Female	3,529	196	95	119	3,939	6.0	4.1	4.21	10.8	6.0
Total	6,901	402	196	135	7,734	5.4	3.8	4.6	10.6	5.5