

**Review of the Performance of the
Baltimore County (MD) Public Schools**

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Edward Roeber Introduction

This paper serves to provide an external review of the performance of the Baltimore County (MD) Public Schools. This review consists of several parts. Part One is a review of the performance of the school system other comparable Maryland school systems, and the State of Maryland as a whole. Student achievement and a number of other outcome measures were examined. Part Two is a review of the performance of the Baltimore County system versus comparable systems in other states. Part Three is a review of the schools within Baltimore County, particularly those at the high school level. By examining this information, it may be possible to at least partially determine how effectively the district is in serving its students.

This review was requested by Dr. Joe Hairston, Superintendent, Baltimore County (MD) Public Schools, and Dr. John Murphy, a consultant to the school system. The purpose of the review is to compare the performance of the Baltimore County (MD) Public Schools with like school districts in Maryland and elsewhere, and the state, using information made available by the school district and the state. The review comments on the performance of the school system on the available measures, and compares this performance with that of other schools. The intent of this review is to assist the school district and those working with it to better gauge the performance of its students.

Limitations

There are several limitations to this study. First, the information reported here was obtained from the Baltimore County (MD) Public Schools and the State of Maryland. Since little other district-comparable information is available, the performance of students on achievement tests given within the state is the primary basis for this report.

Second, tests do not cover all important outcomes of schooling, so caution should be exercised in drawing conclusions about the effectiveness of a school system based solely on test performance. The challenges to educate students vary across school systems.

Third, these results are cross-sectional. That is, the data presented at the different grades for a particular assessment year come from different students. Therefore, differences observed across grades may be due more to differences in the students themselves than in differences in their achievement. This caution also applies to information collected from students at the same grade level over several school

years. Differences in performance may be due more to characteristics other than curricular differences; this may be particularly true in districts in transition.

Fourth, no data on possible explanatory factors is reported here, so the reader should be cautious in positing explanations for how well students performed. Finally, very limited data of a directly comparable nature for comparing school systems in different states. Therefore, extra caution should be used in making crossstate district-level comparisons, where differences in assessments used, grades assessed, and times of assessment may exaggerate or mask true differences between systems.

Finally, comparative data between school systems in different states is particularly challenging to locate, since states' systems of assessment and accountability vary considerably. For example, both Virginia and North Carolina, two states that would be good comparative ones, give customized state assessment tests, making crossstate comparisons impossible. Neither state administers nationally-normed tests to all students, thereby making cross-district comparisons impossible. The little crossdistrict data that is available, such as college entrance test information, does not really represent the full breadth of high school programs, much less K-12 education.

Cautions

Examining the outputs of schooling is not an easy task. There are many important questions that may be asked for which there are no good data. Data that is available is typically only a sample of the information that might be desirable to more completely evaluate school performance, in several ways. First, not all important outcomes of schooling are equally measurable, particularly with the types of measures typically available. Only some of the grades and some of the important content we want students to learn is covered by tests. Even in grades where data is available, the tests used may not measure well the challenging, world-class standards citizens now want students to accomplish. This is true at the high school level in Maryland, where the tests that the state will begin to use in the near future will be much improved over the minimum competency tests now in use.

Second, some important outcomes, such as successful employment, can not be easily estimated, so it is difficult to determine whether schools are helping students achieve such illusive, albeit important, goals. Being employed at the time of a survey does not indicate the level of satisfaction nor the level of competence of this employment.

When data is available, it is sometimes hard to interpret, since we can look at it comparatively or against absolute standards. While the latter is desirable, there is little research to indicate what level of skill is *needed* for success in later education or life. Hence, we often express performance comparatively, wanting our students to do better than others (with the tacit assumption that this will lead to later success). However, when comparing two pieces of data, both might be judged at *adequate* or *inadequate* if we were able to judge the information in an absolute sense.

It is also important to select the right types comparison groups in order to appropriately benchmark the data collected and reported. Among the comparison groups that might be used are:

- districts in the same geographical region of Maryland
- similar urban districts in the state
- similar urban districts in the region
- similar districts across the United States
- the highest-achieving school districts in the state or region
- districts with similar proportions of students based on important characteristics, such as racial-ethnic or the number of students learning English
- high achieving states
- high achieving countries

This is an important issue to resolve, since selecting lower-achieving comparison groups might mire a school or district in mediocrity, while making unrealistic comparisons may serve only to frustrate and anger staff, students, and the public. Two questions need to be resolved, however. What is a it comparison? What is a useful comparison? For example, comparing an urban district against a nearby suburban one may not appear to be fair (after all, the students served are different), yet making such a comparison may be useful because we want all students to achieve at high levels (and they will compete for many of the same jobs). However, all of the desired comparisons may not be available, so we must make do with what data are at hand.

Therefore, in examining the performance of an institution as complex as a school system, it is important to avoid making more of what we know than is warranted, simply because that data is available. However, available data should be looked at to make sure it is useful.

One final note: the opinions and ideas expressed in this report are offered in the spirit of improving both education of students in the Baltimore County (MD) Public schools. The report expresses, of course, the author's opinions, and not those of the organization sponsoring this study, nor the author's employer.

Methodology

As indicated at the outset, several types of information were made available for review and additional information was requested. The types of information used in this review include the following as shown in the following chapters:

1. Performance of the Baltimore County (MD) Public Schools and the state on the Maryland School Performance Assessment Program (MSPAP), including

comparative MSPAP performance of the Baltimore County school system with other Maryland school systems;

2. Performance of the school systems and the state on the Maryland Functional Literacy Test, including comparative performance of the Baltimore County school system with other Maryland school systems;
3. Performance of the school systems and the state on the Comprehensive Test of Basic Skills (C:1'8S), Fifth Edition, including comparative performance of the Baltimore County school system with other Maryland school systems;
4. Performance of the school systems and the state on the SAT, including comparative performance of the Baltimore County school system with other Maryland school systems.
5. Various other student outcomes from the Baltimore County and other county school systems, as well as the State of Maryland..
6. Background characteristics of students in Baltimore County, including comparisons with other Maryland county school systems, as well as comparisons on district characteristics;
7. Performance of the schools within the Baltimore County school systems, particularly at the high school level.

For each type of information listed above, a separate section of this report is devoted to summarizing and commenting on the performance of the school system. Following this piece-by-piece review, an overall summary of performance is provided.

Chapter One

Performance on the Maryland School Performance Assessment Program

The Maryland School Performance Assessment Program is one of three statewide assessment programs administered annually in Maryland. This program assesses students at grades 3, 5, and 8 in six content areas: Reading, Writing, Language Usage, Mathematics, Science, and Social Studies. In each area, the State has set a State Satisfactory Standard (70%) and a State Excellent Standard (25%), meaning that the State expects that 70% of the students will reach the Satisfactory level and 25% will reach beyond this to the Excellent level.

Scores are released in each of the six areas, as well as a composite index, a weighted average of performance in the six subject areas, and show the percentage of students scoring at the Satisfactory level and above. Given below are the changes in performance in the Baltimore County and statewide scores from 1993 to 1999.

Baltimore County Grade 3 Satisfactory Results The state publishes annual results for each county as well as the state, dating from 1993 to 1999 (the latest year in which results are available). The Grade 3 results are shown in the following two tables:

1999 Grade 3 MSPAP Performance Percent Satisfactory

Year	Reading		Writing		Language Usage	
	BC	State	BC	State	BC	State
1999	46.3	41.2	51.8	47.1	53.4	46.8
1998	47.0	41.6	53.8	46.9	57.1	49.4
1997	39.2	36.8	45.3	40.0	56.1	49.5
1996	36.5	35.3	43.6	40.9	49.4	45.2
1995	37.6	34.0	42.4	39.3	46.7	43.0
1994	33.2	30.6	37.1	35.2	37.3	34.2
1993	N/A	N/A	37.4	35.1	32.2	29.4

1999 Grade 3 MSPAP Performance
Percent Satisfactory

Year	Mathematics		Science		Social Studies	
	BC	State	BC	State	BC	State
1999	44.9	38.9	44.0	38.7	48.6	41.5
1998	46.9	41.6	43.1	39.4	46.3	41.0
1997	46.2	41.4	42.8	38.2	42.3	35.8
1996	41.0	38.7	36.9	36.0	32.0	29.1
1995	49.5	42.0	47.0	41.1	44.3	38.0
1994	37.8	33.9	37.8	34.8	35.4	32.4
1993	33.9	28.6	34.6	31.1	35.6	31.9

Commentary There has been a general upward trend in performance of the Baltimore County schools from 1993 to 1999. That said, there have also been some significant year-to-year changes in performance. For example, performance jumped significantly from 1994 to 1995 in Mathematics, Science, and Social Studies (but not as dramatically in Writing and Language Usage), but fell just as sharply from 1995 to 1996 in these areas. Changes in the same direction (although not always of the same magnitude) also occurred at the State level, meaning that these changes may be due more to changes in the test rather than significant changes in the performance of students.

Most recently, there were modest declines in performance from 1998 to 1999 in Reading, Writing, Language Usage, and Mathematics (but not Science or Social Studies). These downward trends should be watched when the 2000 results are released.

Baltimore County has scored above the State level of performance in all subjects for all years reported. The extent by which the Baltimore County schools have outscored the State has varied from year to year, but changes in performance are almost always in the same direction.

Baltimore County Grade 5 Satisfactory Results The Grade 5 results are shown in the following two tables:

1999 Grade 5 MSPAP Performance
Percent Satisfactory

Year	Reading		Writing		Language Usage	
	BC	State	BC	State	BC	State
1999	45.6	41.4	41.5	38.6	57.1	51.0
1998	44.9	40.4	47.4	42.0	58.4	51.4
1997	40.7	35.6	43.3	39.3	53.1	46.8
1996	36.4	33.7	44.8	42.3	49.7	45.3
1995	30.8	29.5	38.5	36.7	43.7	39.6
1994	34.2	30.2	34.4	33.2	39.8	35.0
1993	28.2	24.7	38.4	36.8	28.7	26.8

1999 Grade 5 MSPAP Performance
Percent Satisfactory

Year	Mathematics		Science		Social Studies	
	BC	State	BC	State	BC	State
1999	50.7	46.2	56.4	51.7	49.9	43.7
1998	51.9	47.9	55.4	51.6	47.8	43.8
1997	52.6	48.2	50.1	46.3	49.3	43.7
1996	53.8	47.8	48.5	44.8	45.5	42.8
1995	51.5	44.7	46.1	41.2	45.5	38.4
1994	47.4	42.1	43.3	38.7	38.2	32.7
1993	43.5	39.5	35.7	33.3	35.1	31.3

Commentary The performance of students at fifth grade has also increased from 1993 to 1999 in all subject areas, although there have also been year-to-year declines in performance, some rather dramatic (e.g., the decline in Writing performance from 1998 to 1999). Performance in Mathematics is on a four-year decline (from 1996 to 1999), which is not a good trend; declines in other content areas are only one

year changes. Statewide trends also show somewhat similar increases and decreases, which may mean that year-to-year trends reflect changes in the test rather than changes in the students in Baltimore County.

Baltimore County has scored above the State level of performance in all subjects for all years reported. The extent by which the Baltimore County schools have outscored the State has varied from year to year, but changes in performance are almost always in the same direction.

Baltimore County Grade 8 Satisfactory Results The Grade 8 results are shown in the following two tables:

1999 Grade 8 MSPAP Performance						
Percent Satisfactory						
Year	Reading		Writing		Language Usage	
	BC	State	BC	State	BC	State
1999	30.6	25.3	52.8	46.0	51.8	46.1
1998	32.5	25.5	52.1	43.5	54.7	47.8
1997	34.6	26.3	52.6	42.5	57.7	48.8
1996	34.2	28.6	50.7	43.0	60.5	52.9
1995	31.5	27.6	49.2	42.1	58.5	52.2
1994	28.5	24.0	52.4	44.0	51.4	43.6
1993	26.8	24.6	39.2	36.3	39.9	36.9

1999 Grade 8 MSPAP Performance
Percent Satisfactory

Year	Mathematics		Science		Social Studies	
	BC	State	BC	State	BC	State
1999	50.6	49.0	56.2	51.0	49.8	44.2
1998	51.1	47.4	55.2	48.7	50.2	42.3
1997	51.8	45.9	54.6	45.9	51.2	41.0
1996	47.0	43.3	53.7	46.8	41.9	36.2
1995	45.4	42.3	51.6	46.1	41.1	35.9
1994	44.7	40.3	45.8	39.7	36.7	31.9
1993	39.9	35.8	N/A	N/A	28.7	25.9

Commentary The performance of students at eighth grade has also increased from 1993 to 1999 in all subject areas, although there have also been year-to-year declines in performance. Performance in Language Arts is on a four-year decline (from 1996 to 1999) a trend also seen at the State level. In Mathematics, there has been a three-year decline (from 1997 to 1999), which is not a good trend, particularly since the State level of performance has been increasing during the same time period. Declines in other content areas are only one year changes.

Baltimore County has scored above the State level of performance in all subjects for all years reported. The extent by which the Baltimore County schools have outscored the State has varied from year to year, but changes in performance are almost always in the same direction.

Grades 3, 5, and 8 **Baltimore County Racial-Ethnic Performance** The MSPAP results are disaggregated at all three grades tested by racial-ethnic group. These results are as follows:

**1999 Grade 3 MSPAP Performance
by Racial-Ethnic Group
Percent Satisfactory**

	Level	Rdg	Wrt	Lang	Math	Sci	SS
Amer Ind	BC	36.4	47.1	62.5	50.0	50.0	52.9
	State	31.5	42.5	43.7	32.9	32.7	34.1
Asian	BC	60.2	67.2	69.2	58.6	56.8	62.9
	State	58.2	66.1	70.2	56.3	55.0	54.0
African- American	BC	29.6	37.4	37.0	23.8	25.8	30.8
	State	23.6	31.7	31.0	18.8	20.4	23.1
White	BC	53.7	57.9	60.6	54.3	52.1	56.4
	State	52.4	56.9	56.5	51.8	50.7	53.9
Hispanic	BC	44.6	54.1	45.7	36.1	40.8	48.0
	State	34.1	40.6	38.7	29.6	29.8	30.7
Total	State	41.2	47.1	46.8	38.9	38.7	41.5

Commentary The performance of Asian students In Baltimore County is best of all sub-groups. Hispanic students perform at a higher level than African American students, which is not typical. Many African-American students do not pass MSPAP tests, particularly in Mathematics, Science, and Social Studies. The differences between White and African American students are large and significant (more than 2:1 in some cases).

However, all sub-groups in Baltimore County exceeded the performance of their counterparts statewide. All sub-groups in Baltimore County also exceed the overall statewide level of performance with the exception of American Indian in Reading and Writing (where they tied overall state performance), African-American students in all subjects tested, and Hispanic students in Language Arts and Mathematics.

The performance of the White and the Asian students is much closer to the statewide levels of performance than the performance of other Baltimore County subgroups.

**1999 Grade 5 MSPAP Performance
by Racial-Ethnic Group
Percent Satisfactory**

	Level	Rdg	Wit	Lang	Math	Sci	SS
Amer Ind	BC	50.0	35.7	42.3	50.0	50.0	35.7
	State	35.3	33.9	39.3	33.9	45.8	35.0
Asian	BC	60.2	53.8	74.2	67.4	71.4	60.4
	State	59.5	55.7	72.7	68.6	69.3	58.7
African-	BC	31.4	27.9	41.1	30.1	36.1	33.4
American	State	23.9	22.7.	34.4	24.3	29.8	24.4
White	BC	51.4	47.2	63.7	59.3	65.1	57.2
	State	51.7	48.2	60.8	59.5	65.4	55.9
Hispanic	BC	34.1	35.4	46.1	51.0	47.9	40.6
	State	32.2	30.3	42.1	36.4	39.5	32.2
Overall	State	41.4	38.6	51.0	46.2	51.7	43.7

Commentary The performance of Asian students in Baltimore County is the highest of all groups. Hispanic students perform at a higher level in Baltimore County than African-American students, which is not typical. Many African American students do not pass the MSPAP tests, particularly in Reading, Writing, and Mathematics. The differences between White and African American students are large and significant (approaching 2:1).

All sub-groups in Baltimore County exceed their counterparts statewide with the exception of Asian students in Writing and Mathematics, and White students in Reading, Writing, Mathematics, and Science.

All sub-groups exceed the State overall level of performance except American Indian students in Writing, Language Arts, Science, and Social Studies, African-American students in all areas tested, and Hispanic students in all areas tested except Mathematics.

The performance of sub-groups in Baltimore County is somewhat worse at this level than at the previous one, for both sub-group counterpart and statewide overall comparisons.

1999 Grade 8 MSPAP Performance

by Racial-Ethnic Group

	Level	Rdg	Percent Satisfactory				
			Wrt	Lang	Math	Sci	SS
Amer Ind	BC	19.4	21.9	26.7	25.0	34.4	25.0
	State	22.4	36.9	37.4	39.6	44.2	33.2
Asian	BC	51.6	69.7	71.6	72.7	76.1	68.9
	State	45.3	66.0	68.6	74.8	74.9	65.1
African-American	BC	19.7	40.0	37.0	25.9	35.9	31.2
	State	13.5	30.0	28.6	22.2	28.1	24.2
White	BC	34.3	57.7	57.5	60.5	64.1	57.0
	State	31.4	54.9	56.0	64.5	64.1	55.8
Hispanic	BC	29.7	52.6	45.2	36.8	44.7	44.7
	State	20.3	39.9	38.6	37.2	42.0	35.0
Overall	State	25.3	46.0	46.1	49.0	51.0	44.2

Commentary The performance of Asian students in Baltimore County is the best of all groups. Eighth-grade Hispanic students also perform at a higher level than African American students. Many African American students do not pass the MSPAP tests, particularly in Reading, Writing, and Mathematics. The differences between White and African American students are large and significant (approaching 2:1).

Each sub-group in Baltimore County out-scored its counterpart statewide with the exception of the American Indian group which scored lower than the State in all subject areas tested (which is quite different than the two earlier grade levels), the Asian students in Mathematics (the same as at grade 5), the White students in Mathematics and Science (where the Baltimore County students tied their counterparts statewide), and Hispanic students in Mathematics. The sub-par performance in Mathematics might raise the concern about the quality of instruction provided to students in grade 6-8 in this content area.

All sub-groups in Baltimore County exceeded the level of overall performance of the State with the exception of the American Indian group in all areas tested, the African-American group in all areas tested, and the Hispanic students in Language Arts, Mathematics, and Science.

The performance of sub-groups in Baltimore County is worse at this level than at

the previous two levels, for both sub-group counterpart and statewide overall comparisons. This may reflect differences in composition of these sub-groups now (younger students) versus earlier (the older students), or the cumulative effects of instruction that could be improved.

Grade 3, 5, and 8 Gender Performance Maryland also reports the MSPAP assessment results by gender. The Grade 3, 5, and 8 results are summarized below:

**1999 Grade 3 MSPAP Performance
by Gender**
Percent Satisfactory

Level	Type	Rdg	Wit	Lang	Math	Sd	SS
Balt Co.	Male	41.9	46.5	46.9	44.2	42.1	45.0
	Female	50.7	57.4	59.9	45.6	46.1	52.4
State	Male	36.9	41.8	40.4	38.3	36.8	38.2
	Female	45.5	52.7	53.2	39.6	40.7	45.0

Commentary The performance of both males and females in Baltimore County is superior to their counterparts statewide, by roughly a five-point margin for both groups in all subject areas. What is surprising is that females in Baltimore County outscore males in Baltimore County by such a wide margin in Reading (almost 9 points), Writing (almost 11 points), and Language Arts (13 points). Even in Mathematics and Science, where the gap is narrower, females still outscore males in both Baltimore County and the State.

**1999 Grade 5 MSPAP Performance
by Gender**
Percent Satisfactory

Level	Type	Rdg	Wit	Lang	Math	Sci	SS
Balt Co.	Male	40.1	35.4	50.7	49.6	54.6	47.0
	Female	51.4	48.0	63.6	52.0	58.5	53.2
State	Male	35.8	32.5	44.2	44.2	49.3	40.9
	Female	47.1	45.1	57.9	48.5	54.4	46.8

Commentary The performance of both males and females in Baltimore County is superior to their counterparts statewide, by roughly a four-point margin for both groups in all subject areas. Females at this grade in Baltimore County also outscore males in Baltimore County by a wide margin in Reading (more than 11 points), Writing (more than 12 points), and Language Arts (almost 13 points). Even in

Mathematics and Science, where the gap is narrower, females still outscore males in both Baltimore County and the State.

1999 Grade 8 MSPAP Performance
by **Gender**
Percent Satisfactory

Level	Type	Rdg	Wit	Lang	Math	Sci	SS
Balt Co.	Male	22.7	43.0	41.9	49.9	50.7	44.7
	Female	38.5	63.1	61.7	51.5	61.9	55.1
State	Male	17.5	36.0	36.3	46.9	45.1	38.9
	Female	33.3	56.4	- 56.2	51.3	57.3	49.9

Commentary The performance of both males and females in Baltimore County is superior to their counterparts statewide, by roughly a five-point or more margin for both groups in all subject areas. The closest difference between Baltimore County and the State is in the area of mathematics, where females barely outscore the state (0.2 points) and males are close as well (3.0 points). The female comparison is the closest at this grade level among students at grades 3, 5, and 8.

Females at this grade in Baltimore County outscore males in Baltimore County by a wider margin than other grade levels, showing differences in Reading (almost 16 points), Writing (more than 20 points), Language Arts (almost 20 points), and Social Studies (more than 10 points). Even in Mathematics and Science, where the gap is narrower, females still outscore males in both Baltimore County and the State.

Comparative MSPAP Performance Another way to compare the performance of the Baltimore County school system is to compare the performance of it to that of other county and city school systems in the state. The state facilitates this by releasing to summarize performance across the six content areas assessed in MSPAP. This information will be used to compare the performance of the Baltimore County schools with that of the students in other county school systems. These other counties were identified by the Baltimore County superintendent and his staff as ones that residents of Baltimore County compare performance with when MSPAP scores are reported publicly.

Grades 3, 5, and 8 Comparative Performance The performance of the county and city school systems selected for comparison on the 1999 MSPAP are shown below:

1999 Grade 3 MSPAP Comparative Performance
Percent Satisfactory

County/City	Rdg	Wrt	Lang	Math	Sci	SS
Anne Arundel	<i>47.8</i>	<i>47.2</i>	<i>47.4</i>	42.3	41.3	46.5
Baltimore City	15.6	24.4	23.4	11.4	12.6	15.3
Baltimore County	46.3	51.8	53.4	44.9	44.0	48.6
Howard	60.1	61.0	64.6	55.1	56.0	57.7
Montgomery	48.9	56.1	57.1	52.1	48.4	47.1
State	41.2	47.1	46.8	38.9	38.7	41.5

Commentary The Baltimore County schools outscore the State in all subject areas, as do the other three counties displayed (Anne Arundel, Howard, and Montgomery Counties). The two districts identified by district staff for comparison (Howard and Montgomery County school systems) outscore Baltimore County in all subjects, although the differences in performance are not as great between Baltimore County and Montgomery County as they are between Baltimore County and Howard County. Students in Baltimore County outscore students in Anne Arundel County in all areas except Reading. Baltimore City schools are much lower in performance than any of these counties or the State.

The Montgomery County students outscore Baltimore County students by about the same margin as Baltimore County students perform better than the State.

1999 Grade 5 MSPAP Comparative Performance
Percent Satisfactory

County/City	Rdg	Wrt	Lang	Math	Sci	SS
Anne Arundel	49.3	39.3	54.9	52.4	57.1	48.9
Baltimore City	15.7	15.7	24.6	16.2	20.4	16.9
Baltimore County	45.6	41.5	57.1	50.7	56.4	49.9
Howard	60.2	53.9	65.8	62.3	67.8	60.3
Montgomery	50.0	48.7	64.0	61.2	63.3	55.0
State	41.4	38.6	51.0	46.2	51.7	43.7

Commentary The Baltimore County schools outscore the State in all subject areas, as do the other three counties displayed (Anne Arundel, Howard, and Montgomery Counties). The two districts identified by district staff for comparison (Howard and Montgomery County school systems) outscore Baltimore County in all subjects, although the differences in performance are not as great between Baltimore County and Montgomery County as they are between Baltimore County and Howard County. Students in Baltimore County outscore students in Anne Arundel County in all areas except Reading, Mathematics, and Science. Baltimore City schools are much lower in performance than any of these counties or the State.

The Montgomery County students outscore Baltimore County students by a narrower margin than at Grade 3, but both outscore Baltimore County, particularly in Reading, Writing, Mathematics, Science, and Social Studies.

1999 Grade 8 MSPAP Comparative Performance

County/City	Rdg	Percent Satisfactory			Math	Sci	SS
		Wrt	Lang				
Anne Arundel	23.0	44.2	45.6	54.9	51.2	45.1	
Baltimore City	7.1	20.2	18.5	12.8	17.4	15.5	
Baltimore County	30.6	52.8	51.8	50.6	56.2	49.8	
Howard	33.3	57.1	59.9	66.5	65.7	59.0	
Montgomery	34.2	56.1	59.6	66.1	63.3	55.7	
State	25.3	46.0	46.1	49.0	51.0	44.2	

Commentary The Baltimore County schools outscore the State in all subject areas, as do the other three counties displayed (Anne Arundel, Howard, and Montgomery Counties), with the exception of Anne Arundel County in the areas of Reading, Writing, and Language Arts. The two districts identified by district staff for comparison (Howard and Montgomery County school systems) outscore Baltimore County in all subjects. The performance of Montgomery County is more similar to that of Howard County at this level than at the other two levels. Students in Baltimore County outscore students in Anne Arundel County in all areas except in the area of Mathematics. Baltimore City schools are much lower in performance than any of these counties or the State.

The Montgomery County and Howard County students outscore Baltimore County students by a wider margin (double digits) in the area of Mathematics (15.5 and 15.9 percent respectively), which is a very significant difference in group performance.

Chapter Two

Performance on the Maryland Functional Literacy Test

The State of Maryland is one of approximately 23 states that use a test as part of the high school graduation decision about students. The Maryland Functional Literacy Test has been used for a number of years as part of the decision about the award of high school diplomas. This test is a minimum competency test, with expected passing scores in the mid- to upper-90's. Because the test is so easy, and the MSPAP has been so challenging, there are such significant differences between the two types of measures that scores on MSPAP and the Functional Literacy Test should not be compared. However, the fact that virtually all students pass it is a reason that this test is being revamped so that a much more challenging test will be implemented in the near future. However, there are results on the Functional Literacy Test that can be used to examine the performance of students in Baltimore County and elsewhere in Maryland. This section presents those results.

Grade 9 Functional Literacy Test Performance The overall performance of grade 9 students on the Maryland Functional Literacy Test is shown below for the three school years shown on the current (1998-99) reports:

1999 Grade 9 Functional Literacy Test Performance Percent Passing

Year	Reading		Mathematics		Writing	
	BC	State	BC	State	BC	State
1999	98.6	97.0	91.6	85.3	96.4	92.0
1998	98.6	97.4	90.8	84.8	95.3	89.8
1993	98.2	97.4	83.4	79.2	95.5	93.5

Commentary The performance of both the State and Baltimore County is constrained by how easy the Functional Literacy Test is. The lack of top-end room makes it challenging to improve, as illustrated by the small gains of both the County and the State.

Baltimore County has exceeded the State level of performance on all three tests for each year shown. The lowest level is the area of Mathematics, as can be seen in the lower performance of Baltimore County students in Mathematics (91.6 percent passing) versus Reading (98.6 percent passing) and Writing (96.4 percent passing). This mirrors the same differences in performance statewide.

Grade 11 Functional Literacy Test Performance The overall performance of grade 11 students on the Maryland Functional Literacy Test is shown below for the three school years shown on the current (1998-99) reports:

**1999 Grade 11
Functional Literacy Test Performance**
Percent Passing

Year	Reading		Mathematics		Writing		Citizenship		Pass All Tests	
	BC	State	BC	State	BC	State	BC	State	BC	State
1999	99.8	99.4	97.8	95.7	99.5	98.2	97.9	95.9	95.9	92.2
1998	99.8	99.5	97.8	95.6	98.8	97.8	97.7	94.9	95.3	91.3
1993	99.8	99.6	97.6	96.2	99.4	98.6	97.1	96.3	94.9	93.2

Commentary The passing rates for Grade 11 students in both Baltimore County and the State is slightly higher than for Grade 9, but given the little room for improvement, this is not surprising. The students in Baltimore County outscored their counterparts statewide in all subject areas and all years, although both a quite high and very close to **one another in performance**.

Grades 9 and 11 Racial-Ethnic Performance The Functional Literacy Test results for Baltimore County and the State are disaggregated for both grades-tested by racial-ethnic group. These results are as follows:

**1999 Grade 9 Functional Literacy Test Performance
by Racial-Ethnic Group**
Percent Passing

Group	Level	Reading	Mathematics	Writing
Amer Ind	BC	100.0	83.3	91.7
	State	99.4	88.6	89.6
Asian	BC	97.8	99.1	99.6
	State	98.9	97.0	97.6
African-American	BC	97.1	83.6	93.3
	State	93.9	70.5	84.6
White	BC	99.3	94.9	97.7
	State	98.9	94.5	96.4

Hispanic	BC	95.8	88.8	93.7
	State	96.9	83.2	93.0
Overall	State	97.0	85.3	92.0

Commentary The performance of Baltimore County students exceeds that of their counterparts statewide in all areas for all sub-groups, except the American Indian group in Mathematics, the Asian group in Reading, and Hispanic students in Reading. Overall, the vast majority of students pass the Functional Literacy Test in Baltimore County and statewide.

**1999 Grade 11 Functional Literacy Test Performance by
Racial-Ethnic Group Percent Passing**

Group	Level	Reading	Mathematics	Writing	Citizenship '	Overall Passing
Amer Ind	BC	100.0	100.0	100.0	100.0	100.0
	State	97.8	93.5	99.3	96.3	90.6
Asian	BC	100.0	100.0	100.0	97.0	97.0
	State	99.6	98.4	98.9	96.3	94.9
African- American	BC	99.6	94.5	98.5	95.3	90.2
	State	99.0	89.7	96.1	92.4	83.8
White	BC	100.0	99.0	99.8	99.0	98.1
	State	99.8	99.0	99.3	98.2	97.1
Hispanic	BC	95.8	97.1	100.0	98.5	97.1
	State	98.0	92.3	97.9	88.3	83.9
Overall	State	99.4	95.7	98.2	95.9	92.2

Commentary The performance of Baltimore County students exceeds that of their counterparts statewide in all areas for all sub-groups, except the Hispanic students in Reading. Overall, almost all of students pass the Functional Literacy Test in Baltimore County and statewide.

Grade 9 and 11 Gender Performance Maryland also reports the Maryland Functional Literacy Test results by gender. The Grade 9 and 11 results are summarized below:

**1999 Grade 9 Functional Literacy Test Performance
by Racial-Ethnic Group
Percent Passing**

Level	Group	Reading	Mathematics	Writing
Baltimore	Male	97.9	90.8	94.7
County	Female	99.2	92.5	98.2
State	Male	96.0	84.0	88.9
	Female	98.1	86.8	95.2

Commentary The performance of both males and females in Baltimore County is superior to their counterparts statewide, by roughly a one-point margin for both groups in Reading and about a five-point margin in the other two subject areas. The performance of males and females in Baltimore County is much closer on this test than on MSPAP, although the females outscore the males in all tests in both Baltimore County **and the State.**

**1999 Grade 11 Functional Literacy Test Performance
by Gender
Percent Passing**

Level	Group	Reading	Mathematics	Writing	Citizenship	Overall Passing
Balt Co.	Male	99.7	97.9	99.1	97.8	95.8
	Female	100.0	97.8	99.8	98.0	96.1
State	Male	99.2	95.6	97.4	95.5	91.6
	Female	99.7	95.7	99.0	96.2	92.7

Commentary The performance of both males and females in Baltimore County is superior to their counterparts statewide, with the exception of the performance of males on the Writing test. The performance of males and females in Baltimore County is much closer on this test than on MSPAP, although the females outscore the males in all tests in both Baltimore County and the State, except for the Mathematics test performance of females in Mathematics (where males outscore females by 0.1 percentage point).

Grades 9 and 11 Comparative Performance The performance of the county and city school systems selected for comparison on the 1999 Maryland Functional Literacy Test are shown below:

1999 Grade 9 MSPAP Comparative Performance

County/City	Percent Passing		
	Reading	Mathematics	Writing
Anne Arundel	97.3	91.8	93.6
Baltimore City	89.1	54.9	71.6
Baltimore County	98.6	91.6	96.4
Howard	99.2	93.6	96.8
Montgomery	99.0	92.3	96.2
State	97.0	85.3	92.0

Commentary The Baltimore County schools outscore the State in all subject areas, as do the other three counties displayed (Anne Arundel, Howard, and Montgomery Counties). The two districts identified by district staff for comparison (Howard and Montgomery County school systems) outscore Baltimore County in all subjects, although the differences in performance are great. Baltimore City schools are much lower in performance than any of these counties or the State.

1999 Grade 11 MSPAP Comparative Performance

County/City	Percent Passing				Overall Passing
	Reading	Mathematics	Writing	Citizenship	
Anne Arundel	99.5	98.7	98.5	96.7	94.6
Baltimore City	97.9	78.9	91.0	91.0	74.8
Baltimore County	99.8	97.8	99.5	97.9	95.9
Howard	99.7	98.8	99.2	98.0	96.6
Montgomery	99.7	97.8	99.3	95.1	93.4
State	99.4	95.7	98.2	95.9	92.2

three counties displayed (Anne Arundel, Howard, and Montgomery Counties), except Montgomery County in Citizenship. Baltimore County outscored Montgomery County in three of the four tests (and is tied on the fourth test), as well

as in overall passing rate. Howard County schools outscore Baltimore County in all subjects. Baltimore City schools are much lower in performance than any of these counties or the State.

Chapter Three

Performance on the Comprehensive Test of Basic Skills, 5th Edition

The State of Maryland administers the Comprehensive Test of Basic Skills (CTBS), Fifth Edition to all students at Grades 2, 4, and 6. This is a nationally-normed test which is available from the Copyrighted McGraw-Hill, the publisher of several such instruments. It is used statewide to provide a comparison between students in Maryland and those of the national norm group. Such comparisons can be useful adjuncts to in-state assessments such as MSPAP and the Maryland Functional Literacy Test because they permit the comparison of students with students in other states. The results are reported in terms of percentile rank which shows how the average (median) student scores at the school, district, and state levels.

Grade 2 Baltimore County Results The state publishes annual results for each county as well as the state, in 1997 and 1999 (the latest year in which results are available). The Grade 2 CTBS results are shown in the following table:

1999 Grade 2 CTBS Results
Median National Percentile Rank

Sub-Test	1997		1999	
	BC	State	BC	State
Reading	49	45	59	46
Language	50	39	63	40
Mathematics	49	53	58	43
Language Mechanics	55	45	67	54
Mathematics Computation	52	49	65	49

Commentary This table shows that Baltimore County has scored at a higher level in all sub-tests in 1999, and all sub-tests except Mathematics in 1997. It is not surprising that Baltimore County's performance is at or above national averages, but it is surprising to see how poorly the State has performed on the CTBS sub-tests, which show that the average (median) student scored below national average on all subtests in 1999 except Language Mechanics. That is unusual for a northern state to do so poorly. Baltimore County performance is lowest in Reading and Mathematics.

Grade 4 Baltimore County Results The Grade 4 CTBS results are shown in the following table:

1999 Grade 4 CTBS Results					
Median National Percentile Rank					
Sub-Test	1997		1999		
	BC	State	BC	State	
Reading	53'	51	55	50	
Language	57	55	60	54	
Mathematics	52	51	56	49	
Language Mechanics	55	50	59	51	
Mathematics Computation	54	48	57		

Commentary The performance of the Baltimore County schools has exceeded that of the State on all sub-tests in each of the two years shown. The average (median) Baltimore County student is above national average for both years, while the level of performance of the State is above average for all sub-tests except Mathematics (1999) and Mathematics Computation (1997). Baltimore County performance is lowest in Reading, Mathematics, and Mathematics Computation.

Grade 6 Baltimore County Results The Grade 6 CTBS results are shown in the following table:

1999 Grade 6 CTBS Results					
Median National Percentile Rank					
Sub-Test	1997		1999		
	BC	State	BC	State	
Reading	54	50	56	51	
Language	53	49	54	50	
Mathematics	51	45	52	51	
Language Mechanics	47	49	50	49	
Mathematics Computation	47	44	42	44	

Commentary The performance of the Baltimore County schools has exceeded that of the State on all sub-tests in each of the two years shown, except for Mathematics in 1999 and Language Mechanics in 1997. The average (median) Baltimore County student is above national average for 1999 (except for Language Mechanics and Mathematics Computation in 1997 and Mathematics Computation in 1999). The state is below average on more sub-tests than it is above national average, again a surprisingly state performance for a northern state.

Baltimore County performance is lowest in Mathematics Computation.

Comparative CTBS Performance The performance of Baltimore County schools and other selected county school systems is shown in the following **tables**:

**1999 Comparative Grade 2 CTBS Performance
Median National Percentile Rank**

Subject	Anne Arundal	Baltimore	Howard	Montgomery	State
Reading	55	59	72	59	46
Language	50	63	68	51	40
Mathematics	52	58	72	60	43
Language Mechanics	60	67	83	70	54
Math. Computation	50	65	75	68	49

Commentary The Baltimore County schools are outscored by the Howard County schools at grade 2 by a wide margin, but interestingly, outscores the Montgomery County schools in Language. Baltimore County also ties Montgomery County in Reading, but is outscored by Montgomery County on the remaining three sub-tests.

1999 Comparative Grade 4 CTBS Performance

Median National Percentile Rank

Subject	Anne Arundal	Baltimore	Howard	Montgomery	State
Reading	54	55	69	65	50
Language	56	60	72	67	54
Mathematics	58	56	73	72	49
Language Mechanics	55	59	75	63	51
Math. Computation	54	57	64	67	48

Commentary The Baltimore County schools are outscored on all sub-tests by both the Howard County and Montgomery County. The margin is widest in Mathematics. Anne Arundel County outscores Baltimore County in Mathematics as well, and comes close in the area of Reading.

1999 Comparative Grade 6 CTBS Performance

Median National Percentile Rank

Subject	Anne Arundal	Baltimore	Howard	Montgomery	State
Reading	53	* 56	68	72	51
Language	55	54	68	69	50
Mathematics	58	52	72	81	51
Language Mechanics	46	50	67	70	49
Math. Computation	51	42	52	66	44

Commentary The performance of the Baltimore County schools is poorest at this level. The Baltimore County schools are outscored on all sub-tests by both the Howard County and Montgomery County, typically 10 to 20 points difference. The margin is widest in Mathematics, where the advantage for Montgomery County is almost 30 points. Anne Arundel County outscores Baltimore County in Language, Mathematics, and Mathematics Computation, too.

Performance slips from grade 2 to grade 4 to grade 6, which of course may be due to differences of the students tested, or may be an artifact of the instructional program of the schools in Baltimore County versus Howard and Montgomery Counties.

Chapter Four

Performance on the SAT

Many college-bound students are required by the institutions to which they are applying to submit scores on one of the college-entrance tests: the ACT or the SAT. Students in most states choose to primarily take one or the other instrument and it is these states that make the best comparison group (since only a handful of the elite students will take the other instrument. The SAT is the test which most Maryland students take and it is reported in this section of the report.

Students typically take the test some time in their tenth or eleventh grades, and may take the test again as many times as they wish. The publishers (ACT and the College Board) of the tests report the best score of the student.

Scores are released annually by each publisher in the fall. Unlike other testing programs, the scores are summarized for each graduating class, which may have taken the test at any time over the past two years. Hence, the scores represent the efforts of each graduating class.

A couple of notes are in order before the results are presented. First, the collegeentrance tests are voluntary. Only students who feel they will need the tests in order to apply to college will take them. Some students plan on applying to twoand four-year institutions of higher education that do not require the SAT in order to apply (they may or may not take the ACT). Other students not aspiring to college do not take them either. Hence, they do not provide a complete picture of high school graduates. Average scores can be one measure, however, of how well prepared are high school graduates who plan on attending college.

Second, the percentage of students taking the test is inversely related to the average score: the higher the percentage of test takers, the lower the average score. Therefore, both the percent of students taking the test and their average score are important to examine. Interestingly, the percent of students taking the SAT can be a gauge of the post secondary intentions of high school students and may provide interesting information about what proportion of students are aspiring to attend college.

Finally, the SAT, the college-entrance examination that is used in Maryland, is both an achievement- and an aptitude-based test, which means that there are some aspect of it that schools may not directly impact, particularly in the short run. However, even achievement and aptitude are related, so that improvements in learning should begin to show up on the SAT.

Baltimore County SAT Performance The performance of the high school graduates on the SAT are summarized in the following table:

Baltimore County SAT Performance
Median Score

Year	Partic. Rate		Verbal		Nation	Mathematics		
	BC	MD	BC	MD		BC	MD	Nation
2000	56	65	496	507	505	501	509	514
1999	54	65	504	507	505	504	507	511
1998	49	65	499	506	505	501	508	512
1997	56	64	500	507	505	505	507	511
1996	52	64	501	NA	503	506	NA	508

Commentary The performance of the students in Baltimore County has been slightly below national average during each of the past five years on both the Verbal and the Mathematics sections of the SAT. There has been some variation in the performance of the students, although the trend is also slightly downward. The performance of students in Baltimore County contrasts with those of students statewide and in the nation, where scores have been stable on the Verbal sub-test and slightly upwards on the Mathematics sub-test. These scores are somewhat surprising, given the slightly above average performance of students on the (113S/5 at the younger grade levels.

The participation of students in the SAT in Baltimore County is at a somewhat smaller rate than the state, and except for the graduating class of 1998, has remained in the mid-fifties. An important goal in improving the quality of secondary education in Baltimore County is to increase participation in the SAT, as well as average test **scores**.

Baltimore County Racial-Ethnic Performance The participation of students in various racial-ethnic groups, as well as their performance on the SAT are both shown **below**:

2000 SAT Performance by Racial-Ethnic Group
Median Score

Group	No. Participating		Composite Score
American	BC	18	851
Indian	State	191	944
	Nation	7658	963
Asian	BC	234	1045
	State	2261	1091
	Nation	96,717	1064
African-American	BC	770	830
	State	8175	854
	Nation	119,591	860
Hispanic	BC	54	987
	State	1,011	989
	Nation	97,872	918
White	BC	2,044	1056
	State	18,626	1083
	Nation	712,105	1058
Overall	BC		997
	State		1016
	Nation		1019

Commentary With the exception of the Hispanics, the performance of all racialethnic groups within Baltimore County is below their counterparts in the State and the nation. As seen elsewhere, the Asian and White students do the best, while the African-American students score lowest, followed closely by the American Indian students. It is clear that the quality of the high school academic program needs to be improved, and that the participation rate for the SAT increased, with particular attention to be paid to minority students (without losing sight of the sub-par performance of White students).

Baltimore County Gender Performance The participation of students by gender, as well as their performance on the SAT, are both shown below. Participation rates for each gender were not readily available from the state and national reports that were reviewed for this summary.

**2000 SAT Performance by Gender
Median Score**

Group		Percent Participation	Verbal	Math
Males	BC		497	520
	State	59	508	527
	Nation		507	533
Females	BC		496	486
	State	71	506	494
	Nation		504	498

Commentary The performance of males and females in Baltimore County follows that of the previous of summaries of SAT performance: Baltimore County students score below their counterparts in the State and the nation. There is no special pattern of gender performance of students in Baltimore County on the SAT.

Comparative Performance on the SAT Obtaining comparative data on the performance of schools elsewhere in Maryland, much less other school systems in other states is a bit challenging, in part because the district-level data is provided just to the individual districts and to state education agencies. Some, such as the Maryland State Department of Education, do not publish district level information. Others such as the North Carolina Department of Public Instruction, publish extensive listings of the scores of individual high schools, but not district-level summaries.

Given the limited amount of time (three weeks) in which to complete this study, it was not possible to obtain complete comparative results. However, some information was obtained, as shown in the following table:

Comparative 2000 SAT Performance
Median Score

District	Percent Participation	Composite Score
Baltimore County	56%	997
Anne Arundel County	50%	1051
Howard County	80%	1071
Montgomery County		
Wake County, NC	77%	1059
Maryland State	65%	1016
North Carolina State	61%	986
Nation		1019

Commentary This table shows how students who took the SAT in Baltimore County compared with students elsewhere in Maryland and other states. As this table shows, a smaller percentage of students took the SAT in Baltimore County than in Howard county, and the State of Maryland as a whole. In addition, substantially fewer students took the SAT in Baltimore County than in Wake County, NC. Clearly, there are differences in either the proportion of students aspiring to a four-year college or they are applying to less rigorous colleges that do not require the SAT for admission.

Among the students who did take the test, the performance of students in Baltimore County is substantially lower than Anne Arundel County, Howard County, the Wake County, NC, State of Maryland, and the national scores. The Baltimore County score is only slightly higher than the State of North Carolina score. This signifies potential weaknesses in the college preparation for students who did take the SAT in Baltimore County (as well as the possibility that the preparation of nonSAT takers is also weak).

Chapter Five

Additional Student Outcomes

A report on the performance of students in Baltimore County would not be complete without reference to other student outcomes, as well as other conditions under which students are taught in the county and elsewhere. This section provides additional student outcome information and is followed by descriptions of some of the background information about the school systems, educators who work in it, and the resources provided to educate students.

Student Dropout Rate The retention of students is one measure of the effectiveness of a high school education, since high school dropouts typically under perform other students following high school (lower employment rate, lower average salary, lower standard of living, and so forth). Retaining students just for the sake of lower drop out rates, however, does students and society little favor. The important factor is to retain and to educate all students.

The chart below shows the dropout rate on an annual basis in both the county and the State. Remember that since high school students can drop out at any point after they turn age 16, this annual rate does not show the percent of ninth graders who fail to graduate four years later or who formally elect to leave school.

1999 Dropout Rate
Percent of High School Students (Annual Rate)

	Baltimore State	
1999	2.87	4.16
1998	2.19	4.05
1997	1.25	4.66
1996	1.49	4.58
1995	2.05	4.95
1994	2.19	4.95
1993	3.32	5.36

Commentary The State goal is for the annual dropout rate to be no higher than 3%. Baltimore County has had a better rate than the State for all years reported, and has met the State standard for the past six years. However, the education of

students who remain in high school is a bit problematic, as described in the previous sections.

Disaggregated Dropout Rate The student dropout rate disaggregated by race/ethnic group, is shown in the table below:

1999 Disaggregated Dropout Rate - Grade 9-12
Percent of Students

	Amer Ind	Asian	Aft Amer	White	Hispanic
Dropout	5.05	2.29	2.71	2.96	3.35

Commentary The dropout rate for American Indian students is higher than all other groups, which is not a surprising finding. What is surprising is the higher dropout rate for White students than African-American students, and that the Hispanic rate is relatively low. Typically, the Hispanic rate is higher and the White dropout rate is lower.

Comparative Dropout Rate The dropout rate in Baltimore County as well as the comparison school systems is shown in the table below:

1999 Comparative Dropout Rate - Grade 9-12
Percent of Students

	Anne Arundal Baltimore Howard			Montgomery State	
Dropout	5.12	2.87	2.03	1.85	4.16

Commentary The dropout rate of three counties is less than the state figure, with only slight differences among the three (Baltimore, Howard, and Montgomery Counties). All are good rates, indicating that the annual dropout rate in these counties is excellent. All three counties meet the Satisfactory level of performance of 3.00, while none of them met the Excellent standard of 1.25. Hence, there is still some room for improvement for all three counties.

Student Turnover One of the challenges that schools can face is students who enter or who leave during a school year. In fact, student turnover is a major factor in lower student achievement. Schools need to respond to this challenge by quickly engaging students in the instructional process by ascertaining their current levels of achievement and "catching them up" as needed. The percentage of students entering or withdrawing at each level are shown in the following three tables.

Elementary Student Entrants/Withdrawals
Percent of Students

	Anne Arundal	Baltimore	Howard	Montgomery	State
Entrants	14.3	12.3	8.3	10.0	13.8
Withdrawals	9.8	9.3	7.2	8.5	11.4

Commentary The percentage of entering students is much lower in Howard County than in the other three counties. The percentage of entering students can be a rough gauge of the extent of the challenge before educators. Baltimore, Howard, and Montgomery Counties are all lower than the State level of entrants, while all four are lower in the withdrawal category.

Middle School Student Entrants/Withdrawals
Percent of Students

	Anne Arundal	Baltimore	Howard	Montgomery	State
Entrants	23.8	13.2	6.2	7.4	13.3
Withdrawals	9.3	11.8	6.3	6.3	11.2

Commentary The middle school figure for Anne Arundel County is rather large, almost more than double that of Baltimore County. Howard and Montgomery Counties are half the level of entrants than Baltimore County.

High School Student Entrants/Withdrawals
Percent of Students

	Anne Arundal	Baltimore	Howard	Montgomery	State
Entrants	10.0	14.7	5.1	7.5	11.8
Withdrawals	13.4	15.4	6.9	8.8	13.9

Commentary The entrants and withdrawals for Baltimore County are both higher than the other counties and for the State. The figure rises from elementary to middle school to high school, although there is little that a district can do to reduce the figure at any level.

Comparative Student Post-Secondary Plans One of the important functions of high schools is to prepare students for their future. The plans for students following high school are shown below. This table gives an idea particularly of the percentage of

students who are aspiring to a four-year college education.

1999 Comparative Grade 12 Documented Decisions
Percent of Students

	Anne Arundal	Baltimore	Howard	Montgomery	State
4 Yr College	36.7	43.3	61.4	64.0	44.6
2 Yr College	21.5	16.5	14.5	12.3	16.3
Spec School	2.3	2.8	1.1	1.3	2.6
Employment	11.8	12.2	6.2	4.0	11.5
Military	3.7	3.0	2.0	2.1	3.7
Emp/School	18.3	16.7	9.1	11.0	15.3
Other/NR	5.8	5.6	5.6	5.4	5.8

Commentary The percentage of students in Baltimore County who attend four-year colleges in Baltimore County is slightly less than the State (a low rate itself), but substantially below the rate of Howard and Montgomery Counties. A higher percentage of students also enter employment directly as well. These percentages may be realistic given the average performance of Baltimore County students on the SAT, but to raise these may require improvements in the rigor of high school college preparatory courses and the encouragement for more high school students to enroll in these courses. About half of the Baltimore County students enter the University of Maryland, compared with about seventy-five percent of the students in Howard and Montgomery Counties.

Proportion of Students Enrolled in Rigorous Courses The state computes the percentage of students who enroll in rigorous, college-preparatory courses in high school. This figure reflects both past student achievement and post-secondary **aspirations**.

1999 Comparative Rigorous Course Enrollment
Percent of High School Students

Anne Arundal	Baltimore	Howard	Montgomery	State
NA	15.8	39.1	38.8	21.2

Commentary The performance of Baltimore County is again less than the State and

substantially less than the other two counties reporting data. This is a counseling issue, as well as a preparation one. If students have received a rigorous education in elementary and middle school, more of them will be prepared to take advanced and college-preparatory courses in high school (and more will aspire to and be able to attend a four-year college).

Chapter Six

Background Student/District Characteristics

A report on the performance of the Baltimore County should also reference the conditions under which students are taught in the county and elsewhere. This section provides information about some of the background information about the school system, educators who work in it, the students who attend, and the resources provided to **educate students**.

Poverty Level of Students Poverty is presumed to be a factor in the performance of students. Although there is ample evidence that students from homes in poverty can achieve at high levels, there is a moderate correlation between poverty level and student achievement. Hence, it is an important characteristic of students to note. It should not, however, be used as an excuse for low performance; instead, it should be used as a gauge of the challenge before educators.

1999 Students in Poverty Percent of Students Eligible for Free/ Reduced Price Lunch

	Anne Arundal Baltimore Howard			Montgomery State	
Poverty	16.4	27.2	10.3	22.5	30.5

Commentary The percentage of students deemed eligible for a free or reduced price lunch is an indication of the poverty within the school systems and the State. Although all four counties are under the State level, Baltimore County is only slightly lower than the State, and surprisingly, Montgomery County is almost at the same level as Baltimore County, even though the academic performance of the Montgomery County students is superior to those in Baltimore County (particularly for the college-bound students).

Participation of Students in Special Programs at the Elementary, Middle School and High School Levels School districts enroll a number of students with special needs -- English-language learners, students with educational needs due to family poverty, and students with disabilities. Again, these should not serve as excuses for lower performance, but these students do require special attention and educational services.

1999 Special Program Participation
Percent of Elementary Students

	Anne Arundal	Baltimore	Howard	Montgomery	State
<u>I.E.P.</u>	0.6	2.1	3.1	6.6	2.6
Title 1	6.7	23.1	5.5	12.7	26.3
Spec Ed	8.7	14.3	9.2	11.2	12.9

Commentary The proportion of students who are limited-English proficient is lower in Baltimore County than in Howard or Montgomery Counties. However, Baltimore County has a higher proportion of students enrolled in Title I or in special education.

1999 Special Program Participation
Percent of Middle School Students

	Anne Arundal	Baltimore	Howard	Montgomery	State
<u>I.E.P.</u>	0.2	0.7	1.4	4.2	1.4
Title 1	0.0	6.7	0.0	0.0	10.4
Spec Ed	13.6	12.3	10.5	12.9	13.6

Commentary Only Baltimore County reported students in Title I programs at the middle school level, a figure lower than the State as a whole. The percentage of students in special education programs is lower in Baltimore County than in the State as well as Anne Arundel and Montgomery Counties.

1999 Special Program Participation
Percent of High School Students

	Anne Arundal	Baltimore	Howard	Montgomery	State
<u>I.F.P.</u>	0.2	0.8	1.3	5.6	1.5
Title 1	0.0	0.0	0.0	0.0	0.3
Spec Ed	11.9	7.3	7.4	8.8	10.2

Commentary The percentage of students in special education programs is lower in Baltimore County than in the State and all three other counties. Lower performance

can not be explained by having more students engaged in learning English, in Title I programs (low achievers in poverty), or in special education **programs**.

Additional District Background Characteristics The State of Maryland publishes several additional pieces of background information on school systems in Maryland. These serve to help understand the resources available to educate students and how these resources are being used.

1999 Other District Characteristics

	Anne Arundal	Baltimore	Howard	Montgomery	State
Wealth/Pupil (in \$100('s))	\$284	\$278	\$294	\$395	\$246
Per Pupil Exp	\$6,629	\$6,918	\$7,190	\$8,287	\$6,821
Inst Staff/1000	56	62	63	61	58
Prof Staff/1000	9	10	11	10	10
Inst Assts/1000	8	8	17	14	11
Ave Length Day	6.3	6.3	6.6	6.5	6.5
Length Sch Yr	180	180	180	180	180

Commentary There are some differences between districts in terms of wealth/pupil, although all four districts are above State levels. Howard and Montgomery Counties expend more per pupil than the State or Baltimore County. Staffing figures are comparable among the four counties and the State, except for the exceptional number of instructional assistants used in Howard County (and to a lesser extent in Montgomery Counties). Differences in average length of school day are insignificant.

Chapter Seven

Baltimore County School-Level Performance

Introduction An additional feature of this review of the performance of the Baltimore County school system is a brief summary of the performance of the schools in Baltimore County. Test data on the performance of elementary schools on MSPAP and CTBS is available, as are these data plus the SAT performance at the high school level. In addition, data is available on the course enrollment patterns in high schools, and racial-ethnic and gender performance is available as well. These charts are extensive, in fact, too extensive for this report. However, selected tables of information is provided below, along with comments on the relative performance of different schools on the same measures.

Several types of reports are shown in this report. First, a frequency distribution of performance is shown for each measure. Second, where longitudinal data for three or more years is shown, schools are categorized into improving, declining or stable performance.

School Performance on MSPAP

The following charts summarize the performance of students in Baltimore County at the school level on this measure.

Frequency Distribution of Performance The following table summarizes the performance of schools at each grade level assessed. A frequency distribution is shown to summarize performance. The Composite Index, a weighted average of the performance of the students all all of the measures used in MSPAP at a particular grade level, is used to simplify the analysis and reporting.

1999 MSPAP
Frequency Distribution of Performance
 Composite Score Index

Range of Scores	Three	Grade Five	Eight
00.0-9.9	0	0	0
10.0-19.9	3	1	0
20.0-29.9	13	17	5
30.0-39.9	19	17	6
40.0-49.9	19	18	5
50.0-59.9	20	15	2
60.0-69.9	14	15	4
70.0-79.9	11	19	3
80.0-89.0	4	1	0
90.0-100	0	0	0

Commentary The range in Composite Score performance of the schools in Baltimore County is striking, particularly at grades three and five. There are a few very high scoring schools and an equal number of low scoring schools, but the range in between is substantial. One strategy would be to identify a target level of performance (e.g., Composite Score of 70.0 or higher). Then schools that are quite low could be targeted for additional assistance from the district. Schools with Composite Indices 49.9 and below would be a prime target for additional assistance and improvement efforts.

Change in Performance Another way to examine the results on MSPAP at the building level is to examine which schools are showing improvement and which are showing declines in performance, as well as which ones have remained stable. A note of caution is in order. Given enrollment changes, changes in school performance may be more related the changing nature of the student population being served than changes in the school's instructional program effectiveness. Therefore, additional analysis should be done before these results are used to critique the performance of any school.

**1996 - 1999 MSPAP
Change in Performance
Composite Score Index**

Change in Scores	Three	Grade Five	Eight
-20.0 or more	0	0	0
15.0 to -19.9	0	3	
-10.0 to -14.9	1	4	1
-5.0 to -9.9	5	14	2
-4.9 to +4.9	30	38	19
+5.0 to +9.9	13	12	2
+10.0 to +14.9	16	16	1
+15.0 to +19.9	22	8	0
+20 or more	10	3	0
Did Not Test in 1996	4	5	0

Commentary These results can best be characterized as stable to somewhat improving. There are more improving schools than declining schools at grade three and five, but the schools at grade eight are mainly unchanged (which given their level of performance shown in the previous table) is unfortunate.

The selection of any two years for comparison is somewhat arbitrary, given that school-level performance can change from year-to-year due to changes in the past of achievement of one class of third graders to another. In fact, a more sophisticated change index, incorporating the in-between years of 1997 and 1998, to verify the upward or downward trend of the information would permit better selection of improving and declining buildings. The latter case, particularly when combined with level of performance, could permit schools that are low performing and stable (-4.9 to +4.9) or declining to be identified for special district-level attention.

School Performance of CTBS/5

The following charts summarize the performance of students in Baltimore County at the school level on **this measure**.

Frequency Distribution of Performance The following table summarizes the performance of schools at each grade level assessed. A frequency distribution is shown to summarize performance. The total score is used to simplify the analysis and reporting.

2000 CTBS/5
Frequency Distribution of Performance
 Median Percentile Rank

Range of Scores	Grade and Subject								
	Rdg	Two LA Math		Four Rdg LA Math			Six Rdg LAMath		
00.0-9.9	0	0		0	0	0	0	0	0
10.0-19.9	0	0	0	0	0	1		0	0
20.0-29.9	0	1	4	2		3	2	3	5
30.0-39.9	3	5	19	11	10	13	4	7	7
40.0-49.9	20	19	15	24	17	23	7	3	5
50.0-59.9	29	20	19	13	14	15	6	5	2
60.0-69.9	17	18	15	31	21	20	5	4	3
70.0-79.9	20	19	18	13	17	21	4	6	4
80.0-89.0	13	14	10	7	15	11	0	0	1
90.0-100	0	6	2	0	3	1	0	0	0

Commentary The performance on the C 113S' sub-tests tend to be lower in mathematics than the other sub-tests, particularly at grade 6, where the median school score for almost two-thirds of the schools is below average (50th percentile). The large number of schools scoring below the fiftieth percentile indicates room for improvement of many schools in all three areas tested.

Change in Performance Another way to examine the results on MSPAP at the building level is to examine which schools are showing improvement and which are showing declines in performance, as well as which ones have remained stable. A note of caution is in order. Given enrollment changes, changes in school performance may be more related the changing nature of the student population

being served than changes in the school's instructional program effectiveness. Therefore, additional analysis should be done before these results are used to critique the performance of any school.

1997 - 2000 CTBS
Change in Performance
 Median Percentile Rank

Change in Scores	Rdg	Grade and Subject						Six	Rdg	LA Math
		Two		Four		Six				
		Rdg	LA Math	Rdg	LA Math	Rdg	LA Math			
-20 or more	1	1	3	0	0	1	0	0	0	
-15 to -19	0	1	1	0	2	2	0	0	0	
-10 to -14	0	4	8	1	5	4	0	2	3	
-5 to -9	2	3	12	12	16	13		3	4	
-4 to +4	19	13	25	39	31	34	20	14	13	
+5 to +9	18	18	11	18	15	14	3	6	5	
+10 to +14	25	19	16	15	16	10	0	2	1	
+15 ^w to +19	13	9	9	12	8	14	0	0	1	
+20 or more	22	27	15	3	7	8	0	0	0	
Did Not Test in 1997	1			1			1			

Commentary This chart shows that performance on the CTBS has not declined in many schools, while remaining the same in most schools or improving in some (particularly at grade 2 and 4). Most schools made little or no change over the fouryear period.

School Performance on the SAT

The following charts summarize the performance of students in Baltimore County at the school level on this measure.

Frequency Distribution of Performance The following chart shows how high school students graduating in the class of 2000 did on the Verbal and Mathematics tests that comprise the SAT:

2000 SAT
Frequency Distribution of Performance
Average Scaled Score

Range of Scores	Verbal	Mathematics
300-350	0	0
351 - 400	1	3
401 - 450	3	2
451-500	9	6
501-550	8	9
551-600	2	3

Commentary There appear to be several high-scoring high schools in Baltimore County, but also a larger number of low-scoring ones. For example, the three schools that had an average scores in the 351-400 range in Mathematics (and the c that had a comparable score on the Verbal test) need serious attention. It is the lower scoring schools that should attend to the quality of their high school college preparatory programs, as well as their counseling programs to assure that colleg€aspiring students take solid college preparatory courses. There are more lowscoring buildings than high scoring ones and the district needs to attend to this iss

Change in Performance The district produced a report that showed the level of changes that occurred on a one year and five year basis. The five-year change da is shown in the table below:

Change in Scores	1996 - 2000 SAT Change in Performance Average Scale Score	
	Verbal	Mathematics
-41 or more	4	3
-26 to -40	0	1
-11 to -25	3	4
-10 to +10	8	3
+11 to +25	4	5
+26 to +40	3	5
+41 or more	1	2

Commentary An equal number of schools showed significant declines in performance as significant increases. Some of these five-year declines were quite large. For example, on the Verbal test, Chesapeake (-49), Lansdowne (-52), Overlea (-41), and Randallstown (-62), while on the Mathematics test, Chesapeake (-37), Lansdowne (-69), and Overlea (-48), Patapsco (-40), and Randallstown (-56). Several of these schools started with below average performance in 1996 and declined from there (e.g., Chesapeake, Patapsco, and Randallstown). Low performance that is in decline is a serious issue that needs to be addressed.

Data on participation rates indicated that Chesapeake had 20% of the graduating class take the test, Lansdowne 41%, Overlea 29%, Patapsco 39%, and Randallstown 63%. The participation rate in all but Randallstown is too low.

While data on the changing composition of the graduating class was not available this researcher, even if such changes did occur from 1996 to 2000, they should not be used to excuse such low performance getting worse. There is ample evidence that any student who has taken rigorous, college-preparatory courses can do well on the SAT, regardless of their racial-ethnic group or family income.