An Evaluation of the Effect of Increased State Aid to Local School Systems Through the Bridge to Excellence Act

Interim Report (Volume I)

Submitted to:

MARYLAND STATE DEPARTMENT OF EDUCATION

Achievement Matters Most

Submitted by:

MGT OF AMERICA, INC.

December 21, 2007

An Evaluation of the Effect of Increased State Aid to Local School Systems Through the Bridge to Excellence Act

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Submitted to:

The Maryland State Department of Education

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2123 Centre Pointe Boulevard
Tallahassee, Florida 32308

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EXECUTIVE SUMMARY

Introduction

MGT of America, Inc., presents this *Interim Report* at the end of the second year of a three-year study mandated by the Maryland General Assembly to assess certain outcomes of the *Bridge to Excellence in Public Schools Act of 2002* (BTE). In the fall of 2005, the Maryland State Department of Education (MSDE) solicited proposals from qualified organizations to conduct this independent evaluation and selected MGT through a competitive process. MGT issued an *Initial Report* in December 2006.[1] This *Interim Report* builds upon and supplements much of the information presented in the earlier report.

BTE legislated many of the recommendations made by the Commission on Education Finance, Equity, and Excellence, which was established by House Bill 10 of 1999 (Chapter 601) and came to be known as the Thornton commission because it was chaired by Dr. Alvin Thornton. The commission was charged to make recommendations to ensure the adequacy and equity of public school funding and excellence in student performance. MGT refers those who are unfamiliar with the development and/or the many components of BTE to a report issued by the Maryland Department of Legislative Services.[2] The first page of that report states that:

> *When it enacted Senate Bill 856 on May 6, 2002, (the Bridge to Excellence in Public Schools Act of 2002), Maryland became the first State in the country to endorse a comprehensive reform of its school finance system based on principles of adequacy and equity without being forced to do so by a court order. The legislation calls for a dramatic restructuring of the State's school finance system, including substantial increases in State aid for education phased in over a period of six years. The legislation provides an additional $74.7 million in State education aid in fiscal 2003 that is financed through a 34-cent increase in the State tax on cigarettes. By fiscal 2008, the legislation calls for the State to provide an additional $1.3 billion in education funding to local school systems above the amount that the State would have provided under the prior school finance structure. In total, State aid will increase by 75 percent between fiscal 2002 and 2008.*

To promote effective use of the additional $1.3 billion in state aid for education, BTE required that local governments maintain their education funding and that each local school system (LSS) develop, adopt, and implement a five-year Comprehensive Master Plan (CMP) that was designed to meet the unique needs of its students beginning with the 2003-04 school year. Annual Updates to the Master Plans were required to document the LSS's progress toward meeting federal, state, and local goals and make necessary adjustments to address any deficiencies in performance among any segment of the student population. Additionally, as required by SB 894, school systems must

[1] An Evaluation of the Effect of Increased State Aid to Local School Systems Through the Bridge to Excellence Act: Initial Report (Volumes I and II), MGT of America, Inc., December 20, 2006, <http://docushare.msde.state.md.us/docushare/dsweb/View/Collection-12409>.
[2] "The *Bridge to Excellence in Public Schools Act of 2002:* Its Origins, Components, and Future," Department of Legislative Services, September 18, 2002.

identify how they plan to spend increased aid and what their actual expenditures are. Results are compiled in the annual SB 894 report, prepared by MSDE.

BTE is a very broad initiative that seeks to advance at least five objectives in Maryland:[3]

1. Wealth equalization across LSSs.

2. Adequate funding that will enable all students to meet Maryland's rigorous performance targets.

3. Quality education for all students in terms of a variety of performance measures.

4. Local control in determining how resources are allocated.

5. Community involvement in planning to address the unique needs of each local school system.

However, the first two items are beyond the scope of this evaluation.

The Annotated Code of Maryland, Education Article §5-402 sets forth the parameters of this comprehensive review and evaluation of the effect of increased state aid to LSSs through BTE on student, school, and LSS performance. The article also states that the initial findings of the evaluation were to be presented to the General Assembly on or before December 31, 2006, and that the final report is to be presented to the Assembly on or before December 31, 2008. Senate Bill 907 amended §5-402 by requiring the submission of this additional *Interim Report* on or before December 31, 2007.

The scope of work identified in MSDE's request for proposals appears below. Phrases in italics were added by the General Assembly for clarification during this second year of the evaluation:

1. A comparison of school systems that show significant improvements in student and school performance to school systems that do not show significant improvements in student and school performance.

2. A list of programs or factors that consistently produce positive results for students, schools, and school systems.

3. An assessment of the extent to which county boards are successful in implementing the CMPs required by §5-401 *including whether the CMPs have successfully aligned school system budgets with articulated school improvement strategies.*

4. An analysis of the amount of funding local governments provide for education each year.

5. A detailed description of how LSSs are using state education aid *including:*

[3] Personal communication from MSDE, October 24, 2006.

a. *A list for each school system of the substantial educational enhancements that have been implemented by each school system since the enactment of BTE together with the general issue that each enhancement is attempting to address.*

b. *An estimate of the amount spent to implement each substantial educational enhancement.*

c. *An estimate of the number of new positions, if any, that have been added to execute each enhancement.*

d. *A classification of each substantial educational enhancement in terms of being targeted to the general student population or to a specific student population, specific schools, or specific grade levels.*

MGT has completed the second year of this three-year evaluation. The information in this *Interim Report* identifies many preliminary outcomes of the BTE. However, until the strategies in the 2007 Master Plan Updates are implemented by LSSs throughout the current 2007-08 school year, the evaluation will lack its final year of outcome data. These will include an additional year of student, school, and school system performance data for MGT to analyze during the summer of 2008.

In the spring of 2008, MGT will invite all Maryland public school teachers and administrators to provide information about the extent to which they are implementing "Potential Best Practices" that MGT identified through visits to a sample of 150 schools across all 24 LSSs. MGT will study the relationship between these self-reported implementations and improvements in student achievement to identify practices that consistently result in significant gains in performance. In the final year of the study, MGT also will conduct additional site visits to schools to gather information for case studies of practices that yield consistently positive outcomes.

Comparisons of Improvements in Student Performance Since BTE Implementation

Evaluation Mandate: Produce a comparison of school systems that show significant improvements in student and school performance to school systems that do not show significant improvements in student and school performance.

Progress to Date: MGT obtained and analyzed Maryland School Assessment (MSA) and High School Assessment (HSA) data from 2003 to 2007 for all students and for the No Child Left Behind (NCLB) subgroups in Maryland schools. We presented results of pertinent analyses. We also identified, analyzed, and present trends in high school graduation and dropout rates since the implementation of BTE.

Current Limitations: Administration of the MSA in Grades 3, 5, and 8 began in 2003, and Grades 4, 6, and 7 were added in 2004. Thus, trend data

reported herein cover the period from 2004 to 2007. HSA data have very limited utility at this time because the high school class of 2009 is the first cohort of students who must pass the HSA to graduate. MGT used only the English 2 HSA data for this *Interim Report* because data for the other three subjects tested with the HSA do not yet allow tracking of consistent cohorts when comparing local school systems (LSSs).

Another noteworthy limitation involves caution that must be exercised when comparing changes in achievement of NCLB subgroups that have very few students in some LSSs with the achievement of peer subgroups comprised of many students in other LSSs. Because Maryland reports MSA and HSA results for NCLB subgroups with five or more students, the reader should be mindful that percentages reported for very small populations can be misleading; each student represents a substantial proportion of the entire subgroup's population.

Future Plans: MGT will continue to gather and analyze MSA and HSA data through the 2008 assessments. We will identify schools and school systems that show significant improvements between 2004 and 2008 and determine the extent to which strategies in BTE Master Plans and Updates correlate with significant improvements in student performance. MGT also will gather and assess changes in other performance measures including college and workforce readiness and retention, high school graduation rates, and school dropout rates. Changes in student performance will be among those variables that MGT will use to customize plans for additional on-site data and information collection in selected schools and school systems.

Key Interim Findings on Improvements in Student Performance

In the years following the implementation of BTE, LSSs demonstrated substantial improvements in the percentages of their student populations who were proficient in reading and mathematics, as measured by the MSA. More important, in the three-year period from 2004 to 2007, the gap in the percentages of Maryland students who needed to demonstrate proficiency to meet the NCLB goal of 100 percent proficiency by 2014 was closed by:

- 35 percent in reading and 42 percent in math for the statewide aggregate of students in the elementary school grades (3 to 5).
- 17 percent in reading and 30 percent in math for the aggregate of students in the middle school grades (6 to 8).

As measured by the extent to which they improved, students in Grades 3 to 5 with limited English proficiency (LEP) outperformed 1) the entire student population, 2) the students eligible for free and/or reduced price meals

(FARMS), and 3) special education (SPED) students. In both reading and math, LEP students closed nearly half of the gap between their proficiency level in 2004 and NCLB's 100 percent proficiency goal.

Although the statewide middle school population continued to have higher MSA reading proficiency levels than the three special population subsets of students, LEP and SPED students narrowed their gaps toward reaching the 100 percent proficiency goal to a greater extent than FARMS students or the entire population of middle school students.

The statewide population of middle school students had slightly greater improvements in the percent proficient as measured by MSA math than did the three special populations.

All ethnic groups of elementary and middle school students improved their reading and math proficiency levels. Asian/Pacific Islander students consistently outperformed and made greater relative improvements than other ethnic groups. Hispanic and African-American students made less relative improvement than other ethnic groups.

There were major differences among LSSs in both reading and math proficiency levels and in the relative improvements made in these proficiency levels by elementary and middle school students.

Statewide, elementary school students had relatively higher reading and math proficiency levels (for the grades they were in) and relatively higher improvements in their proficiency levels than did middle school students.

At the high school level, the English 2 HSA was the only statewide test that could be used to make reasonable comparisons among NCLB groups of students and among Maryland's 24 LSSs. Passing rates on the English 2 HSA improved in all 24 LSSs between the first statewide administration of the test in 2005 and the 2007 administration. However, the 2007 test takers had a greater incentive to pass because they were the first group required to do so to graduate.

Passing rates and relative improvements in passing rates on the English 2 HSA varied greatly among LSSs, ethnic groups, and special populations of high school students

White high school students outperformed and showed greater improvements in relative passing rates than non-White students or those in any of the special populations (i.e., FARMS, SPED, LEP).

Programs or Factors that Consistently Produce Positive Results

Evaluation Mandate: Develop a list of programs or factors that consistently produce positive results for students, schools, and school systems.

Progress to Date: Through surveys conducted during the first year of this evaluation, MGT obtained initial indications of programs or factors that school and system administrators perceived to be highly effective. Survey results were presented in the *Initial Report.* During this second year of the evaluation, MGT visited all 24 LSSs and a sample of 150 schools to observe and further identify "potential best practices" that consistently produce positive results. We have identified and described several potential best practices in this *Interim Report*.

Current Limitations: At this point in the study, we have only begun to examine empirical evidence of programs or factors that consistently produce positive results. Although we observed many potential best practices, most of the information we gathered was from discussions with system-level administrators, principals, and teachers. We have intentionally waited until the upcoming final year of the study (after the full implementation of BTE will be completed) to develop the final list of programs or factors required by the mandate shown above.

Future Plans: In the winter of 2008, MGT will invite all principals and teachers to participate in a Web-based survey that will be designed to document the extent to which a potential best practice or combination of practices is institutionalized in schools. Then, we will analyze each school's improvements in student achievement and determine the extent to which certain practices consistently produce substantial improvements. Following these analyses, MGT will identify the final set of best practices and conduct case studies of selected schools in spring 2008 to fully document the implementation and impact of these practices. MGT also will assess the potential for these "best practices" to be adopted or adapted by other schools or school systems.

Key Interim Findings on Potential Best Practices

Systemic best practices findings are based on interviews with LSS officials and supported by school-level findings. These six systemic best practices support and complement one another.

- Strategic planning
- Data utilization for instructional decision-making, based on electronic data warehousing and ease of availability to teachers and administrators
- Professional Learning Communities

- Ongoing, targeted professional development
- Teacher specialists
- Differentiated instruction and individualized approach to teaching and learning

Principal interviews and data collection yielded 520 strategies, programs, and approaches as potential best practices, which fall into the following 11 categories:

- Academic intervention and acceleration
- Professional development/highly qualified teachers
- Research-based, effective core programs and general instruction
- Data analysis and technology
- Teacher specialists
- Differentiated instruction/Individualized Learning Plans
- Professional Learning Communities
- Inclusion and co-teaching for SPED and ELL students
- Behavior modification programs (e.g., PBIS)
- Graduation enhancement programs (e.g., AVID)
- Other (e.g., school culture of high expectations)

Contextual factors play an important role as well. Principals and LSS officials reported that much variation in student achievement from LSS to LSS and from school to school could be explained by the amount of resources available, level of poverty in the community, number of ELL students, and other factors. Additionally, some LSSs have had years of outstanding leadership that have enabled schools to create productive and nurturing environments for both teachers and students. Stable and effective leadership at the central administration level as well as in schools is an important factor to consider in analyzing discrepancies in student achievement.

Comparative analysis of the reported potential best practices of higher- and lower-achieving schools in the sample was reflective of these key findings. For example:

- Principals of higher-performing elementary schools cited almost three times more frequently strategies in the “Teacher specialist” and “Academic intervention” categories, and twice as frequently strategies in the “Differentiated instruction/Individualized Learning Plans” and “Professional Learning Community” categories, compared to principals of lower-performing elementary schools.

- At the middle school level, the "Differentiated instruction/ Individualized Learning Plans" category was frequently mentioned by principals of higher-performing schools and was not mentioned at all by principals of lower-performing schools.

- Principals of higher-performing high schools mentioned data utilization for instructional decision-making five times more frequently than principals of lower-performing high schools.

LSSs' Success in Implementing the Master Plans Required by §5-401 of the Annotated Code of Maryland

Evaluation Mandate: Provide an assessment of the extent to which county boards are successful in implementing the Comprehensive Master Plans (CMPs) required by *§*5-401 including whether the CMPs have successfully aligned school system budgets with articulated school improvement strategies.

Progress to Date: To address the aforementioned mandate during the second year of the evaluation, MGT visited all 24 LSSs to conduct focus groups with Master Planning Teams and to interview each superintendent, assistant superintendent, BTE point of contact, and chief financial officer, as well as the principals of 150 schools. MGT also supplemented the previous content analyses of all initial Master Plan Updates through fall 2005 that were detailed in our *Initial Report* by analyzing all fall 2006 Updates for this *Interim Report*.

Current Limitations: Although the LSSs will have submitted their fall 2007 Master Plan Updates by the time this *Interim Report* is disseminated, and MSDE routinely monitors their progress toward implementing their Master Plans and Updates, information from the 2007 Updates was not available in time for analysis and inclusion in this report. Thus, the Master Plans of some LSSs may have undergone substantial changes that are not reflected in this report.

Future Plans: MGT will conduct content analyses of 2007 Master Plan Updates after they are approved and available. The December 2008 *Final Report* will include a comprehensive review of all Master Plans and Updates. MGT will review its final content analyses with LSS officials and revise them as necessary to better represent what each LSS planned to do, the extent to which Master Plan strategies have actually been implemented, and how successful these implementations have been.

Key Interim Findings on Implementing Master Plans

Key Findings From Focus Groups and Point of Contact Interviews:

- In the majority of LSSs, the master planning process has evolved into a collaborative effort involving multiple stakeholders.
- In the majority of LSSs, priorities have not changed since the passage of BTE.
- Increased strategic planning and accountability and improved instruction were cited as the main changes in the LSSs attributable to BTE.
- A decrease in the reporting burden and modification of the update submission time line were the two most frequently cited recommendations for improving the master planning process.

Key Findings From the Interviews With Superintendents:

- Superintendents emphasized investments in teaching staff, research-based core and intervention programs, data analysis, and early childhood programs as strategies that significantly contributed to improvements in student achievement.
- Superintendents cited the following as the most significant steps in implementing BTE requirements: improved strategic planning, data utilization, increased communication and stakeholder involvement, and increased quality and quantity of teaching staff.
- To improve BTE implementation, superintendents recommended reducing paperwork and differentiating annual reporting requirements based on the LSS's size and performance.

Key Findings From the Interviews With Assistant Superintendents:

- Assistant superintendents identified the following key factors as contributing to improved student achievement:
  - Investments in teaching staff.
  - Strategic planning.
  - Core and intervention programs.
  - Data-driven instruction.
  - Differentiated instruction.
  - A collaborative approach to instruction.

  They also emphasized the role of leadership at the school and system level:

- To improve BTE implementation, assistant superintendents recommended reducing paperwork and differentiating annual reporting requirements based on the LSS's size and performance.

Key Findings From 2006 Master Plan Updates:

- All LSS budgets are aligned with articulated school improvement strategies.
- Emphasis on early learning continues to be a priority for LSSs, with more than half of the 24 school systems either expanding the number of Pre-K programs and/or increasing the number of full-day kindergarten programs.
- Advancement Via Individual Determination (AVID) was the most frequently implemented graduation enhancement program, with a third of LSSs either adopting or expanding the program.
- Hiring of additional staff was consistently tied to specific enhancement strategies in the 2006 Master Plan updates. This included providing instructional support for core subject areas, Special Education, and ESOL, and increasing personnel for the enhancement of school safety efforts.
- All 24 LSSs continue to focus on recruiting and retaining high quality personnel by providing competitive salaries.

Revenues Received by Local School Systems

Evaluation Mandate: Produce an analysis of the amount of funding local governments provide for education each year.

Progress to Date: MGT obtained and analyzed revenue information on each LSS for the years 2001-02 through budgeted 2007-08. We present results of pertinent analyses below.

Current Limitations: Data for 2005-06, 2006-07, and 2007-08 are budgeted, not actual, revenues.

Future Plans: MGT will continue to gather and analyze financial data through the 2008-09 budget year.

Key Interim Findings on Local School System Revenues

- FY2007-08 revenues from all sources (excluding state-paid teachers' retirement) are budgeted to have increased by $3.39 billion over 2001-02 revenues, or 48.5 percent. Of this amount, state appropriations increased by $2.029 billion and local appropriations increased by $1.317 billion.
- Local appropriations in support of LSSs as budgeted did not increase as fast as state appropriations did in the six years following enactment of BTE. Local appropriations increased by 34.2 percent statewide, compared to an 80.3 percent increase in state appropriations.

- State revenues comprise a greater share of total budgets in 2007-08 (44 percent) than they did in 2001-02 (36 percent).
- Federal support increased by only $1.7 million, or 0.33 percent, during this period.
- On a per pupil basis, state appropriations increased by 82.8 percent when adjusted for the number of pupils. Similarly, local appropriations increased by 36 percent per pupil, less than half the rate of increase in state appropriations per pupil.
- Increases in local appropriations per pupil varied significantly among LSSs. Local appropriations per pupil increased by $163 in Somerset County Public Schools and by $3,299 per pupil in Worcester County Public Schools.
- Local appropriations per pupil increased by 5.7 percent in Somerset County Public Schools and by 53.8 percent in Garrett County Public Schools.
- Montgomery County Public Schools received the most local appropriations per pupil both before enactment of BTE and in every year since.
- In contrast, Caroline County Public Schools received the least local appropriations per pupil for every year between 2001-02 and 2007-08.
- The amounts of funding from local appropriations are compounded by the variability in wealth among the jurisdictions. Most State aid is wealth equalized, which provides a higher level of State funding to jurisdictions with lower levels of local wealth.

Uses of Increased Funding Since Passage of BTE

Evaluation Mandate: Provide a detailed description of how LSSs are using state education aid including:

i. *A list for each school system of the substantial educational enhancements that have been implemented by each school system since the enactment of BTE together with the general issue that each enhancement is attempting to address.*

ii. *An estimate of the amount spent to implement each substantial educational enhancement.*

iii. *An estimate of the number of new positions, if any, that have been added to execute each enhancement.*

iv. *A classification of each substantial educational enhancement in terms of being targeted to the general student population or to a specific student population, specific schools, or specific grade levels.*

Progress to Date: MGT obtained and analyzed each LSS's Master Plan and Updates through the 2007 submission to determine how LSSs have been using increased funding. MGT used data from MSDE's *Selected Financial Statistics* publications and from publications on staffing to evaluate changes in staffing.

Current Limitations: LSSs could not provide specific data on positions related to each substantial educational enhancement.

Future Plans: MGT will continue to refine and gather data to provide more detail on the funding and positions associated with each substantial educational enhancement.

Key Interim Findings on Uses of Increased Funding

Since the passage of BTE, LSSs have spent the majority of the additional funding on improvements or enhancements to educational programs and the educational process. These expenditures have been associated with increases in achievement levels in all LSSs.

Key Findings on Uses of Increased Funding From 2001-02 to 2007-08 by Type of Expenditure:

- LSSs have spent or plan to spend the majority of the additional funding on competitive salaries and benefits, increasing their projected spending by $1.850 billion over 2001-02 levels.
- Expenditures for instruction are projected to increase by $1.15 billion; special education, by $413.1 million; plant operations and maintenance, by $474.8 million; mid-level administration, by $241 million; transportation, by $64.6 million; administration, by $116.6 million; and student and health services, by $60.7 million.[4]

[4] Definitions of program areas may be found in the glossary in the Appendix.

Key Findings On Changes in Expenditures by the Content Analysis Themes of the Master Plan Strategies:

- The greatest increase in expenditures has been in the Instructional Process category, which accounted for $2.537 billion or over 75 percent of all increases in expenditures in the years since the enactment of BTE.

- The deficit in Baltimore City Public Schools had a significant effect on the average expenditures of the state. Baltimore City eliminated its deficit in the first three years following the enactment of BTE. To do this, the LSS cut back on expenditures in instruction, administration, and other areas, and reduced its teaching, support, and administrative staff. In addition, enrollment declined, so per pupil expenditures stayed relatively constant.

- Within the Instructional Process category, the strategy "Competitive Salaries and Benefits" accounted for 53.8 percent of all new revenues projected to be received by LSSs, and totaled $1.793 billion. LSSs used another $279.1 million for new or additional personnel. This was consistent with the time line for achieving the goals of NCLB. School systems were required to have core courses taught by highly qualified teachers by the end of the 2005-06 school year. LSSs attempted to achieve this target by focusing new monies on salaries. In addition, they expended $72.5 million to recruit and retain those highly qualified staff and $28.2 million of new dollars to provide professional development. In total, LSSs expended 64.7 percent or $2.2 billion of the $3.34 billion in additional funding from all sources to achieve NCLB Goal 3, regarding highly qualified teachers.

- All LSSs spent the majority of new resources on the instructional process, which could be attributed to NCLB Goals 1, 2, 3, and 5. These resources included additional personnel and alignment to the Voluntary State Curriculum and Core Learning Goals.

- All LSSs spent additional resources for the increased costs of utilities, transportation, or facilities.

Key Findings On Increased Expenditures in Strategies Categorized as "Potential Best Practices":

- Systemic best practices and best practices at the school level were identified through interviews with LSS administrators, principals, and teachers. Among those strategies for which specific expenditure data were available, LSSs devoted the majority of the additional resources to hiring and retaining highly qualified teachers and providing professional development.

- Actual or planned increases in expenditures for strategies that may be best practices were as follows:

Highly qualified teachers:	$2,194,874,193
Data utilization/analysis:	177,994,574
Research-based programs:	163,566,208
Differentiated instruction:	100,175,214
Graduation enhancement:	63,312,557
Academic intervention/acceleration	50,643,124
Professional development:	28,352,356

Key Findings On Changes in Staffing:

- According to their Staffing Reports, between 2001-02 and 2006-07, LSSs increased the total number of staff employed by 10,933 positions, and the number of teachers increased by 8,274, a 15.3 percent increase.

- The number of students per teacher decreased statewide from 15.9 students per teacher to 13.6 students per teacher, a 14.4 percent decrease, as a result of additional teachers and, in some school systems, enrollment declines.

- In their Master Plans and Updates, LSSs reported adding 11,350 new positions related to substantial educational enhancements between 2001-02 and 2007-08.

Preliminary Conclusions

Improvements in the Performance of Students, Schools, and School Systems

MGT's key findings to date lead us to conclude that in the few years following passage of BTE and the full implementation of the MSA, student proficiency levels statewide have improved at the elementary and middle school levels for all NCLB groups. However, some groups are closing their gaps toward achieving the goal of 100 percent proficiency in reading and/or math at a much faster rate than other groups. Similarly, comparisons of progress made by NCLB groups or by the entire population of MSA-tested students reveal much variation among Maryland's 24 LSSs.

Preliminary data using only the English 2 HSA also show that high school students' proficiency levels have improved since this assessment was first administered in 2005. However, large differences in relative levels of improvement are seen when the 24 LSSs or the NCLB groups are compared.

Programs or Factors that Consistently Produce Positive Results

Although MGT cannot draw conclusions about programs or factors that consistently produce positive results until the final year of the study, we have substantial information at this time to identify and categorize what LSS administrators and educators perceive to be best practices. Six systemic factors (potential best practices) were strongly supported by the school observations and interviews with 150 principals.

These six systemic potential best practices are likely to support and complement one another. The educators we interviewed believe that these practices are most effective when they work together. Comparative analyses of the reported potential best practices of higher and lower achieving schools in the site visit sample supported these preliminary conclusions.

Additionally, MGT site visit teams identified a number of specific programs and strategies that school administrators and teachers believe produce positive results for student populations.

LSSs' Success in Implementing the Master Plans Required by §5-401 of the Annotated Code of Maryland

Since the inception of the Bridge to Excellence Act, the master planning process underwent significant changes in most LSSs. Interviewed administrators reported that it evolved to engage relevant groups of stakeholders into a collaborative process of master planning and implementation cycles.

In 71 percent of LSSs, administrators reported that they expect the biggest improvements in NCLB Goal 1 (student achievement) as a direct result of the increased state aid. School Improvement Plans (SIP) were reported to be the main vehicle for achieving master plan goals. SIPs are aligned with master plans and incorporate school-specific strategies to accomplish goals and priorities.

LSS administrators interviewed during the site visits indicated that the main changes within LSSs attributed to BTE were directly connected to improved student achievement throughout Maryland. They also stated that the master planning process affects their success in implementing their Comprehensive Master Plans. The administrators and principals recommended several ways for MSDE to improve the process of BTE implementation.

Changes in Funding

In the six years following implementation of BTE, total funding from all sources will have increased $3.4 billion from $6.963 billion to $10.388 billion. State funding for LSSs (not including state retirement contributions) increased $2.029 billion dollars, or $2,437 on a per pupil basis, an 82.8 percent increase. Local appropriations increased $1.317 billion, or $1,617 per pupil, a 36.0 percent increase. When MGT examined state and local funding by LSS, large variations were seen during this time period, with increases in per pupil state funding varying from 34.7 percent to 126.0 percent, and increases in local funding per student ranging from 5.7 percent to 53.9 percent.

These large differences in changes in state and local per pupil funding likely are due to differences in the wealth of the jurisdiction and the interactions of local wealth within the school finance formula as well as the ability of local governments to increase funding for public education.

Uses of Increased Funding

Since the passage of the BTE initiative as well as the federal NCLB legislation, Maryland schools have been undergoing a systemic shift from focusing on improving learning by the general student population to focusing on individual student achievement and NCLB subgroups. However, to accomplish goals set by BTE and NCLB, schools and local administrations have required additional resources. BTE funding has been and continues to be instrumental in assisting Maryland schools during this transition.

Since the passage of BTE, LSSs have spent the majority of the additional funding on improvements or enhancements to educational programs and the educational process, including increases to salaries and benefits to maintain competitive positions in hiring and retaining highly qualified teachers and staff. Less than one percent of the new revenues were spent on professional development; a significant amount was devoted to professional development before BTE enactment and because new educational programs came with embedded professional development included in the price. LSSs employed staff in over 10,900 new positions, almost 8,300 or 80 percent of these were teaching positions.

MGT found that LSSs spent or plan to spend $2.779 billion or 80 percent of the increased revenues on strategies that LSS administrators and educators identified as potential best practices.

Future Plans for the Evaluation

As the evaluation continues into its third and final year, MGT will:

- Design and conduct a Web-based survey in which all Maryland public schoolteachers and administrators will be encouraged to participate. The survey will identify the extent to which potential best practices and combinations of practices, identified in this Interim Report, have been implemented in Maryland schools.

- Continue to gather and analyze MSA and HSA data, including analyses at the school level for those schools that provided sufficient input about their implementation of potential best practices.

- Conduct analyses that examine the relationships between the implementation of potential best practices and combinations of practices and improvements in student performance using MSA and HSA data and other appropriate and available measures of student proficiency and achievement.

- Examine additional indicators of student, school, and school system performance, including dropout rates, performance on college entrance exams, graduation rates, and reductions in the percentages of Maryland public high school graduates who require remediation as they enter the workforce or higher education.

- Determine the extent to which differing levels of state and local per pupil funding are having an impact on student performance.

- Identify impacts of the small increase statewide in federal support and the wide variation in the changes in federal support by LSS.

- Conduct site visits and produce brief case studies of schools that are implementing potential best practices or combinations of practices that appear to be related to significant improvement in student performance.

- Produce a *Final Report* that fully addresses each of the five major evaluation mandates from the General Assembly.

1.0 BACKGROUND AND EVALUATION OVERVIEW

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1.1 Introduction

MGT of America, Inc., presents this *Interim Report* at the end of the second year of a three-year study mandated by the Maryland General Assembly to assess certain outcomes of the *Bridge to Excellence in Public Schools Act of 2002* (BTE). In the fall of 2005, the Maryland State Department of Education (MSDE) solicited proposals from qualified organizations to conduct this independent evaluation and selected MGT through a competitive process. MGT issued an *Initial Report* in December 2006.[1] This *Interim Report* builds upon and supplements much of the information presented in the earlier report.

BTE legislated many of the recommendations made by the Commission on Education Finance, Equity, and Excellence, which was established by House Bill 10 of 1999 (Chapter 601) and came to be known as the Thornton commission because it was chaired by Dr. Alvin Thornton. The commission was charged to make recommendations to ensure the adequacy and equity of public school funding and excellence in student performance. MGT refers those who are unfamiliar with the development and/or the many components of BTE to a report issued by the Maryland Department of Legislative Services.[2] The first page of that report states that:

> *When it enacted Senate Bill 856 on May 6, 2002, (the Bridge to Excellence in Public Schools Act of 2002), Maryland became the first State in the country to endorse a comprehensive reform of its school finance system based on principles of adequacy and equity without being forced to do so by a court order. The legislation calls for a dramatic restructuring of the State's school finance system, including substantial increases in State aid for education phased in over a period of six years. The legislation provides an additional $74.7 million in State education aid in fiscal 2003 that is financed through a 34-cent increase in the State tax on cigarettes. By fiscal 2008, the legislation calls for the State to provide an additional $1.3 billion in education funding to local school systems above the amount that the State would have provided under the prior school finance structure. In total, State aid will increase by 75 percent between fiscal 2002 and 2008.*

To promote effective use of the additional $1.3 billion in state aid for education, BTE required that local governments maintain their education funding and that each local school system (LSS) develop, adopt, and implement a five-year Comprehensive Master Plan (CMP) that was designed to meet the unique needs of its students beginning with the 2003-04 school year. Annual Updates to the Master Plans were required to document the LSS's progress toward meeting federal, state, and local goals and make necessary adjustments to address any deficiencies in performance among any segment of the student population. Additionally, as required by SB 894, school systems must

[1] An Evaluation of the Effect of Increased State Aid to Local School Systems Through the Bridge to Excellence Act: Initial Report (Volumes I and II), MGT of America, Inc., December 20, 2006, <http://docushare.msde.state.md.us/docushare/dsweb/View/Collection-12409>.

[2] "The *Bridge to Excellence in Public Schools Act of 2002:* Its Origins, Components, and Future," Department of Legislative Services, September 18, 2002.

identify how they plan to spend increased aid and what their actual expenditures are. Results are compiled in the annual SB 894 report, prepared by MSDE.

BTE is a very broad initiative that seeks to advance at least five objectives in Maryland:[3] 1) wealth equalization across LSSs; 2) adequate funding that will enable all students to meet Maryland's rigorous performance targets; 3) quality education for all students in terms of a variety of performance measures; 4) local control in determining how resources are allocated; and 5) community involvement in planning to address the unique needs of each local school system. However, the first two items are beyond the scope of this evaluation.

The Annotated Code of Maryland, Education Article §5-402 sets forth the parameters of this comprehensive review and evaluation of the effect of increased state aid to LSSs through BTE on student, school, and LSS performance. The article also states that the initial findings of the evaluation were to be presented to the General Assembly on or before December 31, 2006, and that the final report is to be presented to the Assembly on or before December 31, 2008. Senate Bill 907 amended §5-402 by requiring the submission of this additional *Interim Report* on or before December 31, 2007.

The scope of work identified in MSDE's request for proposals appears below. Phrases in italics were added by the General Assembly for clarification during this second year of the evaluation:

1. A comparison of school systems that show significant improvements in student and school performance to school systems that do not show significant improvements in student and school performance.

2. A list of programs or factors that consistently produce positive results for students, schools, and school systems.

3. An assessment of the extent to which county boards are successful in implementing the CMPs required by §5-401 *including whether the CMPs have successfully aligned school system budgets with articulated school improvement strategies.*

4. An analysis of the amount of funding local governments provide for education each year.

5. A detailed description of how LSSs are using state education aid *including:*

    a. *A list for each school system of the substantial educational enhancements that have been implemented by each school system since the enactment of BTE together with the general issue that each enhancement is attempting to address.*

    b. *An estimate of the amount spent to implement each substantial educational enhancement.*

[3] Personal communication from MSDE, October 24, 2006.

c. *An estimate of the number of new positions, if any, that have been added to execute each enhancement.*

d. *A classification of each substantial educational enhancement in terms of being targeted to the general student population or to a specific student population, specific schools, or specific grade levels.*

MGT has completed the second year of this three-year evaluation. The information in this *Interim Report* identifies many preliminary outcomes of the BTE. However, until the strategies in the 2007 Master Plan Updates are implemented by LSSs throughout the current 2007-08 school year, the evaluation will lack its final year of outcome data. These will include an additional year of student, school, and school system performance data for MGT to analyze during the summer of 2008.

In the spring of 2008, MGT will invite all Maryland public school teachers and administrators to provide information about the extent to which they are implementing "Potential Best Practices" that MGT identified through visits to a sample of 150 schools across all 24 LSSs. MGT will study the relationship between these self-reported implementations and improvements in student achievement to identify practices that consistently result in significant gains in performance. In this final year of the study, MGT also will conduct additional site visits to schools to gather information for case studies of practices that yield consistently positive outcomes.

1.2 Organization of This Report

For readers who need more details, the remaining subsections of this chapter provide additional background information about BTE and the processes used for the development and approval of Master Plans and their Annual Updates. The three subsequent chapters are organized as follows:

Chapter 2.0: Methodology begins with a flowchart that summarizes the major tasks that MGT completed during the first two years of the evaluation and those that remain for the upcoming final year. The chapter then describes the various methodologies that MGT is using to address the five issues mandated for this evaluation.

Chapter 3.0: Findings summarizes the progress made to date in addressing each of the five evaluation issues, the current limitations in addressing each issue, MGT's plans for additional data collection and analyses to further address each issue, and key findings made at this point in the study.

Chapter 4.0: Summary Findings, Preliminary Conclusions, and Areas of Additional Study presents a summary of all key findings from Chapter 3.0, followed by preliminary conclusions and a discussion of areas of additional study that will be undertaken as the evaluation proceeds into its third year.

1.3 Additional Background on the Bridge to Excellence Act

In 2001, the Maryland Commission of Education Finance, Equity, and Excellence (the Thornton commission) examined the capacity of Maryland's school system revenues to provide an "adequate K-12 education." Based on the findings of the Thornton commission, the *Bridge to Excellence in Public Schools Act* was signed into law in the spring of 2002. This act consolidated 27 funding programs into four and increased Maryland's total state aid to local school systems. BTE required each local school system to develop and implement a five-year Comprehensive Master Plan and Annual Updates that:

- Described the goals, objectives, and strategies that the LSS would use to improve student achievement and meet state and local performance standards for each segment of the student population.
- Specified methods that the LSS would use to measure progress toward meeting its goals and objectives.
- Identified capital improvements that might be needed to implement the Master Plan.
- Linked funding from federal, state, and local sources to the strategies that the LSS was using for school improvement.

The purpose of this comprehensive planning process was to document and thereby permit public review of each school system's priorities and fiscal resources for accelerating academic excellence and eliminating disparities in the achievement levels of groups of students defined under the federal *No Child Left Behind Act of 2001* (NCLB).

1.4 Additional Background on the Master Plan and Annual Update Development and Approval Processes

During the 2003 legislative session, the General Assembly expanded the scope of the CMPs under The Annotated Code of Maryland, Education Article §5-401 to consider capital improvements that might be needed to implement the plans.

In 2004, the General Assembly passed the *Education Fiscal Accountability and Oversight Act,* codified as Education Article, Title 5, Subtitle 1. This act:

- Prohibits LSSs from carrying budget deficits.
- Requires more reporting on LSS finances.
- Requires each LSS to undergo a legislative audit.
- Provides for changes to the CMP Annual Updates that LSSs are required to submit.

MSDE's most recent description of the Master Plan and Annual Update process was provided to the State Board of Education for its October 2007 meeting and is shown below.[4]

> *Upon enactment of The Act, the Maryland State Department of Education (MSDE) had to create a process for the design, submission, review, and approval of local school systems' Master Plans. Because no other state had instituted such reform, MSDE needed to develop this process from scratch. Further, although The Act specified an exact funding formula for distribution of state educational aid, it did not provide for administrative costs to either develop monitor, or assist school systems with The Act and its requirements. Even within such constraints, MSDE, working with local school systems, developed guidelines, rubrics, and processes for the analysis of the Master Plans. Those guidelines, rubrics, and processes were subject to audit by the Department of Legislative Services the subsequent year and were found to be substantially in compliance with the law and intentions of The Act.*
>
> *The Act further requires local school systems to submit Annual Updates to their Master Plans. With input from the Department of Legislative Services and from evaluations conducted by MSDE, the logistics of the required Annual Updates were developed and implemented.*
>
> *In brief, the Master Plan Update process occurs in the following chronological order annually:*
>
> 1. *January – May: Development of the guidance for local school systems by MSDE with input from the BTE Work Group.*
> 2. *May – October: Development of the Master Plan Update at the local school system level with the involvement of staff at the central office and school levels, parents and parent groups, local community leaders, and other stakeholders.*
> 3. *By August 15: Submission of Part II – Federal and State Grants – of the Master Plan Update. All required federal and state grants and their documentation go through technical review by program specialists to ascertain compliance with federal and state regulations regarding allowable expenditures. Approval by these specialists is necessary to release federal and state grant funds to local school systems.*
> 4. *By October 15: Submission of Part I – The Content: Annual Review of Goals, Objectives, and Strategies – of the Master Plan Update. This section of the Master Plan Update entails a substantive analysis of local school system performance on federal, state, and local goals, the implementation of specific strategies to meet those goals, and appropriate allocation of budget resources. This section of the Master Plan Update must be reviewed and approved by the local school board. Additionally, Part I is submitted to local government authorities for their review. At this stage local government officials become aware of the strategies of the*

[4] Attachment II of October 11, 2007 MSDE Memorandum to the State Board of Education.

school system and the budget priorities of the system that will be submitted to local government for funding later in that year.

5. *October – November: Review by teams of professional staff from MSDE and local school systems of Part I. Approximately 8 teams of 100 professional staff examine student performance on federal, state, and local goals, verify that the instructional strategies address the performance data, and cross-check budget alignments to the strategies. The review panel then submits questions to local systems for further clarification and explanation.*
6. *If all panel questions are adequately addressed for Part I and if all technical reviews for Part II are satisfied, then, and only then, is a Master Plan Update recommended to the state superintendent for approval.*
7. *If questions cannot be resolved for either Part I or Part II, or if a school system is in corrective action, then the system must come to MSDE for a meeting with the entire review panel to discuss the Master Plan Update and how it is closing the achievement gap for all subgroups and any other concern of the review panel.*
8. *If the school system meeting with the review panel is successful, the plan is recommended to the state superintendent for approval; if not, then the plan is not recommended for approval.*

The BTE Act specifies that the State Board of Education on recommendation of the State Superintendent may require modifications to a Master Plan Update for it to be approved should that be necessary.

The 2005–2006 Master Plan Updates taken to the State Board in December 2006 marked the first occasion during the four years of reviews that all Master Plan Updates were approved.[5]

To fully understand the Master Plans and Annual Updates, the reader also should be aware of the state standards, the accountability system for these standards, and how the Master Plans and Annual Updates contribute to achieving the goal of Adequate Yearly Progress (AYP) for all students that the federal NCLB legislation established. These relationships are summarized below.

Maryland state standards for students are specified in the Maryland Voluntary State Curriculum (VSC). The principal instrument for accountability for these standards is the Maryland School Assessment (MSA). The MSA began in 2003 and since 2004 has been administered in reading and mathematics annually to all students in Grades 3 through 8. Additionally, the Maryland High School Assessments (HSA) test high school students in four content areas (English, Biology, Government, and Algebra) that must be mastered for graduation beginning with the class of 2009. Although the current versions of these four assessments have been administered since 2005, some earlier versions were administered in 2003 and 2004.

[5] This approval included the Baltimore City Public Schools' resubmission of a new two-year Master Plan. The Baltimore City Master Plan Update of 2004-05 had not been approved by the State Board of Education, and Baltimore City Public Schools was directed to submit a new two-year Master Plan rather than an Update in 2005-06.

The process for developing Master Plans and Annual Updates goes beyond identifying whether or not AYP has been met for LSSs, schools, and NCLB subgroups. The planning process also requires the analysis of data to identify areas of potential future concern. Specifically, school systems are to address the level and sufficiency of progress being made by all NCLB groups each year in meeting achievement goals.

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2.0 METHODOLOGY

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Exhibit 1 summarizes the tasks for this three-year evaluation. Dissemination of this report represents the completion of Task 14A. The remaining tasks, though fewer in number than those already accomplished, are broader in scope and complexity, and some will not be concluded until December 31, 2008. During the first two years of the evaluation, MGT gathered and examined a variety of information and data that described what had occurred during the initial years following passage of the *Bridge to Excellence in Public Schools Act of 2002* (BTE). Tasks in the final year of the evaluation will yield more information, permit a focus on what the data mean, and allow us to make inferences, conclusions, and recommendations.

Exhibit 2 shows the various methodologies MGT is using to address each of the five issues that the General Assembly mandated to be documented through this evaluation. This chapter describes the methodologies we used during the first two years of the evaluation. Related findings are reported in Chapter 3.0.

2.1 State-Level Interviews and Meetings

To ensure that we gained a full understanding of the development and implementation of BTE at the state level, gathered input from state-level representatives, and provided information about the evaluation to various constituencies, we participated in numerous meetings and interviews with state-level stakeholders. These included:

- Meetings at the Maryland State Department of Education (MSDE) to initiate the project and to review the evaluation design and data collection instruments with the Technical Advisory Committee (November 2005, December 2005, and March 2006).
- Interviews with the State Superintendent, a former state senator, and a key education consortium member (April and May 2006), all of whom were involved at the state level in the development and implementation of BTE.
- Four separate meetings in 2006 to orient local school system (LSS) superintendents (April), LSS Points of Contact and Chief Financial Officers (April), State Board of Education members (May), and a group of stakeholders assembled by the State Superintendent to provide input to the evaluation methodology (November).
- Meetings with key Maryland Legislative Services staff members in Annapolis (May 2006) to review MGT's evaluation design and to obtain their input and any relevant documents.
- Quarterly meetings each year with MSDE's Technical Advisory Committee for this evaluation.
- Biannual meetings with the stakeholders' group.
- Meetings at MSDE each fall to review drafts of the MGT reports due in December.
- Meetings each winter to present findings from the December reports to the General Assembly, the State Board of Education, and the Stakeholders' Group.

EXHIBIT 1
EVALUATION WORK PLAN

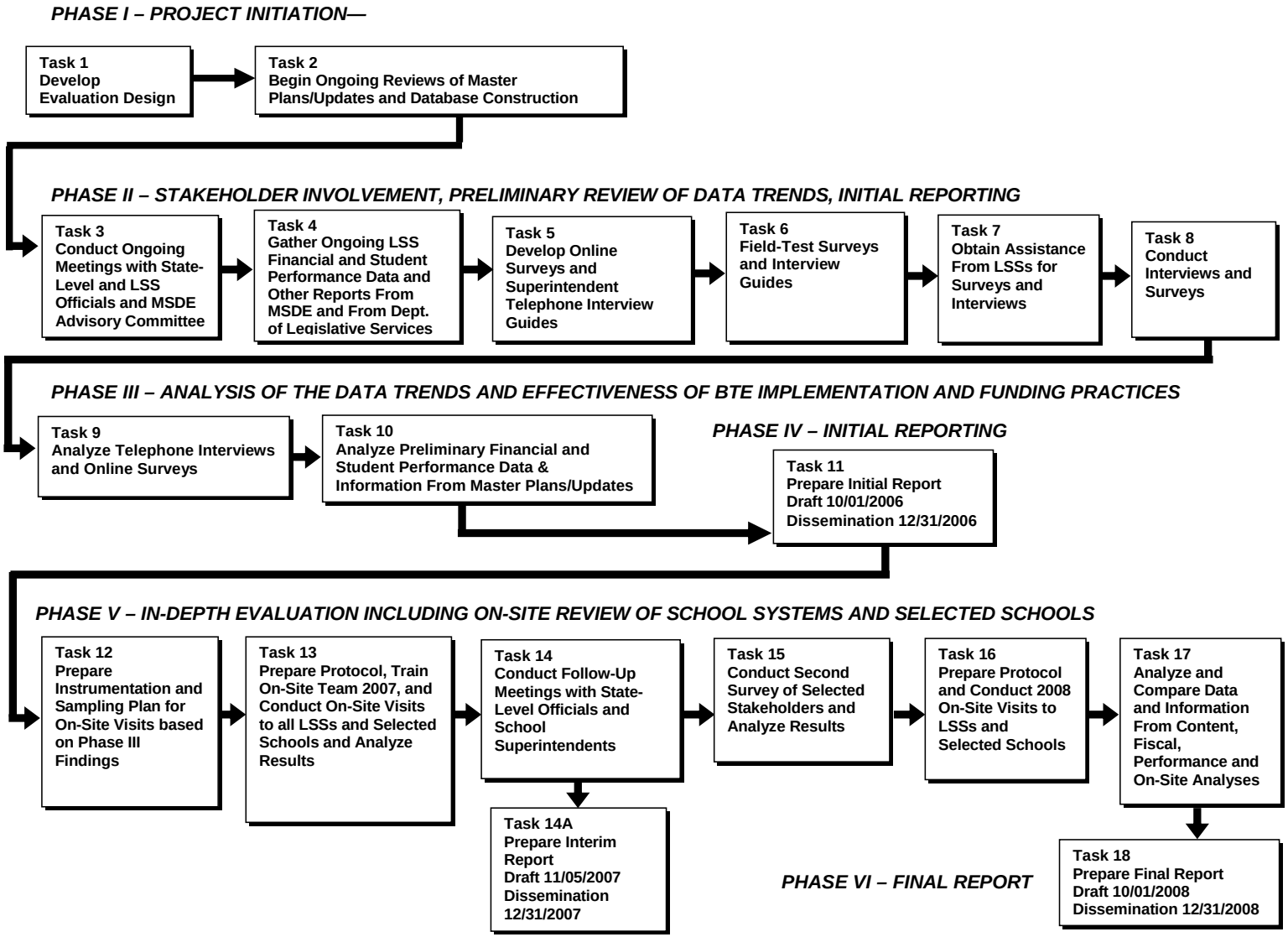

EXHIBIT 2
METHODOLOGIES TO ADDRESS
EVALUATION REQUIREMENTS

EVALUATION REQUIREMENTS (§5-402 BRIDGE TO EXCELLENCE ACT)		METHODOLOGIES MGT IS USING TO ADDRESS REQUIREMENTS						
		QUANTITATIVE			QUALITATIVE			
						System Site Visits		
		SFR	MP/U	DPD	SURV	INTV	DR	FG
1.	A comparison of school systems that show significant improvements in student and school performance to school systems that do not show significant improvements in student and school performance.			√		√		
2.	A list of programs or factors that consistently produce positive results for students, schools, and school systems.		√		√	√	√	√
3.	An assessment of the extent to which county boards are successful in implementing the comprehensive Master Plans required by §5-401.		√		√	√	√	√
4.	A detailed description of how local school systems are using state education aid.	√	√		√	√	√	√
5.	An analysis of the amount of funding that local governments provide for education each year.	√	√		√	√	√	

Abbreviation Key: SFR: Analyses of Selected Financial Reports
MP/U: Analyses of Master Plans and Updates
DPD: Analyses of Demographic and Performance Data
SURV: Analyses of Survey Data
INTV: Analyses of Interview Information
DR: Analyses of Document Reviews Done on Site (Implementation and Fiscal Documents)
FG: Analyses of Focus Group Information

Source: MGT of America, Inc., 2007

2.2 Analyses of Master Plans and Updates

2.2.1 Content Analysis of Original Master Plans and Updates Through 2005

As documented in the December 2006 *Initial Report,* MGT conducted a multiphase content analysis of the original Master Plans and Updates for all 24 LSSs. This analysis included all Updates through 2005. Exhibit 3 illustrates outcomes of the four phases of that analysis.

EXHIBIT 3
METHODOLOGY FOR CONTENT ANALYSIS OF MASTER PLANS AND UPDATES

Phase 1: Review Master Plans and Updates and identify improvement strategies.				
↓				
Phase 2: Create categories for improvement strategies in Master Plan and Updates.				
↓	↓	↓	↓	↓
Programs	**Processes**	**Professional Development**	**Accountability/ Assessment**	**Use of Technology for Data Analysis**
↓	↓	↓	↓	↓
Phase 3: Develop subcategories within each category and sort strategies.				
Program Subcategories	**Process Subcategories**	**Prof. Dev. Subcategories**	**Accountability Subcategories**	**Technology/Data Analysis Subcategories**
↓	↓	↓	↓	↓
Phase 4: Identify additional dollars associated with identified subcategories.				
$	$	$	$	$

Source: MGT of America, Inc. 2007.

In Phase 1, MGT reviewed the 24 Master Plans and extracted all unduplicated strategies to create 24 individual school system strategies summary documents. Then we coded and sorted each strategy according to the *No Child Left Behind Act of 2001* (NCLB) goal it addressed. We also sorted the strategies by school level (elementary or secondary)

In Phase 2 of the content analysis, we created five broad categories to classify the strategies by their common purposes and functions. The following five categories emerged:

- Educational Programs
- Instructional Processes
- Professional Development
- Accountability Measures
- Technology Use and Data Analysis.

In Phase 3, we analyzed strategies that fell into each of the above categories, developed subcategories, and classified each strategy into the subcategory that most closely reflected its function or characteristics. Exhibit 4 shows the subcategories we developed for the first major category, "Educational Programs."[1] We included realignment of programs and reductions in federal funding in this category.

[1] For examples of subcategories of the other four major categories, see pages 3-31 to 3-34 of MGT's December 2006 *Initial Report.*

EXHIBIT 4
EXAMPLES OF SUBCATEGORIES OF THE
EDUCATIONAL PROGRAMS CATEGORY

SUBCATEGORIES	EXAMPLES OF STRATEGIES
Early Childhood/Pre-K	Head Start, Early Start, Judy Centers
Kindergarten	Half- and Full-Day
Reading	Core Reading, Evidence-Based Reading
Math	Core Math, Evidence-Based Math
Other Core Subjects	Tech Prep, Career Prep, Science
Special Education	Inclusion, Assistive Technology
English Language Learners (ELL)	MSDE Career Frameworks
Cultural Diversity	Open Minds/Open Doors,
Graduation Enhancement	Credit Recovery, AVID, SuccessMaker
Safe/Drug-Free Schools	Anti-Bullying and-Harassment Programs
Academic Intervention	Tutoring, Primary Talent Development

Source: MGT Analyses of 24 LSS Master Plans and Annual Updates.

In the final phase of the analysis, we associated all subcategories of strategies with the additional expenditures needed to implement these strategies as reported by each LSS in its Master Plans/Updates.

2.2.2 Content Analysis of the 2006 Master Plan Updates[2]

During this second year of the evaluation, MGT analyzed all 2006 Updates to supplement the information presented in the *Initial Report,* which covered Updates only through 2005.

MGT read each Update and identified all new strategies that were not included in the LSS's Master Plan or previous Updates. We then classified each new strategy into categories and subcategories using the classification procedure described earlier. MGT found that all of the new strategies in the 2006 Updates fit the categories and subcategories that we had developed during the first year of the evaluation. Therefore, in this *Interim Report*, we maintain the same classification scheme for strategies in the 2006 Updates that we used for the *Initial Report*. However, for reasons explained below, we altered some of the category labels to avoid confusion for the reader.

In its request for information to be included in this *Interim Report*, the General Assembly used the phrase "substantial educational enhancements" in seeking clarification of one of the five major evaluation mandates.[3] MGT defines "substantial educational enhancements" as any strategies in an LSS's Master Plan and Updates for which additional state, local, or federal funding was being used. This definition reflects the process used by LSSs to develop strategies to accomplish the goals and objectives of their unique Master Plans and Updates. Please recall that all LSSs used student and school performance data to assess their needs and identified the improvement

[2] For this *Interim Report*, the approved 2007 Master Plan Updates were not available in time to allow content analyses of the strategies the LSSs proposed to implement or continue implementing during the 2007-08 school year.
[3] See pages 2 and 3 for references to *substantial educational enhancements*.

strategies that they would attempt using additional state, local, and federal dollars. Because each LSS implemented key sets of strategies to meet its unique local needs, and because these strategies were approved following rigorous review by teams of experts from MSDE and the LSSs, calling each of those strategies a "substantial educational enhancement" is consistent with the intent of BTE's requirement for Master Plans and Annual Updates that are based on locally prioritized needs.

In our 2006 *Initial Report*, we used the word "enhancement" in the title of one of the five major categories of strategies (Enhancements/Supports to Curriculum and Instructional Processes). To avoid confusion with the term "substantial educational enhancements," we have since relabeled our five major categories of Master Plan/Update strategies as follows:

1. Programs
2. Processes
3. Professional Development
4. Accountability Measures
5. Use of Technology for Data Analysis

2.3 Collection and Analyses of Financial Data

MSDE provided financial, staffing, student, and salary data to MGT for all years from the year before enactment of BTE (2001-02) through 2005-06. Data for 2001-02, 2002-03, 2003-04, and 2004-05 were actual revenue and expenditure data, while data for 2005-06 were projections, and were not used in MGT's analyses for our December 2006 *Initial Report*.

In addition, data were collected from LSS Master Plans/Updates. LSSs must include a narrative that explains how budgeted revenues will be used to support the goals, objectives, and strategies detailed in their Annual Updates. For the 2004 Update, MSDE directed LSSs to list overall budgetary changes in five areas: mandatory increases, new initiatives, additional positions, revised strategies, and redirected or reduced funding.

MSDE also required each LSS to submit supplemental budget data that delineated actual revenues and expenditures for FY2004. For the 2005 and 2006 Updates, LSSs were directed to submit two components: the current year alignment of resources and a supplemental review of prior year expenditures. LSSs allocated resources based on their local goals, objectives, and strategies for improving student achievement, and only for budgetary increases, not for base budget detail. Therefore, data obtained from the Master Plans/Updates pertained only to increases or decreases in expenditures. Increases or decreases were to be separated into "cost of doing business" expenditures and programmatic expenditures. Cost of doing business expenditures included staffing increases related to maintaining existing services in response to enrollment growth, as well as transportation, utilities, plant operations, or non-public special education placements.

LSSs submitted a budget variance table (or supplemental budget table, also called a "look back table") describing their budgeted FY2005 and FY2006 planned expenditures compared to their actual increased expenditures. They were asked to report their

expenditures based on their local goals and the mandatory costs of doing business. MGT used data from the original plans and from the 2004, 2005, and 2006 Updates. We used budgeted data on planned expenditures from the 2006 Updates, and from each LSS's approved FY2008 budget documents. MGT confirmed the FY2007 and FY2008 approved budget data with each LSS.

In addition to the information provided by LSSs in their Master Plans/Updates, MGT obtained data from the following MSDE and LSS reports:

Staffing data:

- Staff Employed at School and Central Office Levels, Maryland Public Schools, October 2001
- Staff Employed at School and Central Office Levels, Maryland Public Schools, October 2002
- Staff Employed at School and Central Office Levels, Maryland Public Schools, October 2003
- Staff Employed at School and Central Office Levels, Maryland Public Schools, October 2004
- Staff Employed at School and Central Office Levels, Maryland Public Schools, October 2005
- Staff Employed at School and Central Office Levels, Maryland Public Schools, October 2006
- Staff numbers reported by each LSS in its FY2008 approved budget
- Analysis of Professional Salaries, Maryland Public Schools, October 2001
- Analysis of Professional Salaries, Maryland Public Schools, October 2002
- Analysis of Professional Salaries, Maryland Public Schools, October 2003
- Analysis of Professional Salaries, Maryland Public Schools, October 2004
- Analysis of Professional Salaries, Maryland Public Schools, October 2005
- Analysis of Professional Salaries, Maryland Public Schools, October 2006

Enrollment data:

- Summary of Attendance, Maryland Public Schools, 2001-02

- Summary of Attendance, Maryland Public Schools, 2002-03
- Summary of Attendance, Maryland Public Schools, 2003-04
- Summary of Attendance, Maryland Public Schools, 2004-05
- Maryland Public School Enrollment by Race/Ethnicity and Gender and Number of Schools, September 30, 2005
- Maryland Public School Enrollment by Race/Ethnicity and Gender and Number of Schools, September 30, 2006
- Enrollment projected by each LSS in its FY2008 approved budget

Financial data:

- Selected Financial Data, Maryland Public Schools, 2001-2002 Ten-Year Summary
- Selected Financial Data, Maryland Public Schools, 2002-2003 Ten-Year Summary
- Selected Financial Data, Maryland Public Schools, 2003-2004 Ten-Year Summary
- Selected Financial Data, Maryland Public Schools, 2004-2005, Part 2 Draft

MGT aggregated data at several levels: statewide and for each LSS over time since the implementation of BTE; total revenues and expenditures; revenues and expenditures per pupil; increases in revenues and expenditures by program and by object of expenditure; increases in revenues and expenditures per pupil by program and by object of expenditure; changes in staffing since the implementation of BTE; changes in staffing per pupil since the implementation of BTE; and changes in expenditures by category of strategy, as defined in Section 2.2. We classified all program realignments and reductions in federal program funding in the Program category.

We provide a breakdown of the expenditure and revenue categories in the appendix.

2.4 Collection and Analyses of Student Assessment Data

MSDE provided student assessment data to MGT for all years from the introduction of the Maryland School Assessment (MSA) and the High School Assessment (HSA) in 2003 through their most recent administrations in spring 2007. In this *Interim Report*, we supplement and update analyses of student assessment data that were not available for our 2006 *Initial Report.* However, for purposes of tracking student cohorts, the HSA data are very limited at this point in time. Only data from the English 2 HSA allowed us to make consistent comparisons of student performance among Maryland's 24 LSSs.

2.4.1 Analyses of MSA Data

As we did for our *Initial Report* in 2006*,* we analyzed the annual MSA results for the aggregate of students tested in the elementary school grades (3-5) and for the aggregate of students tested in the middle school grades (6-8). For the MSA analyses presented in this *Interim Report*, we compared the percentage of students who were proficient in 2004 with the percentage who were proficient in 2007.[4] The results of these analyses are summarized in the exhibits found in Section 3.1 of this report. These graphs illustrate, for each Maryland school system, improvements in the percentages of students who demonstrated proficiency in reading and mathematics at the elementary and middle school levels.

Because some LSSs already had relatively high levels of student proficiency in 2004, they were much closer to achieving the 100 percent proficiency goal of NCLB than other LSSs. Therefore, MGT's methodology for comparing LSS progress included comparisons of the extent to which each LSS had closed the gap remaining to achieve the 100 percent goal by 2014. We used this as our measure to compare the progress of LSSs and NCLB groups.

2.4.2 Analyses of HSA Data

The class of 2009 (most of whom were 10th graders and completing their English 2 course when the 2007 HSA was administered) is the first cohort of students who must pass the four subject area tests to graduate from high school. Compared to the other HSAs administered in 2007, the English 2 HSA had the largest number of first-time test takers in all 24 LSSs and was the only HSA that could be used, with admitted limitations, to compare changes in student performance in each LSS.[5]

MGT analyzed annual improvements in the percentage of students passing the English 2 HSA in each LSS. Because all students in the class of 2009 and thereafter must pass this exam to graduate, we performed the same type of analyses as we had for the MSA to compare the extent to which each LSS had closed the gap toward 100 percent proficiency. We describe this methodology in greater detail in the context of the findings presented in Section 3.1 of this report.

2.5 Interviews With LSS Superintendents

In the spring 2006, MGT conducted telephone interviews with Maryland LSS superintendents. We used an abbreviated version of the telephone interview guide to update the previously gathered information through on-site interviews in spring 2007 with superintendents in every LSS. A copy of the revised interview guide may be found in the appendix.

Selected findings from our interviews with LSS superintendents are presented in relevant sections of Chapter 3.0.

[4] The 2003-04 school year was first one in which all elementary school assessment (Grades 3 to 5) and middle school assessments (Grades 6 to 8) were administered.

[5] The English 2 HSA has been administered annually since 2005, but the 2007 administration marked the key opportunity for first-time test takers in the class of 2009 to pass this exam as one of their graduation requirements. Because Maryland's centralized database does not yet have a unique identifier for each student and is unable to distinguish first-time test takers from those retaking the HSA, it is not yet possible to compare passing rates from year to year of only those students who took the test for the first time. Thus, the data used for these HSA comparisons are not ideal, but are the best available at this time.

2.6 Surveys of Principals

2.6.1 Survey Content

With guidance from MSDE's Technical Advisory Committee for this evaluation, MGT developed extensive Web-based surveys. Along with superintendents and BTE Points of Contact in each LSS, MGT encouraged all Maryland public school principals to participate in the survey during the months of May and June 2006.

Although the survey has been completed, a copy is available for inspection at <https://secure.mgtamer.com/msde/> with the username "practicep" and the password "practice." The survey contained three major sections:

- In Part A, principals expressed their opinions about BTE requirements and potential benefits by responding to 21 statements using a Likert scale ("strongly agree" through "strongly disagree," or "don't know").

- In Part B, principals used a Likert scale to respond to 19 statements that addressed the organization and culture for implementing BTE in their LSS.

- Part C had five subsections, each of which corresponded to one of the five NCLB goals. Each subsection contained examples of strategies that LSSs may have included in their BTE Master Plans/ Updates, and ended with an opportunity for principals to describe additional strategies that were not listed but were a part of their LSS's Master Plan/Updates.

The survey directed principals to indicate whether each of the 63 strategies listed in Part C and any others that they added received high, medium, or low funding priority in their LSS. Principals could also indicate that the strategy was not employed in their LSS, or that they did not know if the strategy was included in their Master Plan/Updates or, if it was, the priority it was receiving.

The survey then instructed principals to indicate the school levels (elementary, middle, high, or all levels) at which the described strategies were needed in their LSS.

Finally, for each strategy, principals were asked to identify or briefly describe any programs or approaches that were very effective in their schools.

2.6.2 Survey Analyses

To minimize any biases that might be caused by the overrepresentation of smaller school systems (or underrepresentation of larger ones), MGT weighted the survey data based on the number of school principals in each LSS who responded to the survey and the total number who were eligible to participate in the survey.[6] A detailed description of the weighting methodology and principal survey response rates is provided near the end of Appendix D of the *Initial Report*; it is not repeated in this *Interim Report.*

[6] MGT applied similar weighting procedures for the survey of Master Planning Team members described in Section 2.7.

Additional analyses examined the survey results in terms of the five major implementation strategy categories derived from the content analysis described in Section 2.2 above. As this *Interim Report* contains findings from interviews we recently conducted with 150 principals during site visits, the survey findings presented in the *Initial Report* are not repeated herein.

2.7 Surveys of LSS Master Planning Team Members

While surveying principals in 2006, MGT simultaneously conducted Web-based surveys of all current and former members of LSS Master Planning Teams (i.e., those individuals who developed and produced the original Master Plan and the Annual Updates for their LSS). The content and organization of this survey were nearly identical to those of the principal survey. However, all items on the Master Planning Team Survey focused on the broad LSS level, whereas several items on the principal survey asked the principal to reply in terms of his or her particular school.

MGT analyzed survey responses statewide and also compared the responses of members of the LSS Master Planning Team who were responsible for educational programs to those of members who were not. A further analysis examined the survey results in terms of the five major implementation strategy categories derived from the content analysis described in Section 2.2 above. MGT also compared the survey responses of Master Planning Team members with those of principals throughout the state

As this *Interim Report* contains findings from focus groups we recently conducted with each Master Planning Team, the survey findings presented in the *Initial Report* are not repeated herein.

2.8 Site Visits to LSSs and Schools

In spring 2007, MGT conducted site visits to all 24 LSSs. We used interview guides and focus group protocols that we developed, field-tested, and revised, as needed, to gather input from:

- Superintendents.
- Assistant Superintendents for Curriculum and Instruction.
- BTE Points of Contact.
- Chief financial officers.
- Representatives of each LSS's Master Planning Team.
- All principals and select staff in 150 schools chosen for visitations.

We tailored interview and focus group questions to each school and LSS and provided them to participants prior to the visit.

The appendix includes a copy of e-mail that we sent to BTE Points of Contact. This e-mail provided details regarding the various interviews, meetings, and school visits and asked the Points of Contact to arrange a schedule for us. MGT greatly appreciated the outstanding cooperation of the Points of Contact and all others who were involved in our site visits.

2.8.1 Instrument Development and Pilot Testing

After developing and reviewing our site visit plans and interview and focus group questions with the Technical Advisory Committee, we pilot-tested these plans and instruments in Anne Arundel County. The pilot-test revealed that the plans and instruments worked well and required only minor adjustments before being used for site visits to the other 23 LSSs.

Copies of all site visit instruments are displayed in the appendix. These copies do not include attachments to some of the instruments that would identify particular schools or data about the schools that we discussed in confidence with LSS and school administrators. The copies also do not include the Master Plan Update Executive Summaries that we provided to focus group participants and to some of the LSS administrators that we interviewed. These documents are available via the MSDE Web site.

2.8.2 Schools Selected for Visits

MGT selected a purposeful sample of 150 schools to visit that would provide a good local and statewide representation of school types, demographics, and performance. For each LSS, we sought to obtain as equal a distribution as possible of schools at each level with the following characteristics:

- Relatively high-performing versus relatively low-performing based on MSA or HSA data for at least three years
- Title 1 versus non-Title 1
- Demographically representative of the school system as a whole

In the 5 largest school systems, we visited 12 schools:

- 4 elementary schools
- 4 middle schools
- 4 high schools

In the 11 mid-size systems, we visited 6 schools:

- 2 elementary schools
- 2 middle schools
- 2 high schools

In the 8 smallest systems, we visited 3 schools:

- 1 elementary school
- 1 middle school
- 1 high school

Some of the 8 smallest systems had only one school at a given level. Thus, selection of these schools for inclusion among those visited was required to meet the criterion of having at least one school visited at each of the three levels (elementary, middle, or high).

2.8.3 Identification of System-Level and School-Level Potential Best Practices

The overall purpose of the qualitative analysis of the site visit data was to identify trends and potential best practices. The results will inform the next stage of data collection, allowing MGT to meet one of the evaluation requirements mandated by the Maryland General Assembly, i.e., to produce a "list of programs or factors that consistently produce positive results for students, schools, and school systems."

Our analyses of the site visit data focused on systemic factors and school programs and strategies that educators believe will produce positive results for students, schools, and school systems. "Positive results" can be defined in terms of both direct improvement in achievement of all students or specific student subgroups, or indirect positive influence on student achievement. "Potential best practice" is defined as an approach, strategy, process, or program that appears to support increased academic achievement of all student populations, including specific subgroups, as reported by LSS administrators and/or school principals. We use the term "potential" because we need to gather and analyze additional data during the final year of the evaluation before we are able to specify those programs or factors that consistently produce positive results for students, schools, and school systems.

MGT began identifying "potential best practices" by focusing on approaches, processes, strategies, and programs that were implemented throughout an LSS by its administration. We carefully reviewed and compared all reports from interviews and focus groups with LSS officials, concentrating on system-wide factors, or combinations of factors, believed by LSS officials to produce consistently positive results for their students. We then compared the findings from this analysis to the findings from our interviews with principals in the same LSS. Only those findings that were corroborated by the information from the school visits were included in our final list of system-level "potential best practices." Thus, the first criterion for the identification of system-level "potential best practices" was the frequency with which the factor was mentioned in interviews and focus groups with LSS officials. The second criterion was the support for the "potential best practice" found during the school visits.

Next, we reviewed the results of the principal interviews to create a matrix of all "potential best practices" that principals mentioned in response to Question 5 of the interview guide.[7] Thus, the first criterion for the identification of a "potential best practice" was that it be mentioned by a principal. Principal interview reports contained references to 520 "potential best practices," which we grouped in 40 subcategories for further analysis. Site visit reports on "potential best practices" provided concrete examples of how the practices worked. Additionally, we analyzed the answers given by principals of the highest performing schools to Question 9 of the principal interview guide.[8] This question asked to what principals attributed the success of their schools.

[7] "Which one of the strategies that you have checked has had the most significant impact in terms of improving the performance of all students or of a subset of students at your school? *If another strategy, program, or factor that is not listed on the attached sheet has led to even more significant improvements in achievement for all students or for a subgroup of your students, please identify that one for us.*"

[8] "I will now share with you some graphs never seen before that compare the extent to which the schools we are visiting have closed their gaps in terms of reaching the NCLB goal of 100 percent proficiency by the year 2014. In your opinion, what are the major factors accounting for the differences between your school's gap closures and the gap closures experienced by the other schools?"

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3.0 FINDINGS

3.0 FINDINGS

This chapter presents interim findings from MGT's evaluation of certain outcomes of the *Bridge to Excellence in Public Schools Act of 2002* (BTE). Each major section of this chapter (3.1 through 3.5) begins with a statement of one of the five evaluation issues mandated by the Annotated Code of Maryland, Education Article §5-402 and supplemented with additional clarifications as requested by the General Assembly.[1] This is followed by a summary of progress made to date in addressing that issue. We then present the current limitations of the evaluation, as well as plans for future work that will enable us to fully address the issue by the end of 2008. We conclude with our interim findings, complete with supporting information, data, and summary analyses.

3.1 Comparisons of Improvements in Student Performance Since BTE Implementation

Evaluation Mandate: Produce a comparison of school systems that show significant improvements in student and school performance to school systems that do not show significant improvements in student and school performance.

Progress to Date: MGT obtained and analyzed Maryland School Assessment (MSA) and High School Assessment (HSA) data from 2003 to 2007 for all students and for the No Child Left Behind (NCLB) subgroups in Maryland schools. We present results of pertinent analyses below. We also identified, analyzed, and present trends in high school graduation and dropout rates since the implementation of BTE.

Current Limitations: Administration of the MSA in Grades 3, 5, and 8 began in 2003, and Grades 4, 6, and 7 were added in 2004. Thus, trend data reported herein cover the period from 2004 to 2007. HSA data have very limited utility at this time because the high school class of 2009 is the first cohort of students who must pass the HSA to graduate. MGT used only the English 2 HSA data for this *Interim Report* because data for the other three subjects tested with the HSA do not yet allow tracking of consistent cohorts when comparing local school systems (LSSs).

Another noteworthy limitation involves caution that must be exercised when comparing changes in achievement of NCLB subgroups that have very few students in some LSSs with the achievement of peer subgroups comprised of many students in other LSSs. Because Maryland reports MSA and HSA results for NCLB subgroups with five or more students, the reader should be mindful that percentages reported for very small populations

[1] See pages 2 and 3 in Chapter 1.0 for a complete list of these issues and points of clarification.

can be misleading; each student represents a substantial proportion of the entire subgroup's population.

Future Plans: MGT will continue to gather and analyze MSA and HSA data through the 2008 assessments. We will identify schools and school systems that show significant improvements between 2004 and 2008 and determine the extent to which strategies in BTE Master Plans and Updates correlate with significant improvements in student performance. MGT also will gather and assess changes in other performance measures including college and workforce readiness and retention, high school graduation rates, and school dropout rates. Changes in student performance will be among those variables that MGT will use to customize plans for additional on-site data and information collection in selected schools and school systems.

Key Interim Findings: Key findings to date are summarized below. The summary is followed by exhibits and narratives that support these findings and provide additional detailed information.

Key Interim Findings on Improvements in Student Performance:

In the years following the implementation of BTE, LSSs demonstrated substantial improvements in the percentages of their student populations who were proficient in reading and mathematics, as measured by the MSA. More important, in the three-year period from 2004 to 2007, the gap in the percentages of Maryland students who needed to demonstrate proficiency to meet the NCLB goal of 100 percent proficiency by 2014 was closed by:

- 35 percent in reading and 42 percent in math for the statewide aggregate of students in the elementary school grades (3 to 5).
- 17 percent in reading and 30 percent in math for the aggregate of students in the middle school grades (6 to 8).

As measured by the extent to which they improved, students in Grades 3 to 5 with limited English proficiency (LEP) outperformed 1) the entire student population, 2) the students eligible for free and/or reduced price meals (FARMS), and 3) special education (SPED) students. In both reading and math, LEP students closed nearly half of the gap between their proficiency level in 2004 and NCLB's 100 percent proficiency goal.

Although the statewide middle school population continued to have higher MSA reading proficiency levels than the three special population subsets of students, LEP and SPED students narrowed their gaps toward reaching the 100 percent proficiency goal to a greater extent than FARMS students or the entire population of middle school students.

The statewide population of middle school students had slightly greater improvements in the percent proficient as measured by MSA math than did the

three special populations.

All ethnic groups of elementary and middle school students improved their reading and math proficiency levels. Asian/Pacific Islander students consistently outperformed and made greater relative improvements than other ethnic groups. Hispanic and African-American students made less relative improvement than other ethnic groups.

There were major differences among LSSs in both reading and math proficiency levels and in the relative improvements made in these proficiency levels by elementary and middle school students.

Statewide, elementary school students had relatively higher reading and math proficiency levels (for the grades they were in) and relatively higher improvements in their proficiency levels than did middle school students.

At the high school level, the English 2 HSA was the only statewide test that could be used to make reasonable comparisons among NCLB groups of students and among Maryland's 24 LSSs. Passing rates on the English 2 HSA improved in all 24 LSSs between the first statewide administration of the test in 2005 and the 2007 administration. However, the 2007 test takers had a greater incentive to pass because they were the first group required to do so to graduate.

Passing rates and relative improvements in passing rates on the English 2 HSA varied greatly among LSSs, ethnic groups, and special populations of high school students

White high school students outperformed and showed greater improvements in relative passing rates than non-White students or those in any of the special populations (i.e., FARMS, SPED, LEP).

In 2003, the MSA replaced the Maryland School Performance Assessment Program (MSPAP) and was administered in Grades 3, 5, and 8. By 2004, the MSA was administered to all students in Grades 3 to 8. Data now are available to compare student performance on the tests that were administered from spring 2004, which was near the end of the first full year of Master Plan implementations by LSSs, for improving student achievement, to spring 2007, which was near the end of the fourth year of implementation of LSSs' Master Plans and Annual Updates.

In compliance with the federal NCLB Act, Maryland LSSs are striving to have 100 percent of their students demonstrate MSA proficiency in reading and mathematics by the year 2014. The exhibits that follow show the improvements in student proficiency in reading and mathematics that have occurred since the implementation of BTE.

Maryland's new HSA replaces the Maryland Functional Tests and includes end of course exams for English 2, Algebra/Data Analysis, Biology, and Government. Although Maryland uses the English 2 and the Algebra/Data Analysis for the NCLB reading and math proficiency goals. The Biology HSA is used to meet the NCLB's science assessment requirement. Students from the class of 2009 onwards must pass all four exams to graduate.

In the pages that follow, we provide detailed information about improvements in MSA and HSA performance since the implementation of BTE. We also provide changes in high school graduation and dropout rates since 2004.

3.1.1 Improvements in Elementary School Students' MSA Performance

Exhibit 5 shows that the percentage of elementary grade (3 to 5) students tested who scored at or above the "proficient" level on the MSA for **reading** increased by:[2]

- 27.7 percentage points for LEP students.
- 18.5 percentage points for SPED students.
- 13.9 percentage points for FARMS students.
- 9.9 percentage points for the entire population (All Students).

Because the percentage of tested students who were proficient in reading in 2004 varied widely among the four groups shown in Exhibit 5, some had relatively large and others had relatively small gaps to close to improve from their 2004 levels of proficiency to the NCLB 100 percent proficiency goal. Exhibit 6 builds upon Exhibit 5 by comparing the progress made by each group to close the gap between where they were in 2004 and where they hope to be by 2014 (i.e., the gap between the 2004 proficiency percentage and the 100 percent proficiency goal).

To understand how the bar graphs build upon and provide better indicators of improvement than the line graphs, note that for the entire population of elementary grade students tested (All Students) in Exhibit 5, the percentage demonstrating proficiency was higher in both 2004 and again in 2007 than for the other three NCLB subgroups shown. To illustrate the *relative* improvements made by each of the groups, the bar graphs in Exhibit 6 show that:

- LEP students closed a greater *percentage* of their remaining gap than any of the other groups. LEP students' 45.6 percent gap closure was calculated by taking their 27.7 percentage point improvement shown in Exhibit 5 and dividing that by 100 minus the 39.2 percent that were proficient in 2004. Thus, to reach the 100 percent proficiency goal by 2014, LEP students had to close a 60.8 percentage point gap. By 2007, LEP students closed 27.7 of those 60.8 percentage points, which is the 45.6 percent gap improvement shown in Exhibit 6. We performed similar calculations to produce the bar graphs that show the percentage of performance gap improvements for the other groups.
- By 2007, each of the other three groups compared in Exhibit 6 closed about one-third of the gap they had between the percentage proficient in 2004 and the goal of 100 percent proficient by 2014. This was much less of a gap closure than that shown for LEP students, who closed nearly one-half of their gap.

[2] In the remainder of this report, references to the percentage of students who were "proficient" include those whose assessments placed them in the "proficient" or "advanced" categories.

Exhibits 7 through 28 follow the same format as Exhibits 5 and 6. We present pairs of exhibits in which the first exhibit in the pair is a series of line graphs that compare improvements in MSA proficiency levels of different groups of elementary school students. The second exhibit in each pair compares the extent to which each group has closed its gap between the percentage demonstrating proficiency in 2004 and the NCLB 100 percent proficiency goal. In the statements below, we summarize the information presented in these pairs of exhibits.

- Similar to what was seen in the Exhibit 5 for MSA reading, the percentage of students demonstrating proficiency on MSA **math** increased for the statewide population of students tested and for each NCLB group shown in Exhibit 7. Exhibit 8 shows that elementary school students with LEP made the greatest improvements in MSA **math** proficiency, followed by FARMS students and then by SPED students.

- Exhibits 9 and 10 show that at the elementary school level statewide, all NCLB ethnic groups improved MSA **reading** proficiency levels. Asian/Pacific Islander students had the highest proficiency levels and the highest relative improvements. Hispanic and African-American students had the lowest proficiency levels and the lowest relative improvements.

- Exhibits 11 and 12 show that statewide, all NCLB ethnic groups improved their MSA **math** proficiency levels. Asian/Pacific Islander students had the highest proficiency levels and the highest relative improvements. Hispanic and African-American students had the lowest proficiency levels and the lowest relative improvements.

- Exhibits 13 and 14 show that elementary students in all 24 LSSs had improved MSA **reading** proficiency levels. Performance gap improvements by LSSs ranged from 19 to 47 percent.

- Exhibits 15 and 16 show that elementary school FARMS students in all 24 LSSs had improved MSA **reading** proficiency levels. Performance gap improvements by LSSs ranged from 18 to 51 percent.

- Exhibits 17 and 18 show that elementary school SPED students in all but one of the 24 LSSs had improved MSA **reading** proficiency levels. Performance gap improvements by LSSs ranged from -12 to +65 percent.

- Exhibits 19 and 20 show that elementary school LEP students in all but two of the 22 reportable LSSs had improved MSA **reading** proficiency levels. Performance gap improvements by LSSs ranged from negative percentages (i.e., declines instead of improvements) to 67 percent. Readers should note that the small number of LEP students in many LSSs can greatly affect the calculations of percentages and changes in percentages shown in these graphs.

- Exhibits 21 and 22 show that elementary school students in all 24 LSSs had improved MSA **math** proficiency levels. Performance gap improvements by LSSs ranged from 27 to 57 percent.

- Exhibits 23 and 24 show that elementary school FARMS students in all 24 LSSs had improved MSA **math** proficiency levels. Performance gap improvements by LSSs ranged from 20 to 51 percent.

- Exhibits 25 and 26 show that elementary school SPED students in all but one of the 24 LSSs had improved MSA **math** proficiency levels. Performance gap improvements by LSSs ranged from 14 to 44 percent.

- Exhibits 27 and 28 show that elementary school LEP students in all but two of the 22 reportable LSSs had improved MSA **math** proficiency levels. Performance gap improvements by LSSs ranged from 1 to 70 percent. It should be noted that the small number of LEP students in many LSSs can greatly affect the percentages and changes in percentages shown in these graphs.

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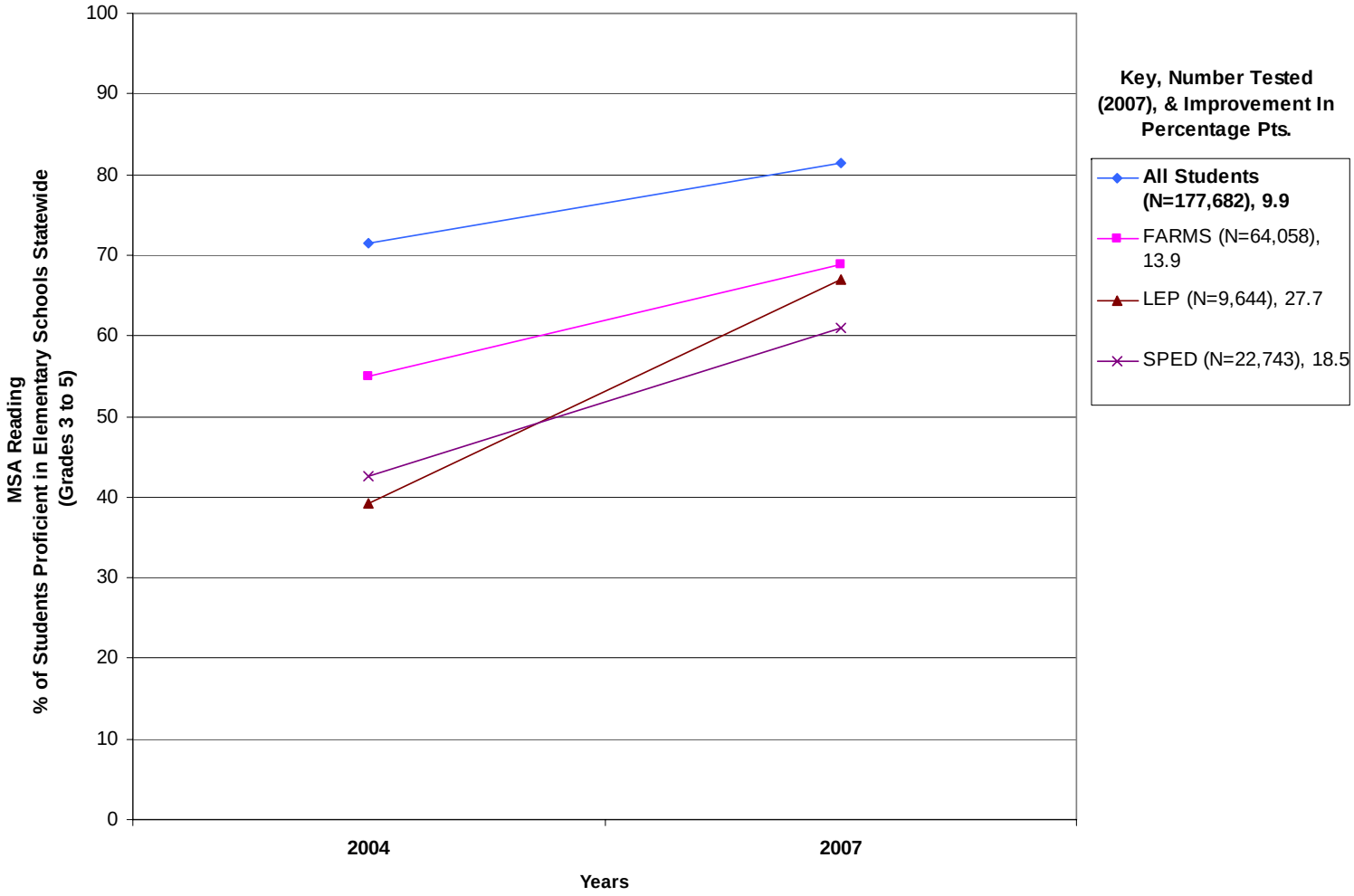
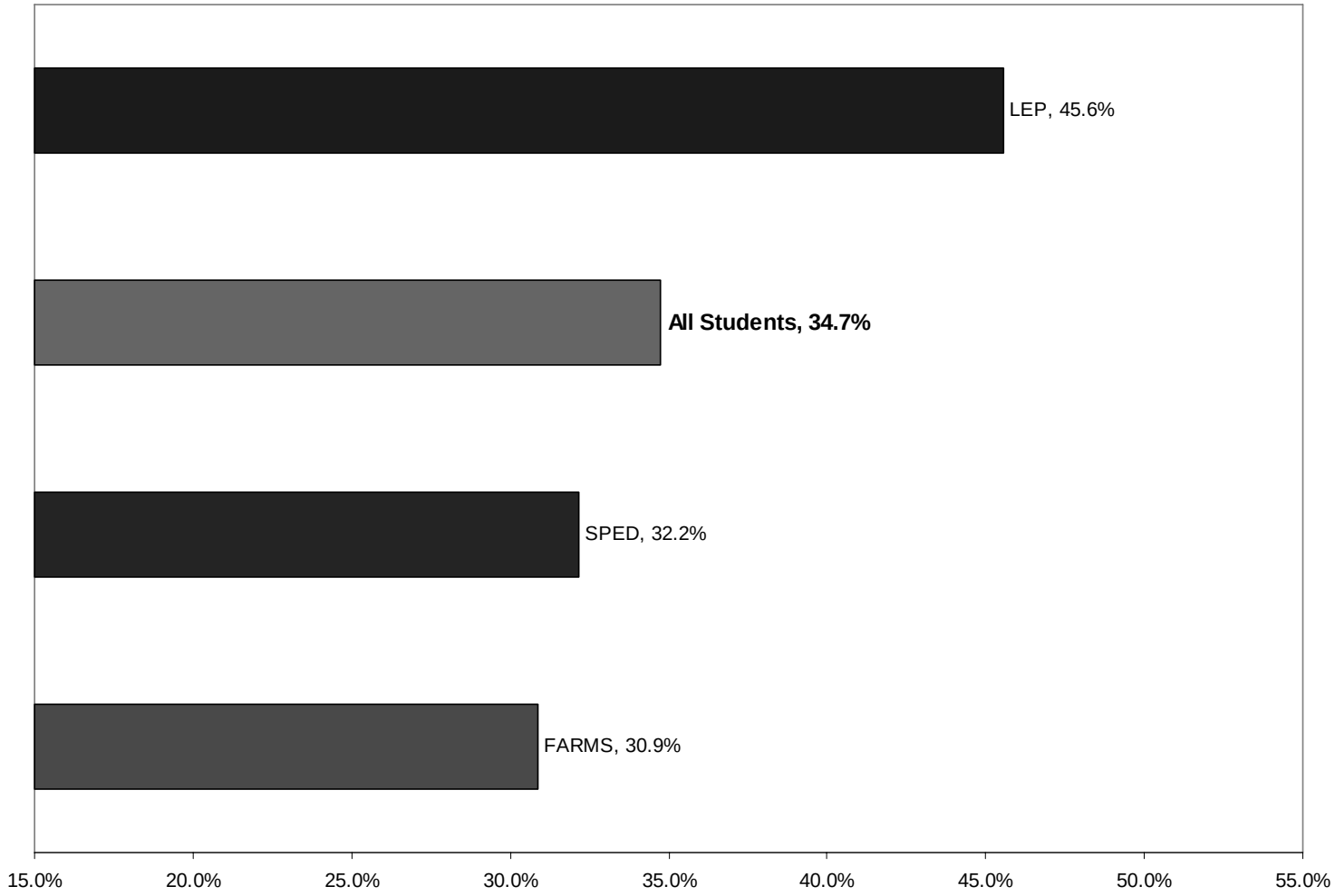
EXHIBIT 5
PERCENTAGE OF ELEMENTARY SCHOOL STUDENTS STATEWIDE DEMONSTRATING PROFICIENCY IN MSA READING
ALL STUDENTS AND SUBGROUPS



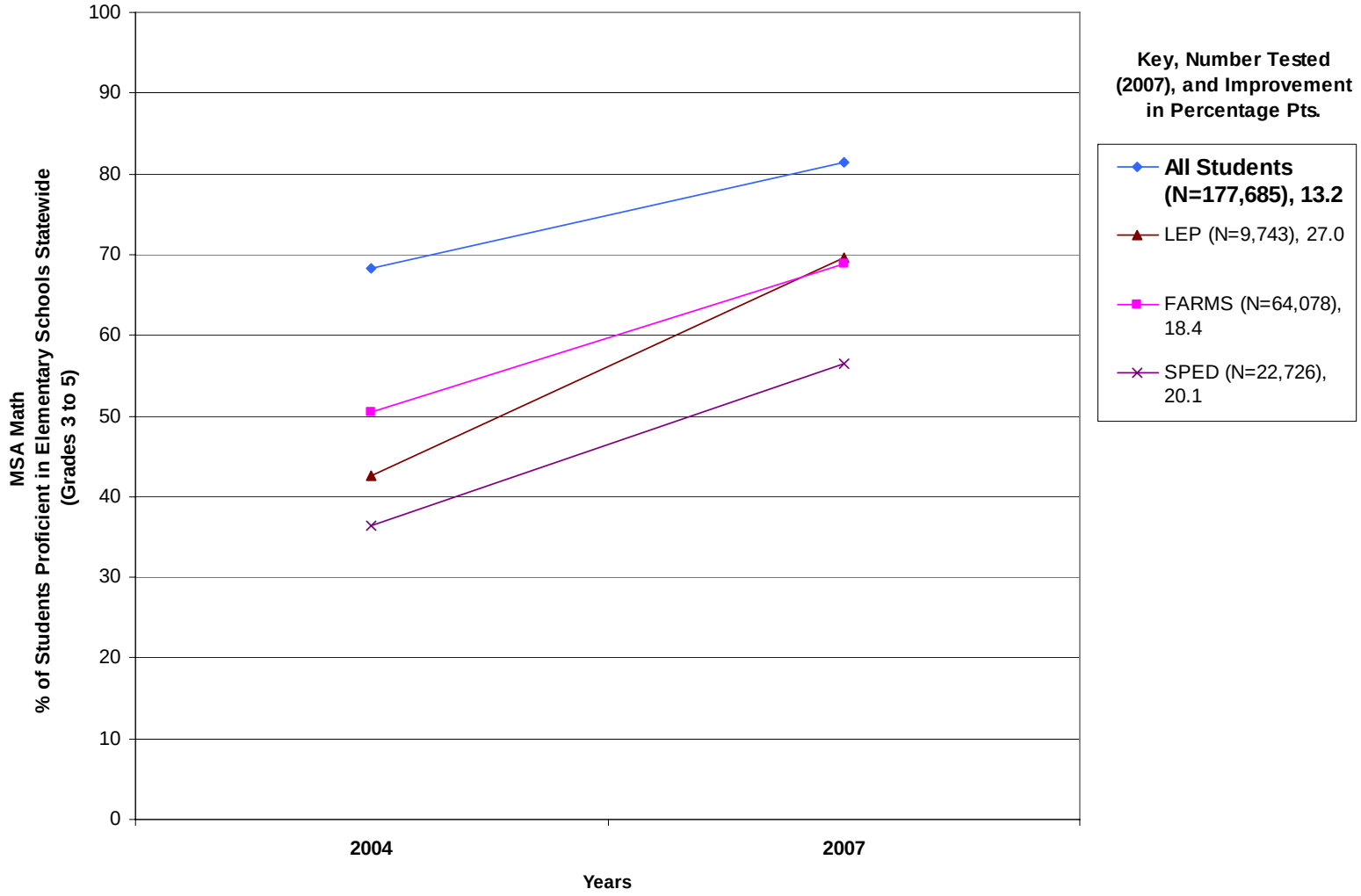
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 6
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS IN MSA READING
ELEMENTARY SCHOOL STUDENTS STATEWIDE: ALL STUDENTS AND SUBGROUPS
2004 TO 2007



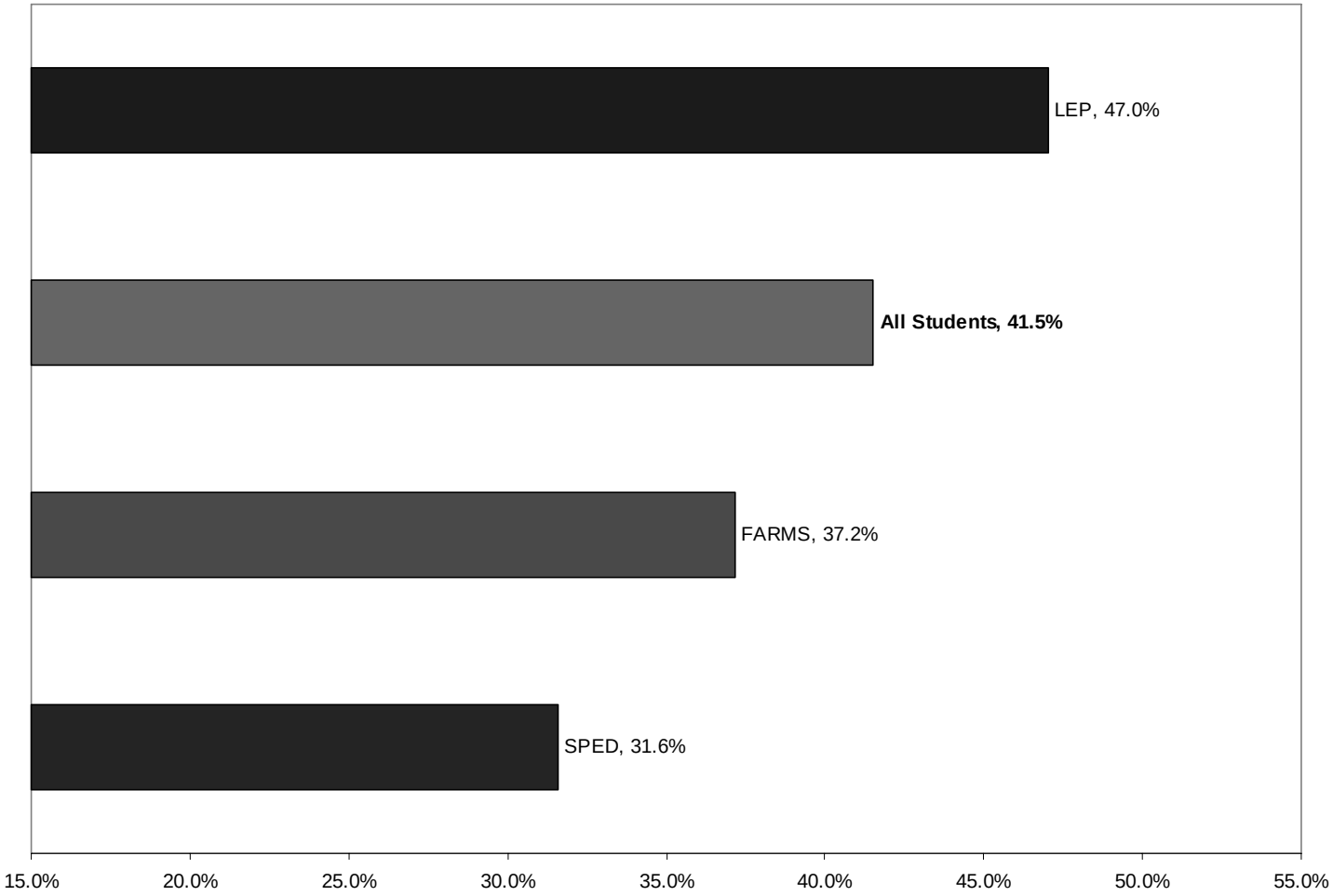
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 7
PERCENTAGE OF ELEMENTARY SCHOOL STUDENTS STATEWIDE DEMONSTRATING PROFICIENCY IN MSA MATH
ALL STUDENTS AND SUBGROUPS



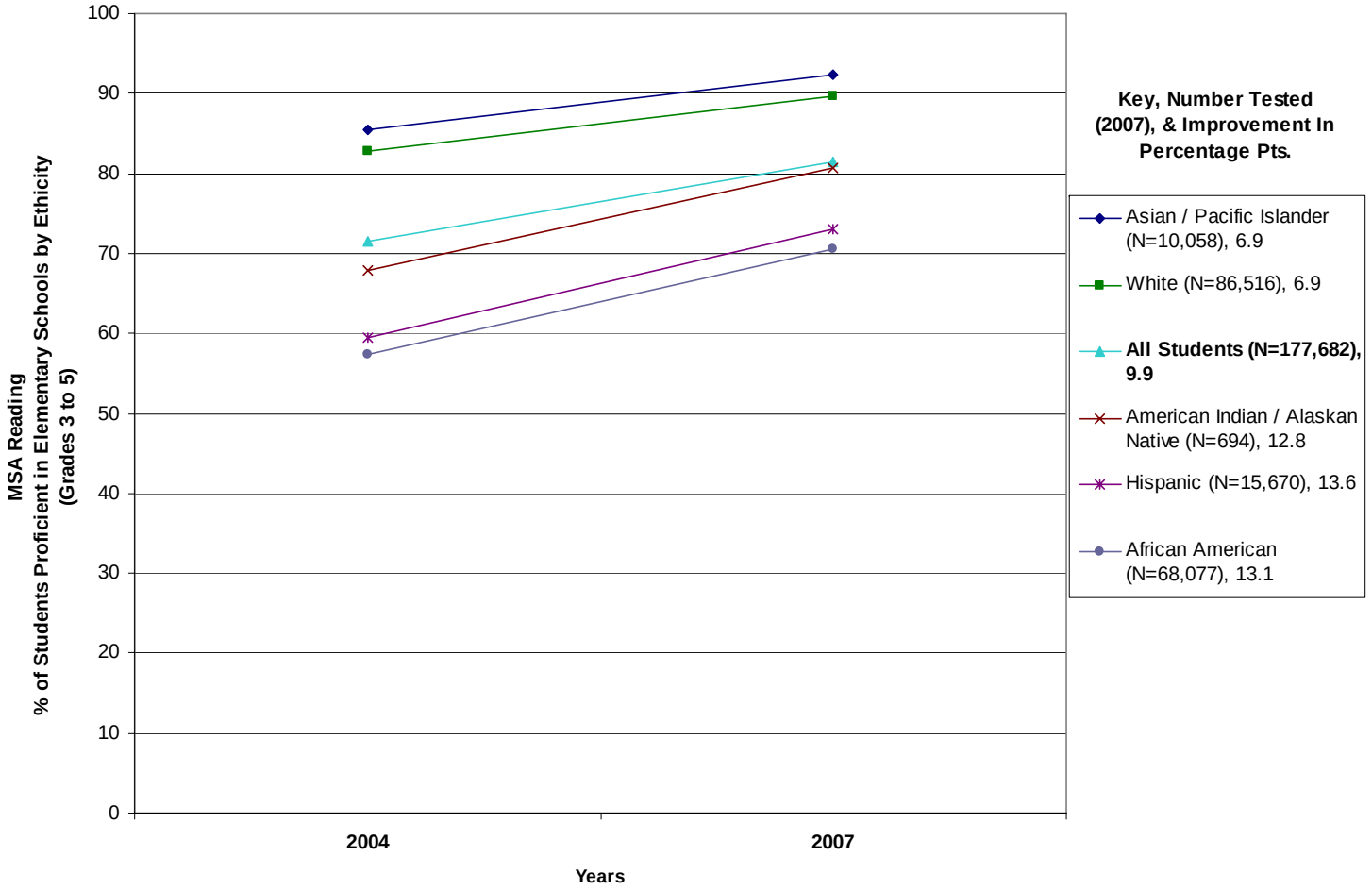
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 8
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS IN MSA MATH
ELEMENTARY SCHOOL STUDENTS STATEWIDE: ALL STUDENTS AND SUBGROUPS
2004 TO 2007



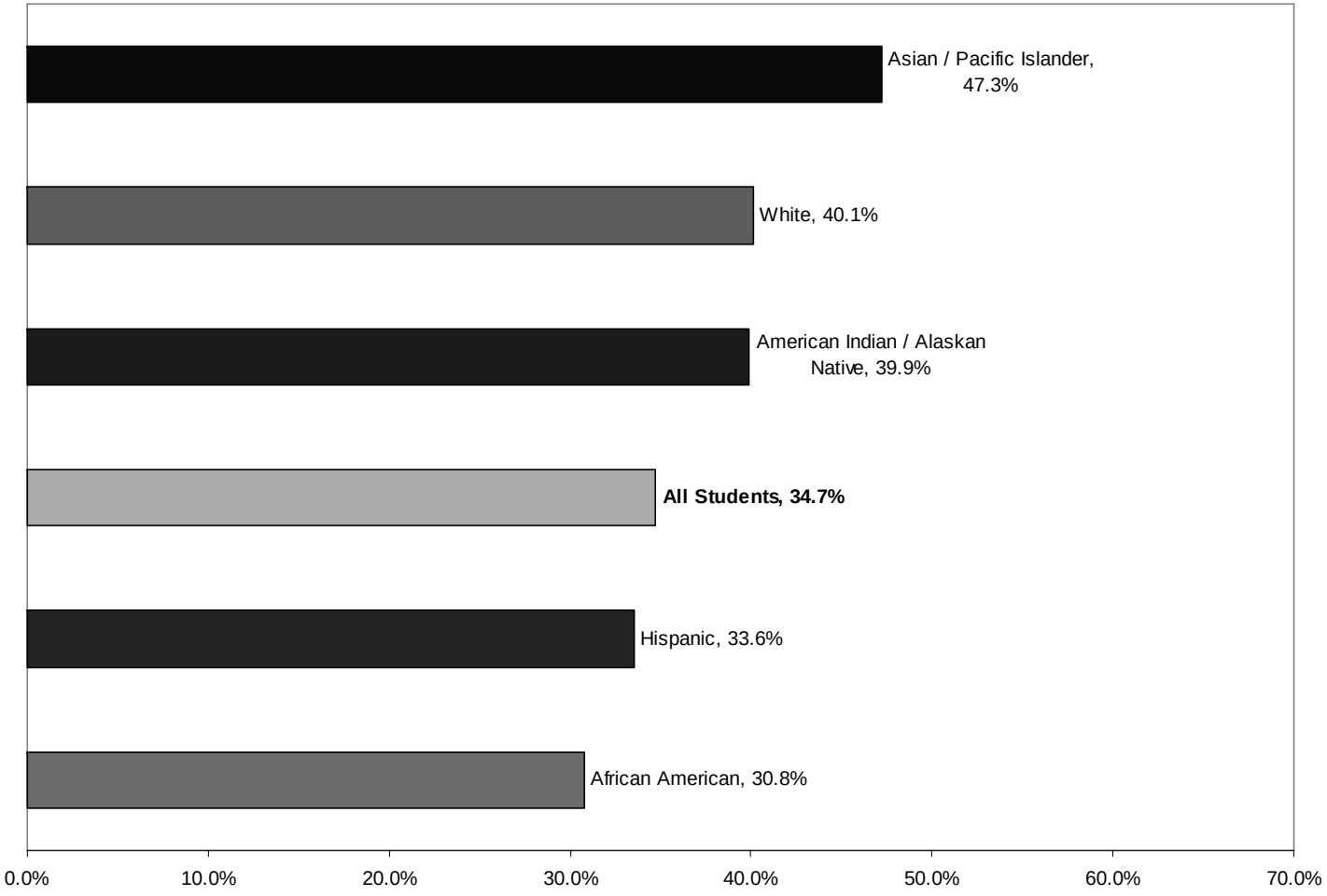
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 9
PERCENTAGE OF ELEMENTARY SCHOOL STUDENTS STATEWIDE DEMONSTRATING PROFICIENCY IN MSA READING
ALL STUDENTS AND ETHNIC GROUPS



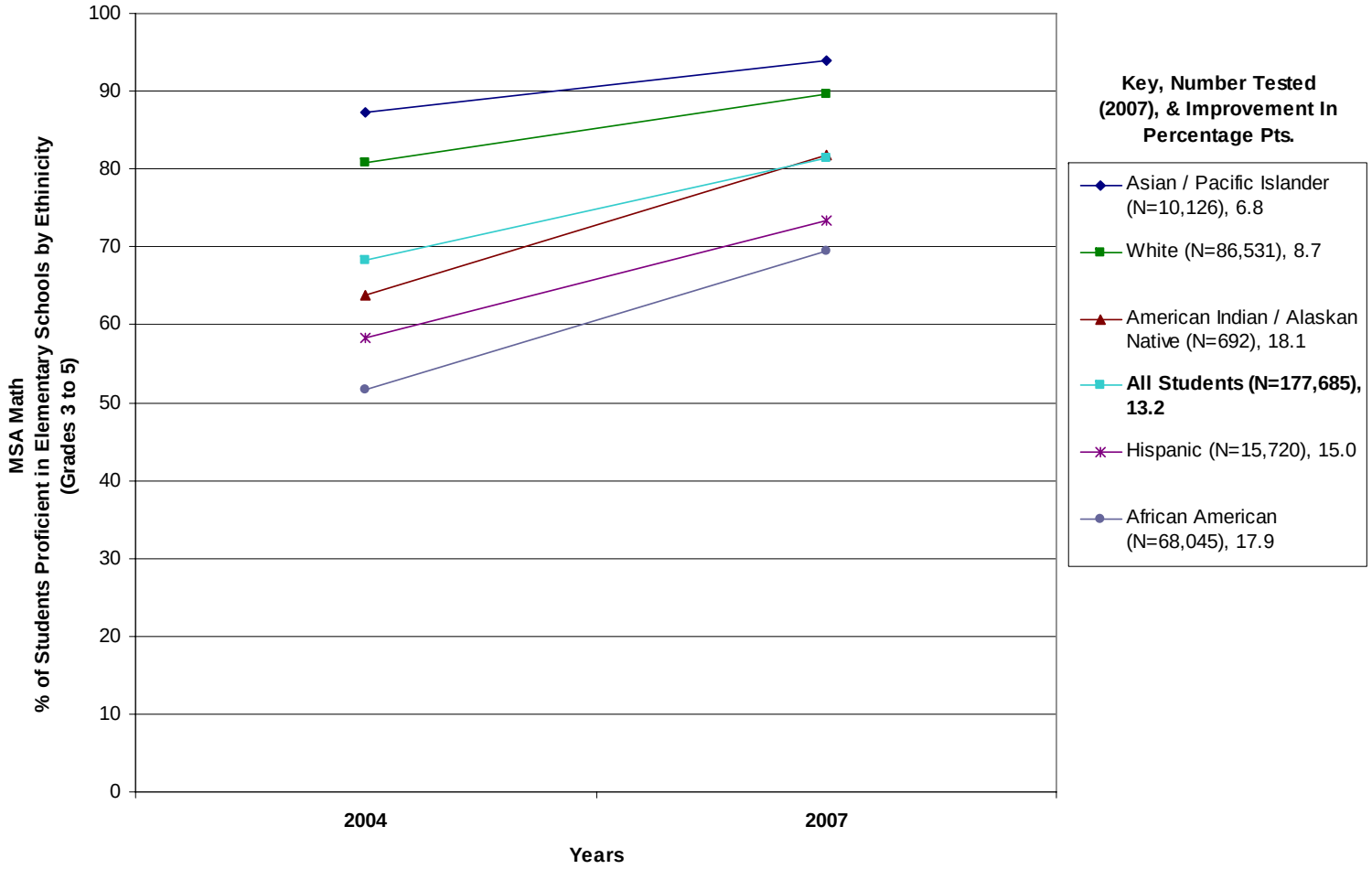
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 10
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS IN MSA READING
ELEMENTARY SCHOOL STUDENTS STATEWIDE: ALL STUDENTS AND ETHNIC GROUPS
2004 TO 2007



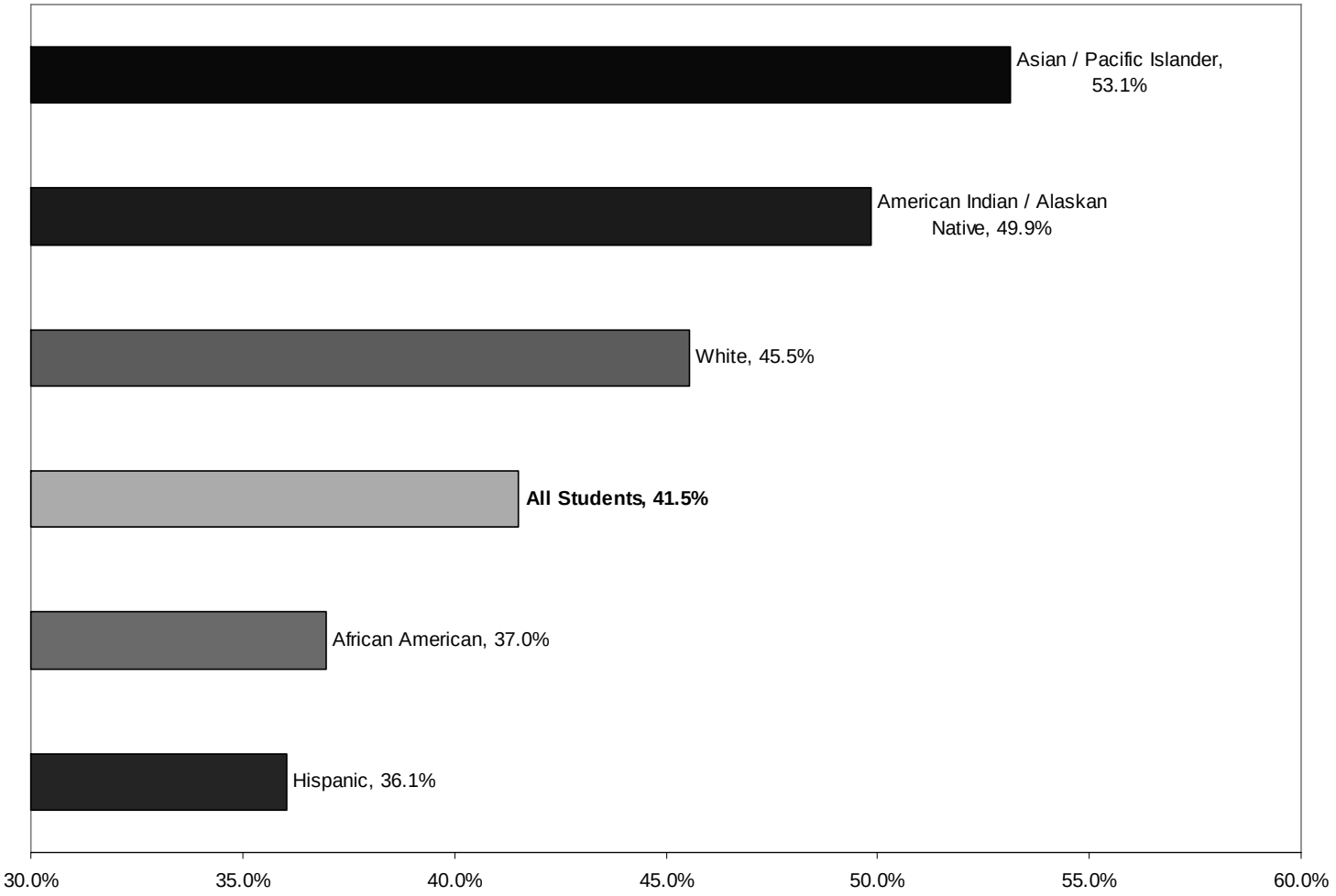
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 11
PERCENTAGE OF ELEMENTARY SCHOOL STUDENTS STATEWIDE DEMONSTRATING PROFICIENCY IN MSA MATH
ALL STUDENTS AND ETHNIC GROUPS



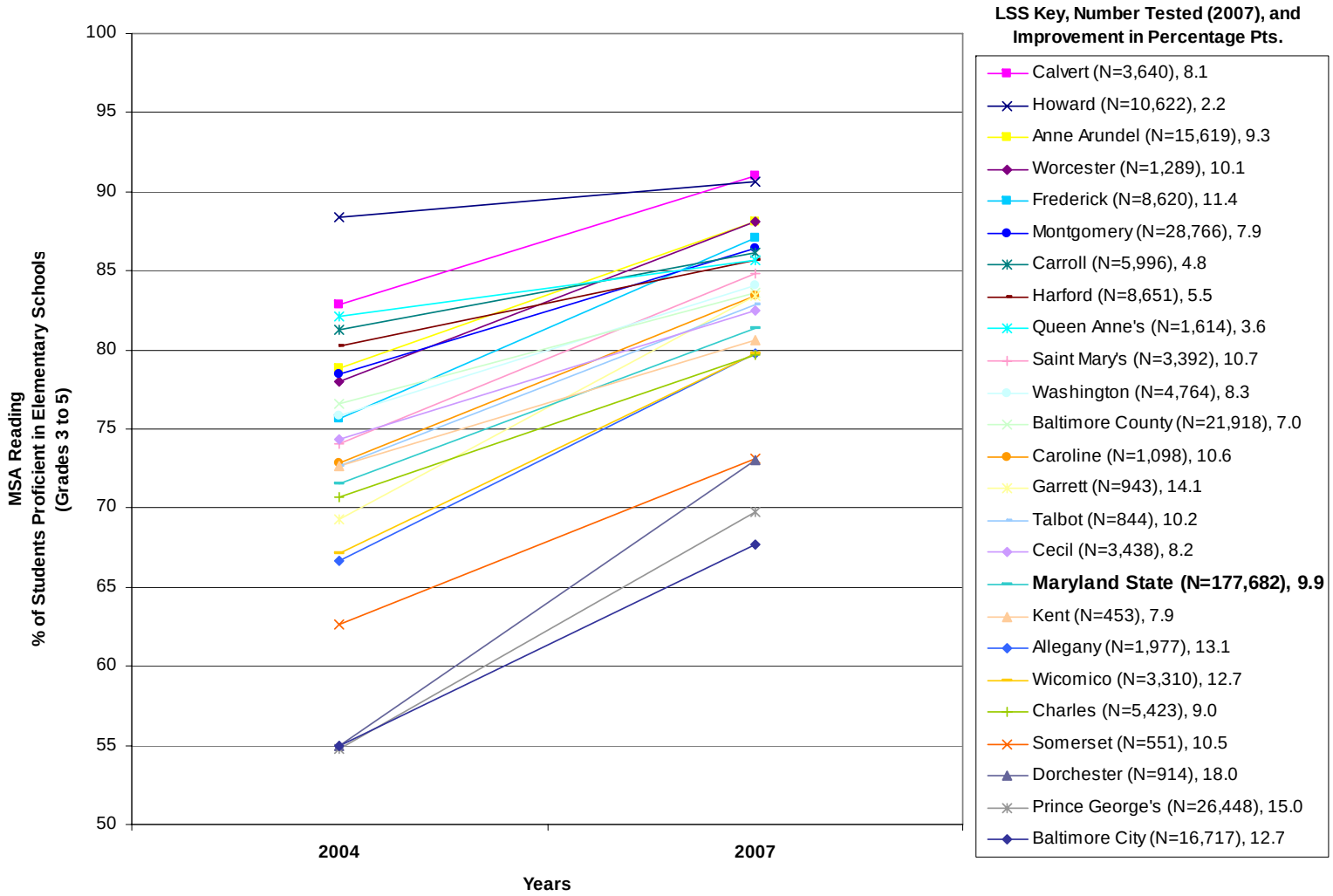
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 12
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS IN MSA MATH
ELEMENTARY SCHOOL STUDENTS STATEWIDE: ALL STUDENTS AND ETHNIC GROUPS
2004 TO 2007



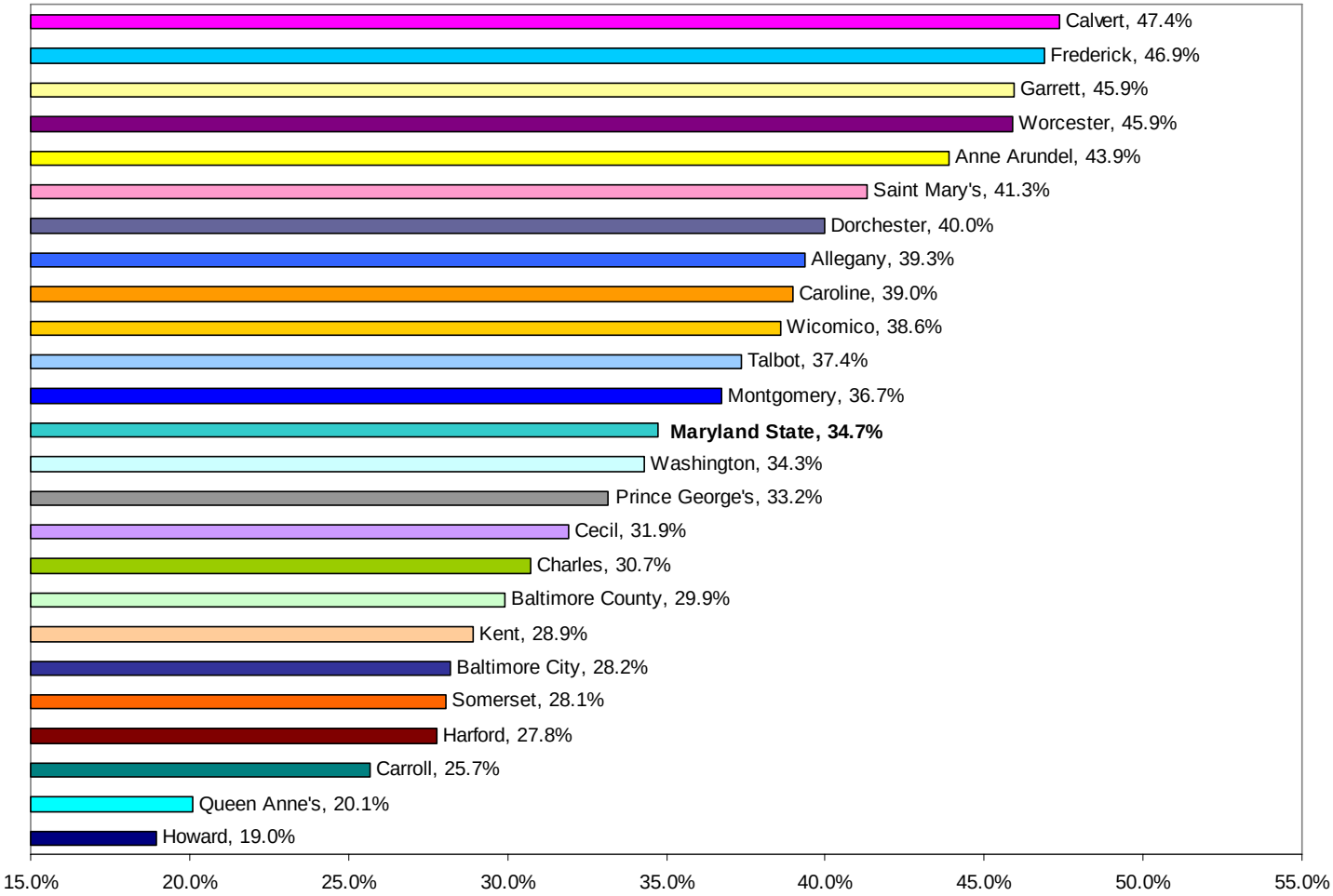
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 13
PERCENTAGE OF ELEMENTARY SCHOOL STUDENTS DEMONSTRATING PROFICIENCY IN MSA READING IN EACH LOCAL SCHOOL SYSTEM: ALL STUDENTS GRADES 3 TO 5



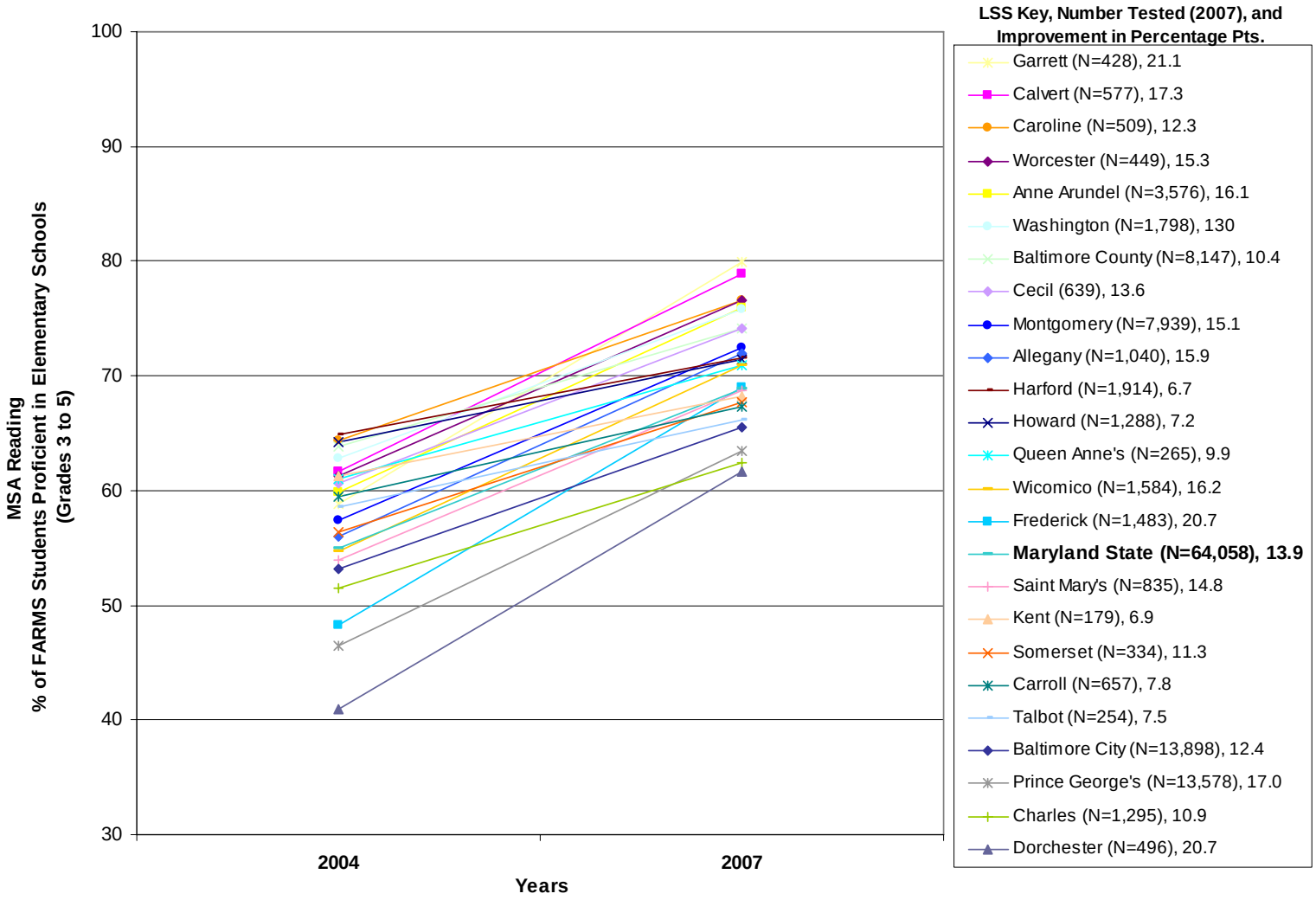
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 14
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
MSA READING: ALL ELEMENTARY SCHOOL STUDENTS GRADES 3 TO 5
2004 TO 2007



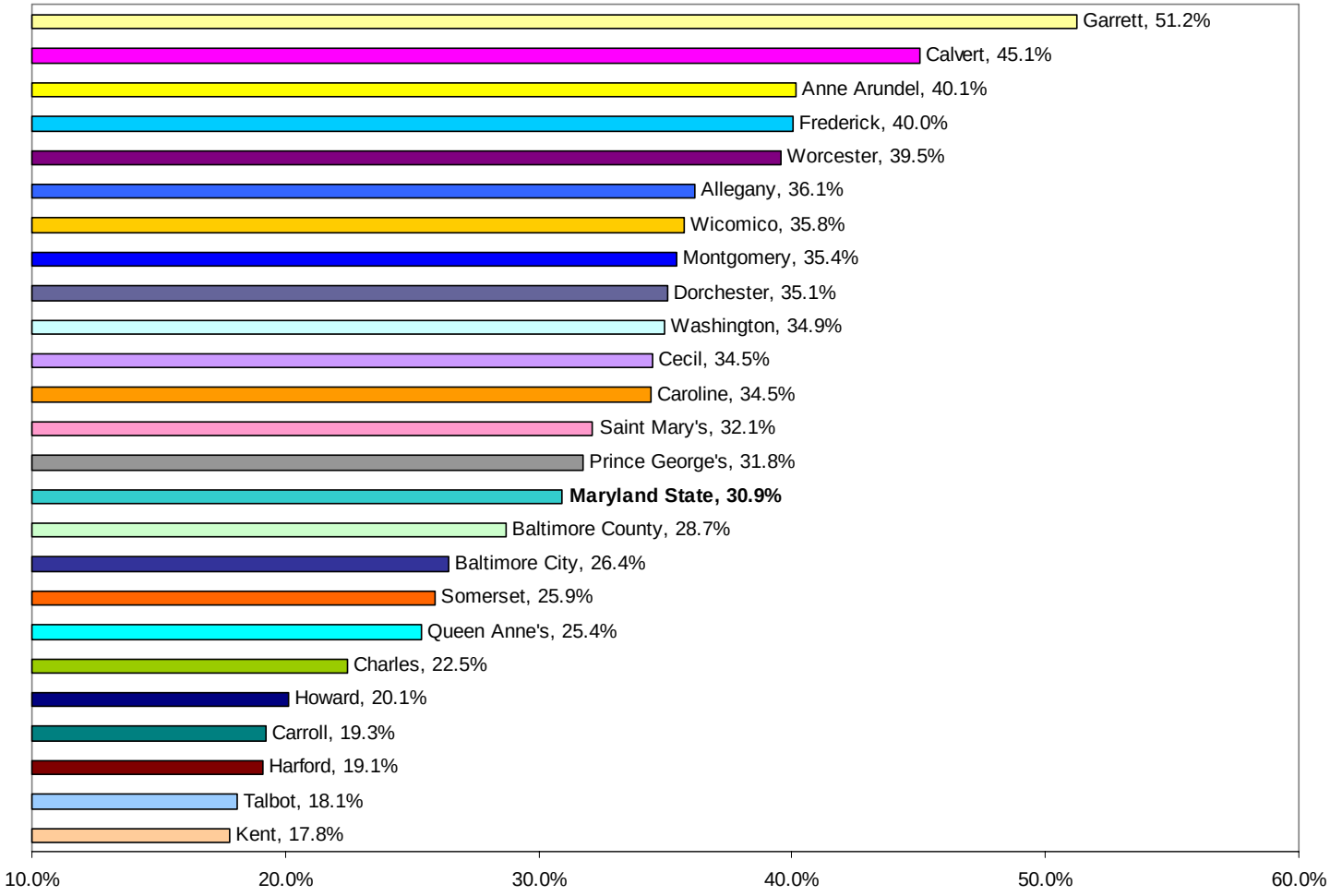
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 15
PERCENTAGE OF ELEMENTARY SCHOOL STUDENTS ELIGIBLE FOR FARMS DEMONSTRATING PROFICIENCY IN MSA READING IN EACH LOCAL SCHOOL SYSTEM: GRADES 3 TO 5



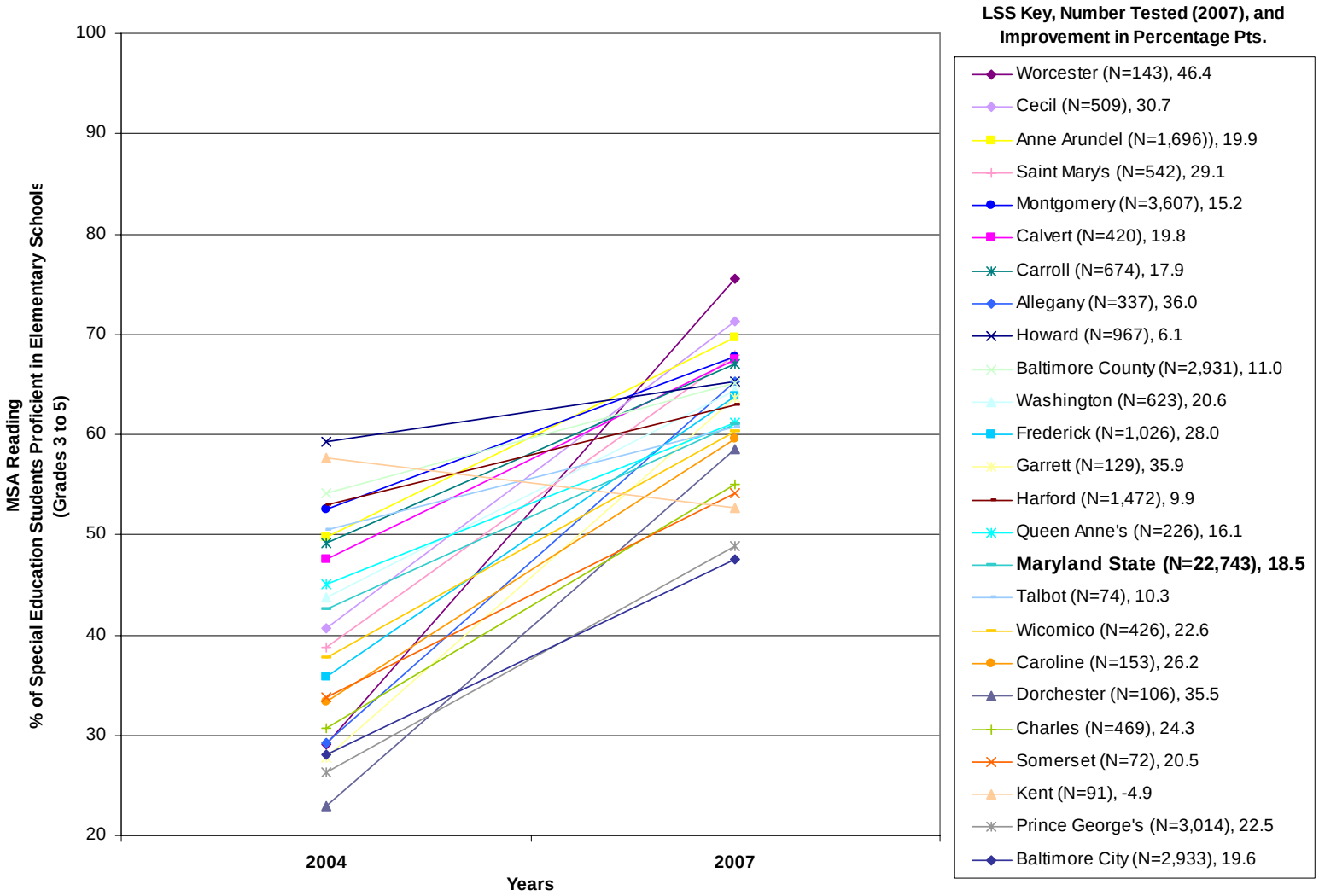
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 16
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
MSA READING: ELEMENTARY SCHOOL STUDENTS ELIGIBLE FOR FARMS GRADES 3 TO 5
2004 TO 2007



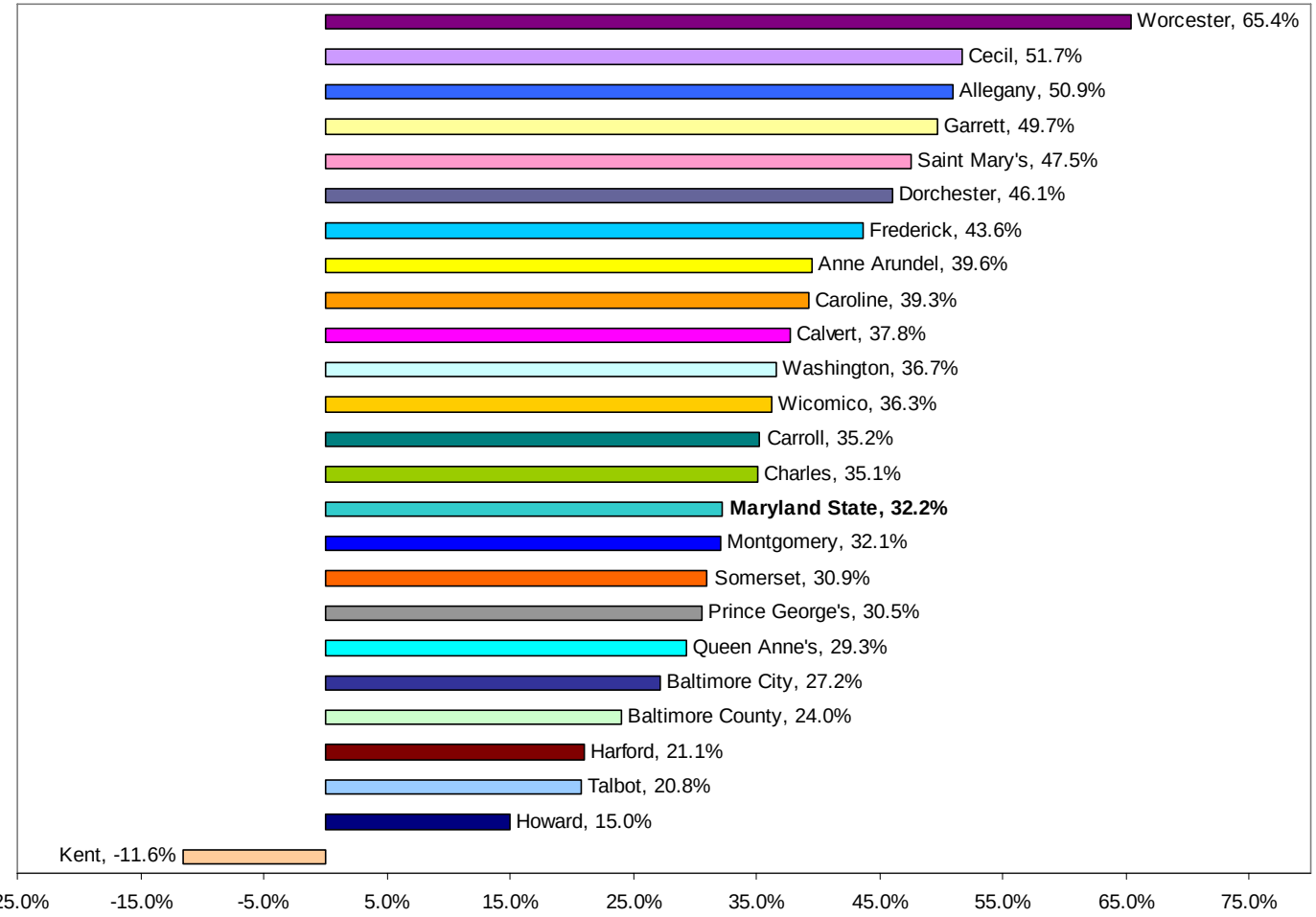
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Limitation: Use caution when comparing percentages of any LSS that has less than 50 students in this subgroup. See preceding Exhibit for Ns.

EXHIBIT 17
PERCENTAGE OF ELEMENTARY SCHOOL SPECIAL EDUCATION STUDENTS DEMONSTRATING PROFICIENCY IN MSA READING IN EACH LOCAL SCHOOL SYSTEM: GRADES 3 TO 5



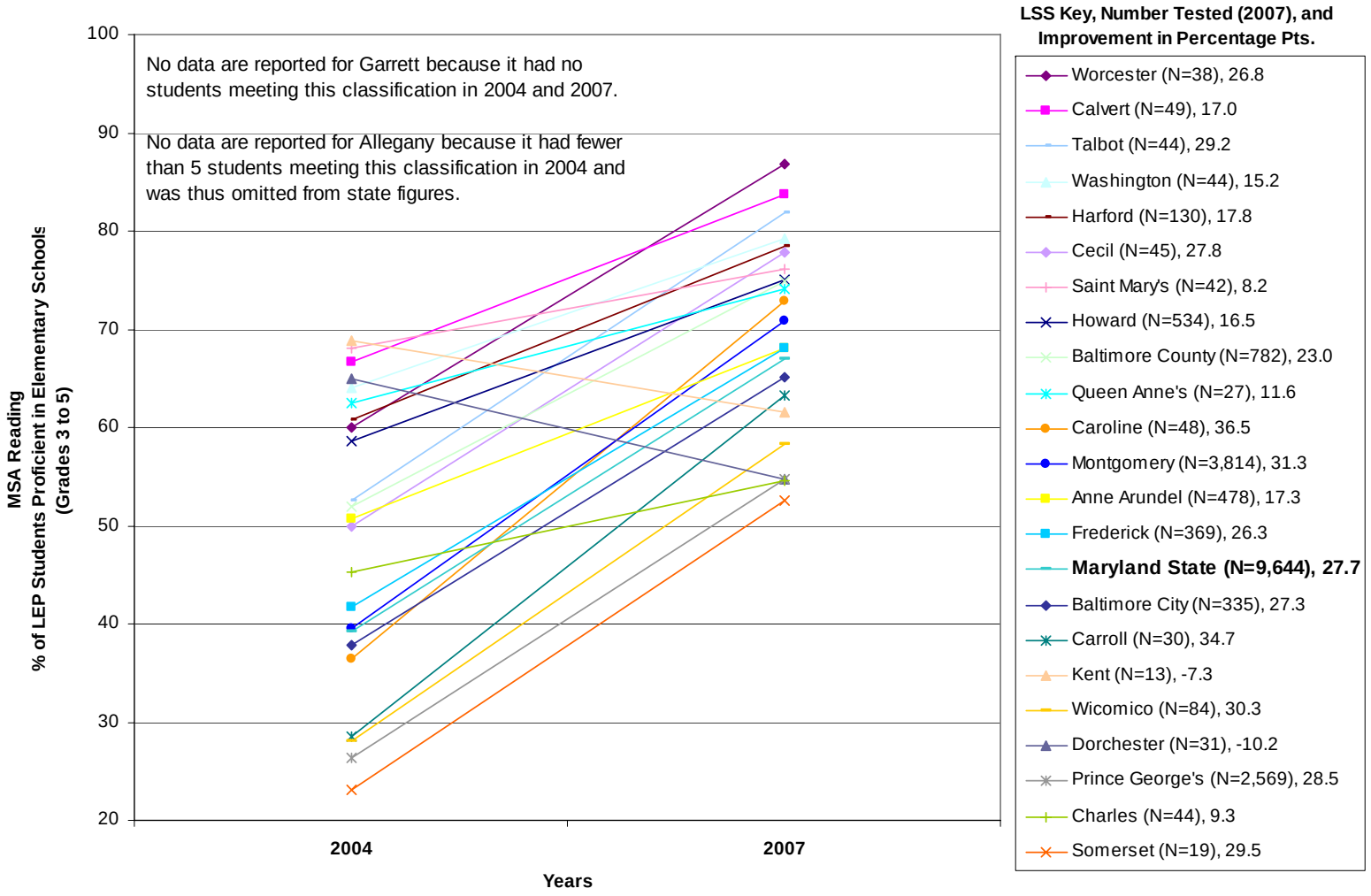
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 18
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
MSA READING: ELEMENTARY SCHOOL SPECIAL EDUCATION STUDENTS GRADES 3 TO 5
2004 TO 2007



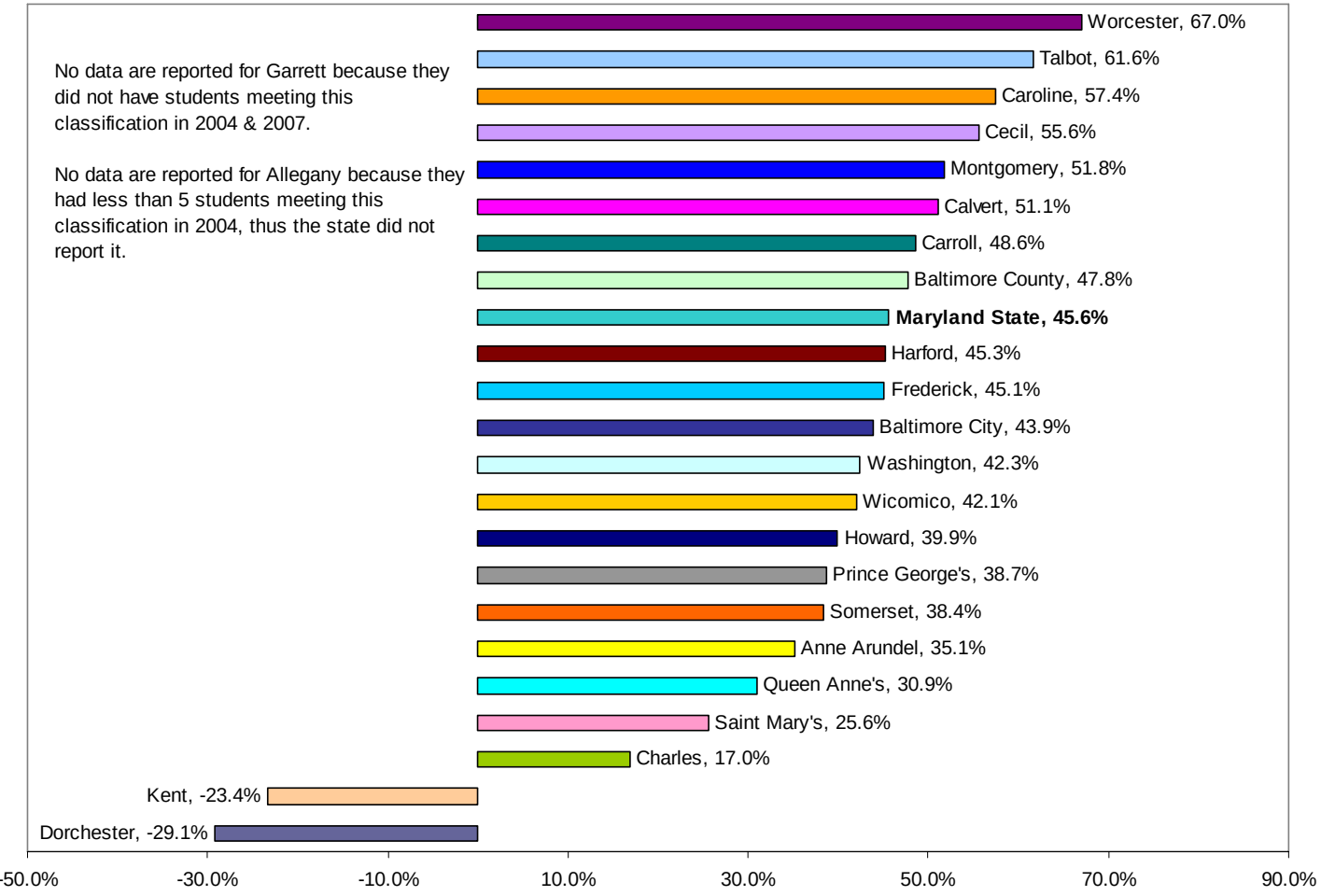
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 19
PERCENTAGE OF ELEMENTARY SCHOOL LEP STUDENTS DEMONSTRATING PROFICIENCY IN MSA READING IN EACH LOCAL SCHOOL SYSTEM: GRADES 3 TO 5



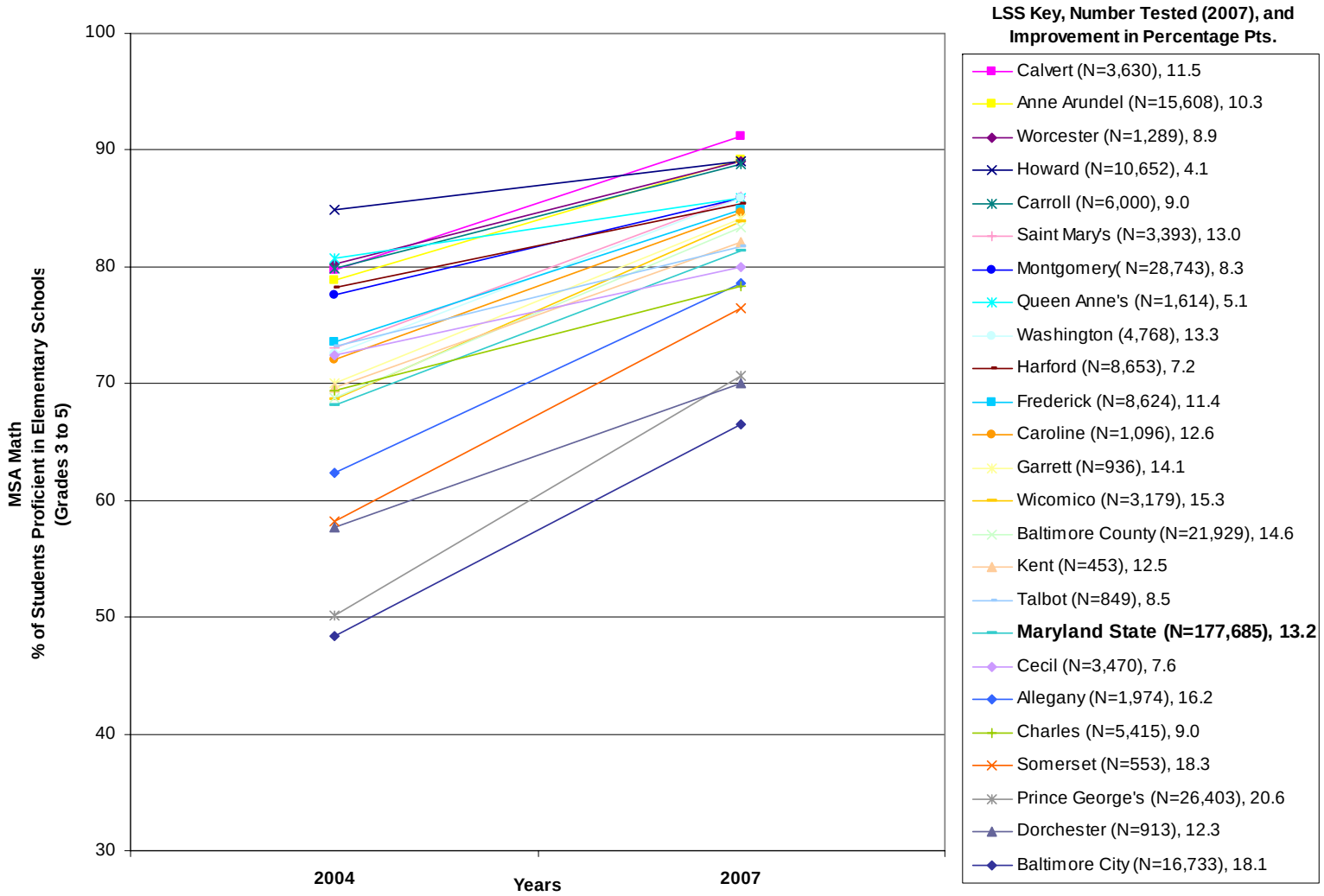
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 20
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
MSA READING: ELEMENTARY SCHOOL LEP STUDENTS GRADES 3 TO 5
2004 TO 2007



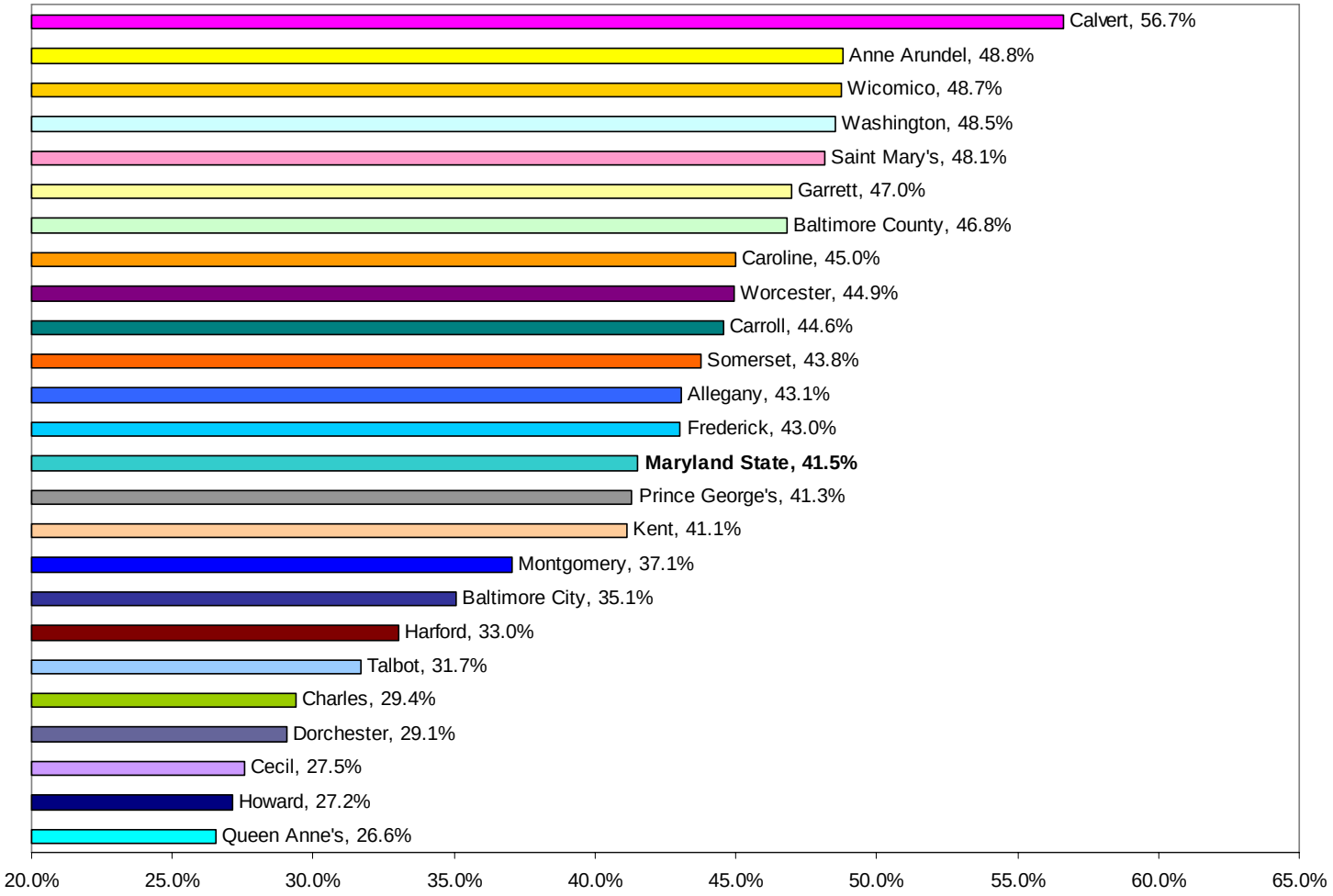
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Limitation: Use caution when comparing percentages of any LSS that has less than 50 students in this subgroup. See preceding Exhibit for Ns.

EXHIBIT 21
PERCENTAGE OF ELEMENTARY SCHOOL STUDENTS
DEMONSTRATING PROFICIENCY IN MSA MATH IN EACH LOCAL SCHOOL SYSTEM: ALL STUDENTS GRADES 3 TO 5



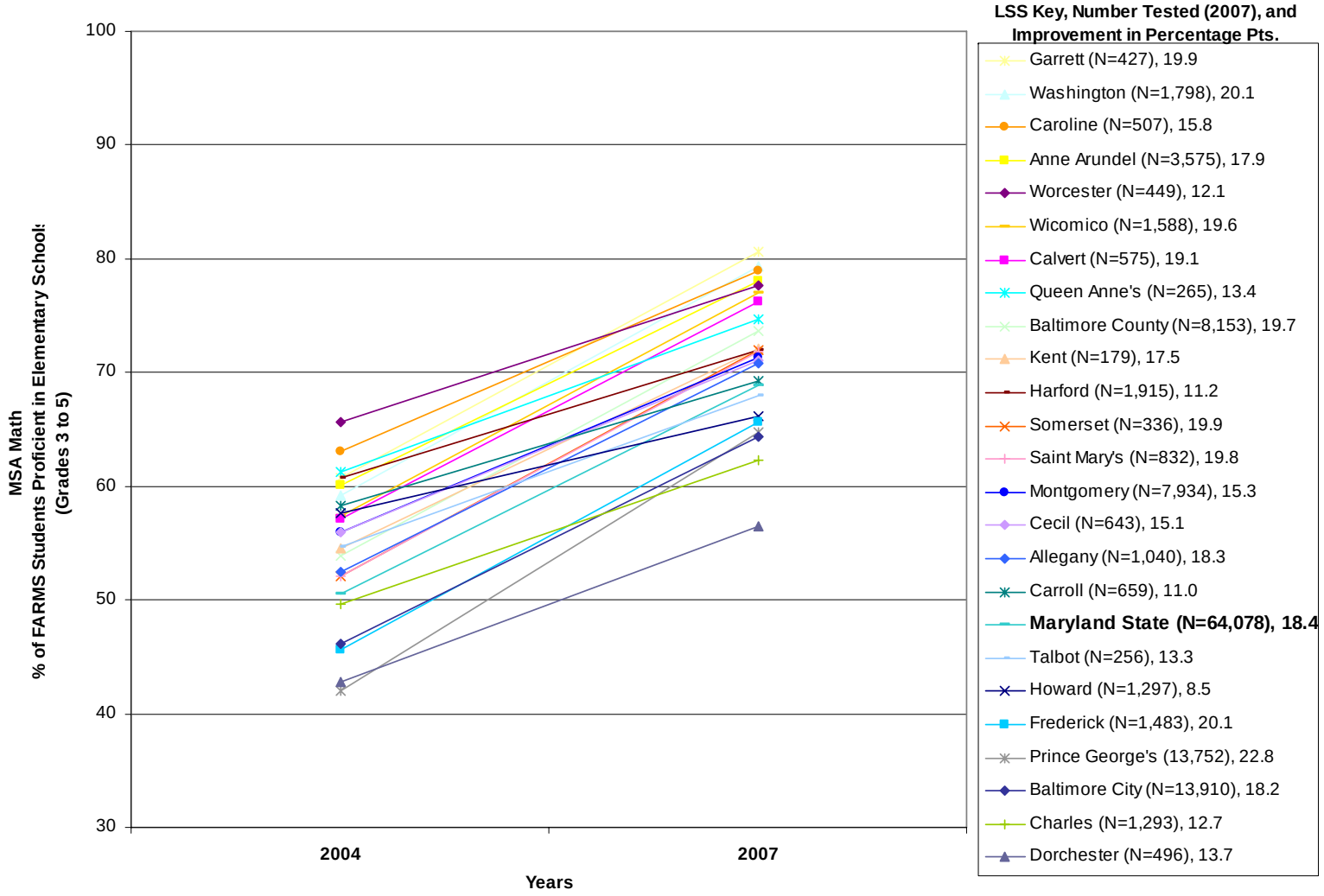
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 22
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
MSA MATH: ALL ELEMENTARY SCHOOL STUDENTS GRADES 3 TO 5
2004 TO 2007



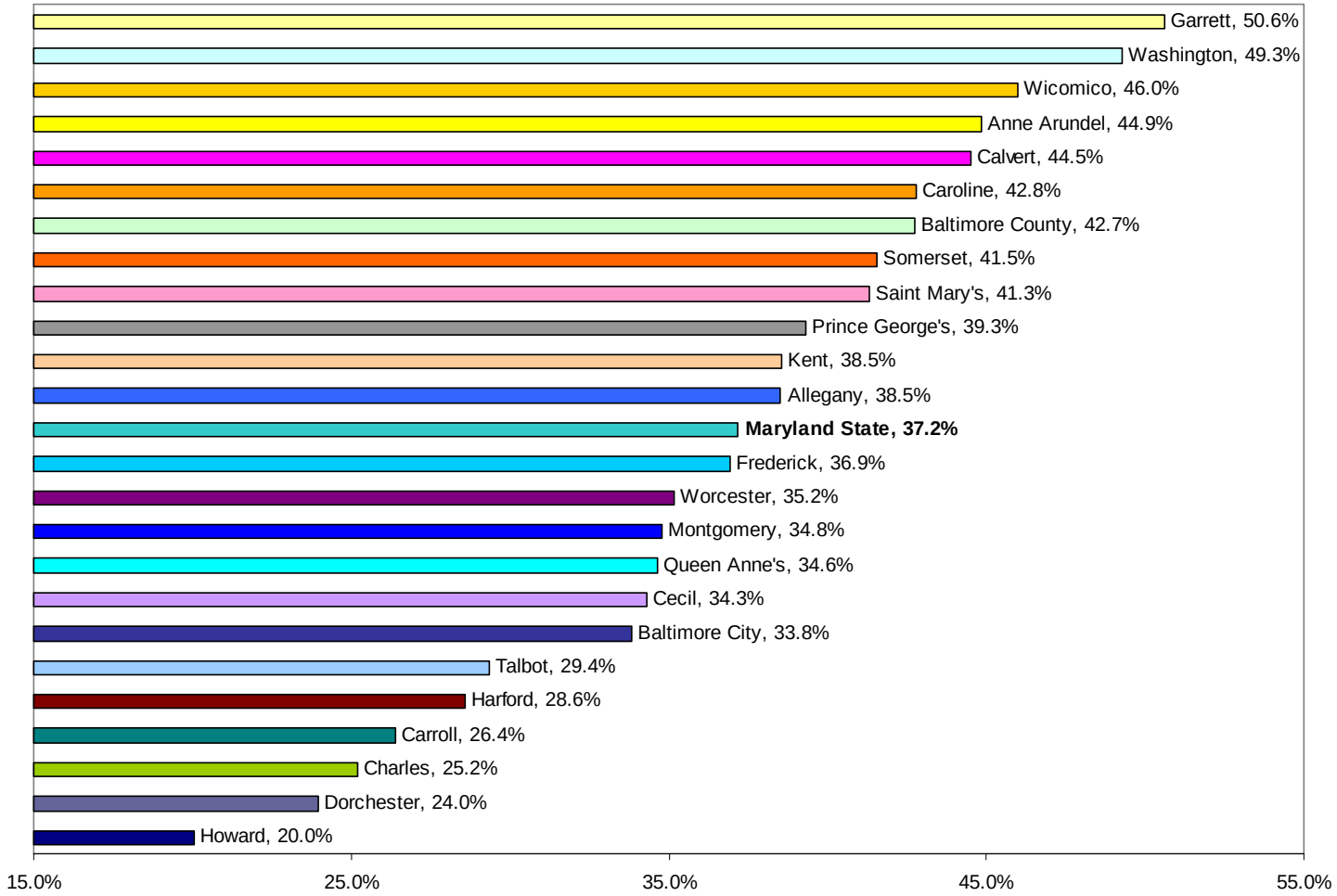
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 23
PERCENTAGE OF ELEMENTARY SCHOOL STUDENTS ELIGIBLE FOR FARMS DEMONSTRATING PROFICIENCY IN MSA MATH IN EACH LOCAL SCHOOL SYSTEM: GRADES 3 TO 5



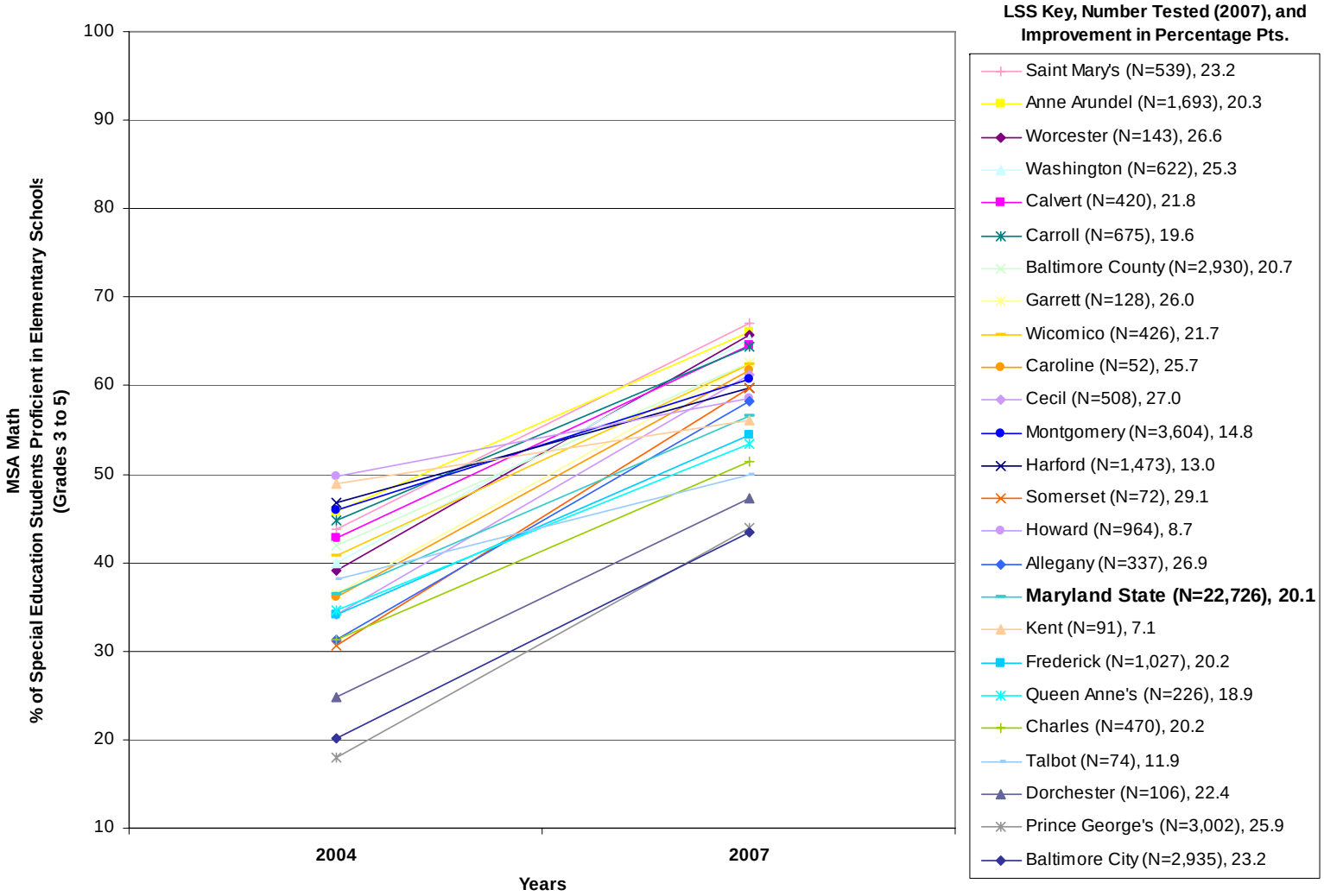
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 24
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
MSA MATH: ELEMENTARY SCHOOL STUDENTS ELIGIBLE FOR FARMS GRADES 3 TO 5
2004 TO 2007



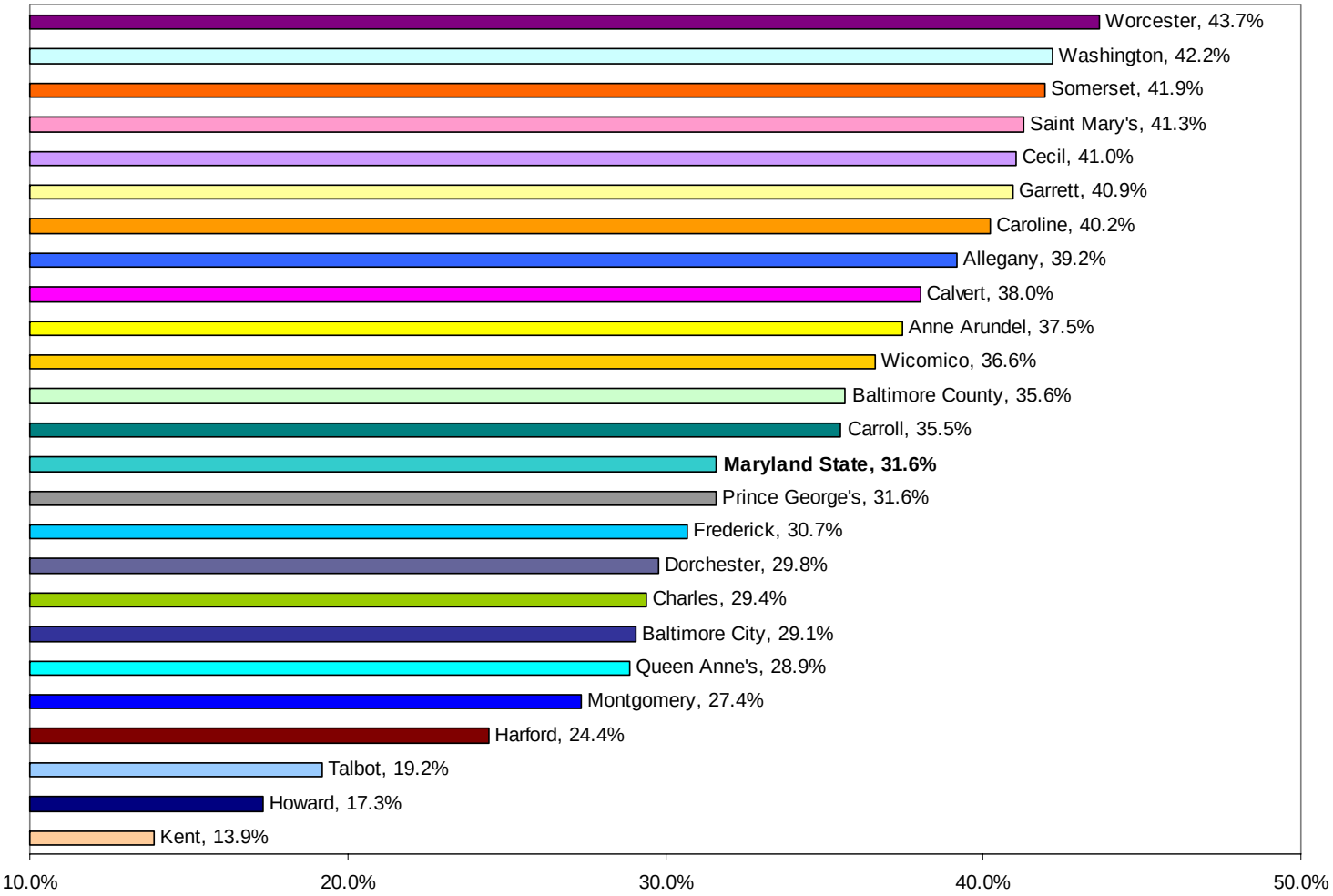
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 25
PERCENTAGE OF ELEMENTARY SCHOOL SPECIAL EDUCATION STUDENTS DEMONSTRATING PROFICIENCY IN MSA MATH IN EACH LOCAL SCHOOL SYSTEM: GRADES 3 TO 5



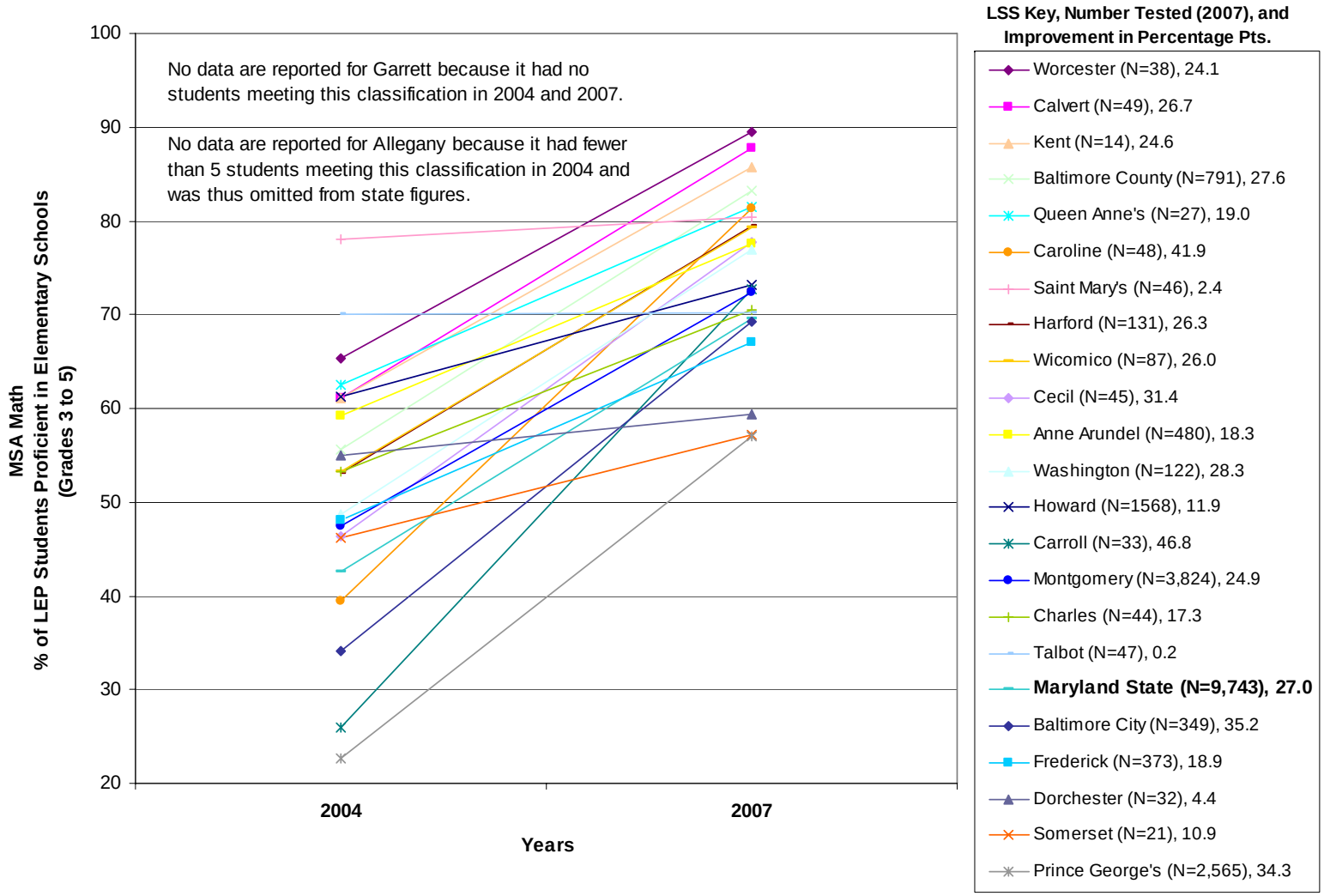
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 26
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
MSA MATH: ELEMENTARY SCHOOL SPECIAL EDUCATION STUDENTS GRADES 3 TO 5
2004 TO 2007



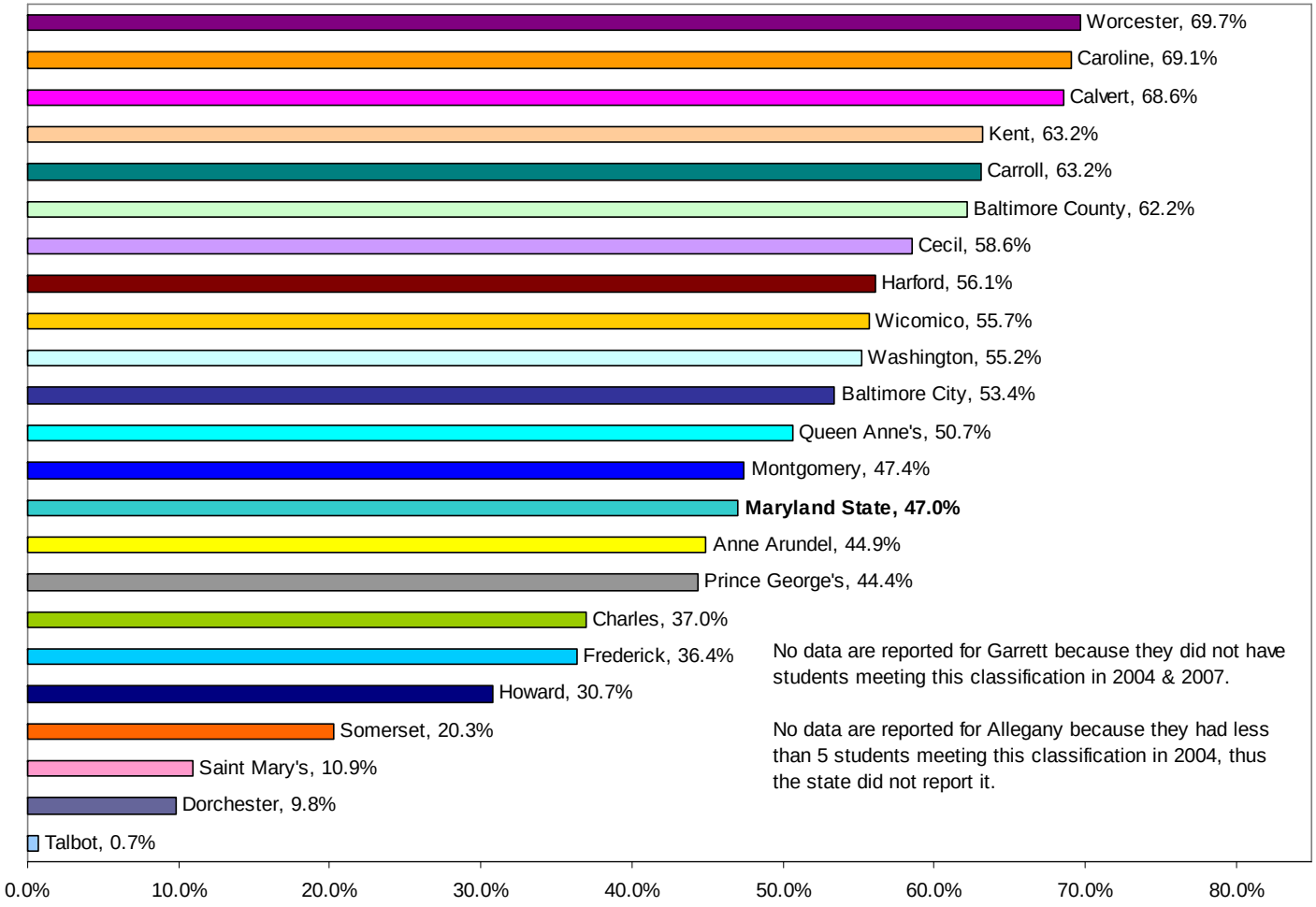
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 27
PERCENTAGE OF ELEMENTARY SCHOOL LEP STUDENTS DEMONSTRATING PROFICIENCY IN MSA MATH IN EACH LOCAL SCHOOL SYSTEM: GRADES 3 TO 5



Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 28
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
MSA MATH: ELEMENTARY SCHOOL LEP STUDENTS GRADES 3 TO 5
2004 TO 2007



Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Limitation: Use caution when comparing percentages of any LSS that has less than 50 students in this subgroup. See preceding Exhibit for Ns.

3.1.2 Improvements in Middle School Students' MSA Performance

Beginning with the assessments administered in 2004, students in all three middle school grades (6, 7, and 8) took the MSA, and the percentage of middle school students in 2004 who were at or above the "proficient" level can now be compared with the 2007 cohort of middle school students. As done above for elementary school students, we present pairs of graphs in Exhibits 29 through 52 that compare the improvements made by the NCLB groups of middle school students. In the statements below, we summarize the information presented in these pairs of exhibits.

- Exhibits 29 and 30 show that although the statewide middle school population continued to have higher MSA **reading** proficiency levels than the three special population subsets of students, LEP and SPED students closed their gaps to reach the 100 percent proficiency goal to a greater extent than FARMS students or the entire population of middle school students.

- Exhibits 31 and 30 show that the statewide middle school population had slightly greater improvements in the percentage of students demonstrating proficiency as measured by MSA **math** than did the three special populations.

- Exhibits 33 and 34 show that all ethnic groups improved their proficiency levels on MSA **reading**. Asian/Pacific Islander students had the highest proficiency levels and the highest relative improvements. Hispanic and African-American students had the lowest proficiency levels and the lowest relative improvements.

- Exhibits 35 and 36 show that all ethnic groups improved their proficiency levels on MSA **math**. Asian/Pacific Islander students had the highest proficiency levels and the highest relative improvements. Hispanic and African-American students had the lowest proficiency levels and the lowest relative improvements.

- Exhibits 37 and 38 show that middle school students in all but one of the 24 LSSs had improved MSA **reading** proficiency levels. Performance gap improvements by LSSs ranged from -16 to +52 percent.

- Exhibits 39 and 40 show that middle school FARMS students in all but two of the 24 LSSs had improved MSA **reading** proficiency levels. Performance gap improvements by LSSs ranged from -11 to +44 percent.

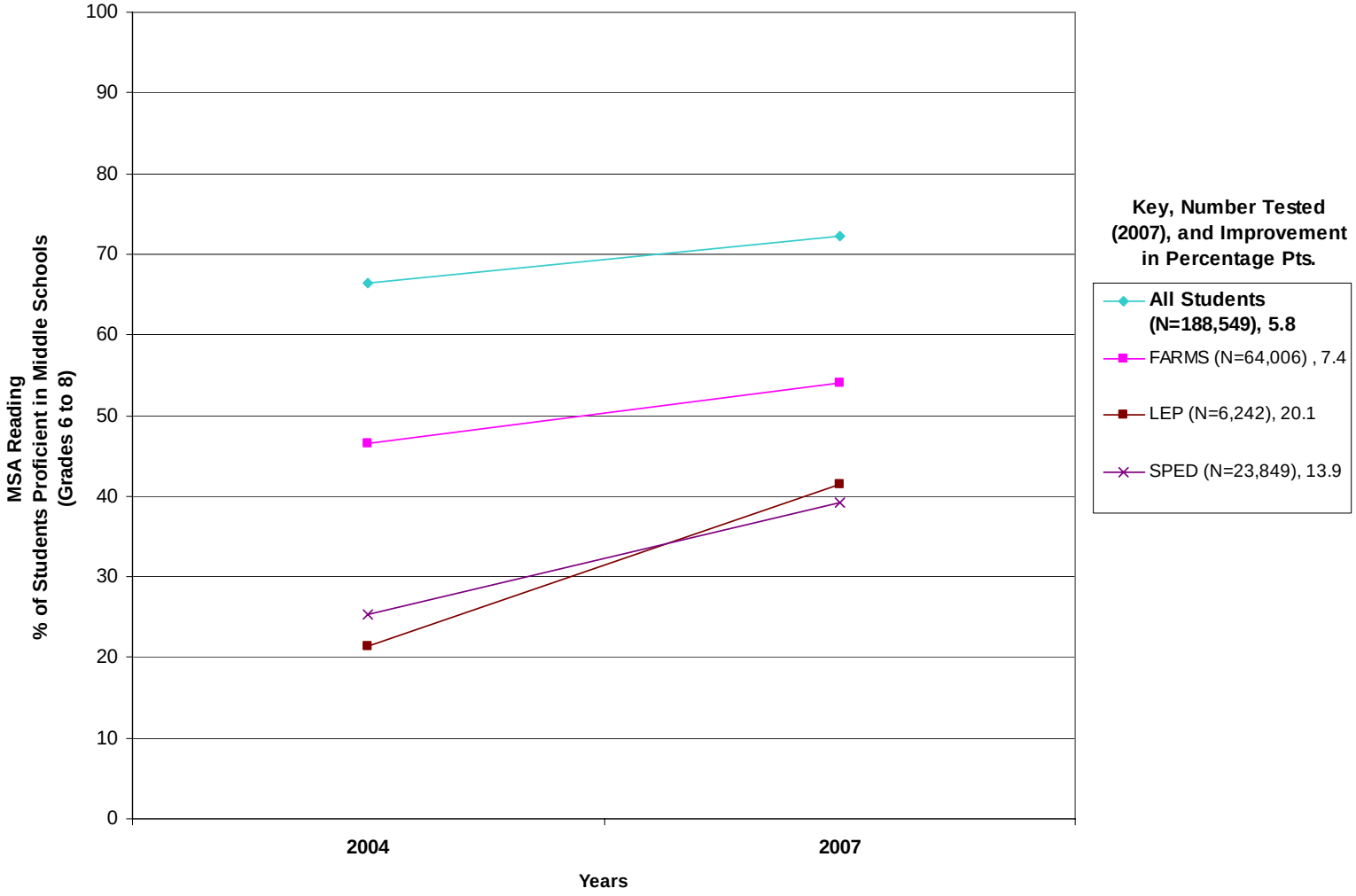
- Exhibits 41 and 42 show that middle school SPED students in all 24 LSSs had improved MSA **reading** proficiency levels. Performance gap improvements by LSSs ranged from 2 to 46 percent.

- Exhibits 43 and 44 show that middle school LEP students in 16 of the 21 LSSs for which LEP data were reported had improved MSA **reading** proficiency levels. Performance gap improvements by LSSs ranged from negative percentages (i.e., declines instead of

improvements) to 69 percent. Readers should note that the small number of LEP students in many LSSs can greatly affect the calculations of percentages and changes in percentages shown in these graphs.

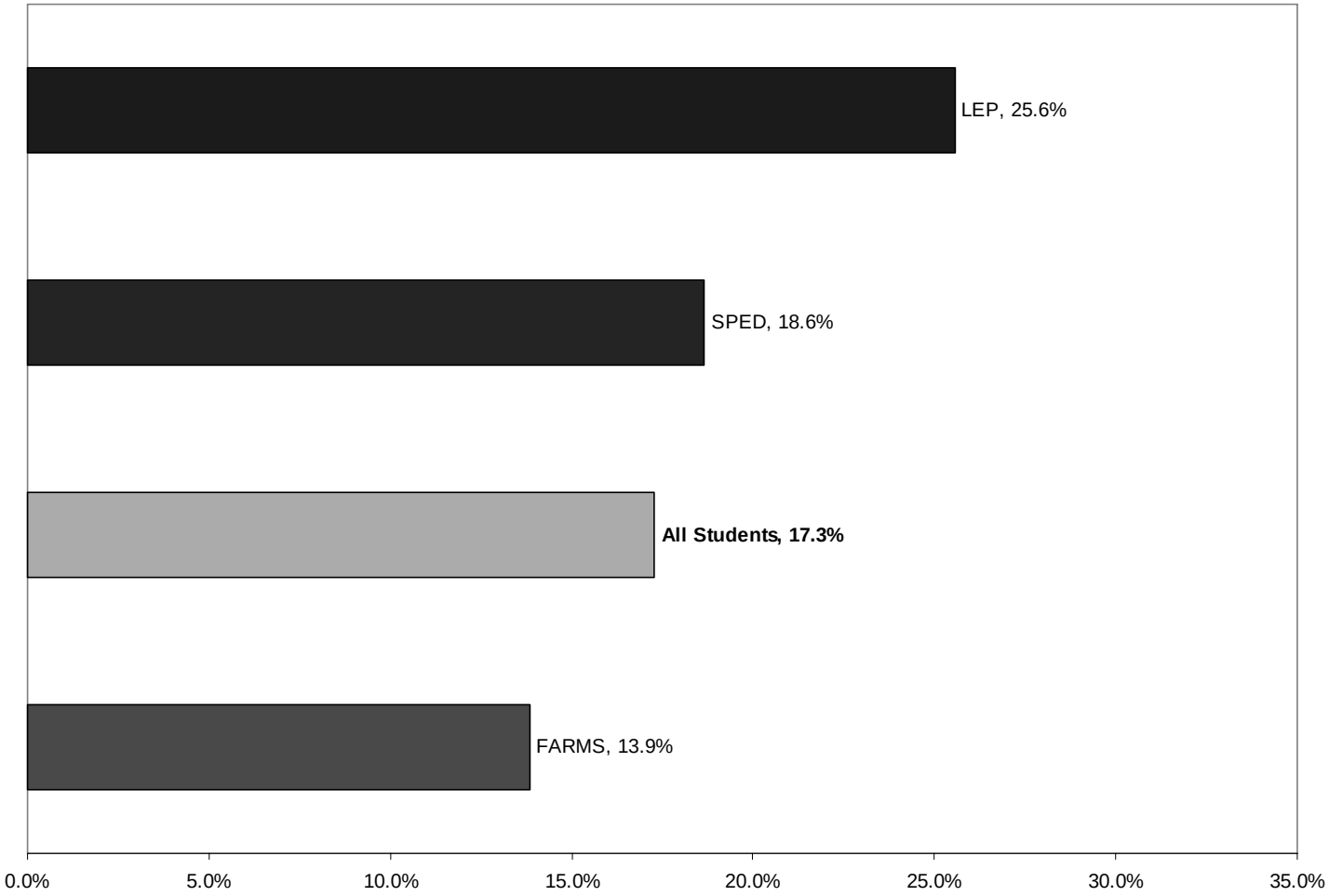
- Exhibits 45 and 46 show that middle school students in all 24 LSSs had improved MSA **math** proficiency levels. Performance gap improvements by LSSs ranged from 13 to 61 percent.
- Exhibits 47 and 48 show that middle school FARMS students in all 24 LSSs had improved MSA **math** proficiency levels. Performance gap improvements by LSSs ranged from 5 to 53 percent.
- Exhibits 49 and 50 show that middle school SPED students in all 24 LSSs had improved MSA **math** proficiency levels. Performance gap improvements by LSSs ranged from 12 to 48 percent.
- Exhibits 51 and 52 show that middle school LEP students in all but 3 of the 21 LSSs for which LEP data were reported had improved MSA **math** proficiency levels. Performance gap improvements by LSSs ranged from -24 to +74 percent. Readers should note that the small number of LEP students in many LSSs can greatly affect the percentages and changes in percentages shown in these graphs.

EXHIBIT 29
PERCENTAGE OF MIDDLE SCHOOL STUDENTS STATEWIDE DEMONSTRATING PROFICIENCY IN MSA READING
ALL STUDENTS AND SUBGROUPS



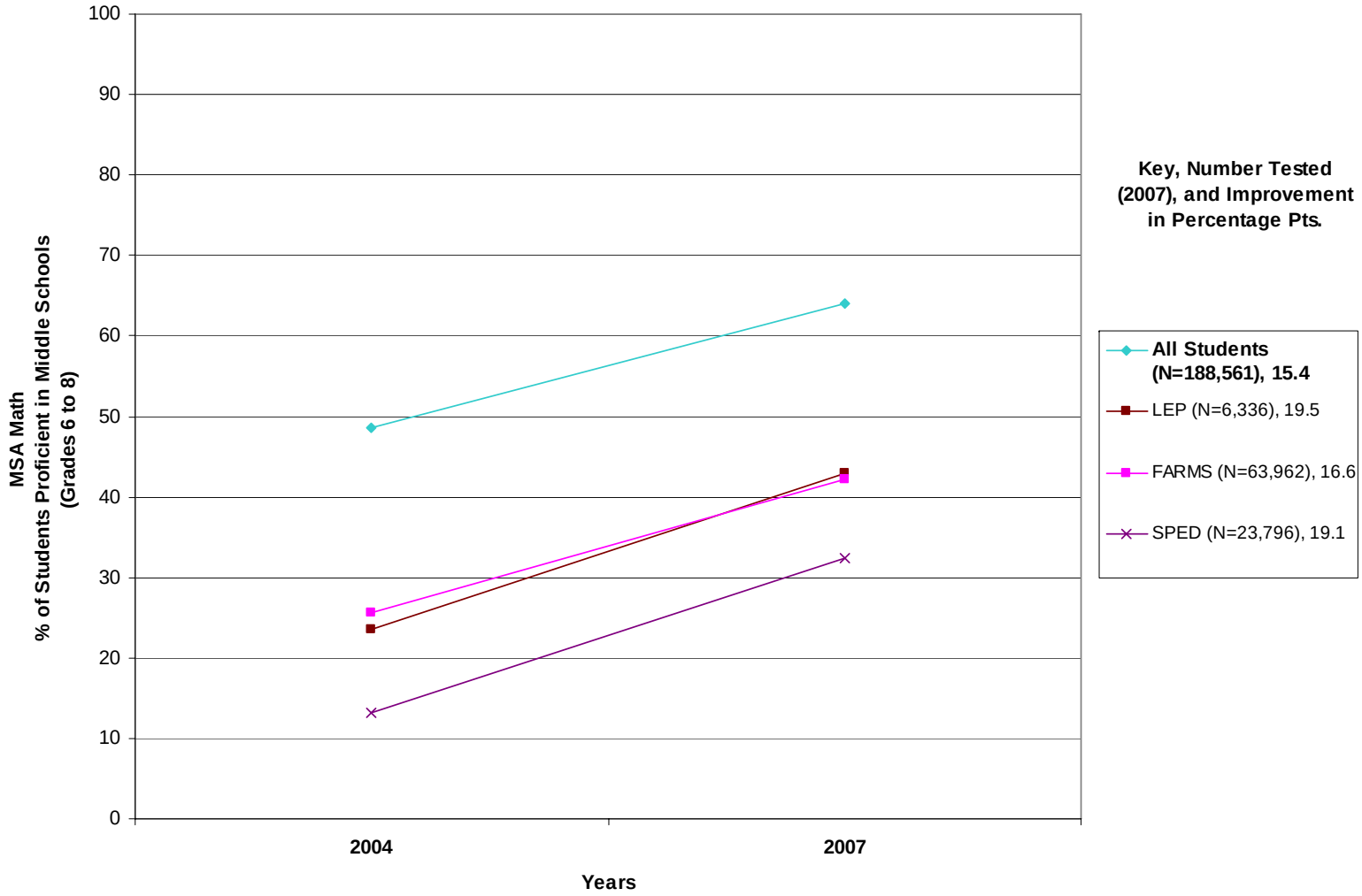
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 30
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS IN MSA READING
MIDDLE SCHOOL STUDENTS STATEWIDE: ALL STUDENTS AND SUBGROUPS
2004 TO 2007



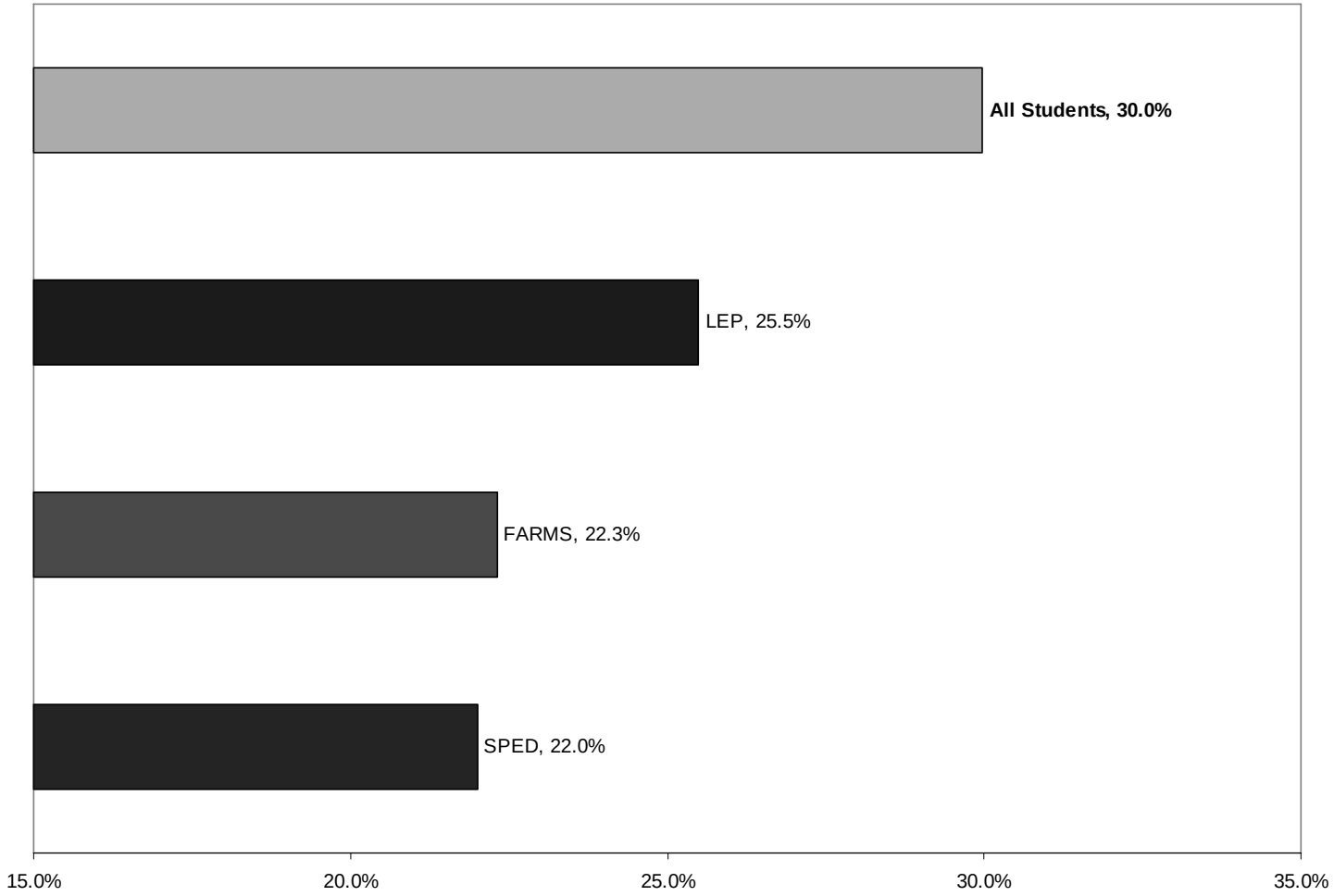
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 31
PERCENTAGE OF MIDDLE SCHOOL STUDENTS STATEWIDE DEMONSTRATING PROFICIENCY IN MSA MATH
ALL STUDENTS AND SUBGROUPS



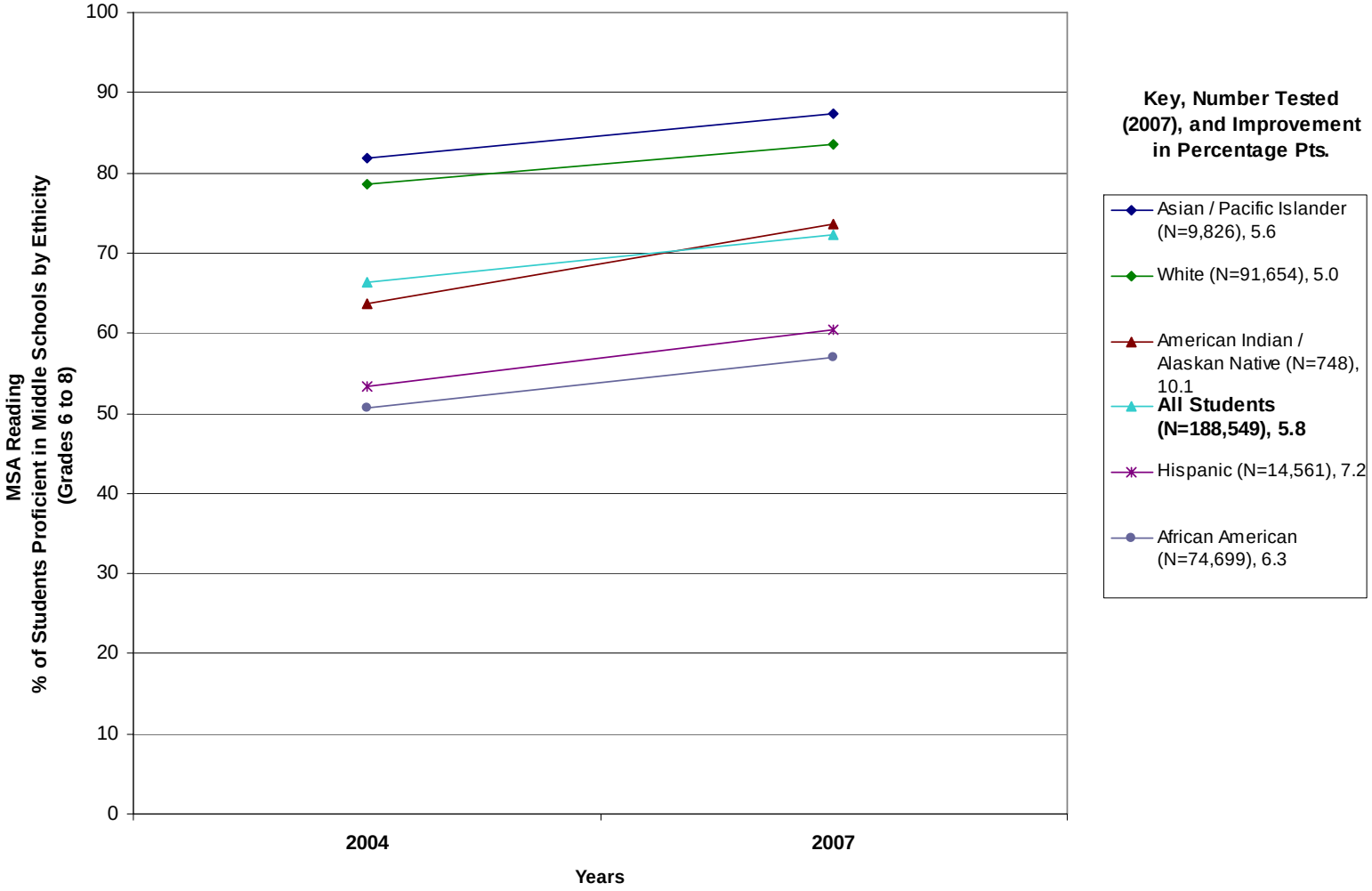
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 32
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS IN MSA MATH
MIDDLE SCHOOL STUDENTS STATEWIDE: ALL STUDENTS AND SUBGROUPS
2004 TO 2007



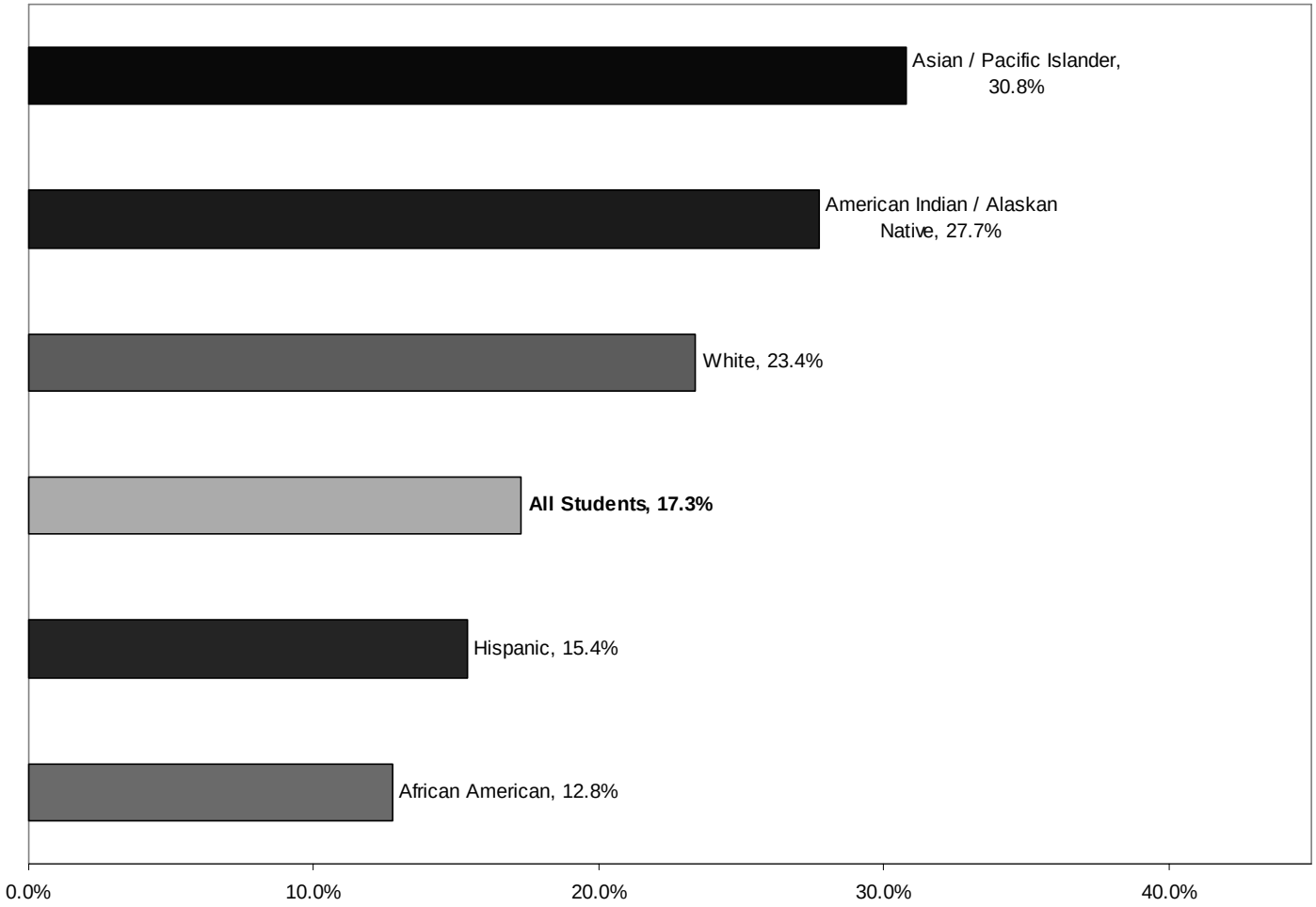
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 33
PERCENTAGE OF MIDDLE SCHOOL STUDENTS STATEWIDE DEMONSTRATING PROFICIENCY IN MSA READING
ALL STUDENTS AND ETHNIC GROUPS



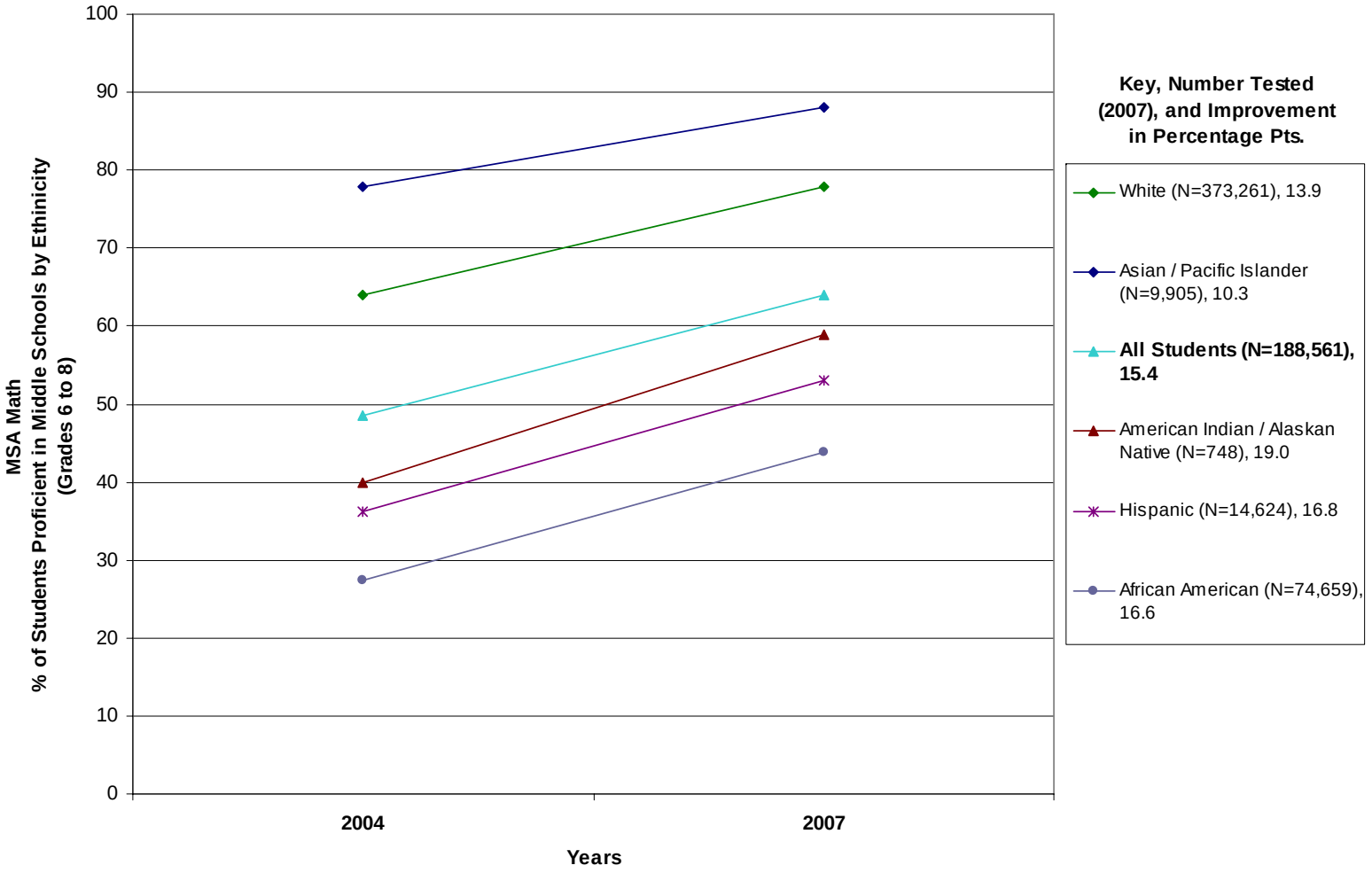
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 34
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS IN MSA READING
MIDDLE SCHOOL STUDENTS STATEWIDE: ALL STUDENTS AND ETHNIC GROUPS
2004 TO 2007



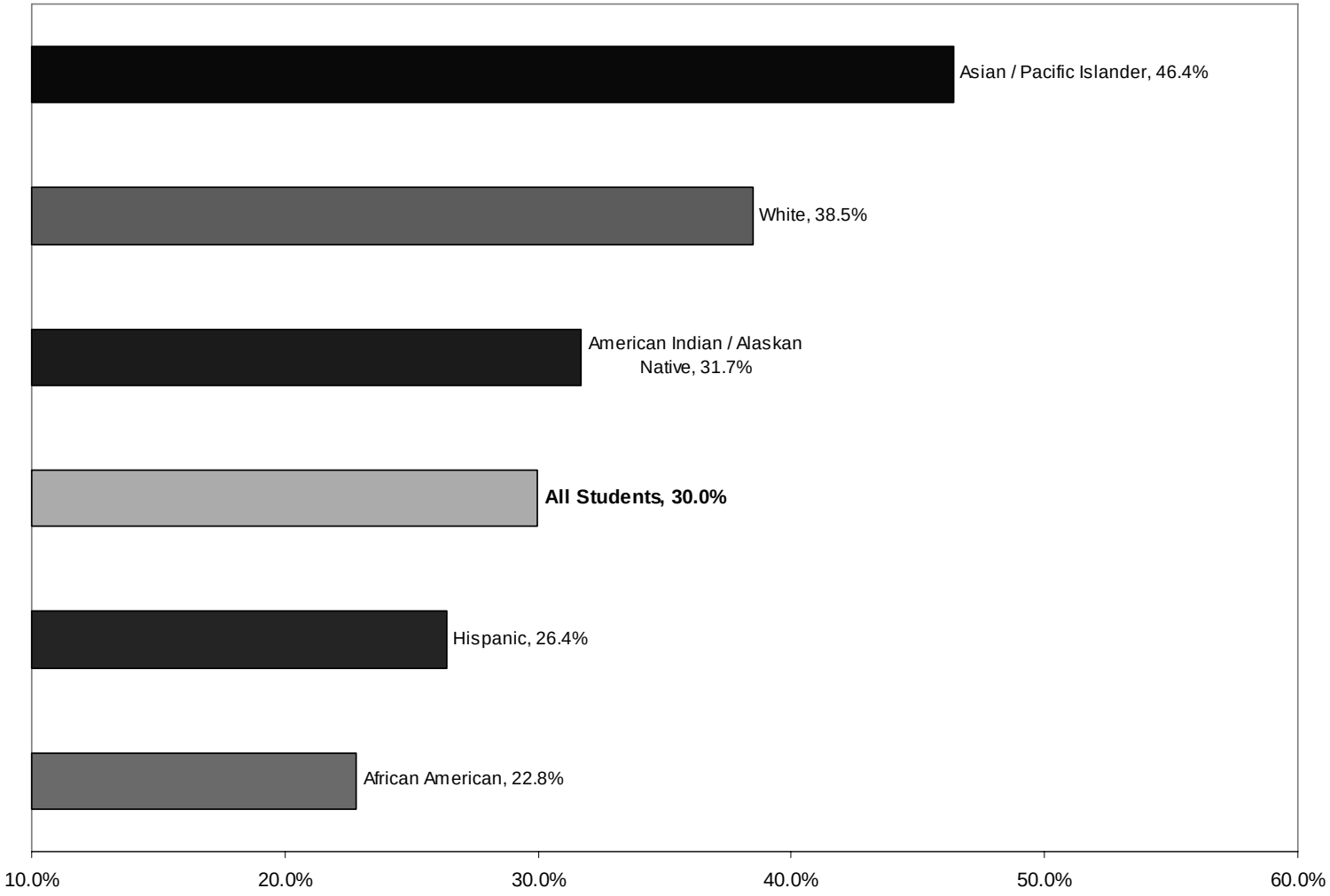
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 35
PERCENTAGE OF MIDDLE SCHOOL STUDENTS STATEWIDE DEMONSTRATING PROFICIENCY IN MSA MATH
ALL STUDENTS AND ETHNIC GROUPS



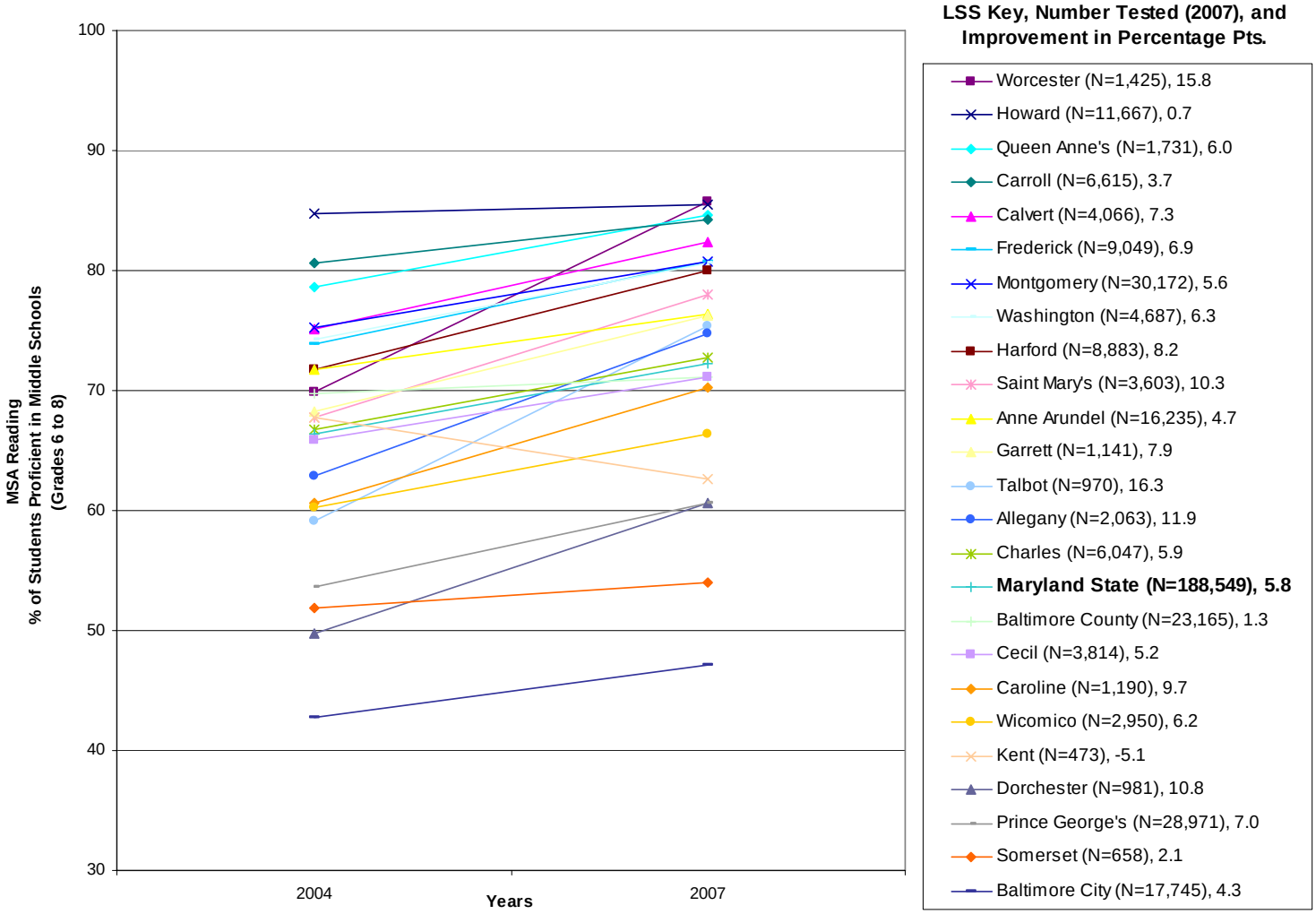
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 36
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS IN MSA MATH
MIDDLE SCHOOL STUDENTS STATEWIDE: ALL STUDENTS AND ETHNIC GROUPS
2004 TO 2007



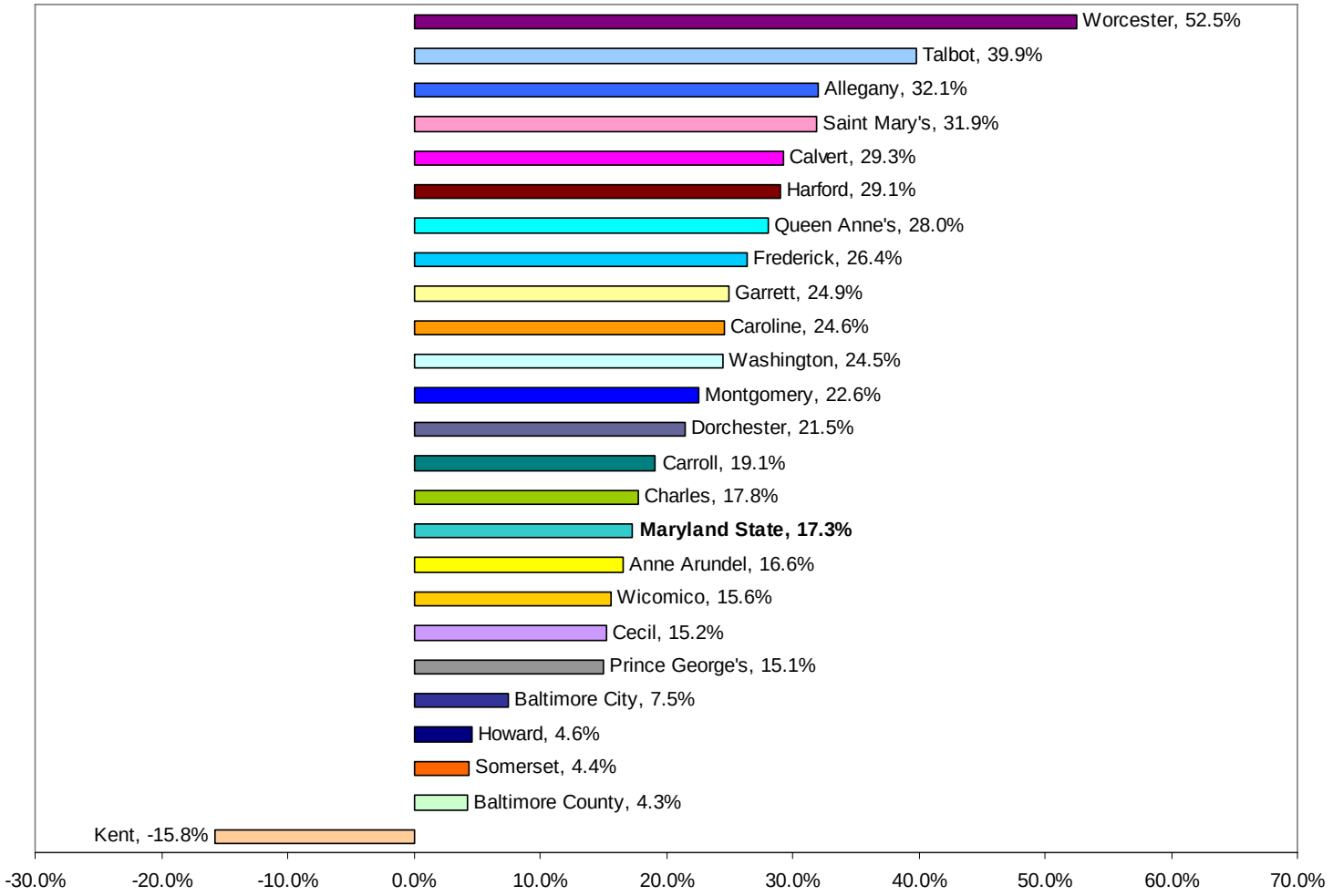
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 37
PERCENTAGE OF MIDDLE SCHOOL STUDENTS
DEMONSTRATING PROFICIENCY IN MSA READING IN EACH LOCAL SCHOOL SYSTEM: ALL STUDENTS GRADES 6 TO 8



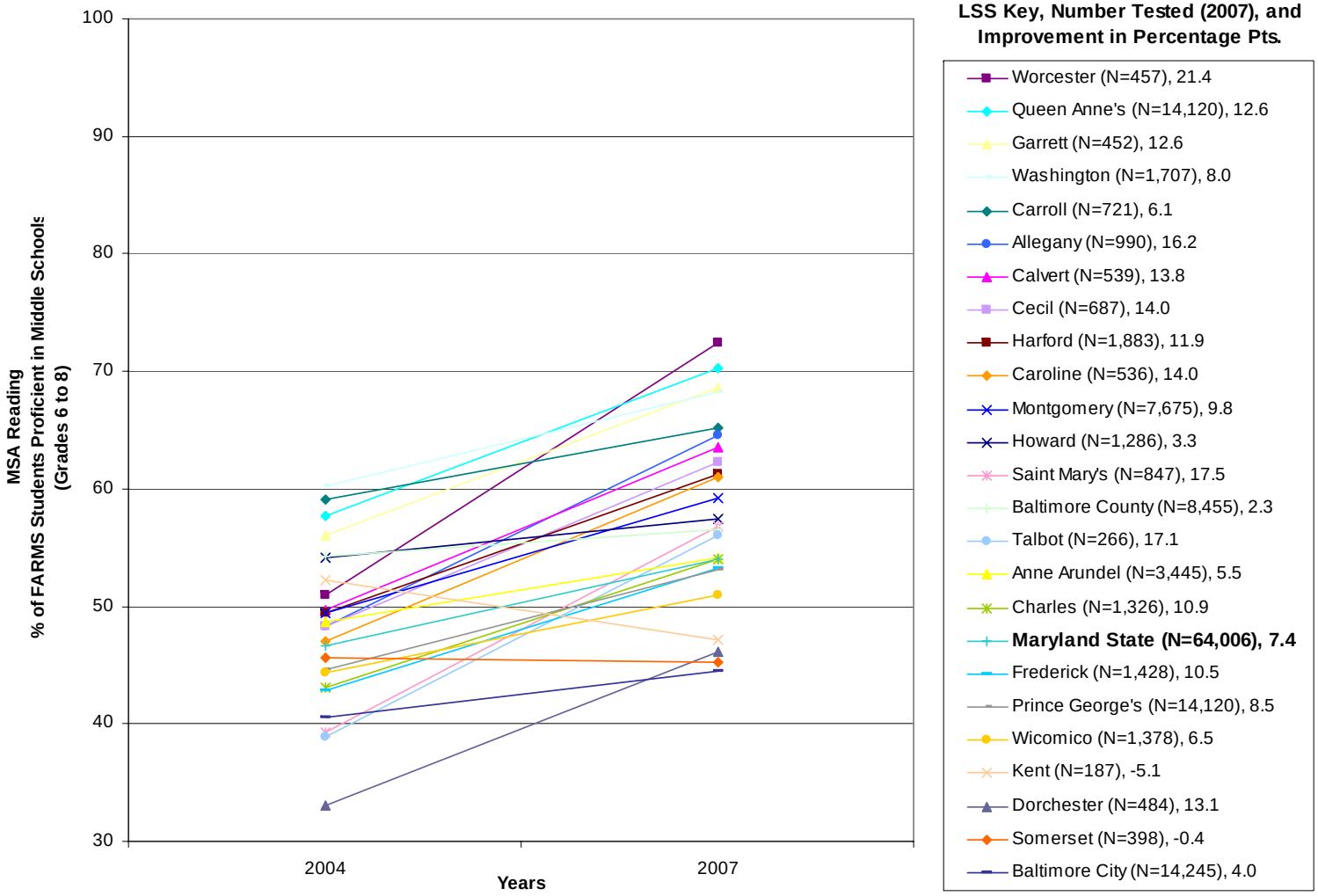
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 38
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
MSA READING: ALL MIDDLE SCHOOL STUDENTS GRADES 6 TO 8
2004 TO 2007



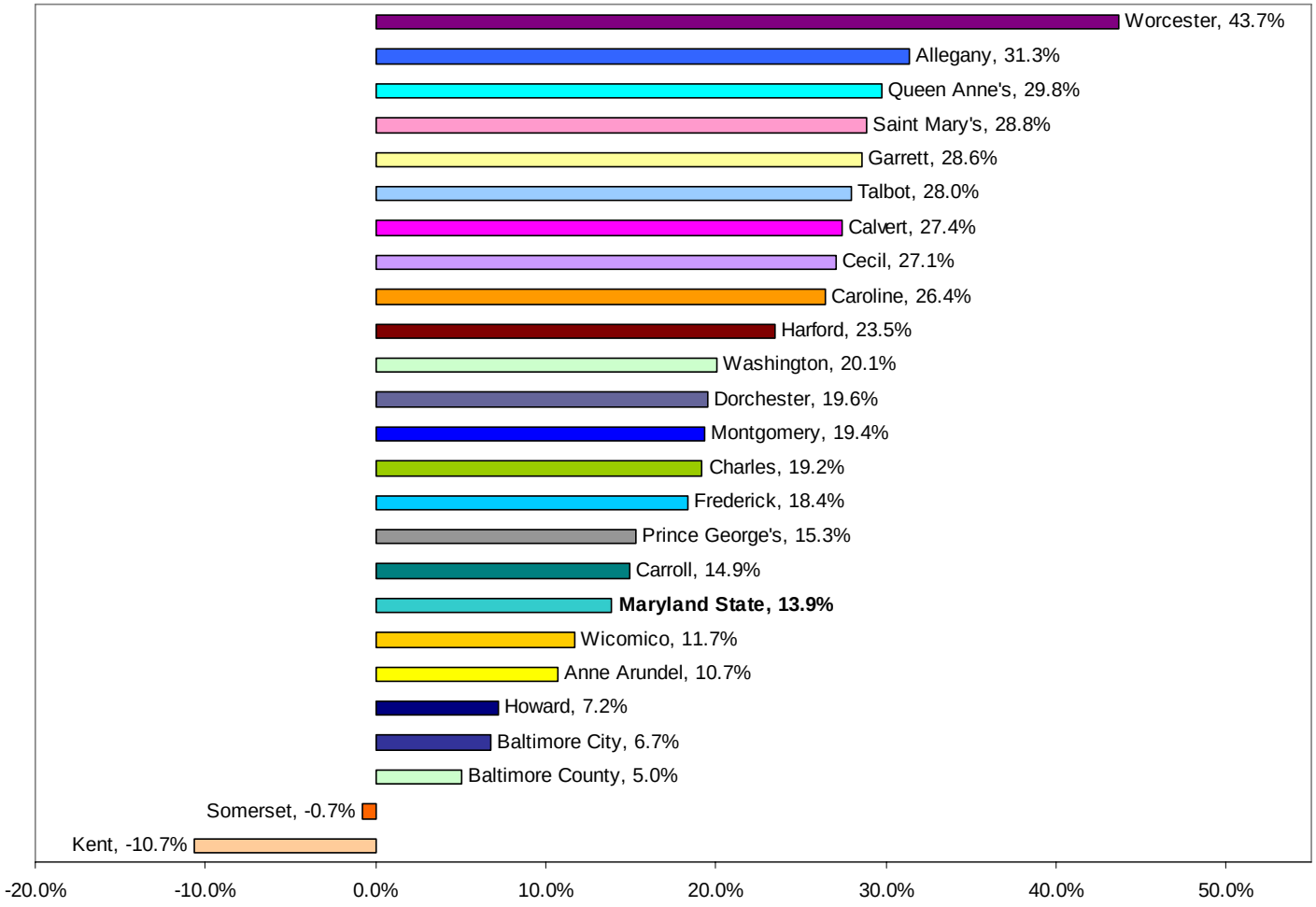
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 39
PERCENTAGE OF MIDDLE SCHOOL STUDENTS ELIGIBLE FOR FARMS
DEMONSTRATING PROFICIENCY IN MSA READING IN EACH LOCAL SCHOOL SYSTEM: GRADES 6 TO 8



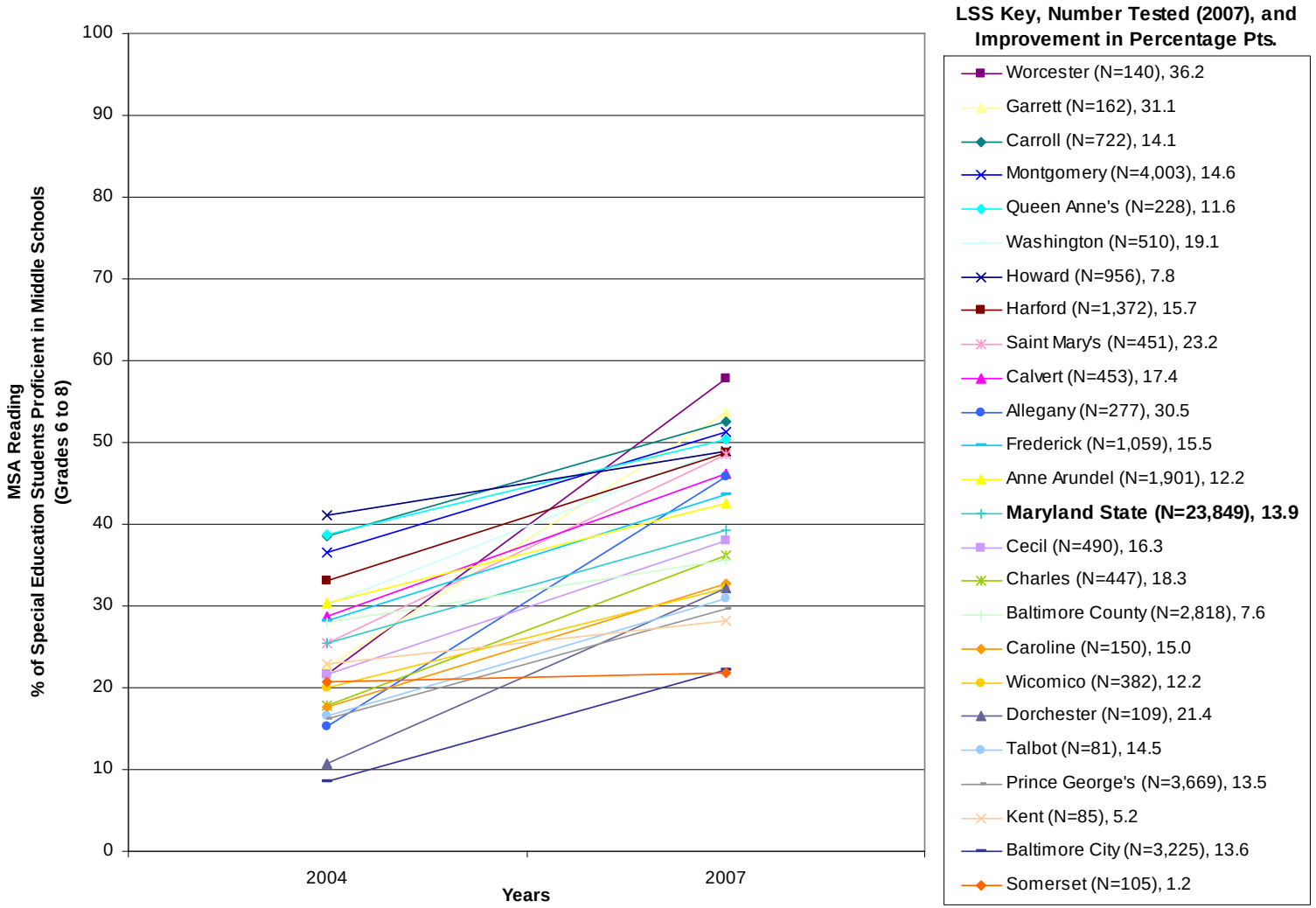
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 40
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
MSA READING: MIDDLE SCHOOL STUDENTS ELIGIBLE FOR FARMS GRADES 6 TO 8
2004 TO 2007



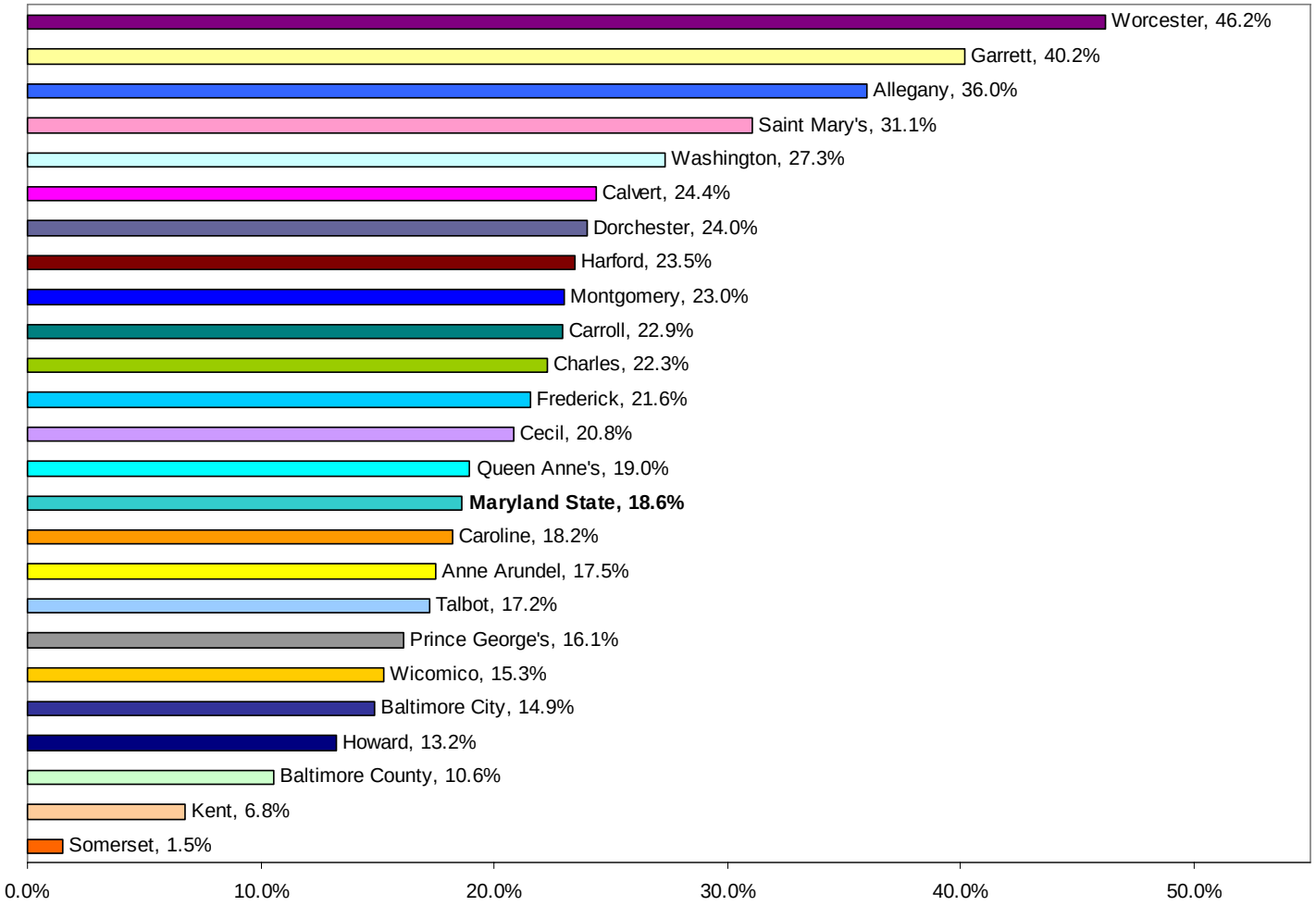
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 41
PERCENTAGE OF MIDDLE SCHOOL SPECIAL EDUCATION STUDENTS DEMONSTRATING PROFICIENCY IN MSA READING IN EACH LOCAL SCHOOL SYSTEM: GRADES 6 TO 8



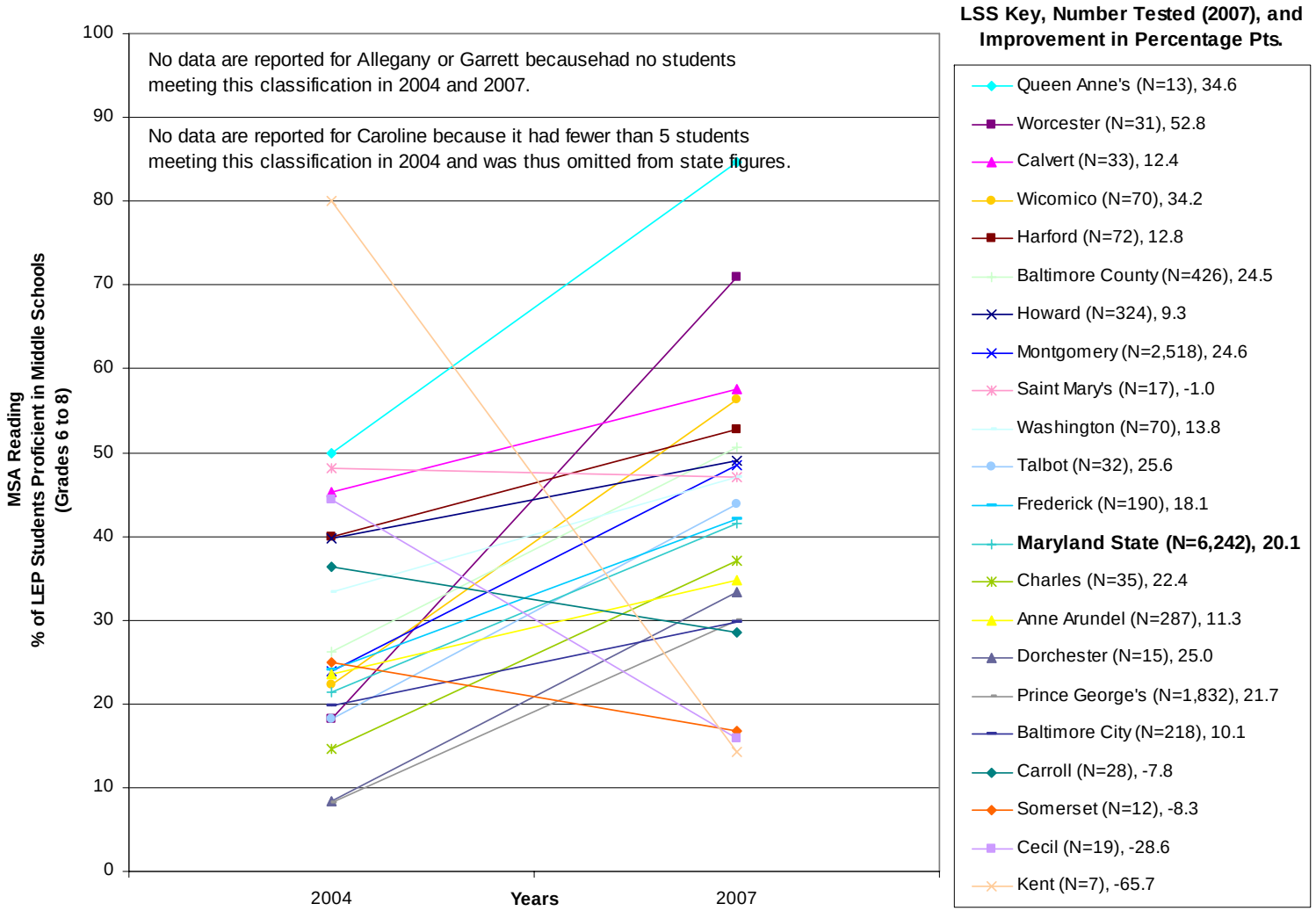
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 42
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
MSA READING: MIDDLE SCHOOL SPECIAL EDUCATION STUDENTS GRADES 6 TO 8
2004 TO 2007



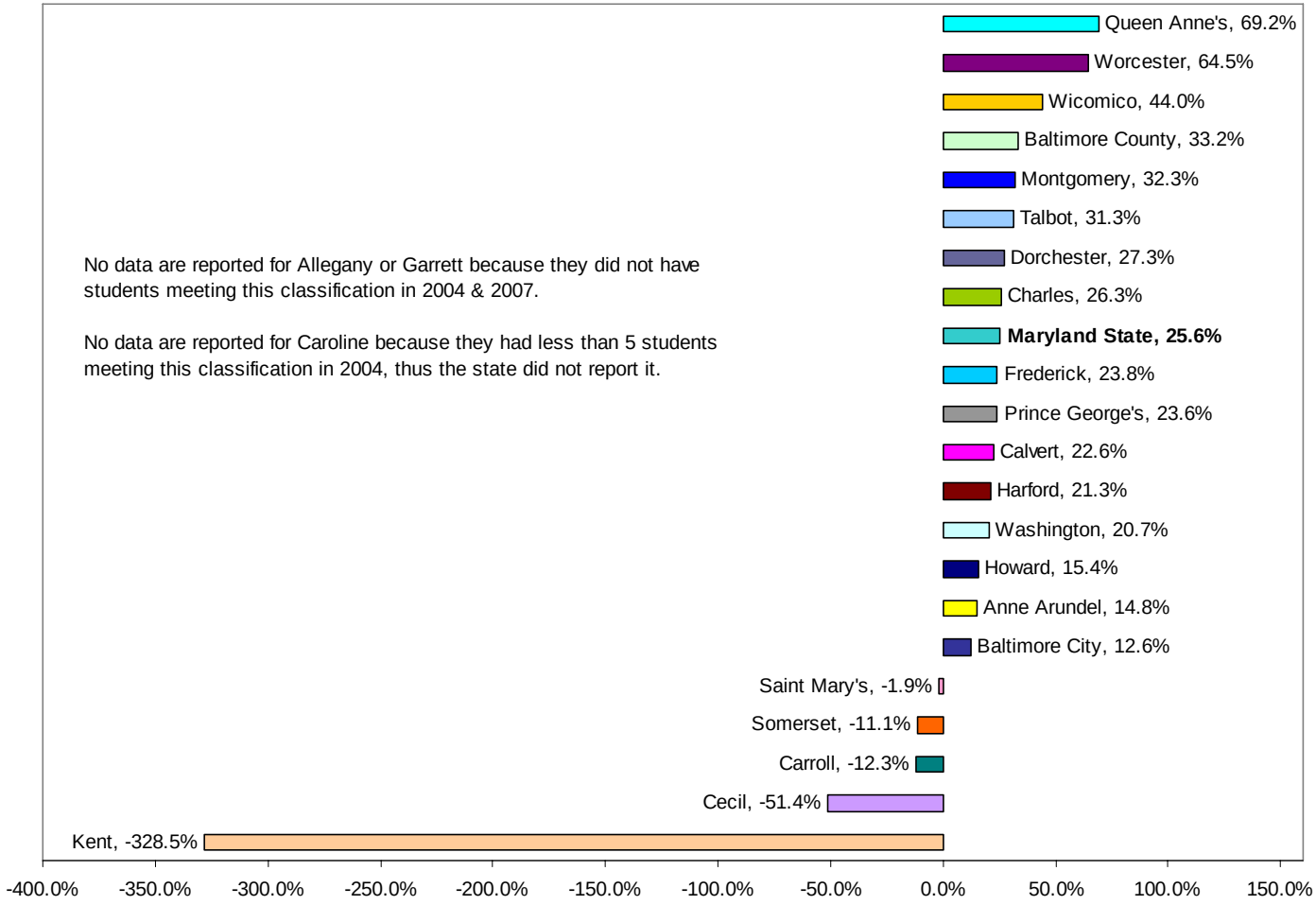
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 43
PERCENTAGE OF MIDDLE SCHOOL LEP STUDENTS DEMONSTRATING PROFICIENCY IN MSA READING IN EACH LOCAL SCHOOL SYSTEM: GRADES 6 TO 8



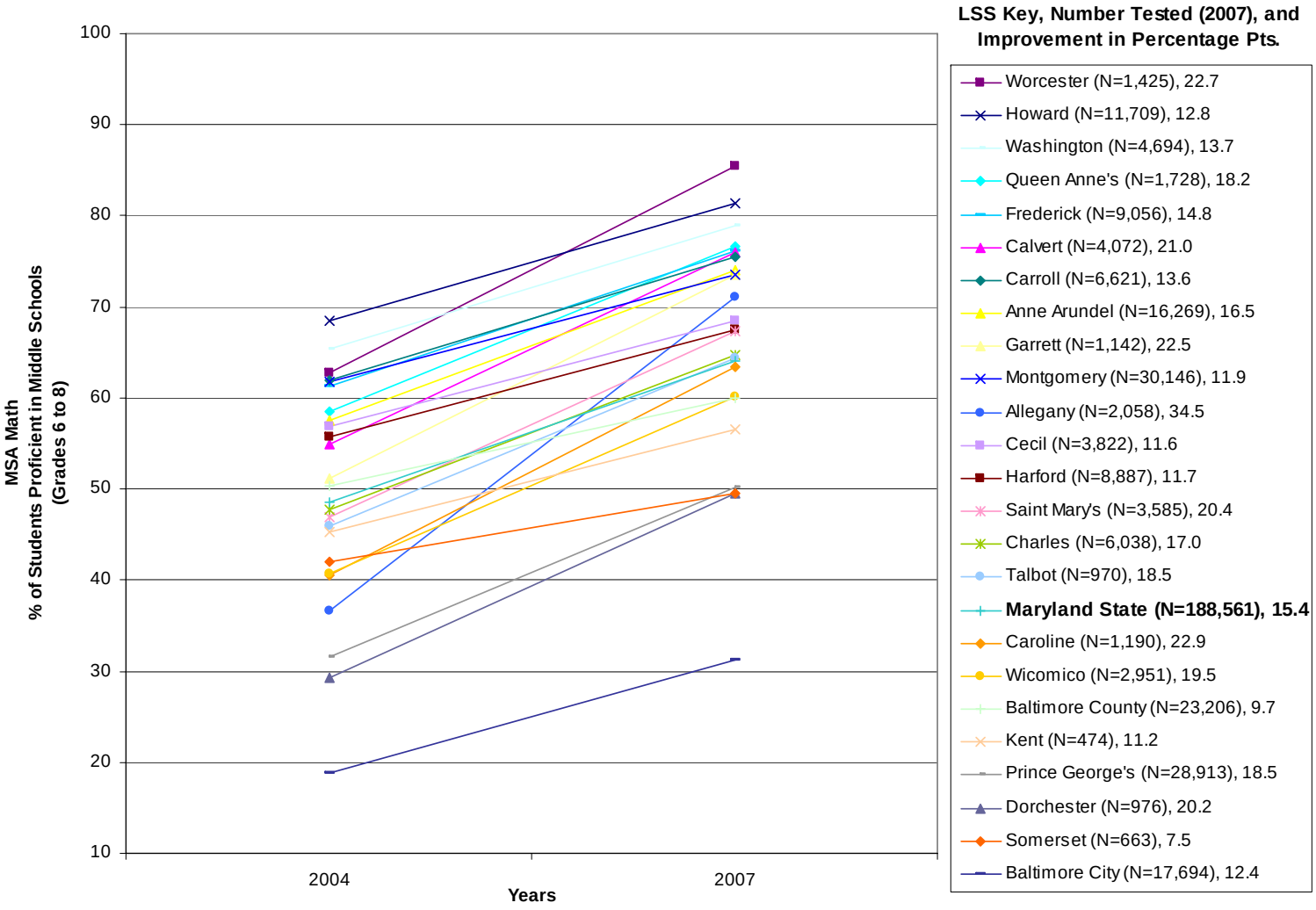
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 44
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
MSA READING: MIDDLE SCHOOL LEP STUDENTS GRADES 6 TO 8
2004 TO 2007



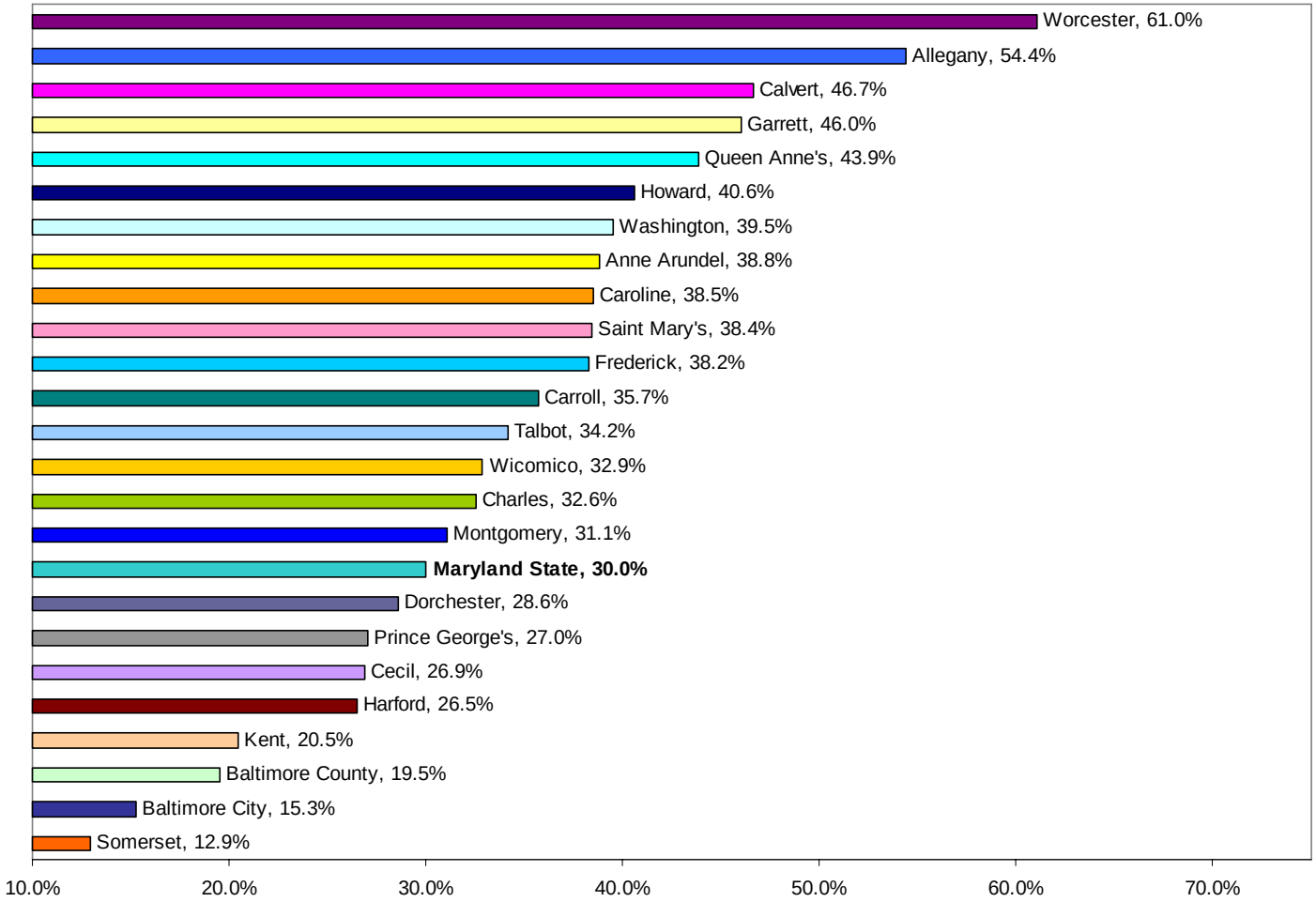
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Limitation: Use caution when comparing percentages of any LSS that has less than 50 students in this subgroup. See preceding Exhibit for Ns.

EXHIBIT 45
PERCENTAGE OF MIDDLE SCHOOL STUDENTS
DEMONSTRATING PROFICIENCY IN MSA MATH IN EACH LOCAL SCHOOL SYSTEM: ALL STUDENTS GRADES 6 TO 8



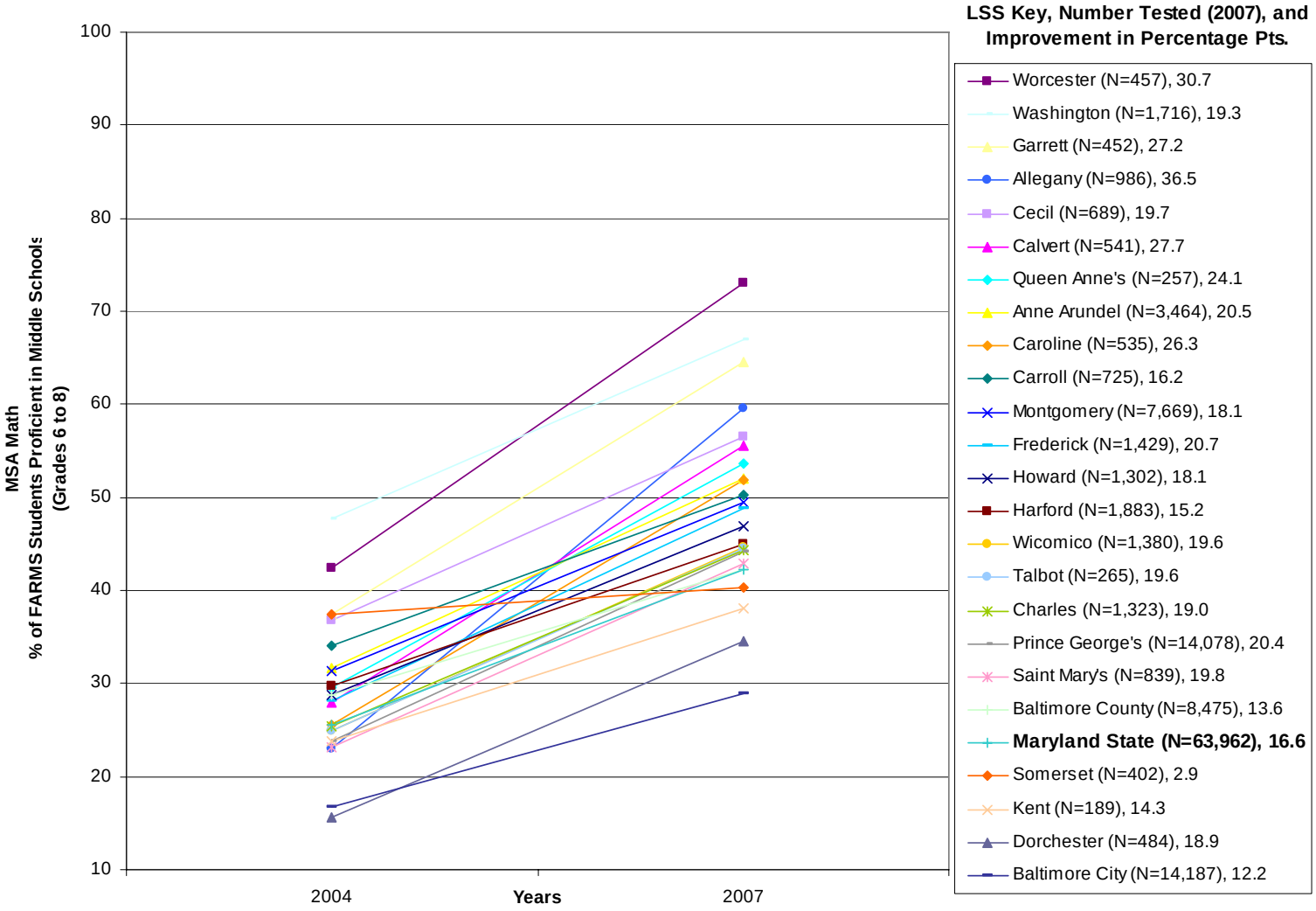
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 46
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
MSA MATH: ALL MIDDLE SCHOOL STUDENTS GRADES 6 TO 8
2004 TO 2007



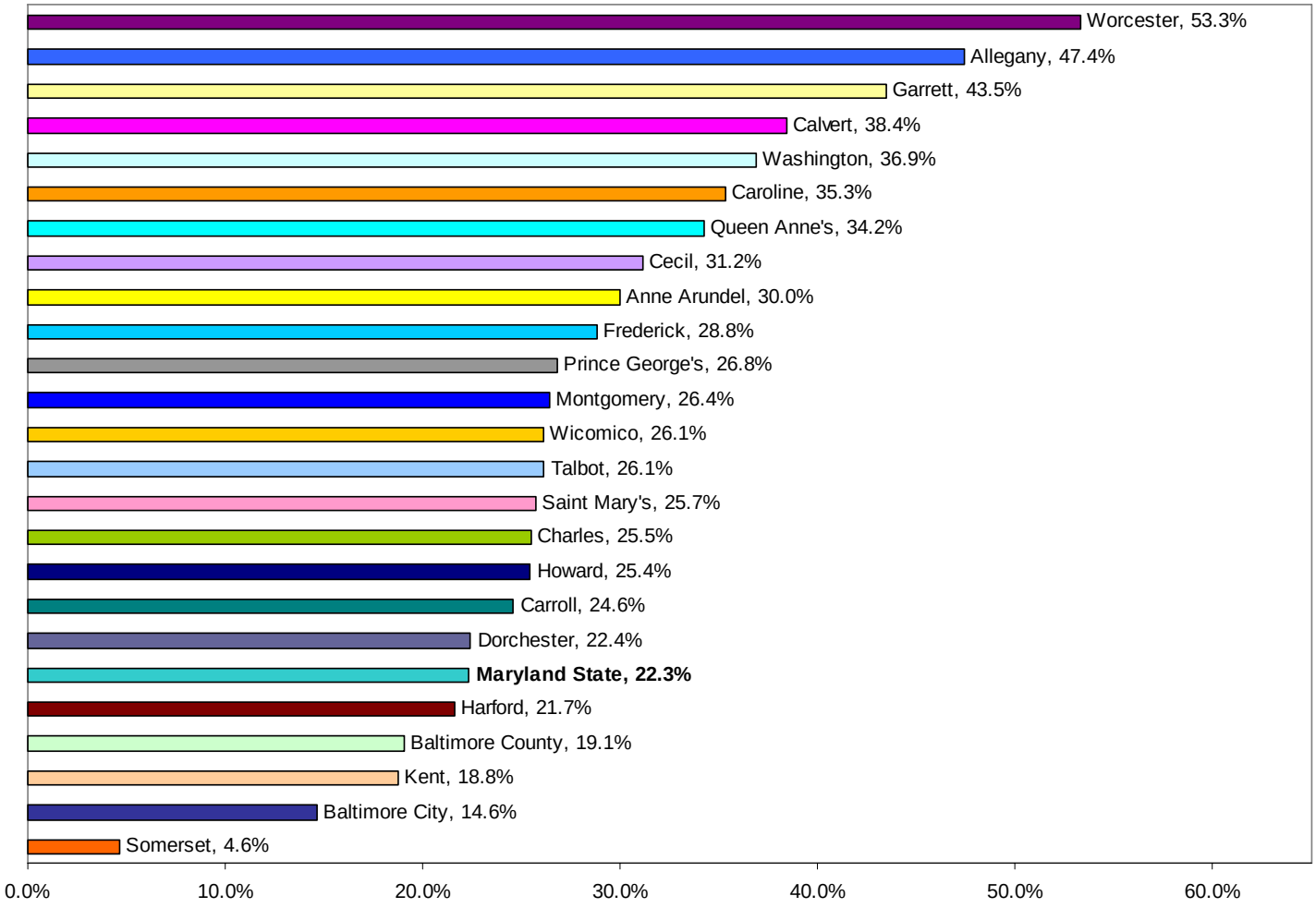
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 47
PERCENTAGE OF MIDDLE SCHOOL STUDENTS ELIGIBLE FOR FARMS DEMONSTRATING PROFICIENCY IN MSA MATH IN EACH LOCAL SCHOOL SYSTEM: GRADES 6 TO 8



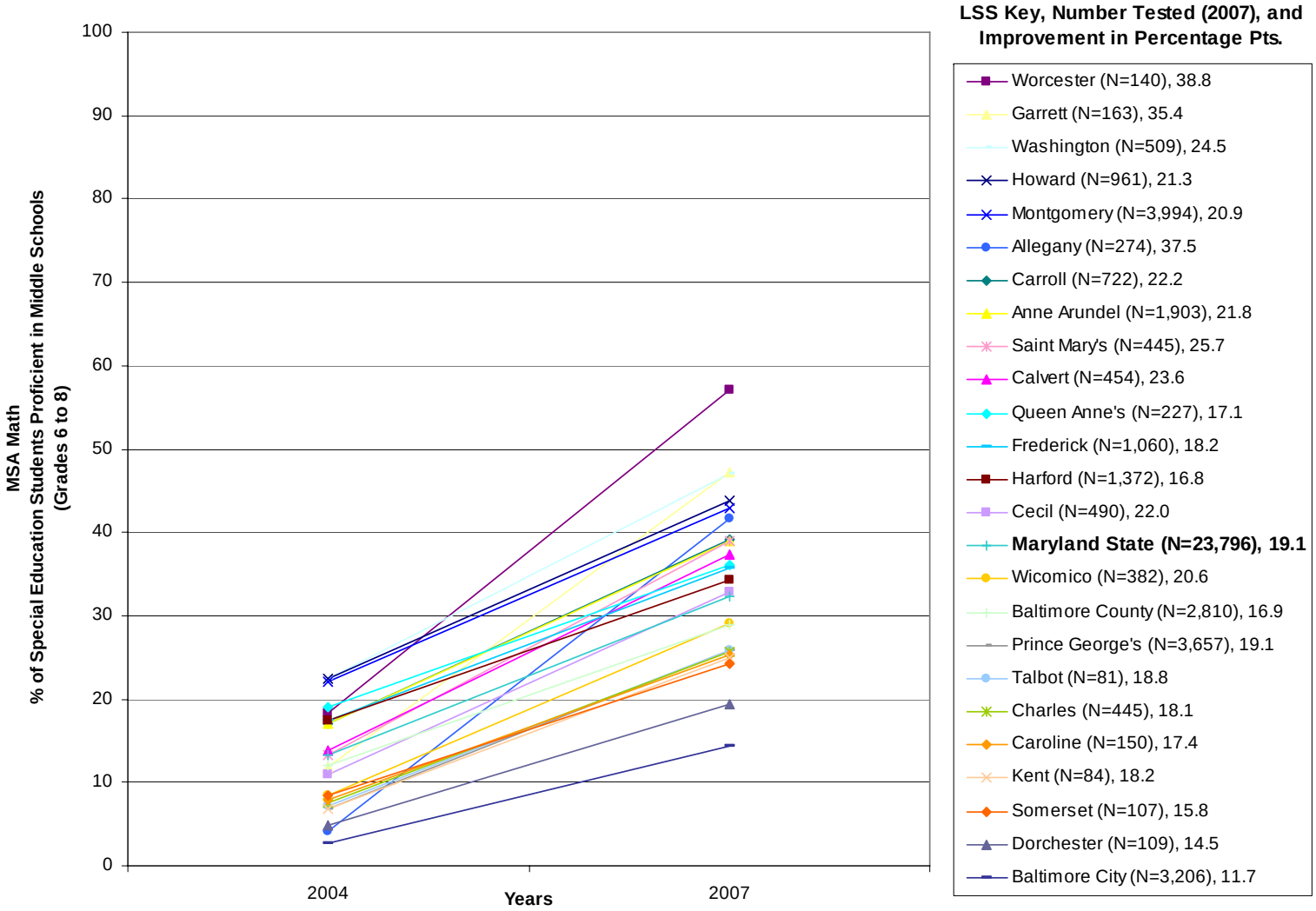
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 48
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
MSA MATH: MIDDLE SCHOOL STUDENTS ELIGIBLE FOR FARMS GRADES 6 TO 8
2004 TO 2007



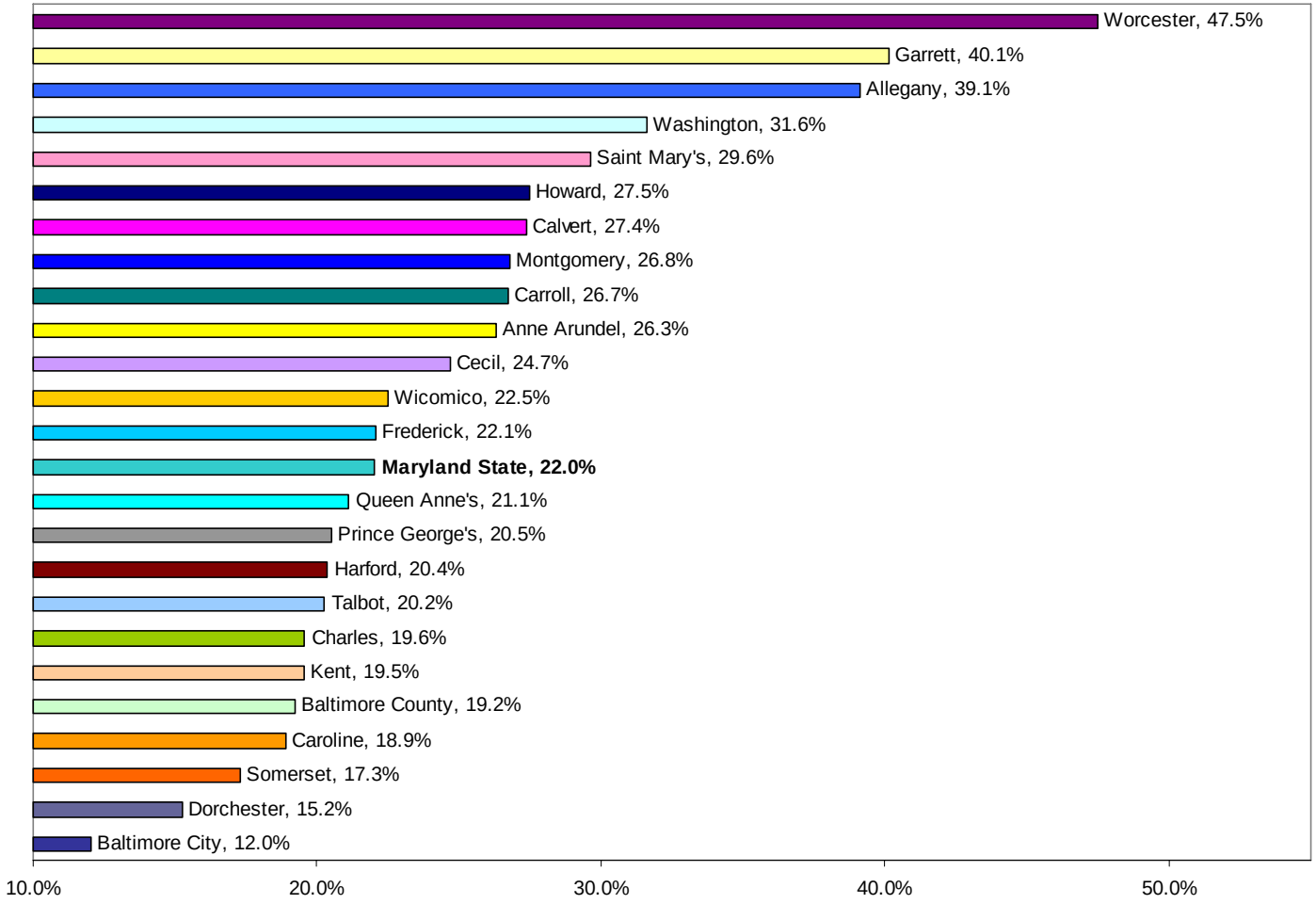
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 49
PERCENTAGE OF MIDDLE SCHOOL SPECIAL EDUCATION STUDENTS DEMONSTRATING PROFICIENCY IN MSA MATH IN EACH LOCAL SCHOOL SYSTEM: GRADES 6 TO 8



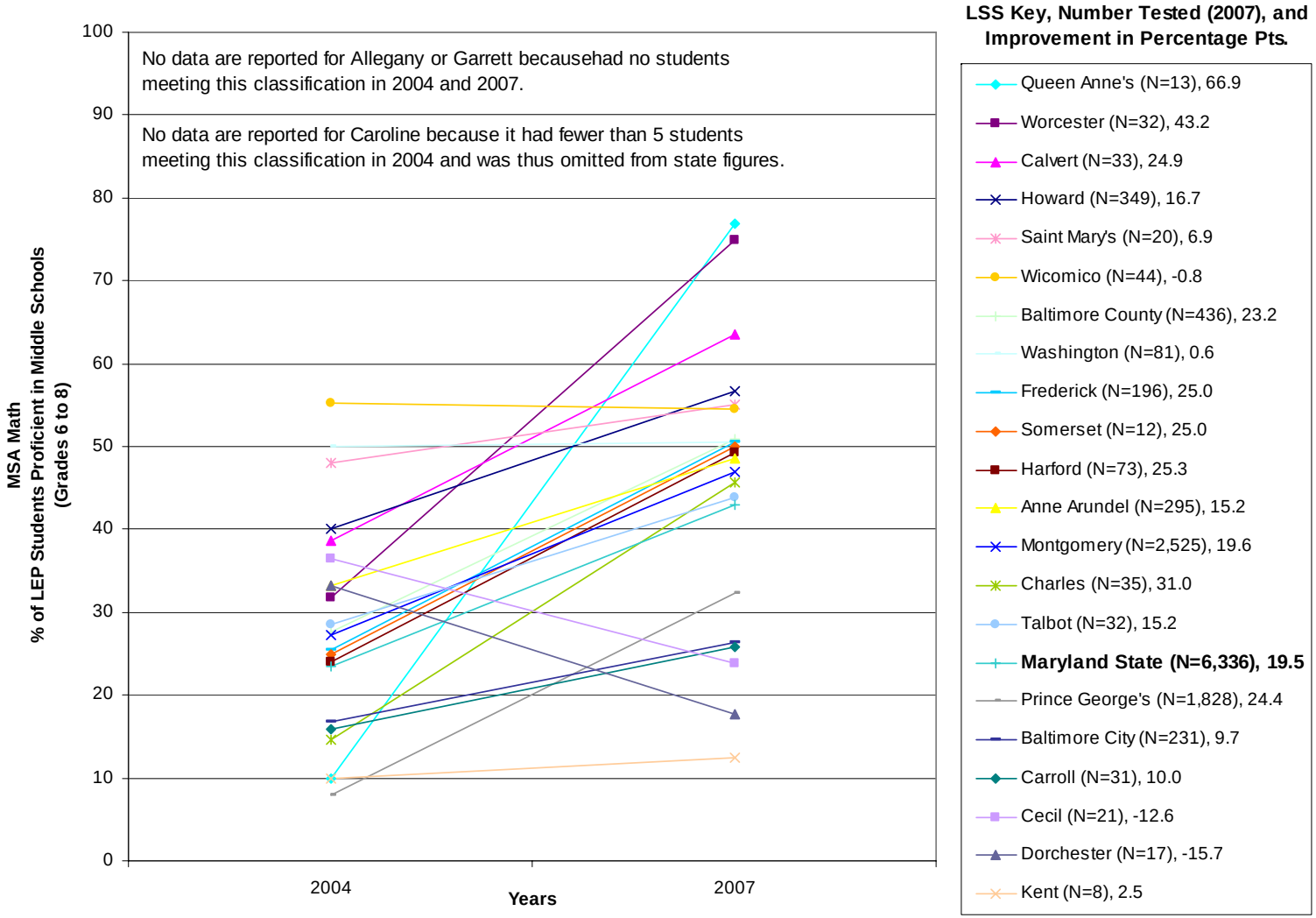
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 50
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
MSA MATH: MIDDLE SCHOOL SPECIAL EDUCATION STUDENTS GRADES 6 TO 8
2004 TO 2007



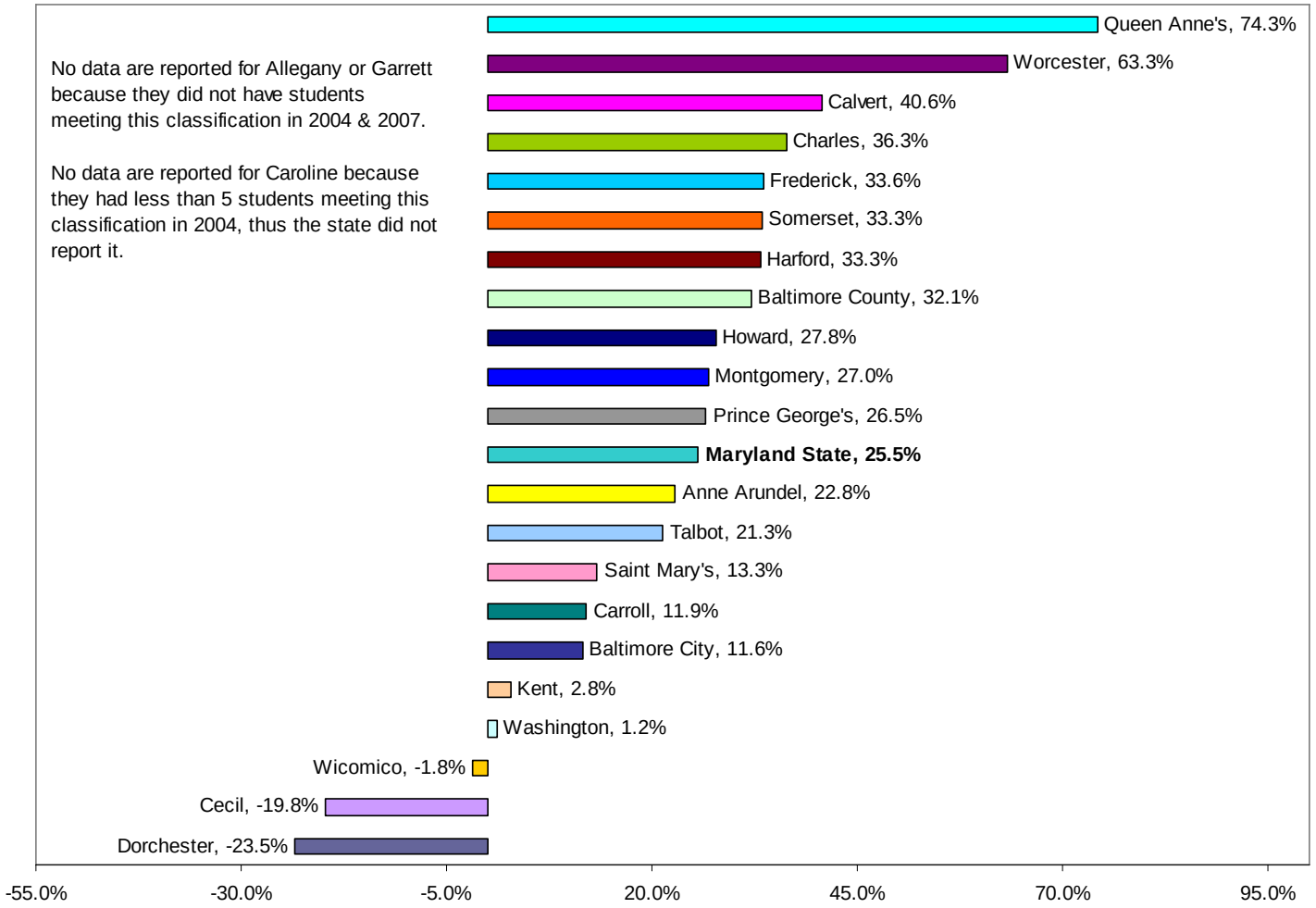
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 51
PERCENTAGE OF MIDDLE SCHOOL LEP STUDENTS DEMONSTRATING PROFICIENCY IN MSA MATH IN EACH LOCAL SCHOOL SYSTEM: GRADES 6 TO 8



Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 52
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
MSA MATH: MIDDLE SCHOOL LEP STUDENTS GRADES 6 TO 8
2004 TO 2007



Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Limitation: Use caution when comparing percentages of any LSS that has less than 50 students in this subgroup. See preceding Exhibit for Ns.

3.1.3 Improvements in High School Students' HSA Performance

The class of 2009 (most of whom were 10th graders and completing their English 2 course when the 2007 HSA was administered) is the first cohort of students who must pass the four subject area tests to graduate from high school. Compared to the other HSAs administered in 2007, the English 2 HSA had the largest number of first-time test takers in all 24 LSSs and was the only HSA that could be used, with admitted limitations, to compare changes in student performance in each LSS.[3]

MGT's analyses of changes in passing rates from 2005 to 2007 reveal the following:

- The percent of test takers who passed the English 2 HSA increased for the entire population of students tested and for each of the NCLB groups shown in Exhibit 53. As 2007 was the first year that test takers in the class of 2009 had to either pass the test or retake it until they passed, we hypothesize that this requirement is likely to have encouraged more students than in prior years to perform at their best during the 2007 assessment. Thus, improvements in passing rates may be largely attributed to this added incentive for students to pass in 2007 and not merely to LSSs' improvements in instructional strategies.

- Compared with the entire high school population that took the English 2 HSA, each of the three NCLB groups had lower passing rates in 2005 and again in 2007. However, the FARMS group had the greatest improvement in percentage points, as seen in the box on the far right of Exhibit 53. SPED students demonstrated much more improvement than LEP students during this two-year period, and SPED students' 13.2 percentage point improvement was nearly the same as that for the entire population of English 2 HSA test takers (13.6 percentage points).

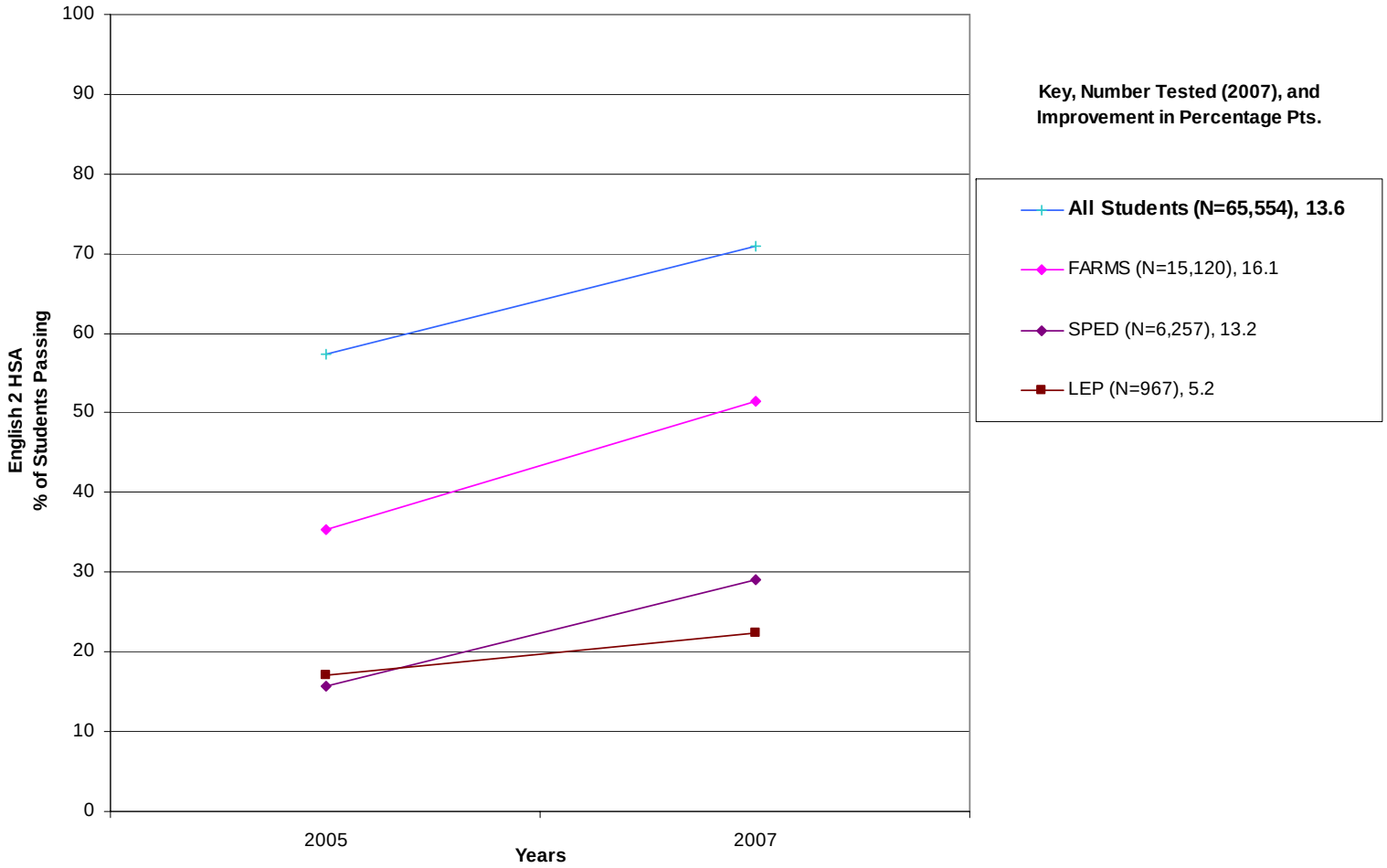
- Using the metric of percentage of performance gap closure to compare the relative improvements made by the statewide high school population that took the English 2 HSA and by the NCLB groups, Exhibit 54 shows that none of the NCLB groups closed its gap toward the 100 percent passing goal to the extent achieved by the entire population of test takers. FARMS students closed more of their gap than did SPED students, and SPED students closed more of their gap than did LEP students.

- Exhibits 55 and 56 show that White high school students out-performed and showed greater relative improvements in HSA English 2 passing rates than non-White students.

[3] The English 2 HSA has been administered annually since 2005, but the 2007 administration marked the key opportunity for first-time test takers in the class of 2009 to pass this exam as one of their graduation requirements. Because Maryland's centralized database does not yet have a unique identifier for each student and is unable to distinguish first-time test takers from those retaking the HSA, it is not yet possible to compare passing rates from year to year of only those students who took the test for the first time. Thus, the data used for these HSA comparisons are not ideal, but are the best available at this time.

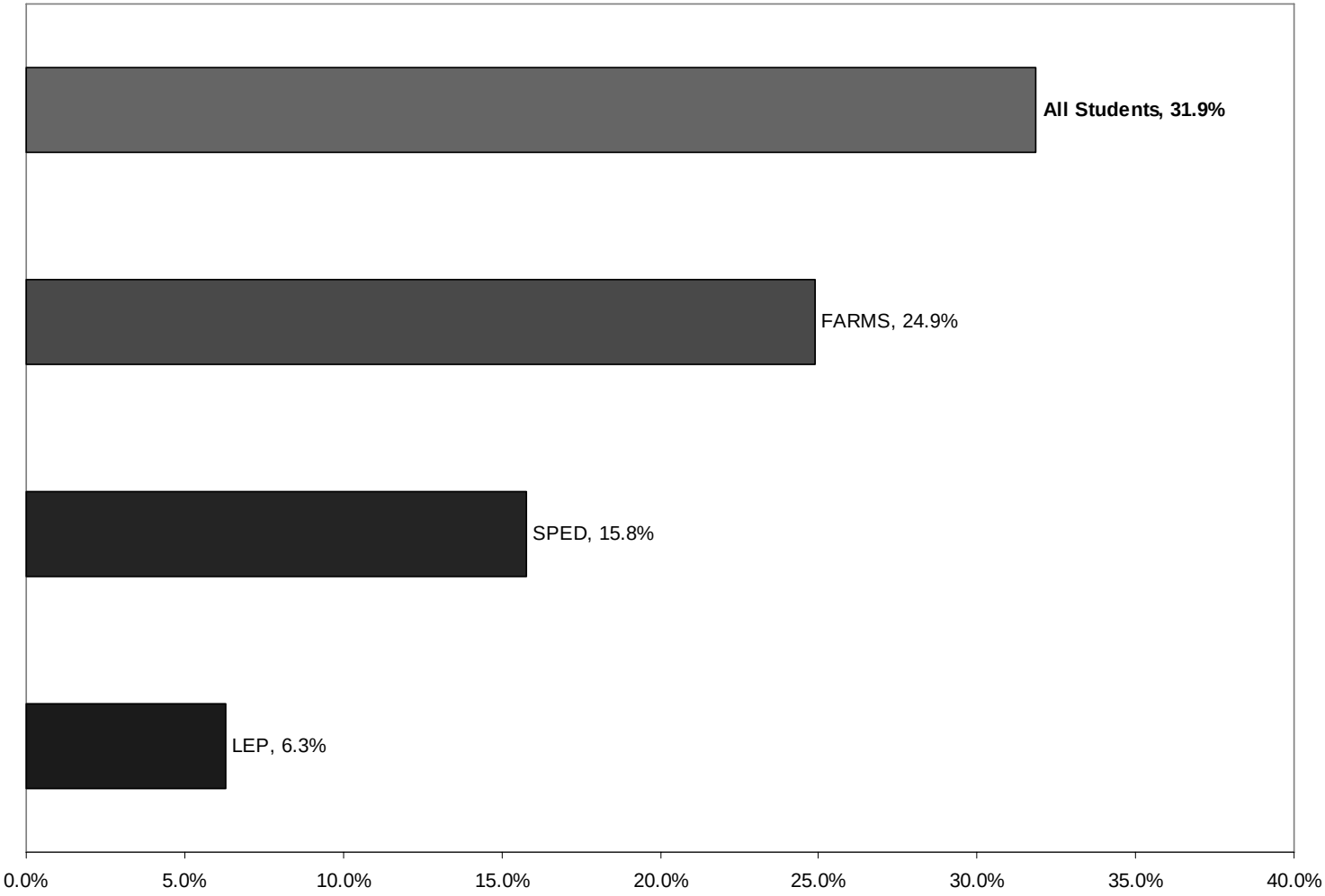
- Exhibits 57 to 64 compare the changes in passing rates on HSA English 2 for the four groups of high school students (All, FARMS, SPED, and LEP) in each of Maryland's 24 LSSs. In every case, the entire population of test takers (Exhibit 57) and the SPED students (Exhibit 61) showed higher passing rates in 2007 than in 2005. A decline in passing rates was seen in only one LSS for FARMS students (Exhibit 59) and in four LSSs for LEP students (Exhibit 63). For all four groups, HSA English 2 performance gap closures varied substantially among LSSs, as seen in Exhibits 58, 60, 62, and 64. As noted previously, the very small number of LEP students in some LSSs can greatly affect the percentages and changes in percentages shown in these graphs.

EXHIBIT 53
PERCENTAGE OF STUDENTS STATEWIDE PASSING ENGLISH 2 HSA
ALL STUDENTS AND SUBGROUPS



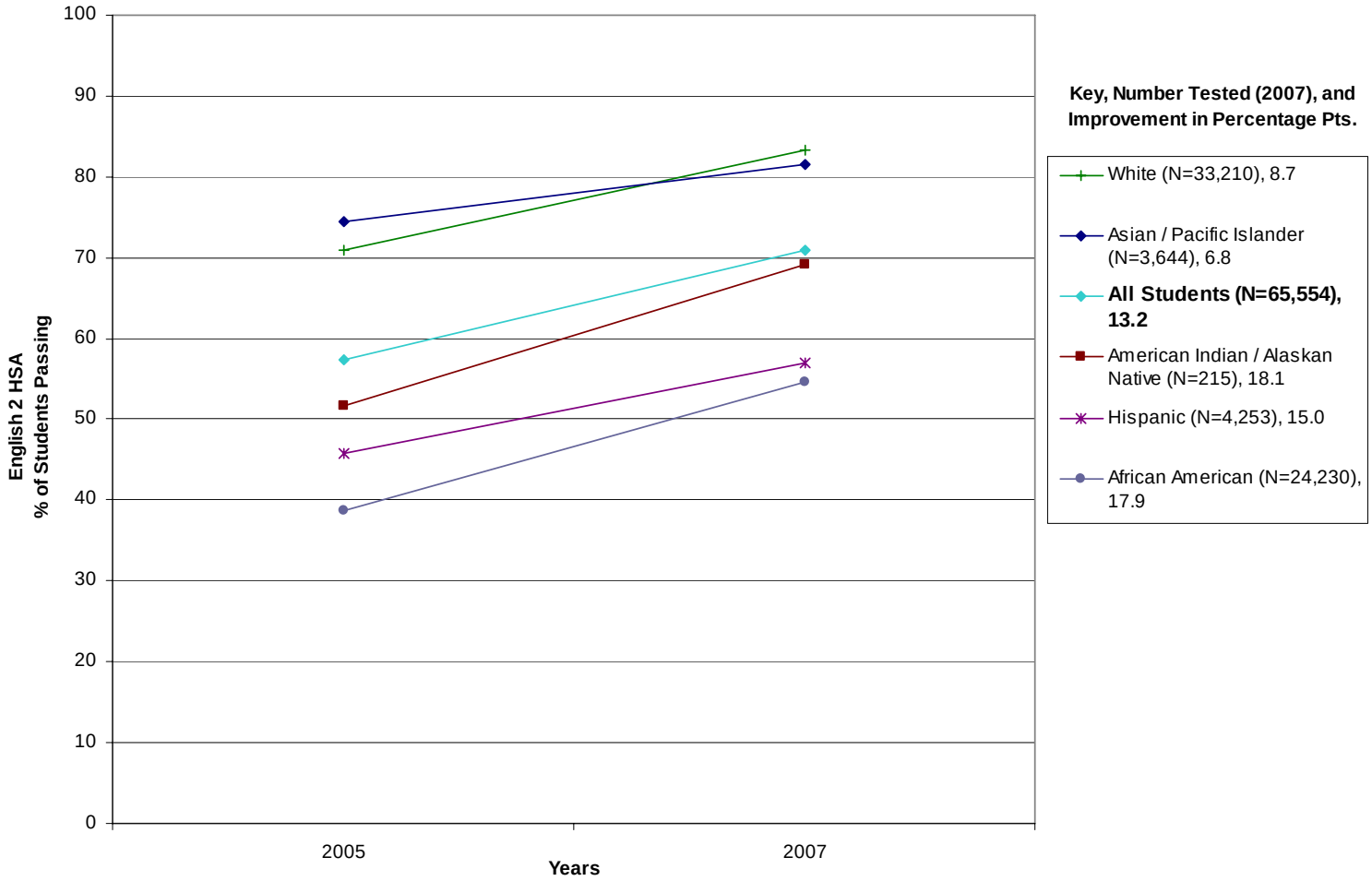
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 54
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS IN ENGLISH 2 HSA
ALL STUDENTS AND SUBGROUPS
2005 TO 2007



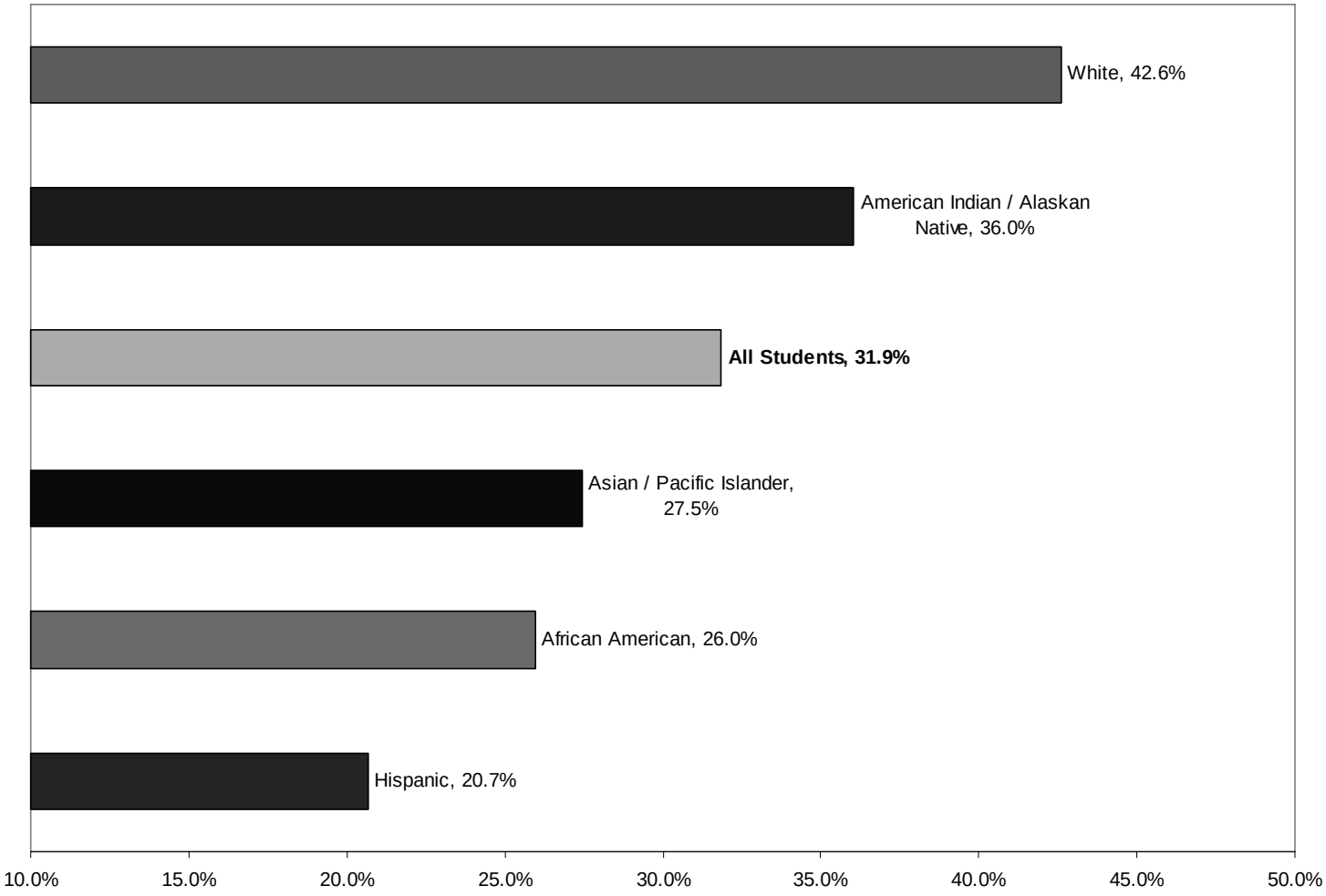
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 55
PERCENTAGE OF STUDENTS STATEWIDE PASSING ENGLISH 2 HSA
ALL STUDENTS AND ETHNIC GROUPS



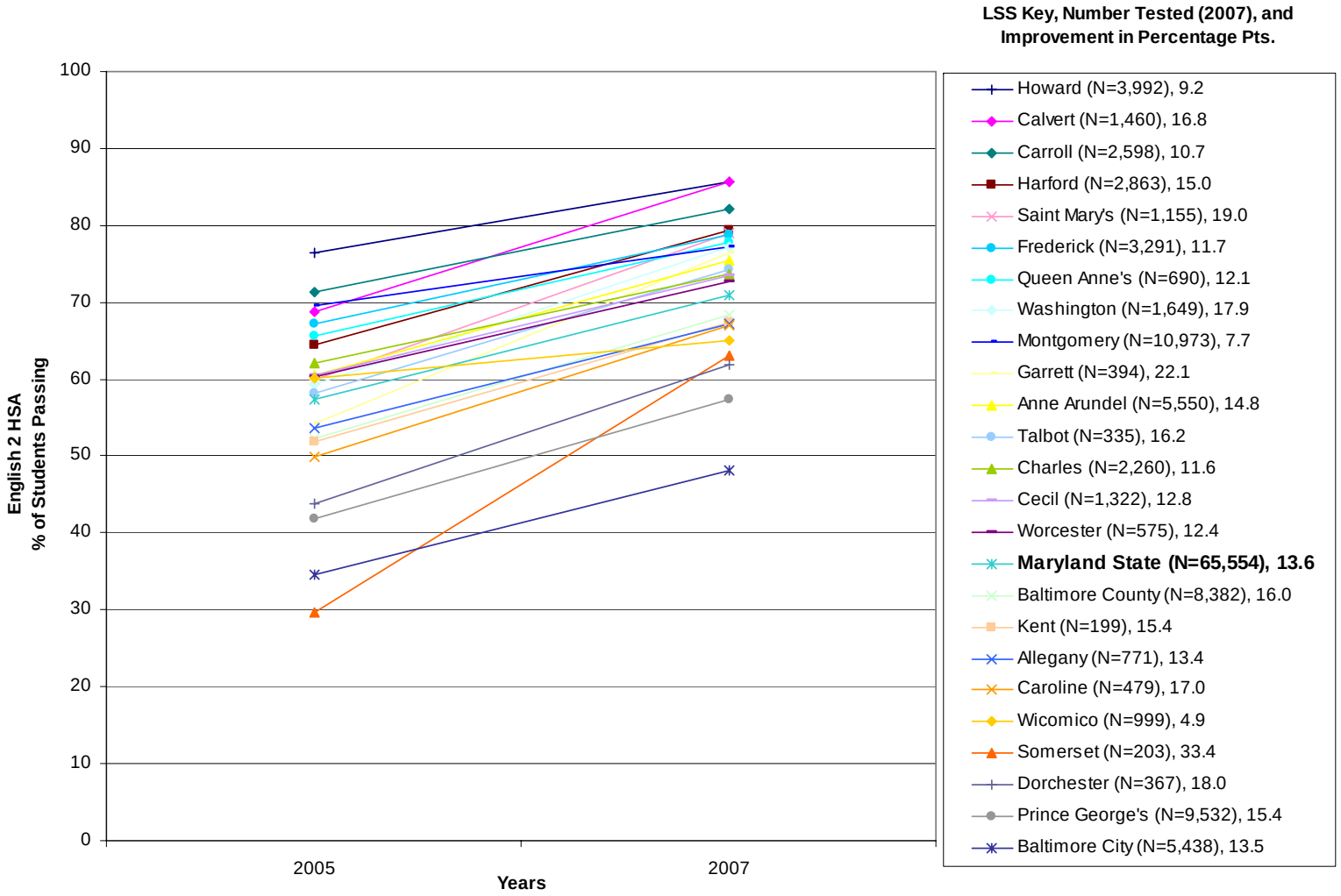
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 56
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS IN ENGLISH 2 HSA
ALL STUDENTS AND ETHNIC GROUPS
2005 TO 2007



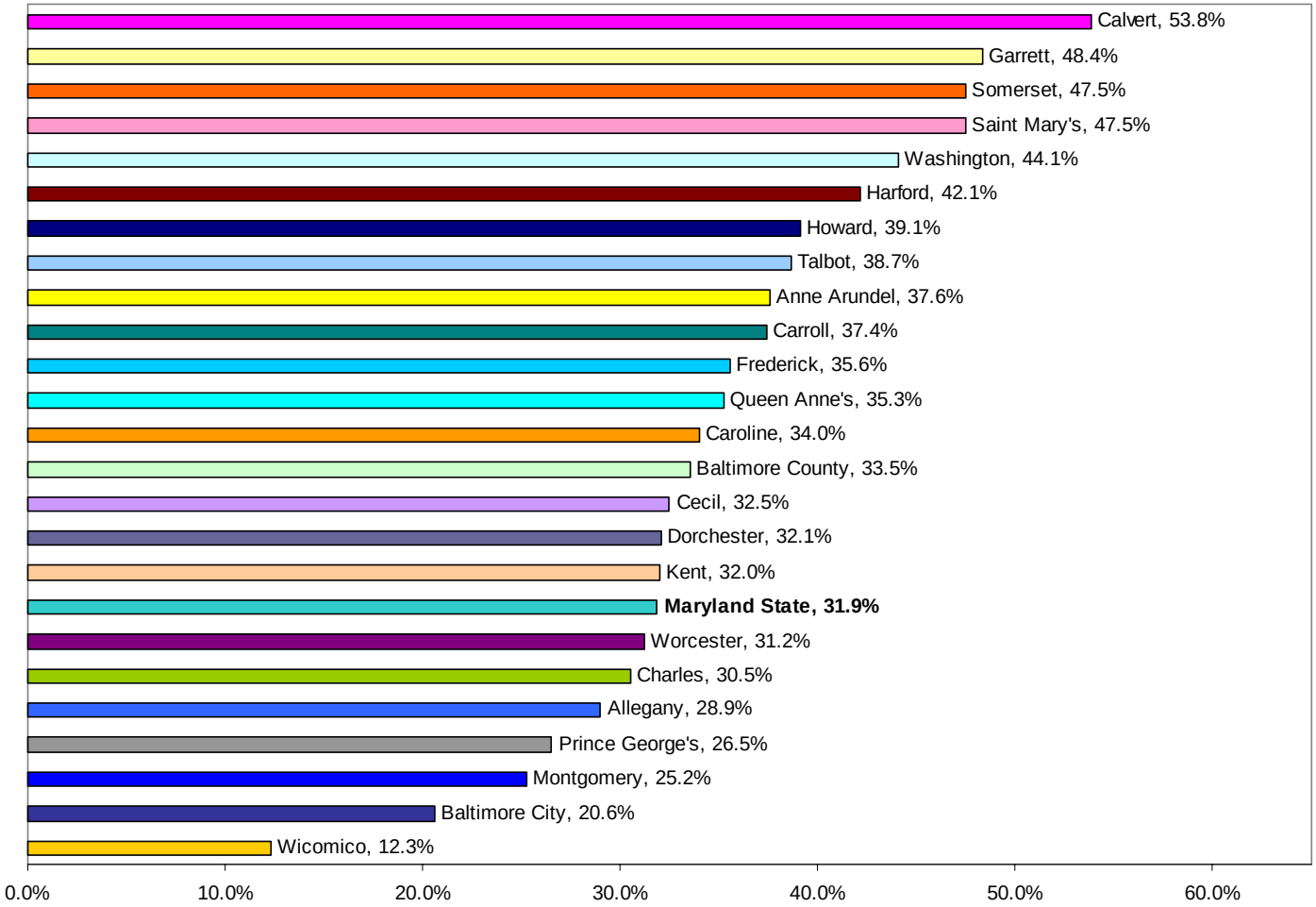
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 57
PERCENTAGE OF STUDENTS PASSING ENGLISH 2 HSA IN EACH LOCAL SCHOOL SYSTEM: ALL STUDENTS



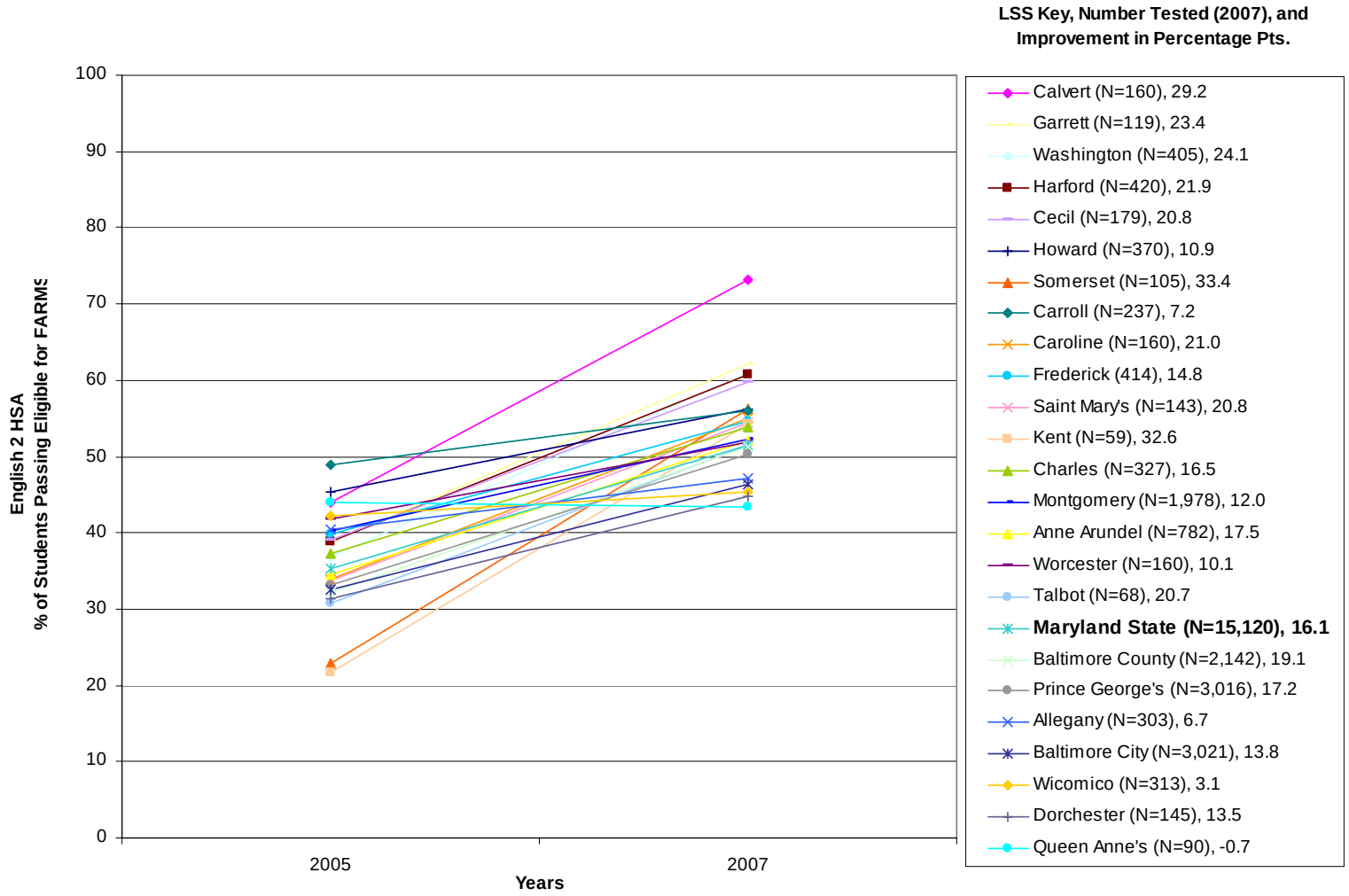
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 58
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
ENGLISH 2 HSA: ALL STUDENTS
2005 TO 2007



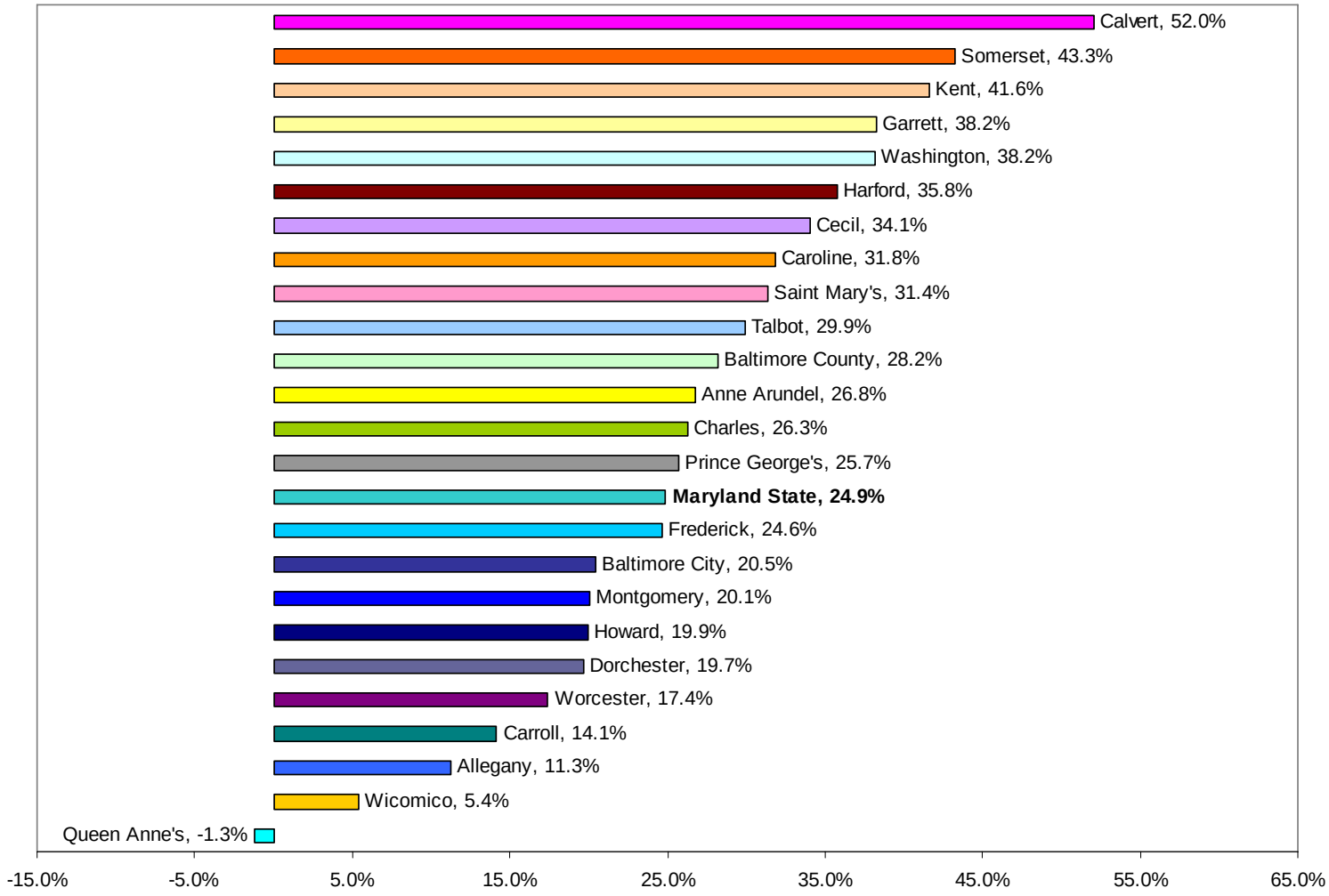
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 59
PERCENTAGE OF STUDENTS ELIGIBLE FOR FARMS PASSING ENGLISH 2 HSA IN EACH LOCAL SCHOOL SYSTEM



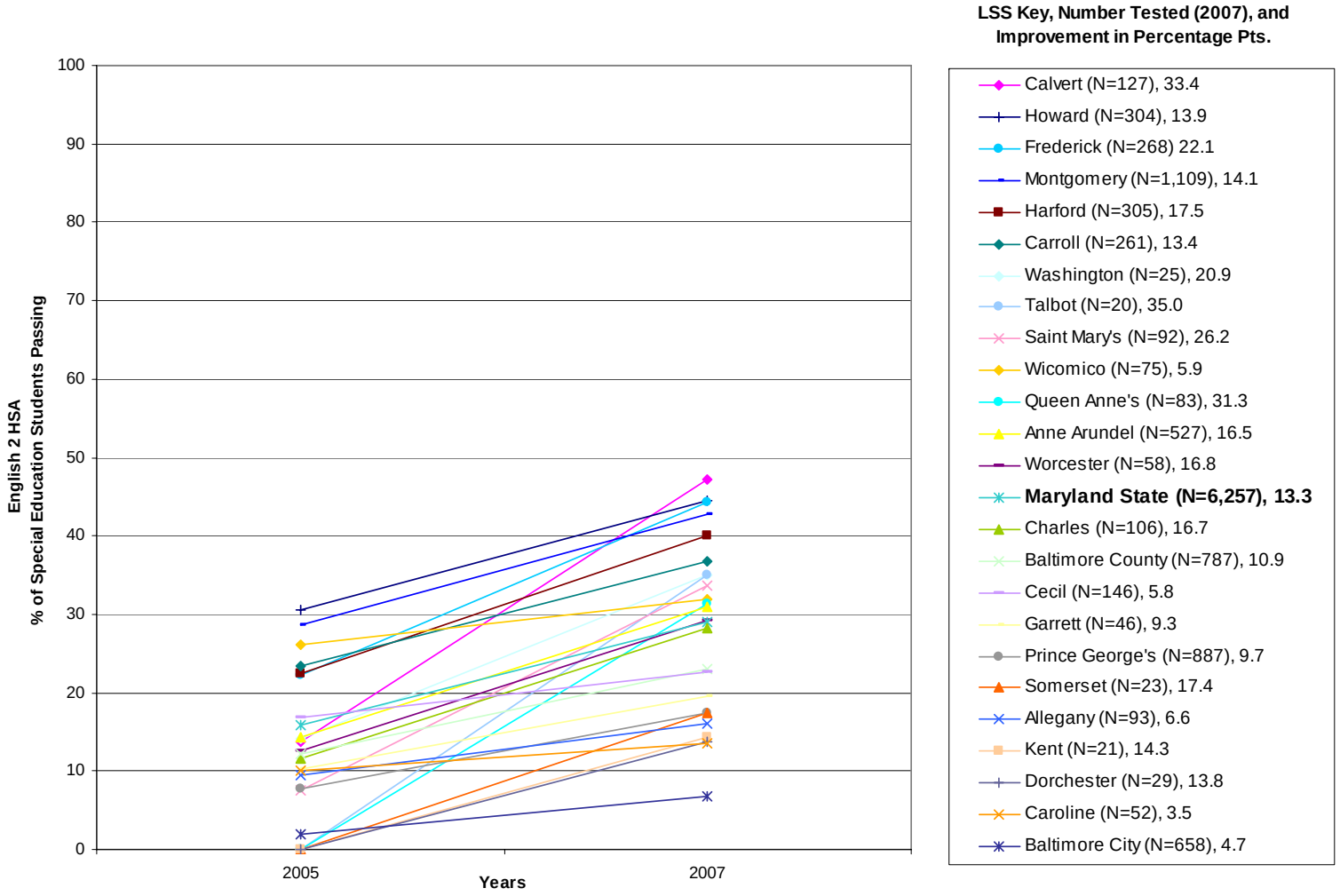
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 60
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
ENGLISH 2 HSA: STUDENTS ELIGIBLE FOR FARMS
2005 TO 2007



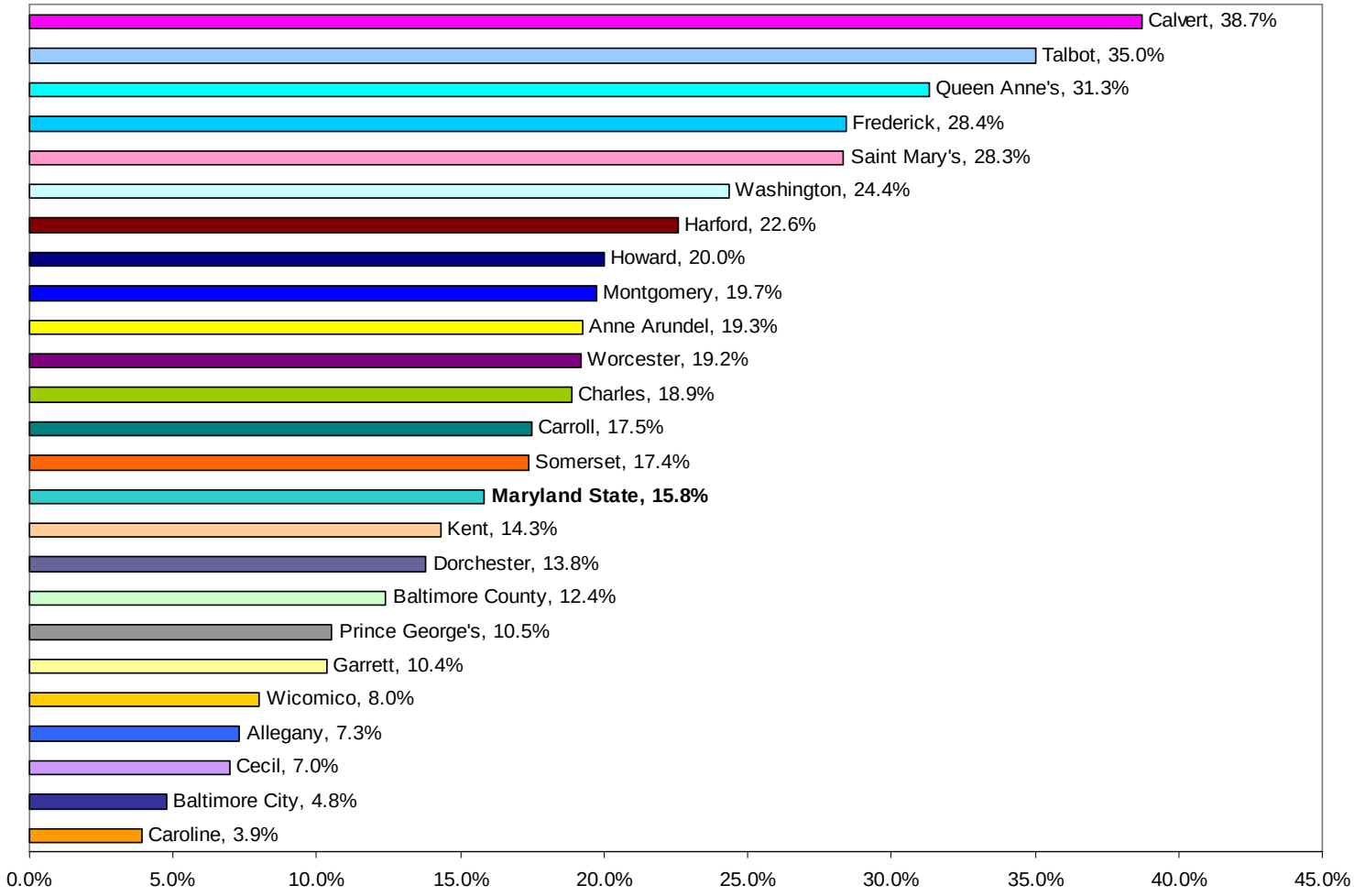
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.

EXHIBIT 61
PERCENTAGE OF SPECIAL EDUCATION STUDENTS PASSING ENGLISH 2 HSA IN EACH LOCAL SCHOOL SYSTEM



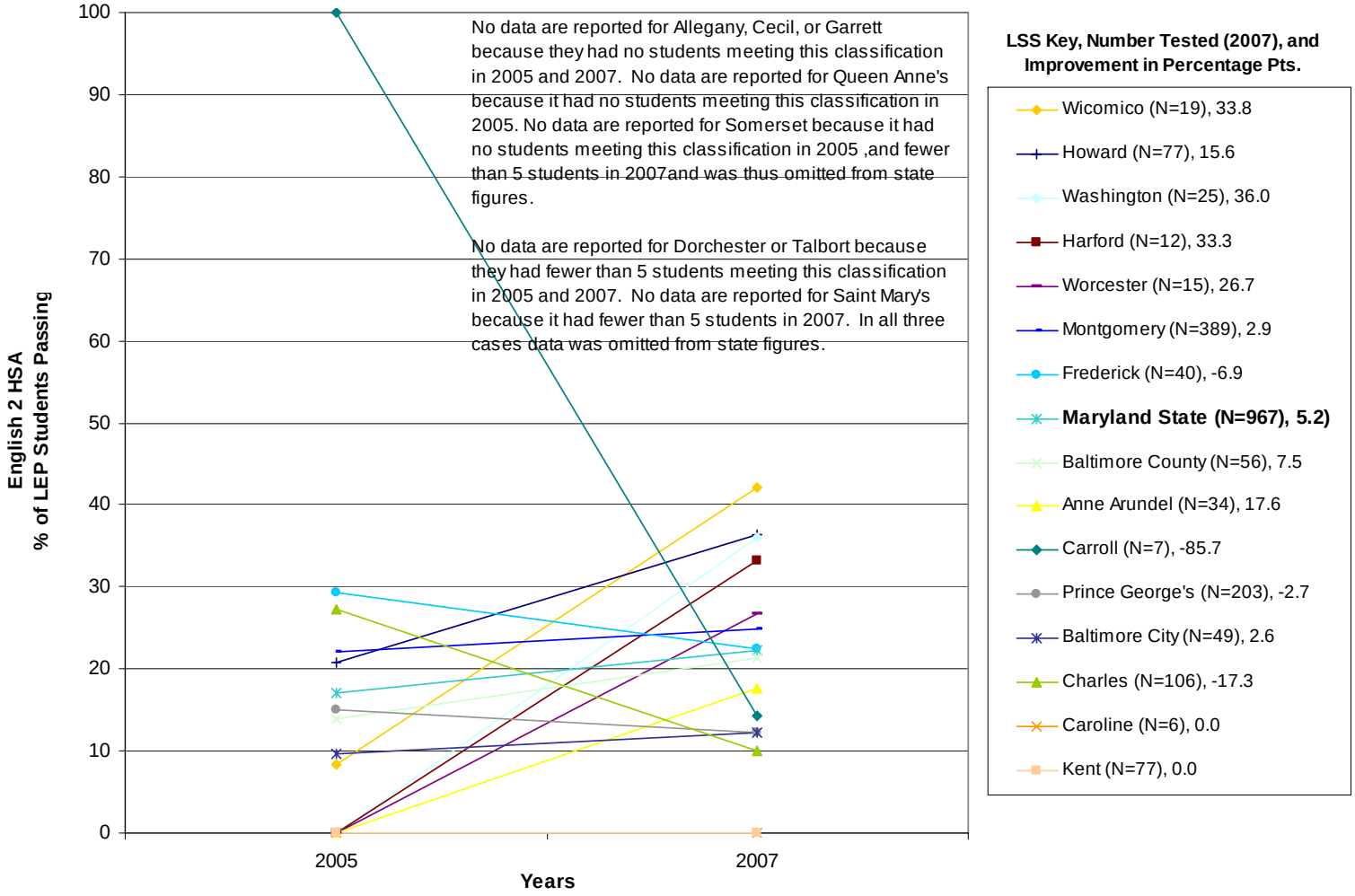
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 62
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
ENGLISH 2 HSA: SPECIAL EDUCATION STUDENTS
2005 TO 2007



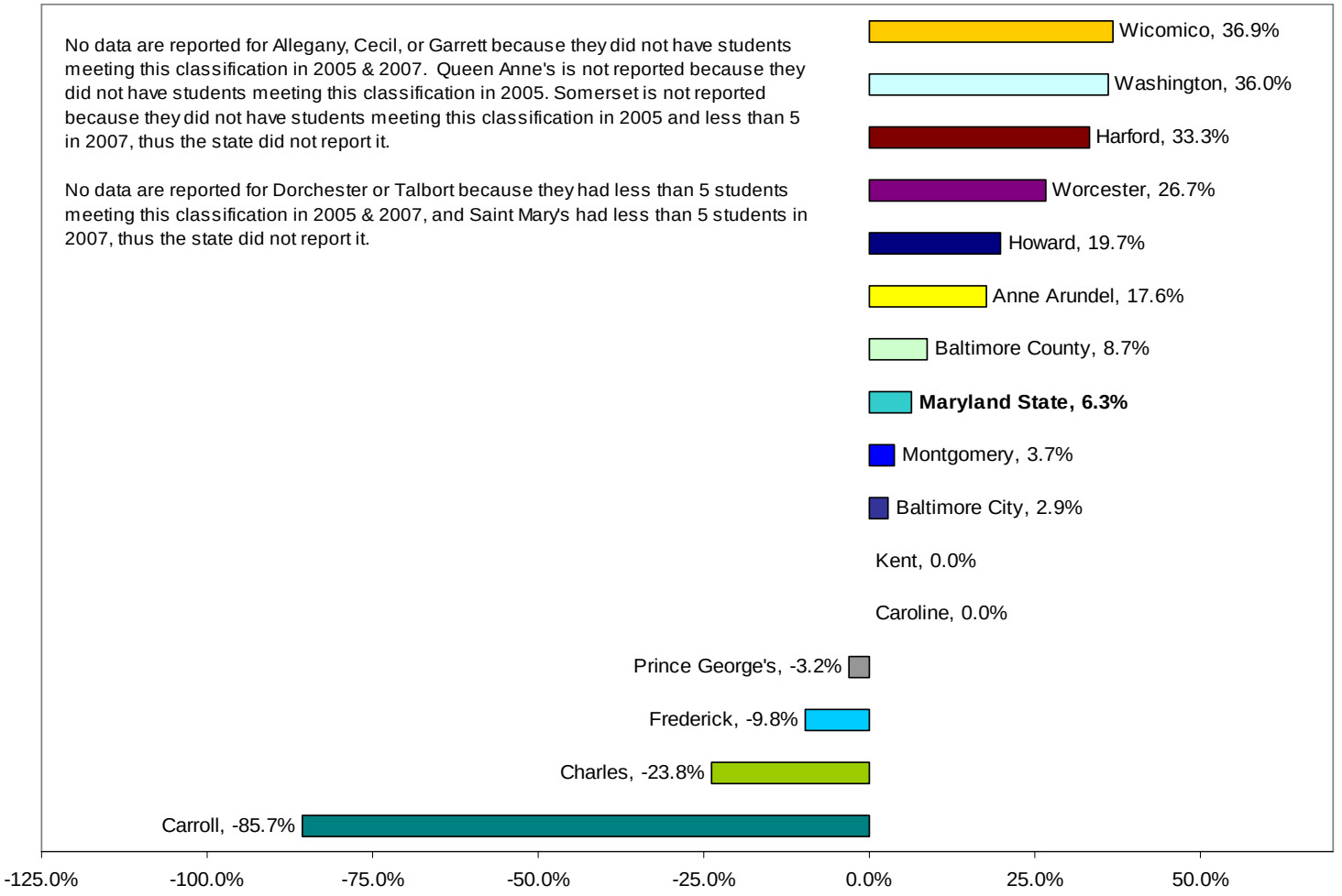
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Limitation: Use caution when comparing percentages of any LSS that has less than 50 students in this subgroup. See preceding Exhibit for Ns.

EXHIBIT 63
PERCENTAGE OF LEP STUDENTS
PASSING ENGLISH 2 HSA IN EACH LOCAL SCHOOL SYSTEM



Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 64
PERCENTAGE OF PERFORMANCE GAP IMPROVEMENTS BY LOCAL SCHOOL SYSTEM
ENGLISH 2 HSA: LEP STUDENTS
2005 TO 2007



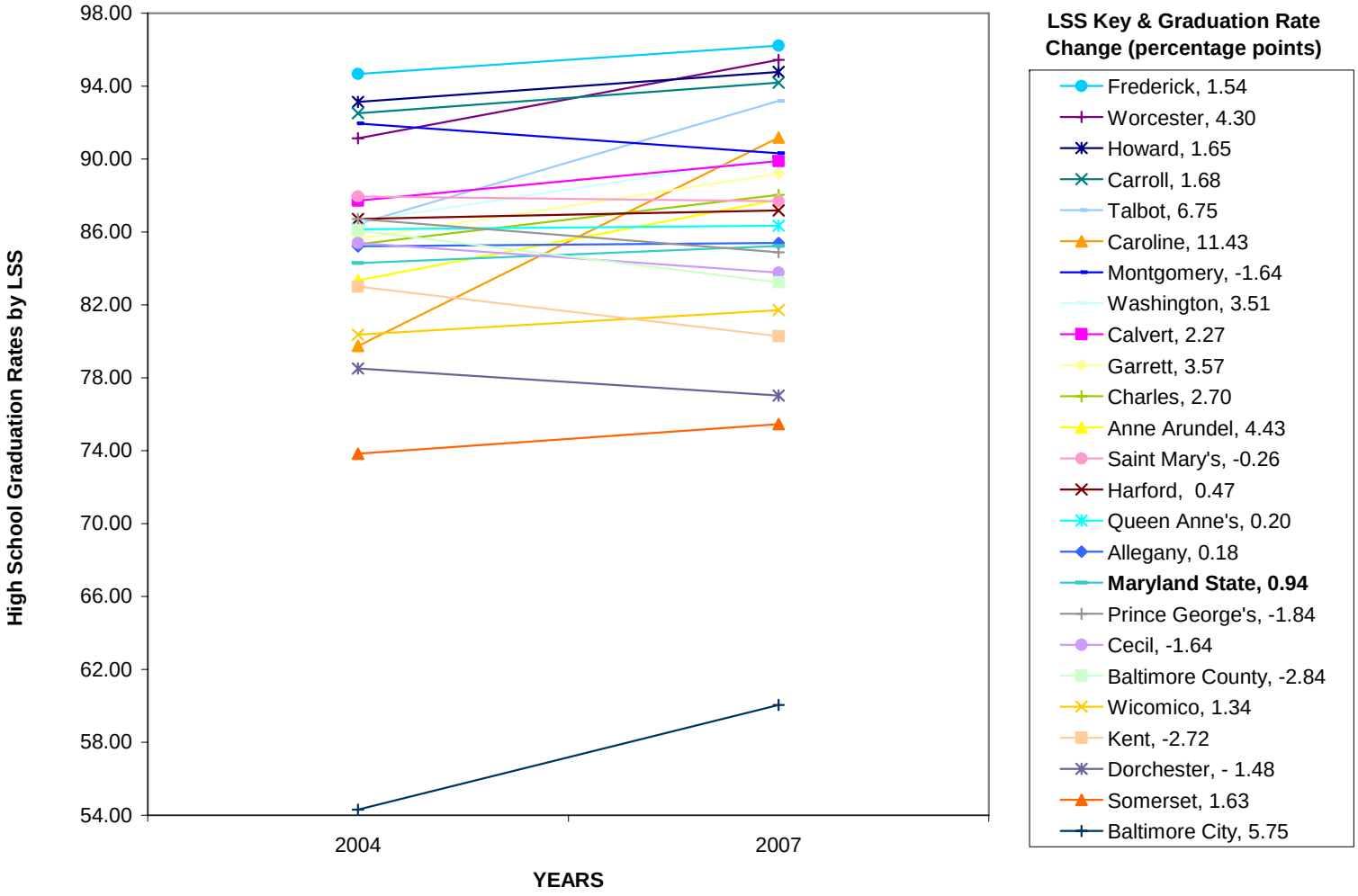
Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Limitation: Use caution when comparing percentages of any LSS that has less than 50 students in this subgroup. See preceding Exhibit for Ns.

3.1.4 Improvements in High School Students' Graduation and Dropout Rates

Exhibit 65 displays changes in high school graduation rates between 2004 and 2007 for each LSS and the state as a whole. Graduation rates improved for the statewide population of public high school students from 84.3 to 85.2 percent. Seventeen (17) of the 24 LSSs also had improvements in graduation rates that ranged from 0.2 to 11.4 percentage points, and most improvements were less than 3 percentage points. The other 7 LSSs had lower graduation rates in 2007 than they had in 2004, and all decreased by less than 3 percentage points.

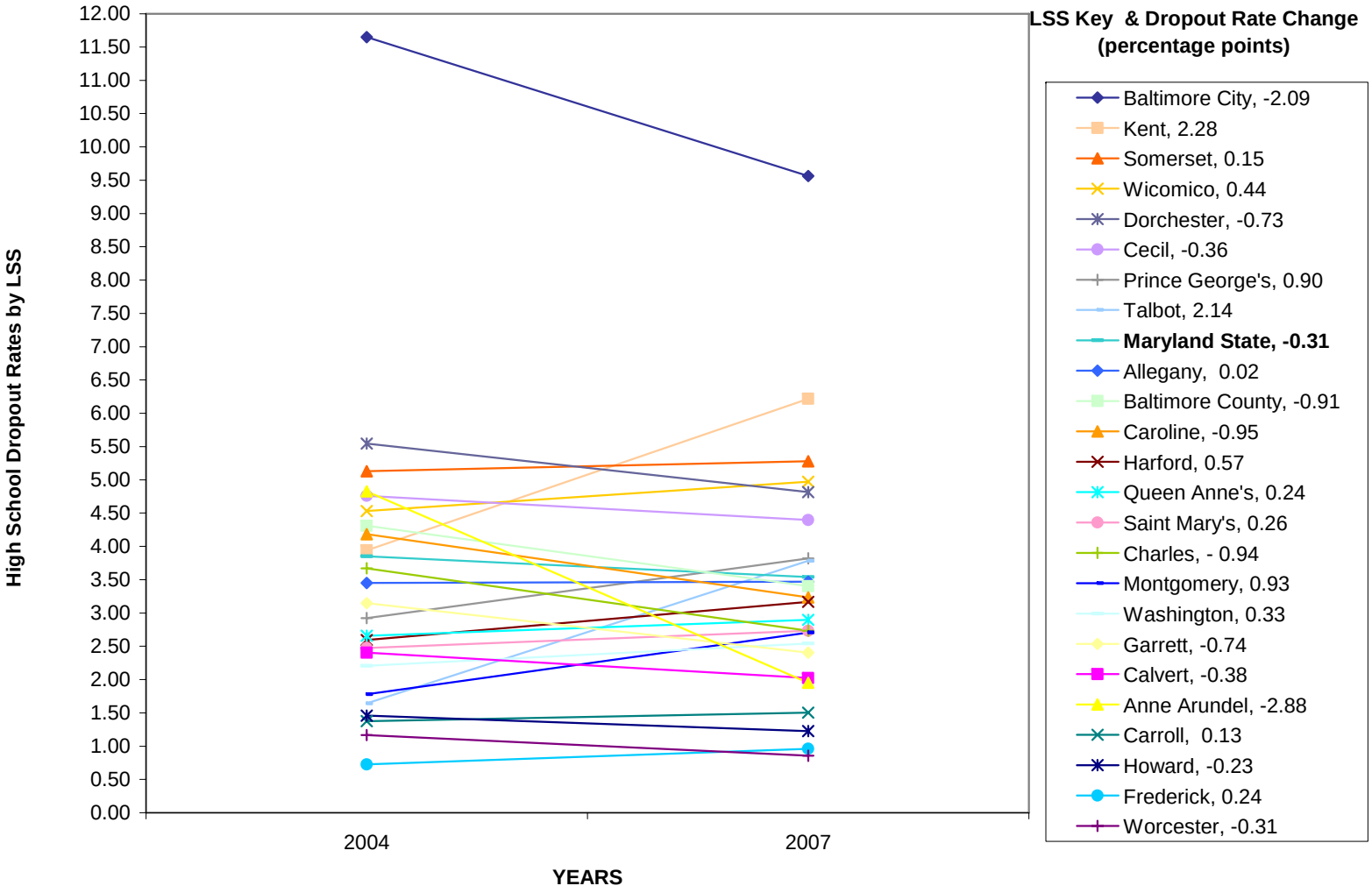
Exhibit 66 displays changes in high school dropout rates between 2004 and 2007 for each LSS and the state as a whole. Dropout rates improved slightly statewide, decreasing by 0.31 percentage points from 3.85 percent in 2004 to 3.54 percent in 2007. During this period, 10 LSSs saw their dropout rates decrease with reductions ranging from 0.23 to 2.88 percentage points. The 14 LSSs whose dropout rates worsened had increases ranging from 0.02 to 2.28 percentage points.

EXHIBIT 65
HIGH SCHOOL GRADUATION RATES BY LSS
2004 TO 2007



Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

EXHIBIT 66
HIGH SCHOOL DROPOUT RATES BY LSS
2004 TO 2007



Source: MGT of America, 2007, using data from <www.mdreportcard.org>.
Note: Key and graph lines are ordered from highest percentage in 2007 at the top to lowest at the bottom.

3.2. Programs or Factors That Consistently Produce Positive Results

Evaluation Mandate: Develop a list of programs or factors that consistently produce positive results for students, schools, and school systems.

Progress to Date: Through surveys conducted during the first year of this evaluation, MGT obtained initial indications of programs or factors that school and system administrators perceived to be highly effective. Survey results were presented in the *Initial Report.* During this second year of the evaluation, MGT visited all 24 LSSs and a sample of 150 schools to observe and further identify "potential best practices" that consistently produce positive results. We have identified and described several potential best practices in this *Interim Report*.

Current Limitations: At this point in the study, we have only begun to examine empirical evidence of programs or factors that consistently produce positive results. Although we observed many potential best practices, most of the information we gathered was from discussions with system-level administrators, principals, and teachers. We have intentionally waited until the upcoming final year of the study (after the full implementation of BTE will be completed) to develop the final list of programs or factors required by the mandate shown above.

Future Plans: In the winter of 2008, MGT will invite all principals and teachers to participate in a Web-based survey that will be designed to document the extent to which a potential best practice or combination of practices is institutionalized in schools. Then, we will analyze each school's improvements in student achievement and determine the extent to which certain practices consistently produce substantial improvements. Following these analyses, MGT will identify the final set of best practices and conduct case studies of selected schools in spring 2008 to fully document the implementation and impact of these practices. MGT also will assess the potential for these "best practices" to be adopted or adapted by other schools or school systems.

Interim Key Findings: Key findings to date follow the introduction below. The summary is followed by details that support these findings and provide additional information.

3.2.1 Introduction

This section presents MGT's findings from visits to all 24 LSSs and to 150 Maryland public schools in the spring of 2007. During these visits, we collected data on potential best practices and factors. Sources of information included interviews and focus groups with high-ranking officials in the LSS, interviews with principals of select schools, and school observations. Information from the system-level visits and public school visits was

used to compile the "list of programs or factors that consistently produce positive results for students, schools, and school systems" requested by the General Assembly.

The analyses of the site visit information produced two levels of findings:

- Systemic potential best practices: approaches, processes, strategies, or programs that are introduced system-wide by the LSS administration and thus affect the entire LSS.

- School-level potential best practices: approaches, strategies, or programs that were reported by principals of visited elementary, middle, and high schools as producing positive results for their students.

The systemic potential best practices findings are based on interviews with LSS officials and supported by school-level findings. The school-level potential best practices findings are based on interviews with principals and school observations. All data were self-reported by principals and LSS officials. School visitation teams based all reports on opinions of interviewed principals, supported with information from brief interviews with teachers and school walk-throughs. It is important to note that practices that are mentioned less frequently as potential best practices are not necessarily less effective in improving student achievement than those that are mentioned more frequently, and vice versa. Likewise, our analysis revealed that in some cases school administrators did not discuss practices that their school had been following for some time; these were not seen as potential best practices because they were considered an established component of the school.

The site visit data were analyzed using qualitative and quantitative techniques. Qualitative analysis of the data identified trends and explored potential causal links. Where appropriate in this section, qualitative findings were supplemented by quantitative data. However, due to the self-reported nature of the data, in many cases we purposefully chose NOT to report exact numbers of the potential best practices described in our interviews, or to make explicit causal connections. In the next stages of the evaluation research, MGT will seek to identify which of the potential best practices have resulted in improved student outcomes.

We begin by presenting a summary of key findings from the site visits. We then describe systemic potential best practices and compare the potential best practices in higher- and lower-performing counties. Next, we present school-level potential best practices, with examples from school visits. The section closes with comparative analyses of potential best practices in higher- and lower-performing elementary, middle, and high schools.

"Key Findings" From the Site Visits

Based on MGT's site visits, the following are the most promising candidates for best practices that will undergo additional study in the current BTE evaluation.

Systemic best practices findings are based on interviews with LSS officials and supported by school-level findings. These six systemic best practices support and complement one another.

- Strategic planning
- Data utilization for instructional decision-making, based on electronic data warehousing and ease of availability to teachers and administrators
- Professional Learning Communities
- Ongoing, targeted professional development
- Teacher specialists
- Differentiated instruction and individualized approach to teaching and learning

Principal interviews and data collection yielded 520 strategies, programs, and approaches as potential best practices, which fall into the following 11 categories:

- Academic intervention and acceleration
- Professional development/highly qualified teachers
- Research-based, effective core programs and general instruction
- Data analysis and technology
- Teacher specialists
- Differentiated instruction/Individualized Learning Plans
- Professional Learning Communities
- Inclusion and co-teaching for SPED and ELL students
- Behavior modification programs (e.g., PBIS)
- Graduation enhancement programs (e.g., AVID)
- Other (e.g., school culture of high expectations)

Contextual factors play an important role as well. Principals and LSS officials reported that much variation in student achievement from LSS to LSS and from school to

school could be explained by the amount of resources available, level of poverty in the community, number of ELL students, and other factors. Additionally, some LSSs have had years of outstanding leadership that have enabled schools to create productive and nurturing environments for both teachers and students. The stability and effectiveness of leadership at the central administration level as well as in schools are important factors to consider in analyzing discrepancies in student achievement.

Comparative analysis of the reported potential best practices of higher- and lower-achieving schools in the sample was reflective of these key findings. For example:

- Principals of higher-performing elementary schools cited almost three times more frequently strategies in the "Teacher specialist" and "Academic intervention" categories, and twice as frequently strategies in the "Differentiated instruction/Individualized Learning Plans" and "Professional Learning Community" categories, compared to principals of lower-performing elementary schools.

- At the middle school level, the "Differentiated instruction/Individualized Learning Plans" category was frequently mentioned by principals of higher-performing schools and was not mentioned at all by principals of lower-performing schools.

- Principals of higher-performing high schools mentioned data utilization for instructional decision-making five times more frequently than principals of lower-performing high schools.

3.2.2 Systemic Processes as Best Practices

Some of the programs and factors that were reported during the site visits are system-wide and affect multiple schools, while others are specific to particular schools. At the school system level, the following six factors emerged as crucial to improving student performance. Our assessment of the importance of each factor guides the sequence of their presentation, starting with the most important.

1. Strategic planning. Strategic planning refers to established procedures at both the system level and the school level that link instructional activities and related expenditures to improvements in student performance. Interviews with LSS officials and principals indicated that purposeful long-term and short-term planning of instructional activities, related expenditures, and goals laid the foundation for success in improving student achievement.

   LSSs that used strategic planning prior to the BTE initiative demonstrated better student performance. This may be due in part to the better planning that is possible when strategic planning procedures are in place, and also to better defined accountability standards. Howard County, Calvert County, and other top-performing LSSs had strategic planning procedures in place prior to the BTE enactment. While the BTE initiative succeeded in establishing strategic planning processes in those LSSs that did not have any before, it will take time for them to fully catch up.

> Example of system-level strategic planning: Worcester County has had established strategic planning procedures since 1999, when it adopted AFG (Accreditation for Growth), supported by the Middle Schools Association. As a tool, AFG is school-based and student-oriented, it takes the strategic master plan to the classroom level and impacts instructional practices. Worcester students have demonstrated a high level of academic achievement. The planning process appears to be particularly helpful in some student subgroups. Currently, Worcester African-American students are among the highest achieving in the state.

When aligned with an LSS's Comprehensive Master Plan (CMP), individual School Improvement Plans (SIP) are an important tool for strategic planning. Principals in all but five counties indicated that they aligned SIP goals with CMP goals. In a few counties, strategic planning procedures are now established not only for schools, but also to plan grade-level improvement.

> Example of school-level strategic planning: Benjamin Banneker Elementary School (ES) in Saint Mary's County uses Grade Level School Improvement Plans (GLSIPs) as its chief planning tool. The plans are aligned with the SIP, which in turn is aligned with the CMP. At Banneker, grade-level teachers meet biweekly for GLSIP team meetings to review student data and to determine and discuss staff development needs, the "when/where/what" of collaborative planning meetings, challenges in instruction, and other issues. According to the principal, the "GLSIP process has made all teachers be on the same 'page' with instruction and helps colleagues brainstorm ways to meet the needs of each child. The school is functioning at the 'student name' phase."

2. Data utilization for instructional decision-making. Nearly all LSSs indicated that with the passage of the BTE initiative soon after the NCLB legislation, data utilization for instructional decision-making had become critically important. However, based on interviews with principals and teachers, many districts still do not have an electronic data warehouse that would allow for student-level data analysis by indicator. For example, principals and teachers in Montgomery County said they manually entered data following each assessment. As a result, the student-level statistics were not easily obtainable, and the process was cumbersome and time-consuming. Districts that have relied on electronic warehouses for years demonstrated significantly better student achievement. Five of the higher-performing counties—Calvert County, Howard County, Carroll County, Washington County, and Worcester County—all use an in-house or commercially developed electronic data warehouse (EduSoft, Performance Matters, Advanced Reporting Tool [ART]).

   Electronic data warehousing allows teachers and administrators to receive assessment results quickly. Data can be disaggregated down to an individual student or a subgroup. Commercial data systems can show a photograph of a student whose assessment results are retrieved. Data can also be analyzed by a curriculum indicator. Teachers can then assemble student groups who are weak on a particular indicator for targeted instruction. Professional training on how to analyze and use data in the instructional decision-making is an

essential component of professional development in counties that recently acquired or developed their own data warehouses.

Availability of student-level data by indicator allows quick adjustments to strategic plans at both school and system levels, making it possible to better respond to identified student needs. At the school level, principals and teachers can make data-informed decisions while assigning students to intervention programs; developing individualized learning plans; assigning students for individual and group tutoring; and recommending students for after-school, weekend, and/or summer programs. Additionally, some LSSs have developed quick-response, professional development programs that are based on the indicator-level data from student assessments. Professional development coaches deliver targeted professional development to teachers with identified areas of need in either content or instructional delivery.

> Example of data utilization for instructional decision-making: While Garrett County had strategic planning procedures in place prior to the BTE, only in the past four years did it start using data for instructional decision-making. Teachers and administrators received training on how to use data. Two years ago, Garrett adopted a new intervention strategy, "Instructional Consultation Team," which utilizes data to focus on the needs of individual students. In part as a result of the new data-oriented approach, Garrett's FARM and special education student achievement has improved dramatically in the past three years.

3. Professional Learning Communities (or PLC facsimiles). Many LSS officials and principals indicated "Professional Learning Community" (PLC) as their potential best practice. At the heart of this concept is the collaborative process of planning instruction, learning from colleagues, and sharing experiences. According to the interviewed principals and LSS officials, the PLC has been a powerful staff development tool. Schools utilize different approaches to collaborative planning, depending on the school level. Elementary schools typically have grade-level teams with a common planning time, while middle and high schools have common planning time by subject area.

   Schools incorporate strategic planning and accountability procedures into the collaborative planning mechanism. When used in conjunction with data-based instructional decision-making, collaborative planning can be very effective. In addition to a general discussion of instructional strategies, teachers can then focus on addressing specific indicators. More effective teachers can share their approach with their colleagues, such as modeling instruction.

   > Example of impact of PLCs: The superintendent of the high-performing Calvert County Public Schools attributes the LSSs success in recent years to collaboration among teachers in addressing instructional challenges, in conjunction with extensive data utilization for instructional decision-making. In fact, he said in the interview, the purchase of the data warehouse three years ago became a "catalyst": "It forced people to sit down and start talking, asking questions. It started conversations among teachers about effective instructional practices." Currently, a collaborative

> approach is used on all levels in the county—from the administration to the classroom.

4. Professional Development. Professional development activities in visited school systems ranged from a few days of voluntary professional development seminars in the summer to ongoing need-based—by indicator (based on student data)—embedded professional development delivered throughout the school year by professional coaches. Such an integrated approach to professional development was reported by principals and teachers to be highly effective. It is typically supported by a professional coach or a teacher specialist on staff. Professional development activities typically focus on instruction, but may also include behavioral issues, data analysis and utilization training, cultural sensitivity training, and relationship building between teachers and students.

> Example of professional development: Howard County administration holds Summer Institutes for principals, teachers, and other members of its school improvement teams. During these institutes, the school improvement teams work on their SIP for the next school year. The institutes also provide professional development on topics related to school improvement and provide networking and peer review opportunities across the LSS, which contributes to the LSS's overall Professional Learning Community. The administration and principals have cited the Summer Institutes as being one of their potential best practices.

5. Teacher Specialists. With the increased level of accountability to the state and the federal government, schools and school systems are investing more resources in building capacity for instructional leadership. Schools in all but six LSSs indicated that they had designated positions to guide and support their teaching staff. These positions have different names that vary by county ("resource teachers," "learning specialists," "student achievement specialists," "coaches," etc.) but fall have similar responsibilities. Typically, they:

   - Model instructional strategies to teachers.
   - Analyze data and assist teachers with data-based instructional decision-making.
   - Facilitate common instructional planning meetings.
   - Provide differentiated instruction to students.
   - Develop strategic goals and plans.
   - In some LSSs, serve as liaisons between the school and the central office.

   Teacher specialists provide support that enables schools to operate in today's more demanding system of requirements and expectations, with an emphasis on the needs of an individual student. Teacher specialists provide leadership

in continuous staff development, in the process of improving instruction through professional learning communities, and in data utilization.

While beneficial to the entire student population, teacher specialist positions were reported to be especially helpful in increasing achievement of NCLB subgroups. Providing differentiated instruction and tutoring to the neediest students is usually a part of their responsibilities.

> Example of a teacher specialist: Both the superintendent and assistant superintendent of Caroline County Public Schools cited the LSS's utilization of resource teachers as a unique step that had contributed to the implementation of BTE requirements within their schools. Every elementary school in Caroline County has at least one full-time resource teacher. Resource teachers are there to assist not only the students, but the teachers as well. They provide modeling and coaching as well as professional development regarding utilization of data and Voluntary State Curriculum (VSC) alignment. Principals of visited Caroline schools cited teacher specialists among their potential best practices.

6. Differentiated Instruction. Differentiated instruction was frequently mentioned as a potential best practice by principals and LSS officials. In the differentiated instruction model, teachers break their class into groups based on recent assessment scores and deliver targeted instruction to each group in order to focus on the common need of the group participants. Groups can be formed for the duration of a class or for a few weeks or even months. Differentiated instruction is sometimes called "flex grouping," and in some schools students are moved from one teacher to another depending on their identified need. Some schools have double blocks of core subjects (reading and math) in order to provide differentiated instruction during the second block. Such "built-in schedule" differentiated instruction was reported to produce good results.

   While it may take different forms, the key element of the differentiated instruction model is attention to the needs of an individual student. The majority of the interviewed LSS officials indicated that the shift in focus from the needs of the entire student population to the needs of an individual student was systemic and had been brought about by the requirements of both BTE and NCLB. This shift required additional planning, additional resources, and realignment of the entire school structure. Similarly to how intervention programs are delivered, regular teachers and support personnel are used for delivering differentiated instruction.

   > Example of built-in schedule differentiated instruction: Talbot County utilizes differentiated instruction for the SPED, lower-performing, and accelerated students. Students receive either remedial intervention or enrichment based upon their assessment scores. Teachers are also able to regroup students depending upon their current performance in the classroom (homework and test grades). To assist with the lower-performing students, the LSS employs a co-teaching model that utilizes both SPED teachers and resource teachers. Additionally, the intervention-enrichment period is embedded into the schedule, usually

> taking place in the morning, which allows for a more integrated approach for the students.

These six systemic best practices support and complement one another. Strategic planning processes permeate everything that successful LSS administrations and schools do. Data utilization is led by teacher specialists by means of Professional Learning Communities and informs instruction and interventions. And finally, ongoing professional development is necessary for continuous improvement of instructional effectiveness. These six elements work best in conjunction with one another. Strategic planning is enabled by data analysis; data are examined during the collaborative process of Professional Learning Communities to inform regular and differentiated instruction; professional development addresses teacher needs; and teacher specialists provide leadership in all or most of these processes.

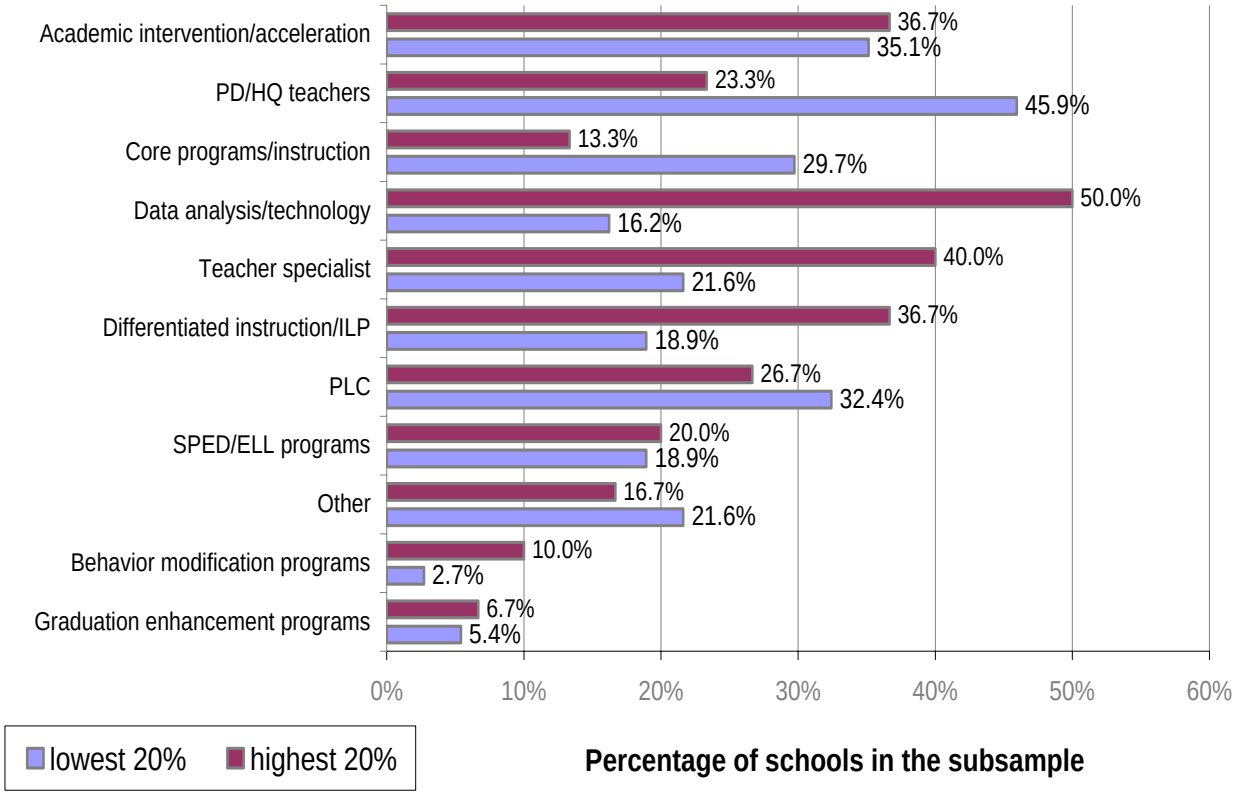
> Example all six systemic potential best practices in combination: Mount Harmony Elementary School in Calvert County is among the highest-achieving elementary schools in Maryland both in terms of academic performance and in closing the achievement gap of its students. The SIP is aligned with with the county CMP. At school, strategic planning works through "smart goals," which are central to the SIP. The vice principal and the teacher specialist ("learning specialist") work to set these instructional smart goals. Smart goals are developed at each grade level by teachers (led by the vice principal and teacher specialist), who during PLC meetings come up with goals and strategies for achieving them, and use data to address student needs. A team approach to problem-solving exists both at the grade level and as a faculty. In addressing the needs of each student, the faculty places great emphasis on differentiated instruction. The teacher specialist is central to the process: she models lessons, analyzes data, and works with teachers. She meets with teachers individually and as a group for instructional coaching, and attends and chairs PLC meetings. Overall, the school exemplifies how strategic planning, data utilization, collaboration, embedded professional development, the teacher specialist, and differentiated instruction combine to create an exceptionally effective place of learning.

According to interviewed LSS officials and principals, contextual factors play an important role as well. Many interviewees expressed an opinion that at least some variation in student achievement from county to county and from school to school could be explained by the amount of resources available, level of poverty in the community, number of ELL students, and other factors beyond the control of schools and administrations. Additionally, some counties have had years of outstanding leadership that have enabled schools to create productive and nurturing environments for both teachers and students. The stability and effectiveness of leadership at the central administration level as well as in schools are important factors to consider in analyzing discrepancies in student achievement.

Exhibit 67 shows the results of the comparative analysis of potential best practices reported by principals of the highest and lowest performing twenty-percent of LSSs.

The exhibit shows significant differences in reported potential best practices that support the findings above.[4]

EXHIBIT 67
COMPARISON OF PBP CATEGORIES IN HIGHEST- AND LOWEST-PERFORMING COUNTIES



Source: Site visits to LSSs by MGT of America, 2007.

Exhibit 67 demonstrates that schools in higher-performing counties use data analysis in instructional decision-making much more frequently than schools in lower-performing counties. Only 8 percent (3 out of 37) of the sampled schools in the lowest-performing counties reported data analysis for instructional decision-making as one of their potential best practices, while 40 percent (12 out of 30) of the sampled schools in top-performing counties reported data analysis for instructional decision-making as one of their potential best practices. The use of technology in the classroom was comparably similar.

[4] The comparison was performed in the following manner: potential best practices from all schools in the sample from five top-performing counties were compared to potential best practices from all schools in the sample from five bottom-performing counties. Only the categories of the potential best practices were included in the construction of the exhibit (even if more than one strategy was mentioned in each category). Since the number of schools analyzed for the highest-performing and the lowest-performing counties was different (30 for the highest- and 37 for the lowest-performing), the number of strategies indicated in each category was divided by the number of schools in the subsample and multiplied by 100 percent.

The other two significant differences between potential best practices reported by principals in the higher-performing counties and principals in the lower-performing counties was the "Teacher specialist" category and the "Differentiated instruction and Individualized Learning Plans" category. In both of these categories, principals in the higher-performing counties reported potential best practices twice as frequently as principals in the lower-performing counties.

One category in which principals in the lowest-performing counties reported significantly more potential best practices is "Professional development/highly qualified teachers" While comparable numbers of principals reported professional development among their potential best practices, significantly more principals from the lowest-performing counties reported hiring additional staff and increasing salaries to existing faculty among their potential best practices. Another category in which schools from the lowest-performing counties cited more strategies was "Core programs and general instruction," including core reading program, core math program, pre-K and kindergarten mentioned among potential best practices.

Overall, this comparison provides a good illustration of the analysis of systemic processes as best practices above. It underscores that data utilization, staff to conduct data analysis and use the results for differentiated instruction were cited as potential best practices more frequently by principals in the highest-performing counties than by principals in the lowest-performing counties. Further analysis is needed to ascertain if causal relationships, if any, are present.

3.2.3 Potential Best Practices at the School Level

Categories of potential best practices

During the site visits, principals were shown a list of strategies from the current LSS Master Plan Update and LSS budget and asked to check all applicable strategies for their school. Following that, principals were asked:

> "Which one of the strategies that you have checked has had the most significant impact in terms of improving the performance of all students or of a subset of students at your school? *If another strategy, program, or factor that is not listed on the attached sheet has led to even more significant improvements in achievement for all students or for a subgroup of your students, please identify that one for us.*"

Many principals identified strategies that were not on the list, particularly those that did not correspond directly to funding. For example, such strategies as differentiated instruction may appear in the budget if it involves additional teacher time. However, if it is applied to existing instructional time, then it is unlikely to appear in the budget. Similarly, "collaborative approach" would not have a direct budget line. The important best practice of data utilization in instructional decision-making would not necessarily occur in direct expenses either, and thus would frequently not be listed in the budget.

Site visit data included documented references to 520 potential best practices, including strategies, programs, approaches, positions, and activities. One hundred sixty-five of these were described in "Potential Best Practices Reports" that were prepared by site

visit teams in addition to school visit reports. To present site visit findings in the clearest and most logical way, the 520 potential best practices were organized into 40 new subcategories and then grouped into 11 main categories. Exhibit 68 presents these categories and subcategories:

EXHIBIT 68
CATEGORIES OF POTENTIAL BEST PRACTICES

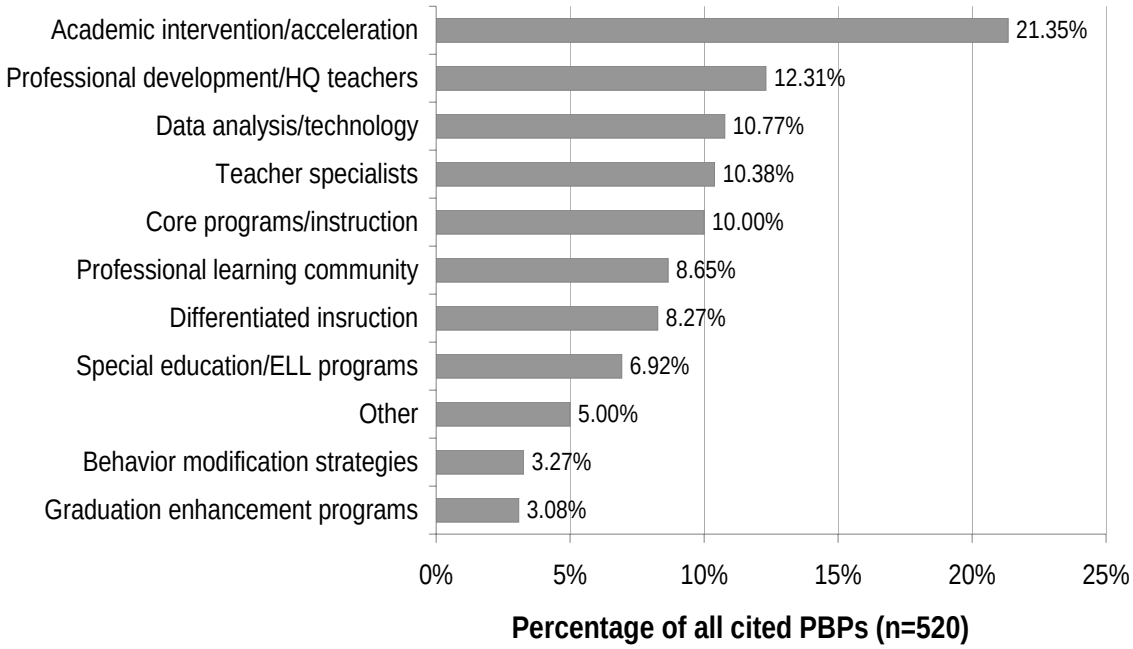
DATA CATEGORY	CODED POTENTIAL BEST PRACTICES IN THE CATEGORY
Category 1: **Academic intervention and acceleration programs**	■ Reading intervention programs ■ Math intervention programs ■ After-school, weekend, and summer programs ■ MSA, HSA preparation programs ■ Built-in schedule intervention/enrichment block ■ Scheduling two class blocks together in core areas (double blocking) ■ Advanced placement courses ■ Gifted and Talented program and other enrichment programs (e.g., International Baccalaureate)
Category 2: **Professional development/high quality teachers**	■ Professional development ■ High quality teachers (including highly qualified teachers), mentoring for new teachers, salary increases; additional teachers ■ Cultural sensitivity training, relationships training
Category 3: **Data analysis and technology**	■ Data warehouse and data analysis ■ Technology in the classroom instruction
Category 4: **Teacher specialists**	■ Teacher specialist (including resource teacher, student achievement specialist, learning specialist, etc.) ■ Reading specialist ■ Math specialist
Category 5: **Core programs and general instruction**	■ Reading core programs ■ Math core programs ■ Head Start, Pre-K, and kindergarten ■ Materials of instruction ■ Voluntary state curriculum (VSC)/pacing guides ■ Instruction in other non-core programs: sports, arts, etc. ■ Small class size ■ Departmentalization of higher elementary school grades ■ Smaller learning communities (freshman academies, multi-grade academies organized around career interests or other themes, “houses” in which small groups of students remain together throughout high school, and autonomous schools-within-a-school, etc.)

EXHIBIT 68 (Continued)
CATEGORIES OF "POTENTIAL BEST PRACTICES"

DATA CATEGORY	CODED "POTENTIAL BEST PRACTICES" IN THE CATEGORY
Category 6: Differentiated instruction/Individualized Learning Plans	■ Individualized approach to intervention ■ Differentiated instruction ■ Targeted teacher assignments ■ Individualized Learning Plans
Category 7: Professional Learning Community	■ Professional Learning Communities, collaborative approach, team planning
Category 8: Special education/ELL programs	■ Special education inclusion ■ Special education co-teaching ■ Special education programs ■ ELL co-teaching ■ ELL programs
Category 9: Behavior modification strategies	■ Psychologist, counselor on staff ■ PBIS and other behavior modification programs
Category 10: Graduation enhancement programs	■ Advancement via Individual Determination (AVID) program ■ Dropout prevention programs, specialists ■ Partnerships with local colleges
Category 11: Other	■ Parent involvement ■ School culture of high expectations ■ Student involvement in school governance

Exhibit 69 presents the overall distribution of the 520 cited potential best practices using these site visit data-driven categories:

EXHIBIT 69
POTENTIAL BEST PRACTICES IN 150 VISITED SCHOOLS
BY IDENTIFIED CATEGORIES



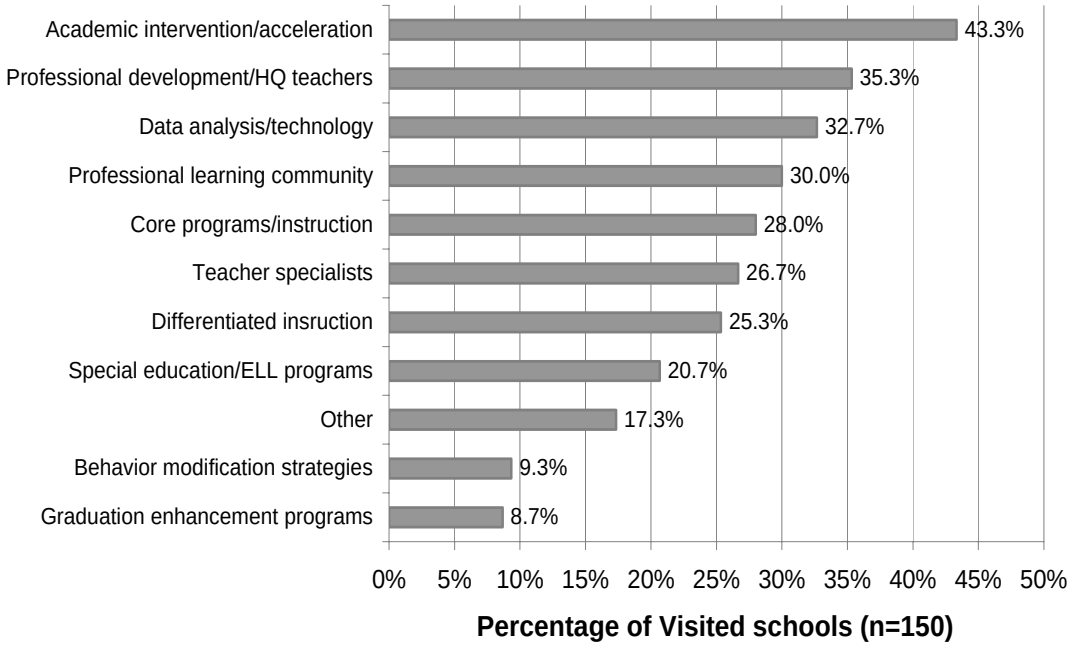
Source: Site visits to LSSs by MGT of America, 2007.

Exhibit 69 demonstrates the distribution of all 520 identified potential best practices among 11 identified categories. However, it does not show how many schools have identified potential best practices in the categories. Exhibit 70 presents the distribution of the 11 categories among the 150 schools we visited. The graph was constructed in the following way: for each visited school, each potential best practices category was coded no more than once. Thus, Exhibit 70 shows the percentage of all visited schools that mentioned at least one strategy in the potential best practices category. For example, the first category ("Academic intervention and acceleration programs") lists 43.3 percent, which means that 65 out of 150 interviewed school principals mentioned at least one academic intervention or acceleration program (or other strategy in the category, as identified in Exhibit 67) among their potential best practices.

In the analysis, we used available information and our professional judgment to classify each potential best practice into only one category, although some practices mentioned by principals could be categorized in multiple ways. Exhibits 69 and 70 thus present a t simplified picture of the potential best practices identified. For example, some intervention programs could also be classified as "graduation enhancement programs." Professional learning community meetings focus much attention on data analysis, and thus could also fall into two separate categories. Teacher specialists who deliver professional development to instructional personnel could fit both the "Teacher specialist" and the "Professional development" categories. Additionally, many principals pointed out that all potential best practices were only as good as the teachers and staff who delivered them. Quality and a high retention rate of personnel are

essential to the efforts to improve student achievement. Principals and administrators alike commended BTE for allowing them to improve their instructional staff by raising salaries to attract and retain better teachers.

EXHIBIT 70
CATEGORIES OF POTENTIAL BEST PRACTICES IN 150 VISITED SCHOOLS



Source: Site visits to LSSs by MGT of America, 2007.

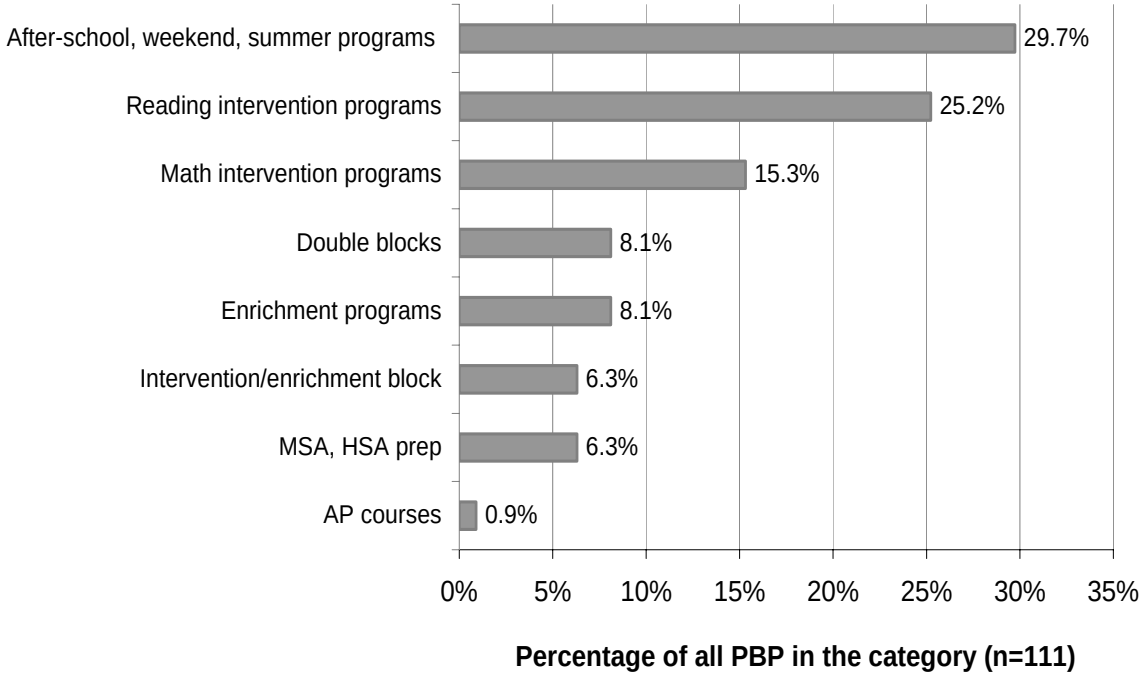
Category 1: Academic Intervention and Acceleration Programs

Academic intervention and acceleration programs were most frequently cited by principals among their potential best practices, with almost a quarter (111 out of 520) of all mentioned practices falling into this category. This category includes the following subcategories:

- Reading intervention
- Math intervention
- After-school, weekend, and summer programs
- MSA and HSA preparation programs
- Built-in schedule intervention/enrichment block
- Double blocking in core areas
- Advanced placement courses
- Gifted and Talented program and other enrichment and acceleration programs (International Baccalaureate, etc)

Exhibit 71 below presents a distribution of practices in this category.

EXHIBIT 71
ACADEMIC INTERVENTION AND ACCELERATION PROGRAMS CATEGORY



Source: Site visits to LSSs by MGT of America, 2007.

Although strategies and programs included in this category vary greatly, their uniting feature is attention to the needs of students who may benefit from additional instruction, be that remediation for lower-performing students or enrichment for higher-performing students. Intervention programs range from brief one-on-one tutoring during lunch time to extensive programs (e.g., Cognitive Tutor software for help in math) and enrichment classes (e.g., Advanced Placement courses, William and Mary Gifted and Talented curriculum). Some intervention programs specifically target students at risk for dropping out and thus could also qualify as graduation enhancements.

Many practitioners have reached the consensus that pull-out intervention programs do not work well since they cause students to miss instruction. Consequently, some LSSs (e.g., Talbot) and some schools have adopted scheduling arrangements to include intervention programs into the main schedule. Some schools have included a full block for intervention and enrichment activities in the middle of the day, while others have incorporated them into the end of the day.

> Example on built-in schedule intervention block: Parkland Middle School in Montgomery County has recently introduced a home-grown "Parkland Power Period" (PPP): a 45-minute block twice a week for all students. Teachers set goals for their students, and students keep notebooks to record their progress and have monthly reviews of their accomplishments. During PPP, students receive support in math, in reading, or in other areas (for example, organizational skills). The focus

> of PPP is on academic interventions (as well as on building relationships) and data-monitoring through student notebooks. The principal attributed significant gains in student achievement in part to PPP.

Of interviewed principals, 65 (43.3 percent) cited at least one strategy from the "Academic intervention and acceleration programs" category as one of their potential best practices.

Category 2: Professional Development and High-Quality Teachers

Twelve percent of all cited potential best practices fell into the category of "Professional development and high-quality teachers." The majority of them (62.5 percent) referred to professional development (PD) activities, a third (32.8 percent) to having or hiring high-quality teachers, and the remaining 4.7 percent to cultural sensitivity training. The "High-quality teachers" subcategory included hiring new teachers, retaining existing teachers by means of incentives (e.g., increasing teacher salaries), supporting teachers in becoming "highly qualified" by MSDE standards, and creating new teaching positions.

Principals in a third (35.3 percent) of all visited schools mentioned at least one strategy in the "Professional development and high-quality teachers" category as one of their potential best practices. Professional development activities that were most frequently mentioned as deserving the status of a best practice typically involved embedded, ongoing, and targeted PD. Some of the most effective examples incorporated multiple strategies into one activity.

> Example of embedded professional development: Northern Middle School in Calvert County cited its home-grown PD program, "Authentic Learning Labs" (ALL), as one of its best practices. ALL is an in-house PD program with the following goals: a) model strategies for teachers by learning specialist; b) encourage dialogue and collaboration among teachers; and c) provide an opportunity for daily PD for teachers with the focus on teacher learning through thinking about their practices. ALL is led by a teacher specialist who does daily walk-throughs of the classrooms, identifies strengths and weaknesses of teachers, and brings them to ALL. While on a system level, teachers get PD four times a year, based on the needs identified through student testing, ALL is embedded in the school and provides quick response to the needs of teachers and students. Northern is among the highest-performing middle schools in Maryland.

Well-designed embedded professional development is instrumental not only in increasing teaching effectiveness, but also in stimulating constructive professional dialogue among teachers about instructional practices. Many principals and administrators mentioned high quality of teachers in general as an underlying factor for all other potential best practices.

Category 3: Data Analysis and Technology

The category "Data analysis and technology" comprises two subcategories: data warehousing and data analysis for instructional decision-making, and utilization of technology in the classroom. Over 10 percent of all cited potential best practices fell into

this category, with 80 percent referring to data warehousing and data analysis for instructional decision-making, and 20 percent referring to the use of technology in the classroom. Almost a third of all visited schools (32.7 percent) cited a potential best practice in this category. The transformative effect of the data analysis for instructional decision-making on student achievement elicited particularly enthusiastic responses from principals.

> Example of data utilization in instructional decision-making: Grasonville Elementary School in Queen Anne's County utilizes data triangulation for student achievement monitoring. The data from three sources are analyzed routinely, and the results are triangulated: external data (MSA results, Stanford test results), benchmarks (county-developed quarterly assessments), and classroom data (gradebooks, observations). The county allocates seven half-days a year to analyzing student-level data, performing collaborative examination, and choosing a strategy for each student. The school hired a consultant to establish the data system to be used to impact instructional practices. The principal of Grasonville attributes the high level of academic achievement among NCLB subgroups to extensive student achievement monitoring that informs the intervention approach.

Both LSS officials and principals in many counties expressed their commitment to increasing teaching effectiveness through the use of technology in the classroom. The most commonly used technologies are Smart Boards, interactive White Boards, LCD screens with computers, and various computer software packages for instructional purposes. Principals maintain that use of technology in instruction doubles teaching effectiveness. Site visit teams observed technology use in the classrooms, and there is little doubt that technology increases student motivation and attention and allows teachers to present complex concepts effectively.

Category 4: Teacher Specialists

Forty out of 150 (26.7 percent) interviewed principals cited the position of teacher specialist as one of their best practices. Over 10 percent of all cited potential best practices fell in the "Teacher specialist" category. This category includes a variety of positions, among them "resource teacher," "math specialist," "reading specialist," "staff development specialist," "learning specialist." Some positions are content-area specific (for example, "social studies specialist"), while others are not (for example, "learning specialist" or "student achievement specialist").

This category includes teacher specialists who are mainly responsible for ongoing staff development. These teachers are called "Student Achievement Specialists" in Washington, "Student Learning Specialists" in Calvert, "Instructional Support Teachers" in Cecil, and "Professional Development Coaches" in Wicomico. They look for new teaching strategies, especially in critical areas (subjects or types of students), bring them into the school from meetings with their peers at other schools, and demonstrate them in the classroom or train the teachers in their use. They also assist teachers with data utilization in instructional decision-making, provide differentiated instruction and tutoring to students, and facilitate collaboration in the instructional process. In many visited schools, this position was relatively new, and principals raved about it.

The "Teacher specialist" category also includes reading or math specialists whose job is to assist teachers in providing regular and differentiated instruction, and in tutoring. Thirteen principals cited "reading specialist" as one of their potential best practices, and 12 cited "math specialists" as one of their potential best practices.

> Example of a teacher specialist potential best practice: Wicomico Middle School in Wicomico County cited "intervention teachers" as one of its potential best practices. Floating intervention teachers in reading and algebra supplement the classroom teachers. They may be used to split a class of 20 into two classes of 10 for more individualized attention, or may meet with individuals or small groups of students in "pull-out" situations to review or re-teach curriculum elements with which students are having difficulty. Teaching aides and interns also supplement classroom teachers. Essentially, the school is using a limited number of extra teaching staff to achieve very small class sizes on a selective basis by student or topic, and this practice significantly improves student achievement.

Over a quarter of the 150 principals interviewed cited the teacher specialist position as one of their potential best practices.

Category 5: Core Programs and General Instruction

This category of potential best practices included references to a number of strategies, materials and programs, including the following:

- Reading core programs
- Math core programs
- Head Start, pre-K, and kindergarten
- Materials of instruction
- VSC and pacing guides that help adhere to it
- Instruction in other non-core programs: sports, fine arts, etc.
- Small(er) class size
- Departmentalization of higher elementary school grades
- Smaller learning communities (freshman academies, multi-grade academies organized around career interests or other themes, "houses" in which small groups of students remain together throughout high school, and autonomous schools-within-a-school, etc.)

Ten percent of all potential best practices fell into this category. Forty-two principals (28 percent) cited at least one strategy in this category as their potential best practice. The largest number of references was to the "Head Start, Pre-K and Kindergarten" category.

Eleven principals (22 percent of all interviewed elementary school principals) said that Head Start, pre-K, and full-day Kindergarten redefined early education by significantly increasing the level of student preparedness by the first grade.

Reading and math core curricula were often cited as potential best practices. Open Court and Houghton Mifflin core reading curricula were found to be popular among elementary school principals. Today's Math, Connected Math, and Investigations were cited as great core math curricula. In relation to the VSC, five principals cited pacing guides as a very effective tool in increasing student achievement.

Category 6: Differentiated Instruction and Individualized Learning Plans

As shown in Exhibit 69, almost 9 percent of all potential best practices mentioned referred to strategies that fell into the category of "Differentiated instruction and individualized learning plans." This category comprises a variety of strategies that have to do with individualized approaches to teaching and learning. It differs from the "Academic intervention and enrichment programs" category (which focuses on *programs)* by focusing on the individualized *approach* to teaching and learning. The category includes four subcategories:

- Individualized approach to intervention
- Differentiated instruction
- Targeted teacher assignments
- Individualized Learning Plans

Of these four categories, differentiated instruction is the most commonly used: 19 principals named it among their potential best practices. Thirteen principals cited a data-based individualized approach to intervention as their potential best practice. Targeted teacher assignments (i.e., using data to pair teachers who demonstrate effective instruction in a particular area with students who are weak in this area) was named a potential best practice by five principals, and Individual Learning Plans by six principals.

> Example of individualized approach to intervention: Northern Middle School in Garrett County adopted the idea of Instructional Consultation Teams (ICTs), developed by the University of Maryland. The main idea of the ICT is the highly individualized approach to academic intervention, whenthe best teachers are matched with lower-performing students. The ICT works by involving a peer teacher ("case manager") into the process of addressing a student's low performance: PID (problem identification), assessment, result review, set baseline, set target, design intervention. The case manager and the teacher work together to create an intervention strategy for the student. The strategy is used for four to six weeks, with weekly assessments that are plotted on a chart to show progress. If there is no progress, reexamination and change of strategy occurs. A peer teacher brings an independent perspective into student-teacher relationships. The ICT strategy is highly effective in improving achievement of SPED students.

A quarter of all visited schools cited at least one of the subcategories in the "Differentiated instruction and individualized learning plans" among their potential best practices.

Category 7: Professional Learning Communities

The "Professional Learning Communities" category includes all potential best practices that have to do with common planning, a collaborative approach to instructional decision-making, and grade and subject area collaboration. 45 principals (30 percent) cited their PLC or PLC look-alike as their potential best practice. Additionally, principals of some of the lower-performing schools cited difficulty and teacher resistance to collaboration as substantial obstacles to improving student achievement. See the "Systemic Processes as Best Practices" section for more discussion.

> Example of a Professional Learning Community: Teachers of Bel Air Middle School in Harford County meet each fall for a full day of team planning. The teachers break into ten teams and review the data on current students to determine the needs of individual students. They also review the data for the previous years to see if students achieved the desired growth. Teams then create action plans. Throughout the year, the teachers meet every Monday to review and revise the plan they created in the fall. They look at all the basic-level students and decide if they need support beyond the ability of the team; if so, they determine what interventions to use. This part of the process begins five weeks into the school year so that they can determine which students do not need additional interventions. Bel Air is among the highest performing middle schools in Maryland, and the principal credits its success in part to this practice.

Category 8: SPED and ELL Programs

Responding to federal and state mandates regarding achievement of the NCLB subgroups, most schools have some strategies in place to improve performance of their SPED and/or ELL population. Almost 7 percent (6.9 percent) of all cited potential best practices had to do with SPED and/or ELL programs. Fourteen principals cited their programs targeting special education students, including the co-teaching model. Nine principals cited programs targeting their ELL students among their potential best practices. Thirteen principals said the inclusion model could be viewed as one of their potential best practices. Overall, 20.7 percent of all visited schools had special education or ELL programs that principals viewed as a potential best practice.

> Example of an ELL program: Culturally responsive teaching is an approach that is specifically designed for use with ELL students in the Silver Spring International School in Montgomery County. This approach features three components: (1) active student engagement; (2) use of cooperative learning; and (3) use of appropriate wait time. Active student engagement is an NCLB technique in which all students in a class are involved during any lesson. This involvement includes responding to direct questions, conducting an in-class demonstration, teaching a mini-lesson, and re-teaching previous lessons to peers. The approach greatly increases the number and quality of student-teacher interactions during a given lesson and for students from cultures as diverse as those represented in the school, it is a critical component in helping to bridge the cultural divide and draw students into active class discussions.

Category 9: Behavior Modification Programs

Behavioral issues remain one of the major challenges that schools face. Under Goal Four of NCLB legislation, schools have various programs and positions in place to improve school environment. By improving overall school climates, reducing teacher time spent on behavioral issues rather than instruction, and increasing overall time students spend in classrooms, behavior modification programs impact student achievement in a significant way. Fourteen principals (9.3 percent of all) cited a behavior modification program as a potential best practice. Positive Behavior Interventions and Support (PBIS) and PEACE (a program that reinforces students' independent demonstration of positive learning skills in support of their academic achievement) were among those mentioned.

> Example of a behavior modification program: Greenview Knolls Elementary School in St. Mary's County is a PBIS exemplary school. Before PBIS, children spent too much time out of the classroom, missing instruction due to disciplinary problems. Since the PBIS was adopted five years ago, the number of referrals and suspensions dropped significantly. PBIS is focusing on teaching pro-social behavior. Teachers and administration have been trained to adopt a team approach to behavior modification. Teachers work to create an environment that helps modify students' behavior. Since implementation of the PBIS, 80 percent of students do not have behavioral issues. Fifteen percent (fewer than five referrals a year) have some issues and receive interventions (e.g., lunch with a guidance counselor). Five percent have more than five referrals a year and receive daily support and personal plans. The central tenet is positive reinforcement ("give-a-hoot" coupons for entry in weekly lottery drawings of small prizes).

Category 10: Graduation Enhancement Programs

Programs in the "Graduation enhancement" category include the following:

- Advancement via Individual Determination (AVID) program
- Dropout prevention programs and specialists
- Partnerships with local colleges

Thirteen principals reported at least one program in this category as one of their potential best practices, although such programs were observed in many more schools. AVID was the most commonly mentioned, with ten principals reporting it as one of their potential best practices. The AVID program is designed for first-generation college-bound students and teaches them skills, while in early grades, that will enable them to enter college. In higher grades, the program assists students with searching for a college and with the application process. AVID classes have informational as well as motivational value, and principals attest to their effectiveness.

The other two graduation enhancements are dropout prevention programs and specialists, and partnerships with colleges. Dropout prevention programs and specialists focus on identifying and attending to the needs of at-risk students, providing them opportunities for credit recovery, and working with them and their families toward graduation. Partnership with a local college is an effective strategy for higher-achieving students who would like to try college classes before graduating from high school.

Academic intervention programs that targeted students at risk for dropping out were not included in this category, but rather in the broader "Academic intervention and acceleration programs" category.

Category 11: Other

All mentioned strategies that did not fit in the ten categories described above were grouped in the "Other" category. About 5 percent (5.4 percent) of the 460 potential best practices mentioned fell into this category, including the following:

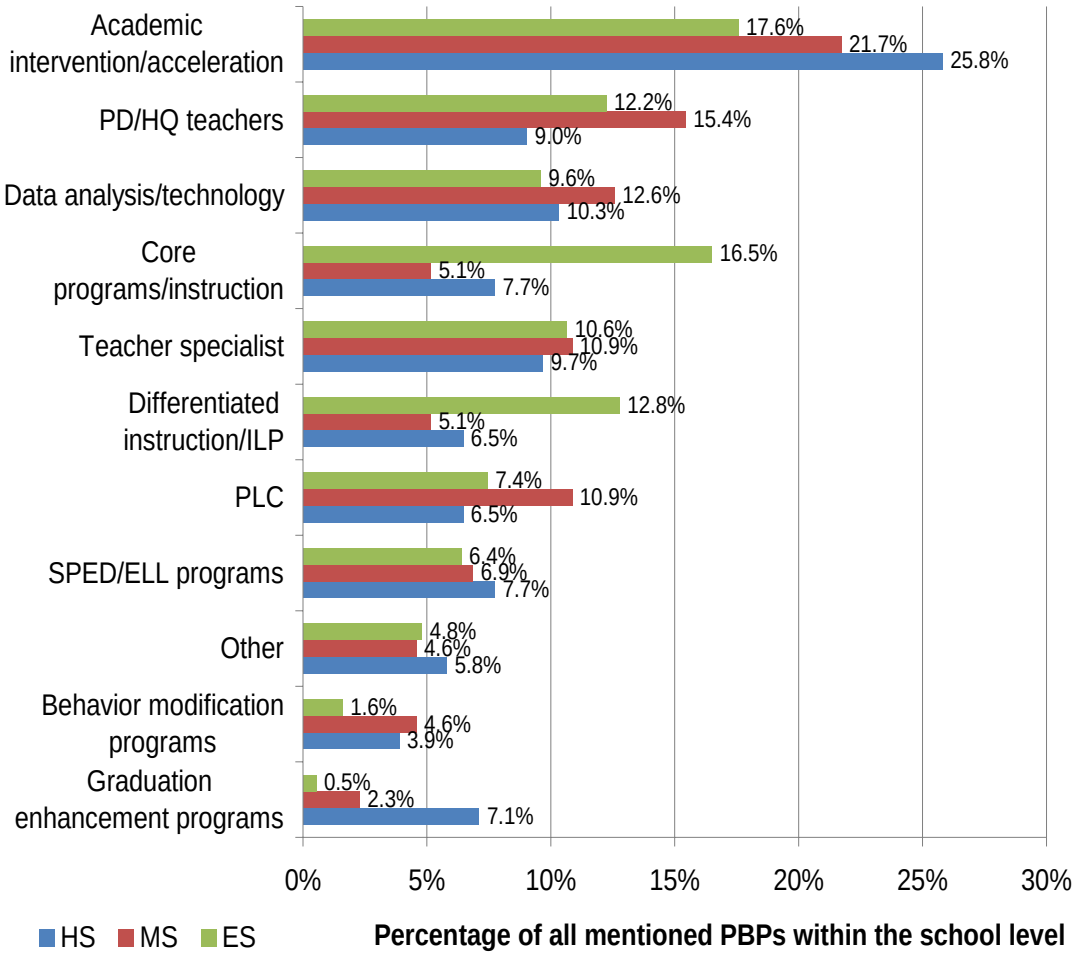
- Parent involvement
- Student government association
- School culture of high expectations
- Student involvement in school improvement team
- Jostens Renaissance Program
- Other programs, scheduling arrangements, and school services that did not fall into the ten main categories

Of all the interviewed principals, 26 (17.3 percent) named a practice or an approach from this category as one of their potential best practices.

Comparison of categories of potential best practices by school level

Analysis of the categories of potential best practices by school level revealed substantial differences among what principals of elementary, middle, and high schools consider their best practices. Exhibit 72 demonstrates a distribution of frequencies of potential best practices within each category by school level.

EXHIBIT 72
COMPARISON OF POTENTIAL BEST PRACTICES BY SCHOOL LEVEL
(n=50 IN EACH LEVEL)



Source: Site visits to LSSs by MGT of America, 2007.

As seen above, principals of elementary schools reported core programs and general instruction strategies and differentiated instruction strategies three times more frequently than principals of middle and high schools. This is mainly due to the "Pre-K/ Kindergarten" subcategory, which elementary school principals frequently mentioned as very important in improving student achievement. They also reported strategies "Differentiated instruction/Individual Learning Plan" category more frequently than principals of middle and high schools.

Principals of middle schools mentioned more strategies in the "Data analysis and technology," "Professional development and high quality teachers," and "Professional learning communities" categories than principals of elementary and high schools. Principals of high schools reported more strategies in the "Academic intervention and acceleration programs" category than principals of elementary and middle schools. They also cited more strategies in the "Graduation enhancement programs" category. In general, principals of high schools cited fewer potential best practices compared to

principals of elementary and middle schools: as a group, they cited 11.4 percent fewer potential best practices then principals of middle schools, and 17 percent fewer potential best practices than principals of elementary schools. Exhibit 72 controlled for this difference.

It is important to note that practices that are mentioned less frequently as potential best practices are not necessarily less effective in improving student achievement than those that are mentioned more frequently. For example, the fact that Professional Learning Communities are mentioned less frequently by high school principals in the list of potential best practices may simply mean that fewer high schools are attempting to engage their faculty in a Professional Learning Community. Further research into strategies cited by principals as potential best practices is needed to determine effectiveness of specific practices and their combinations.

3.2.4 Comparative Analysis of Higher-Performing Schools With Lower-Performing Schools by School Level

To better understand the differences between high- and low-performing schools at each school level, MGT conducted an analysis of their identified potential best practices. First, we ranked elementary and middle schools by their combined performance in reading and math based on 2007 MSA data.[5] The top 20 percent of schools and bottom 20 percent of schools on the list were selected for further analysis. We then ranked schools by percentage of gap closed since 2004 in both reading and math. Again, the top 20 percent of schools and bottom 20 percent of schools on the list were selected for further analysis. The lists of potential best practices in the highest and the lowest 20 percent of schools in both lists were combined. The best practices of higher-achieving schools were then compared to the best practices of lower-achieving schools.

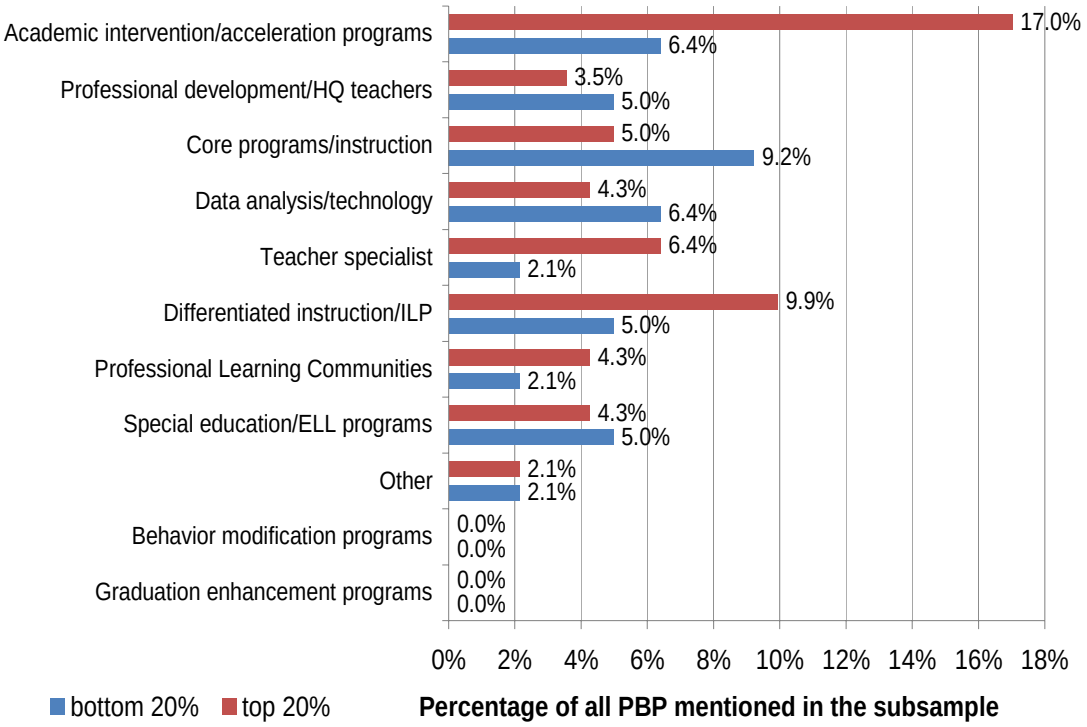
At each school level, the final list of schools for comparison included the 20 highest-performing elementary schools compared with 20 lowest-performing elementary schools (representing the top and bottom 20 percent of two lists: ranking by combined math and reading scores, and ranking by percentage of gap closed in both math and reading).

Elementary Schools

Exhibit 73 demonstrates the distribution of potential best practices cited by principals of the 20 percent highest- and 20 percent lowest-achieving elementary schools in both 2007 MSA scores and in closing the achievement gap.

[5] When this report was drafted, only English 2 HSA data were used to classify high schools into the relatively high- and relatively low-performing categories.

EXHIBIT 73
COMPARISON OF POTENTIAL BEST PRACTICES AMONG HIGHEST- AND LOWEST-PERFORMING ELEMENTARY SCHOOLS IN THE SAMPLE



Source: Site visits to LSSs by MGT of America, 2007.

As evident from the chart, principals of higher-performing elementary schools cited almost three times more frequently strategies in the "Academic intervention and acceleration" and "Teacher specialists" categories than did principals of lower-performing schools. They also mentioned strategies in the "Differentiated instruction/ Individualized Learning Plan" and "Professional Learning Community" categories twice as frequently as principals of lower-performing schools. Principals of the lower-performing schools cited strategies in the "Core programs and general instruction" category significantly more frequently than principals of the higher performing elementary schools. No principals in the subsample cited behavior modification programs or graduation enhancement programs among their potential best practices. "Other" category included "parent involvement," "school culture," and "finding ways to extend learning opportunities."

Question 9 of the principal questionnaire asked principals to explain the achievement of their students, as compared to the achievement of those in other elementary schools in the LSS:

> "I will now share with you some graphs never seen before that compare the extent to which the schools we are visiting have closed their gaps in terms of reaching the NCLB goal of 100 percent proficiency by the year 2014. In your opinion, what are the major factors accounting for the

differences between your school's gap closures and the gap closures experienced by the other schools?"

Principals of both higher- and lower-performing schools indicated that students' socio-economic status had an important impact on student achievement. According to the interviewed principals, students from higher socioeconomic backgrounds performed significantly better than students from lower socioeconomic backgrounds. Other than this contextual factor, principals of higher-achieving schools most frequently cited Professional Learning Communities as the chief factor of their success. Additionally, they emphasized the importance of differentiated instruction and individualized attention to students' needs, professional development for teachers, and both core and intervention programs.

Reading. Principals of elementary schools that were particularly successful in closing the gap in reading identified the following intervention programs as being highly useful in improving the performance of their lower-achieving students (including special education students): Foundations, Voyager, Read Naturally, Early Reading Intervention (ERI), Corrective Reading, Great Leaps, and Soar to Success.

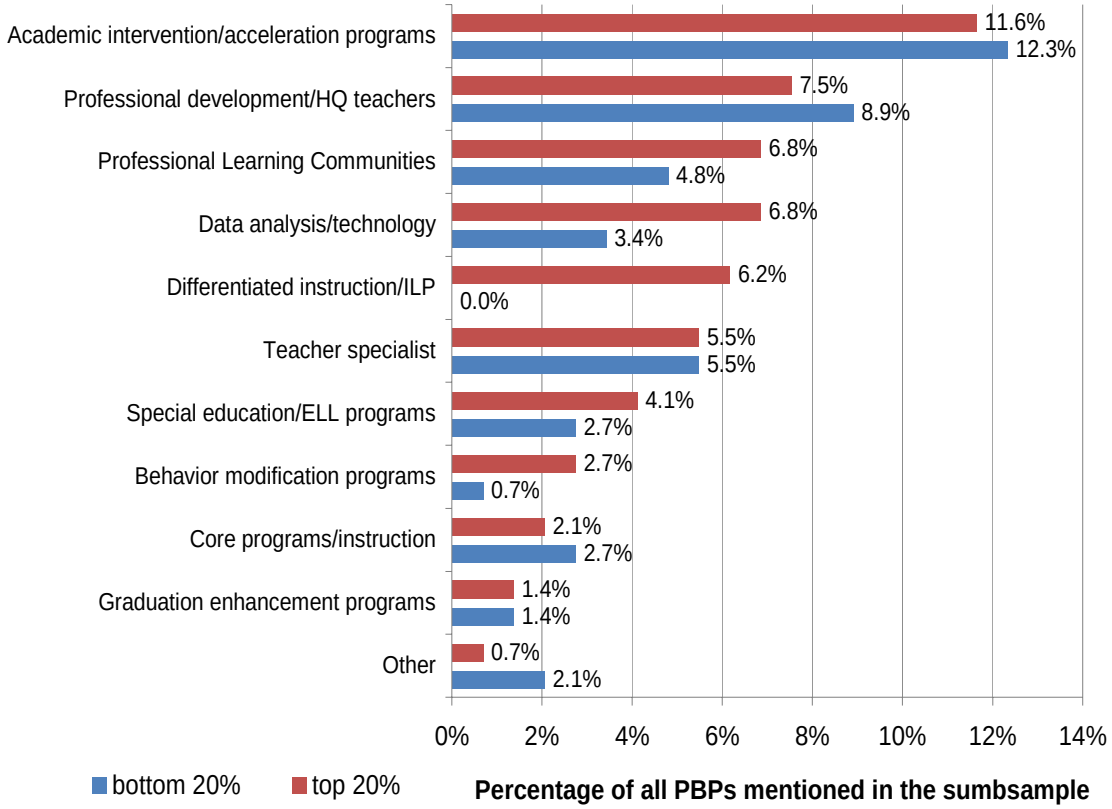
Two principals also mentioned the Houghton Mifflin core reading program as highly effective and amenable to differentiation of instruction. One principal mentioned the Reading First grant as being instrumental in improving the performance of his school's students in reading.

Math. Principals of those elementary schools in the sample with the highest percentage of achievement gap closed in math identified the Saxon Math and Calendar Math core programs as highly effective. They also cited flexible grouping of students for differentiated instruction and use of a math specialist as essential strategies in improving student achievement.

Middle Schools

Exhibit 74 demonstrates the distribution of potential best practices cited by principals of the 20 percent highest- and 20 percent lowest-achieving middle schools in both 2007 MSA scores and in closing the achievement gap.

EXHIBIT 74
COMPARISON OF POTENTIAL BEST PACTICES AMONG THE HIGHEST- AND LOWEST-PERFORMING MIDDLE SCHOOLS IN THE SAMPLE



Source: Site visits to LSSs by MGT of America, 2007.

Principals of both higher-achieving and lower-achieving middle schools cited academic intervention and acceleration programs among their potential best practices. The most notable difference between potential best practices of the higher- and lower-achieving schools appears to be differentiation of instruction and the use of individual learning plans (ILPs). No practices mentioned by principals of the lower-achieving schools fell into this category.

The other striking difference is in the "Data analysis and technology" category. Principals of higher-performing schools cited this category almost twice as frequently as principals of lower-performing schools. The distribution of potential best practices within the category was also different. Principals of higher-performing schools mentioned data analysis four times more frequently than principals of lower-achieving schools, while principals of lower-achieving schools mentioned technology in the classroom twice as frequently as their counterparts in higher-achieving schools.

The "Other" category included references to parental involvement by principals of lower-performing schools, and to "progress monitoring" by a principal of a higher-performing school.

When asked to explain the reasons for their success, principals of the higher-achieving schools cited professional development, parental involvement, an individualized approach to teaching and learning, high expectations, school culture, and effective teachers.

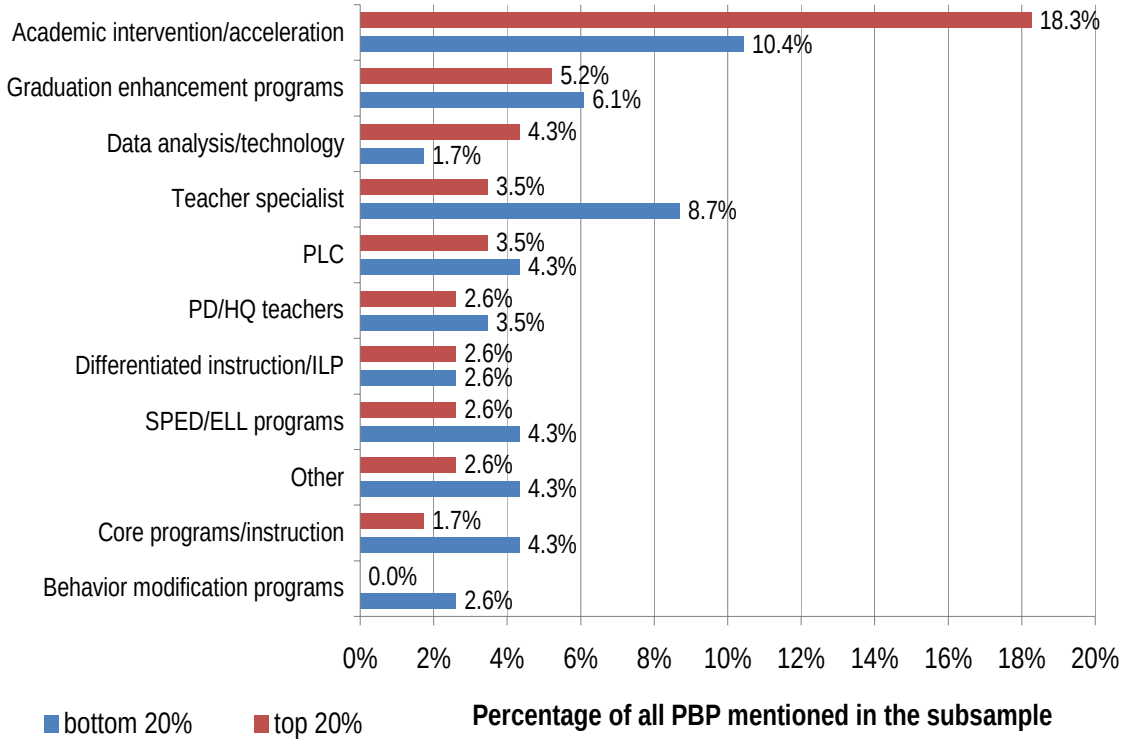
Reading. In accounting for high accomplishments in reading, principals of the higher-achieving schools cited use of a reading specialist, highly individualized instruction, and common planning time for English teachers.

Math. Principals of the highest-achieving schools attributed their success in closing the achievement gap in math to grade-wide math planning teams, use of math specialists, after-school interventions in math, and math MSA preparation programs. One principal mentioned the Connected Math core program as highly effective in improving student achievement in math.

High Schools

Exhibit 75 below demonstrates the distribution of potential best practices cited by principals of the 20 percent highest- and 20 percent lowest-achieving high schools in both the 2007 HSA passing rates in English 2 and in closing the proficiency gap in English 2 HSA since its first administration in 2005.

EXHIBIT 75
COMPARISON OF POTENTIAL BEST PRACTICES AMONG HIGHEST- AND LOWEST-PERFORMING HIGH SCHOOLS IN THE SAMPLE



Source: Site visits to LSSs by MGT of America, 2007.

The exhibit shows that principals of higher-performing high schools cited academic intervention and acceleration programs almost twice as frequently as principals of lower-performing high schools. Another significant difference was that principals of lower-performing high schools cited teacher specialists much more frequently than principals of higher-performing high schools. This difference is especially significant given that only one principal of a lower-performing high school cited data utilization for instructional purposes, while five principals of higher-performing schools cited data utilization (data warehousing) for instructional purposes among their potential best practices.

No principals of higher-performing high schools cited behavioral programs among their potential best practices, possibly because these schools are located in higher-income communities and have fewer behavioral issues than lower-performing schools.

In the "Other" category, principals of higher-performing schools cited school culture and student government among their potential best practices, while principals of lower-performing schools cited student groups and a day care center on campus among theirs.

When asked to account for their success, principals of the higher-performing schools cited the following factors and strategies: PLC, special education co-teaching, inclusion and intervention programs, data utilization in instructional decision-making, individualized attention to students' needs, parental involvement, professional development for teachers, and small class size.

Reading and Math. In addition to those potential best practices already mentioned, principals of higher-achieving high schools cited collaboration (PLC) and reading interventions in explaining their student's high scores in English. To account for success specifically in math, principals cited Cognitive Tutor computer software, which they use as a math intervention program for their lower-performing students, with great success.

3.3 LSSs' Success in Implementing the Master Plans Required by §5-401 of the Annotated Code of Maryland

Evaluation Mandate: Provide an assessment of the extent to which county boards are successful in implementing the Comprehensive Master Plans (CMPs) required by *§*5-401 including whether the CMPs have successfully aligned school system budgets with articulated school improvement strategies.

Progress to Date: To address the aforementioned mandate during the second year of the evaluation, MGT visited all 24 LSSs to conduct focus groups with Master Planning Teams and to interview each superintendent, assistant superintendent, BTE point of contact, and chief financial officer, as well as the principals of 150 schools. MGT also supplemented the previous content analyses of all initial Master Plan Updates through fall 2005 that were detailed in our *Initial Report* by analyzing all fall 2006 Updates for this *Interim Report*.

Current Limitations: Although the LSSs will have submitted their fall 2007 Master Plan Updates by the time this *Interim Report* is disseminated, and MSDE routinely monitors their progress toward implementing their Master Plans and Updates, information from the 2007 Updates was not available in time for analysis and inclusion in this report. Thus, the Master Plans of some LSSs may have undergone substantial changes that are not reflected in this report.

Future Plans: MGT will conduct content analyses of 2007 Master Plan Updates after they are approved and available. The December 2008 *Final Report* will include a comprehensive review of all Master Plans and Updates. MGT will review its final content analyses with LSS officials and revise them as necessary to better represent what each LSS planned to do, the extent to which Master Plan strategies have actually been implemented, and how successful these implementations have been.

Key Interim Findings: Key interim findings to date are summarized below. The summary is followed by exhibits and narratives that support these findings and provide additional information.

Key Findings From Focus Groups and Point of Contact Interviews

- In the majority of LSSs, the master planning process has evolved into a collaborative effort involving multiple stakeholders.
- In the majority of LSSs, priorities have not changed since the passage of BTE.
- Increased strategic planning and accountability and improved instruction were cited as the main changes in the LSSs attributable to BTE.
- A decrease in the reporting burden and modification of the update submission time line were the two most frequently cited recommendations for improving the master planning process.

Key Findings From the Interviews With Superintendents

- Superintendents emphasized investments in teaching staff, research-based core and intervention programs, data analysis, and early childhood programs as strategies that significantly contributed to improvements in student achievement.
- Superintendents cited the following as the most significant steps in implementing BTE requirements: improved strategic planning, data utilization, increased communication and stakeholder involvement, and increased quality and quantity of teaching staff.
- To improve BTE implementation, superintendents recommended reducing paperwork and differentiating annual reporting requirements based on the LSS's size and performance.

Key Findings From the Interviews With Assistant Superintendents

- Assistant superintendents identified the following key factors as contributing to improved student achievement:
  - Investments in teaching staff.
  - Strategic planning.
  - Core and intervention programs.
  - Data-driven instruction.
  - Differentiated instruction.
  - A collaborative approach to instruction.

They also emphasized the role of leadership at the school and system level.

- To improve BTE implementation, assistant superintendents recommended reducing paperwork and differentiating annual reporting requirements based on the LSS's size and performance.

Key Findings From 2006 Master Plan Updates:

- All LSS budgets are aligned with articulated school improvement strategies.
- Emphasis on early learning continues to be a priority for LSSs, with more than half of the 24 school systems either expanding the number of Pre-K programs and/or increasing the number of full-day kindergarten programs.
- Advancement Via Individual Determination (AVID) was the most frequently implemented graduation enhancement program, with a third of LSSs either adopting or expanding the program.
- Hiring of additional staff was consistently tied to specific enhancement strategies in the 2006 Master Plan updates. This included providing instructional support for core subject areas, Special Education, and ESOL, and increasing personnel for the enhancement of school safety efforts.
- All 24 LSSs continue to focus on recruiting and retaining high quality personnel by providing competitive salaries.

3.3.1 Focus Groups With Master Planning Teams and Interviews With LSS BTE Points of Contact

In the spring of 2007, MGT visited 24 LSSs. In each, we conducted focus groups with 8 to 12 representative members of Master Planning Teams and separately interviewed BTE Points of Contact, among other data collection activities. The main purpose of the focus groups and interviews with Points of Contact was to gather information on the structure of the master planning process and ways to improve it. Topics included:

- The master planning process.
- Master Plan priorities.
- Substantial educational enhancements.
- Changes attributable to BTE.
- Recommendations to improve the master planning process.

Evolution of the Master Planning Process

Since the inception of BTE, the master planning process has undergone significant changes in most LSSs. Master Planning Teams and Points of Contact reported that the process was quite chaotic at first, but eventually became streamlined as BTE requirements became clearer. In seven focus groups, participants reported that the process started out as a top-down approach and in eight focus groups participants said it was bottom-up. The remaining focus group participants said they had followed a collaborative approach involving stakeholders and administration officials alike. Participants of all focus groups said the process evolved to become more structured and became incorporated into the LSS routine. In all counties but one (Dorchester), the BTE master planning process evolved to engage relevant groups of stakeholders in a collaborative process of master planning and implementation cycle.

Master Plan Priorities

Participants of 20 focus groups said that their number one priority was student achievement and closing the achievement gap. Participants of three focus groups named various year-specific priorities as their number one priority. In Carroll County, focus group participants said SPED students' and ELL student achievement was their first priority. Participants in Prince George's County said that curriculum alignment and expanding learning opportunities were their first priorities, and in Somerset County the integration of Master Plan goals and strategies into school practices was the first priority. Baltimore City focus group participants said that they did not determine their priorities; because of pending litigations and other factors, priorities are imposed on them externally.

Participants of nine focus groups had difficulty naming the second and third priorities of their Master Plans. Focus group participants in the remaining counties named the following lower-order priorities: safe schools, stakeholder involvement, highly qualified teachers, data utilization and technology, ensuring rigor and challenges for all students, achievement of special education students, capital projects, and effective management of existing resources. Many focus group participants and Points of Contact indicated that while their high priorities had not changed since the passage of BTE, now they had better clarity about strategies to achieve goals and more focus on NCLB subgroups.

Focus group participants and Points of Contact indicated that LSSs used a variety of means to communicate their major priorities to stakeholders, including media, Web sites, public forums, Parent Teacher Associations' and School Improvement Teams' annual reports, and outreach by the superintendents and assistant superintendents. Administrations use monthly meetings to communicate CMP priorities to school principals.

Participants of 18 out of 24 focus groups indicated that School Improvement Plans were the main vehicle for achieving CMP priorities. In these counties, SIPs are aligned with Master Plans and incorporate school-specific strategies to accomplish goals and priorities. Focus group participants in the remaining counties indicated that the LSS administration worked with principals to ensure that CMP priorities and strategies were understood and followed.

Defining Criteria for "Substantial Educational Enhancements"

The Master Planning Teams and Points of Contact identified a variety of criteria for defining "substantial educational enhancement." The most frequently mentioned criteria were the following:

1. "Substantial": The enhancement should produce a *significant* impact over time, and have a good "return on investment." The impact should be on student achievement first and foremost, but could also be on related variables, like attendance and dropout rates, as well as disciplinary records. The impact could be on all student populations, specific NCLB subgroups, or lower-performing students. Data should be used to identify whether the impact is truly significant. What is "significant" depends on the starting point (e.g., moving from basic to proficient or moving from proficient to advanced) or on identified priorities. Some

focus group participants approached the issue from a fiscal perspective and considered the increase in percentage points relative to standard allocations (i.e., a 10 percent increase was cited as being "substantial").

2. "Educational": The enhancement must be directly related to student academic achievement. It does not have to be exclusively instructional. For example, programs that affect student behavior (like Positive Behavior Intervention Support) can also qualify as substantial educational enhancements. Other examples include the reconfiguration of staff or staffing additions in order to meet identified programmatic needs, professional development for teachers, and class size reduction.

3. "Enhancement": It should be a program that goes beyond "core" education and "enhances" the standard curriculum; examples include Gifted and Talented programs, arts, music, and classroom libraries. Intervention programs, services to pupils, and "tangibles" (books and software) can also be considered "enhancements." Technology is very important, particularly data systems for instructional decision-making and technology in the classroom such as Smart Boards.

Additionally, focus group participants and Points of Contact stated that it might be difficult to identify universal criteria for defining a substantial educational enhancement because criteria could differ across LSSs, schools, and student populations. The definition would, in some cases, depend on a unique configuration of needs, resources, and particular circumstances. Counties should define what constitutes a substantial education enhancement for themselves.

Finally, some participants said that whatever it is, a substantial educational enhancement must be research-based, tested, shown as effective and replicable, and implemented with fidelity. It should be put in place to address a specific identified need, and be connected to a Master Plan goal.

Most Notable Changes Attributable to BTE

Master Planning Teams and Points of Contact were asked to identify the most notable changes that had occurred in their LSS that they attributed to BTE. They identified the following:

1. Strategic planning and accountability. Representatives of nine Master Planning Teams indicated that they had participated in limited, if any, strategic planning prior to the BTE initiative. BTE requirements fostered the development of strategic planning and tightened up accountability standards at both school and system levels. Participants cited the introduction of strategic planning and new standards of accountability as the most important result of the BTE program in their LSSs. The new focus on planning and accountability has brought about better communication between schools and administration as well as with the community. Common goals and expectations are implemented through the integration of the Master Plan strategies into daily school practice.

2. Instruction. Focus group participants and BTE Points of Contact attributed the following improvements in instruction to BTE:

   - Improvement in quality of instruction resulting from professional development, hiring of highly qualified teachers; raising of salaries to retain good teachers; hiring of teacher specialists who provide differentiated instruction, teacher "coaches," etc.; collaborative planning; and data analysis.

   - Increase in quantity of instruction resulting from hiring of additional teachers, full-day kindergarten, Pre-K classes, and smaller class sizes.

   - Data-driven instruction resulting from available student-level data being broken down by instructional indicators, making teachers aware of individual students and groups who need help.

   - New research-based programs, including intervention in core areas for lower-performing, SPED, and ELL students, and acceleration for higher-performing students (Gifted and Talented, etc).

   - Technology-assisted instruction thanks to BTE funds that allowed LSSs to purchase computers, Smart Boards, LCD projectors, and other technology to increase teaching effectiveness.

   - Updating of materials of instruction, including new textbooks and upgraded science labs.

Finally, some focus group participants and Points of Contact indicated that the total increase in state funding was offset by decreases in federal and local funding. Only a few counties reported seeing a substantial increase in overall funding since the enactment of BTE[1].

Recommendations to Improve Master Planning Process

Master Planning Teams and Points of Contact expressed concerns regarding the current master planning process and requirements. Their two major concerns were the burden that BTE requirements imposed on LSSs and the time line for Update submissions.

Burden. Participants of 14 focus groups (58 percent) said the requirements of BTE put a great strain on the LSS administration, to the point of diminishing its ability to actually implement the Master Plan. This opinion was expressed by Master Planning Teams of all small LSSs and some medium-size LSSs. Small LSS administrations said they did not have the necessary resources to adhere to BTE requirements. Participants of focus groups expressed frustration over the redundancy of much of the information requested in the Master Plan Updates, saying that they already supplied this information to the relevant departments within MSDE, using different formats. One focus group stated that

[1] This opinion is not supported by financial information presented in other parts of this report. It does, however, reflect a common perception that the costs of doing business rise faster than the increases in state and local funding.

since BTE differentiated funding based on per pupil spending, MSDE should also differentiate requirements based on the amount of BTE funds allocated. Another focus group suggested that updates should be biannual. Constantly dwindling federal and local resources made some focus group participants suggest that detailed planning for five years was not really feasible and should be replaced with three-year planning. Finally, participants of five focus group said that MSDE should make more effort to reduce the burden on LSSs by allowing electronic only (paperless) submission, clarifying format requirements, providing templates, and standardizing data submission requirements across its departments.

Time line. Ten out of 24 focus groups (42 percent) said that the time line for submission of Master Plan Updates was out of synch with other relevant processes. MSA and especially HSA data arrive too late to be addressed in the Updates. In addition, the time line is not aligned with that of the local budget process. The majority of participants suggested January 1 as a better alternative for the submission of the Annual Updates.

Other. Other recommendations to improve the master planning process included the following:

- Relax budgetary standards and redirect accountability from dollars to achievement scores.
- Relax requirements for evaluation of each CMP strategy. Some strategies are not easily linked to student achievement. Expenses for improved transportation for students are one example. Everyone understands that these expenses are needed to get students to school, but it is not easy to evaluate how they translate into improved student achievement.
- MSDE should be more responsive to questions and to criticism.
- Some program coordinators at MSDE are too aggressive with their agenda. For example, participants of two focus groups indicated their frustration with one office coordinator who did not demonstrate sensitivity to the financial circumstances of their school systems.
- MSDE should make a concerted effort to attract highly qualified teachers, especially in special education. Administration officials suggested such strategies as intensifying out-of-state recruitment efforts, providing an incentive package for teachers to relocate to Maryland, and offering tuition support in exchange for a commitment to teach in Maryland for a number of years.
- Finally, LSS administrations should be allowed to submit their own strategic plans when these plans meet all the main requirements of the Master Plan.

3.3.2 Interviews With Superintendents

As part of the site visits, MGT conducted interviews with LSS superintendents. The main purpose of the interviews was to collect information on each superintendent's perceptions about BTE implementation in the LSS and its impact on student and school performance.

Topics included:

- Strategies for improvement.
- Significant steps since BTE.
- NCLB goals.
- Recommendations for improvement.

Strategies Contributing to Improvements

In the interviews, superintendents were asked to describe up to three strategies that had contributed to significant improvement in student and school performance. In response, the interviewees focused on some or all of the following categories:

Teachers are widely seen as central to educational development, and significant improvements in performance are most frequently linked to either an improvement in the *quality* of teachers (hiring more highly-qualified teachers, provision of professional development, etc.) or increase in the *quantity* of teaching positions (hiring additional teachers to reduce the class size, introduction of new positions of "resource" or "specialist" teachers who guide and assist regular teachers), resulting in more instructional time. Eighteen superintendents (75 percent) indicated a teacher-related strategy yielded significant improvements in their LSS.

Programs are also essential for improvement in performance. Superintendents referred to the selection of research-based core programs and their implementation with fidelity as critically important. Alignment of the curriculum with the VSC was mentioned by seven superintendents (29 percent) as greatly improving the MSA/HSA scores of their students. Additionally, multiple intervention/acceleration programs help address various needs and further develop the talents of students. Advanced Placement, Positive Behavior Intervention Support (PBIS), Advancement Via Individual Determination (AVID), International Baccalaureate, and after-school intervention programs were among those mentioned. Co-teaching and inclusion models for teaching special education students were mentioned by four superintendents as extremely successful in improving the achievement of special education students. In total, 18 superintendents (75 percent) mentioned a program-related strategy or strategies among those that yielded significant improvements in their LSS.

Availability of accurate and timely data was mentioned by seven superintendents (29 percent) as a very important factor in improving student achievement. Performance Matters, Edu-Soft and other assessment management systems that provide student-level data were mentioned. Training to use data for planning instruction as well as time to analyze the data were both cited as important for making data-driven instructional decisions. Three superintendents mentioned the development of quarterly county benchmarks as helpful in identifying problems early and addressing them prior to the state testing.

Full-day kindergarten and early childhood programs were mentioned by seven superintendents (29 percent) as having a significant impact on student achievement.

Among other strategies mentioned by superintendents were the following:

- Individualized attention to students.
- Technology in the classroom: Superintendents voiced a belief that using technology in instruction was instrumental for improving results. Technology not only increases teaching effectiveness, but also improves student motivation and prepares students for their life after graduation.
- Collaborative approach to teaching: Two superintendents mentioned Professional Learning Communities and PLC look-alikes as having played a key role in improving student achievement.
- Four superintendents mentioned focusing on the school improvement planning process.

Most Significant Steps Since BTE Enactment

We asked superintendents to name the most significant steps that their LSS had taken to implement BTE requirements relating to Master Plans and Annual Updates. The following four steps were the most frequently mentioned:

- Strategic planning and alignment of goals throughout the LSS
- Data utilization for planning and instructional decision-making
- Increased communication and stakeholder involvement
- Increased quality and quantity of teaching staff

Nine superintendents (37.5 percent) said that strategic planning and alignment of goals and strategies throughout the LSS, including alignment of SIP goals in each school with goals in the Master Plan, was the most significant step. The second most frequently mentioned step was the introduction or increased prominence of data utilization for both planning and instructional decision-making. Seven superintendents (29 percent) mentioned that data utilization was an important step in implementing BTE requirements in their LSS. Five superintendents (20.8 percent) said that their LSS had increased communication with stakeholders and stakeholder involvement. Four superintendents (16.7 percent) indicated that their LSS had taken steps to increase the quality and quantity of teaching staff, including raising salaries to retain and attract highly qualified teachers, teacher specialists, and professional development.

The interviewees also mentioned the following steps undertaken by their LSS in response to BTE requirements:

- Updated technology and materials of instruction
- Increased differentiated instruction and individualized approaches to teaching

- Introduced inclusion model for special education students
- Fostered collaboration among teaching staff through professional learning communities
- Started implementing the Voluntary State Curriculum (VSC)
- Focused on student subgroups
- Introduced new intervention and support programs

Additionally, we asked superintendents what changes in their school systems could improve BTE implementation efforts. Nine superintendents (37.5 percent) said they needed more resources to implement changes, including resources for more and better teachers, technology, transportation, and materials of instruction. Other superintendents said they would like to see a reduced burden from BTE requirements and unfunded state mandates, earlier results from state testing, and more support from local officials.

NCLB Goals

We asked superintendents to pick the NCLB goal towards which their LSS was likely to make the greatest progress due to increased state aid through BTE. The overwhelming majority (70.8 percent) cited Goal 1, improved student achievement, because "that's what we are held most accountable for" and "that's where all the resources go." The other seven superintendents named either Goal 2 or Goal 3. We also asked superintendents to identify the NCLB goal towards which their LSS was likely to make the least progress. Exhibit 76 shows their responses. Six superintendents, who said they expected to see the least improvement in the achievement of ELL students (Goal 2), explained that this was mostly "because it has not been their focus." Three superintendents said they did not expect to see any improvements in Goal 4 (safe and orderly environment), because "there is no real need here, schools are safe."

EXHIBIT 76
NCLB GOALS AND EXPECTED IMPROVEMENTS IN MARYLAND LSSs

NCLB Goal	Number of LSSs That Expect to See Largest Improvements	Number of LSSs That Expect to See Smallest Improvements[2]
Goal 1: Student Achievement	17 systems	3 systems, for special education students
Goal 2: ELL	2 systems	6 systems
Goal 3: Highly Qualified Teachers	5 systems	5 systems
Goal 4: Safe and Orderly School Environment	0 systems	3 systems (because they are "already there")
Goal 5: Graduation	0 systems	5 systems

[2] The total in this column is 22 systems; superintendents of two systems did not identify the NCLB goal towards which they expected to see the least improvement.

Recommendations to Improve BTE Implementation

Over a third of all interviewed superintendents (37.5 percent) indicated that the master planning process was too burdensome for their LSS. They indicated that the process involved too much paperwork and a great deal of duplication and redundancy, thereby draining administrations' resources from serving schools and students. Like focus group participants, superintendents suggested that electronic submission would be an improvement.

Additionally, seven superintendents said that MSDE should differentiate the BTE reporting requirements based on a number of key factors, including an LSS's performance and size. Among other recommendations, superintendents proposed limiting the number of unfunded mandates, shifting the focus from a punitive to an incentive-based approach, changing the time line for the submission of Annual Updates, and extending the school year to 11 months in order to increase the total annual instructional time.

Overall, superintendents emphasized the importance of BTE funding to their LSSs, and expressed the hope that BTE would be reauthorized.

3.3.3 Interviews With Assistant Superintendents for Curriculum and Instruction

During our site visits, we conducted interviews with LSS assistant superintendents for curriculum and instruction. Interview topics included:

- Key factors for student achievement.
- Recommendations to improve BTE implementation.

Key Factors Explaining Student Achievement

During interviews, we asked assistant superintendents for curriculum and instruction to identify key factors that accounted for the differences between student achievement in their LSS and student achievement in other counties. Among positive factors, assistant superintendents most frequently identified the following:

- Teaching staff: teacher specialists, additional teaching positions, professional development for teachers
- Strategic planning and alignment of goals throughout the LSS
- Intervention programs
- Data analysis and data-driven instruction
- Leadership in the LSS and in individual schools
- Research-based core curricula
- Differentiated instruction

- Collaborative approach to instruction, Professional Learning Communities

Less frequently mentioned factors included the following: full-day kindergarten, pupil support services, PBIS, and inclusion for special education students.

Among factors negatively impacting student achievement in their systems, assistant superintendents for curriculum and instruction most frequently identified socio-demographic factors, including a high rate of poverty in communities and a high percentage of FARMS and minority students in poorly performing schools. Over a third of assistant superintendents (37.5 percent) mentioned socio-demographic characteristics of their student population as a key reason for low student achievement.

Other negative factors mentioned by assistant superintendents included continuously decreasing local funding, a culture of low expectations among the cadre of older teachers, and a lack of resources to provide students with individualized attention and interventions.

Twenty out of 24 interviewed assistant superintendents said that their Master Plan addressed all critical needs of their students. The remaining four assistant superintendents said that some needs had appeared since they drafted the Master Plan, for example, a need for ELL teachers due to the rapidly growing ELL population. Additionally, four assistant superintendents said that while all critical needs were addressed in the Master Plan, their LSS currently lacked the resources to implement the proposed strategies.

Recommendations to Improve BTE Implementation

Over half of the interviewed assistant superintendents for curriculum and instruction (54.2 percent) said that the process of developing the Master Plan and especially the Annual Updates was too cumbersome for their LSS and involved too much paperwork. Like superintendents, assistant superintendents for curriculum and instruction emphasized the need for reducing paperwork and introducing differentiated reporting requirements. This opinion was particularly strong among assistant superintendents from small school districts that were doing well in closing their achievement gap.

In the Master Plan and Updates, assistant superintendents pointed out, too much emphasis is placed on trying to match a single component (or a single dollar) to results. Assistant superintendents said that programs worked in combination and it was hard or impossible to isolate the effects of each one. In other words, the system worked and needed to be looked at holistically. Some programs or expenditures—transportation, for example—had only indirect influence on student achievement.

Additionally, one assistant superintendent noted, “MSDE believes that if something is not in the Master Plan, then it is not important, and it is not always so. Some things are not in the Master Plan precisely because they have been functioning well for years and yield great results.” Another assistant superintendent suggested changing the time line of the Annual Update submission to January 1.

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Overall, the interviewed assistant superintendents said that the BTE initiative was a very worthy one and had produced positive changes in their LSSs. As noted above, however, they did recommend modifying its implementation.

3.3.4 Content Analyses of Enhancement Strategies in Master Plans and Updates

In conducting the content analysis for the 2006 Master Plan Updates, MGT identified all enhancement strategies that were not included in prior Updates. All such new enhancement strategies in the 2006 Updates aligned with the categories and subcategories we previously established to classify the strategies. Section 2.2.2 of this report provides a complete description of our methodology.

Enhancement Category 1: Programs

As described in our *Initial Report*, the Programs category includes:

> *All strategies that specifically cited the addition, expansion, or continuation of a clearly defined education program (e.g., Drop Out Prevention Program, Reading Program) or programmatic change or enhancement to an existing program, such as full-day kindergarten or Head Start.*

Additionally, the Programs category includes realignment of programs and reductions in federal funding. Exhibit 77 shows the subcategories for the Programs category of strategies that were in LSS's 2006 Master Plan Updates. The most commonly cited strategies were in the subcategories of:

- "Early Education/Pre-K Programs," which included the expansion of existing Pre-K programs to provide greater access to educational services for three and four year-old children. This subcategory included the costs of additional staff.
- "Kindergarten Programs," which involved the expansion of full-day kindergarten programs to additional schools. This subcategory included the costs of additional staff.
- "Graduation Enhancement Programs," which included AVID and other programs designed to decrease the dropout rate.
- "Academic Intervention Programs," consisting primarily of extended school day and/or year programs.

EXHIBIT 77
NEW PROGRAM STRATEGIES FROM 2006 BTE MASTER PLAN UPDATES

Local School Systems	Early Education/Pre-K Programs	Kindergarten Programs	Reading Programs	Math Programs	Other Core Subject Programs	Special Education Programs	ELL/Cultural Diversity Programs	Graduation Enhancement Programs	Safe School Programs	Academic Intervention Programs
Allegany	●		●	●						
Anne Arundel		●						●		
Baltimore City	●		●		●			●	●	
Baltimore County	●	●				●	●	●		
Calvert										●
Caroline		●								
Carroll	●									●
Cecil					●				●	
Charles	●									
Dorchester		●						●		
Frederick										
Garrett										
Harford										
Howard	●	●								
Kent								●		
Montgomery		●								●
Prince George's										
Queen Anne's		●						●		●
Somerset				●		●			●	●
St. Mary's										
Talbot										
Washington	●	●						●	●	●
Wicomico	●	●							●	●
Worcester	●							●		●

Source: MGT Analyses of LSSs' 2006 Master Plan Updates.

Enhancement Category 2: Processes

The second enhancement category is "Processes," and was defined as:

> *All actions taken by the school system or schools that affect one or more of the following: a) the approach to delivering curriculum and instruction; b) the nature of the instructional content; or c) the structure of the environment in which the instruction is delivered. Examples include hiring additional teachers, aligning the curriculum with a standard or test, and developing partnerships with external agencies to support a specific goal.*

As shown in Exhibit 78, two of the Process strategies had a high level of implementation across the 24 LSSs, with "Competitive Salaries" employed in all the school systems, and "Hiring Additional Personnel" in 18 of the 24 school systems. The "Competitive Salaries" strategy included increasing base salaries or making other adjustments in the salary schedule. The "Hiring Additional Personnel" strategy encompassed a range of employment categories, including:

- Regular Classroom Teachers
- Pupil Personnel Workers (e.g., nurses, guidance counselors, etc.)
- Reading Specialists
- Math Specialists
- Administrative Personnel
- Clerical and Instructional Assistants

Ten of the LSSs' 2006 Master Plan Updates contained Process strategies related to "Recruitment/Retention of Highly Qualified Personnel." The majority of the strategies included mentoring of new teachers, but also assisting teachers with the credentialing process, providing tuition reimbursements, and providing assistance/tutorials for the PRAXIS exam.

MGT found "Improvement of Instructional Practices" and "Safe and Drug-Free Schools" were the next two most common subcategories across the LSSs. "Improvement of Instructional Practices" included efforts to increase access to and participation in rigorous courses (e.g., increasing the number of students enrolled in Advanced Placement courses). Strategies under "Safe and Drug-Free Schools" included anti-bullying programs, school system crisis management plans, and ATOD and violence prevention programs.

EXHIBIT 78
NEW PROCESS STRATEGIES FROM 2006 BTE MASTER PLAN UPDATES

Local School Systems	Competitive Salaries	Hiring Additional Personnel	Recruitment/ Retention of HG Personnel	Class Size Reduction	Curriculum Alignment	Community Involvement	Improvement of instructional Practices	Improvement of the Reading Program	Improvement of the Math Program	Other Core Academics	Safe and Drug Free Schools	Improvements for NCLB Groups
Allegany	●	●			●		●	●			●	
Anne Arundel	●	●					●	●	●		●	●
Baltimore City	●	●	●									
Baltimore County	●	●	●			●	●					●
Calvert	●	●			●							
Caroline	●	●										
Carroll	●	●	●									
Cecil	●	●	●	●		●	●	●				●
Charles	●							●			●	
Dorchester	●									●		
Frederick	●	●	●	●								
Garrett	●	●		●			●					
Harford	●										●	
Howard	●	●					●					
Kent	●	●						●	●		●	●
Montgomery	●	●		●	●	●	●					
Prince George's	●	●			●	●						
Queen Anne's	●		●	●							●	
Somerset	●	●	●		●	●						
St. Mary's	●	●										
Talbot	●		●									
Washington	●	●		●			●				●	
Wicomico	●		●	●			●					
Worcester	●	●	●								●	

Source: MGT Analyses of LSSs' 2006 Master Plan Updates.

Enhancement Category 3: Professional Development

The third enhancement category is "Professional Development" and was defined as:

> *All activities related to the training of school system staff (school administrators, instructional staff, support staff, etc.). It includes workshops, seminars, one-on-one sessions, in-school facilitators, job-embedded mentoring, and campus or online courses.*

As shown in Exhibit 79, MGT found most of the professional development strategies centered on core content areas (reading and math) with classroom teachers as the primary audience. The strategies included workshops on improving instructional practices in these subject areas.

EXHIBIT 79
NEW PROFESSIONAL DEVELOPMENT STRATEGIES FROM 2006 BTE MASTER PLAN UPDATES

Local School Systems	Provision of Professional Development (Instructional/ Administrative)	Targeted Professional Development for NCLB Subgroups	Targeted Professional Development for Core Content Areas	Targeted Professional Development for School Improvement
Allegany	●	No new strategies identified in the 2006 Updates.		No new strategies identified in the 2006 Updates.
Anne Arundel				
Baltimore City	●			
Baltimore County				
Calvert				
Caroline				
Carroll				
Cecil			●	
Charles				
Dorchester				
Frederick				
Garrett				
Harford			●	
Howard				
Kent				
Montgomery			●	
Prince George's			●	
Queen Anne's			●	
Somerset			●	
St. Mary's				
Talbot				
Washington	●			
Wicomico	●			
Worcester				

Source: MGT Analyses of LSSs' 2006 Master Plan Updates.

Enhancement Category 4: Accountability Measures

The fourth enhancement category, "Accountability Measures" is defined as:

> *Strategies that address all formal and informal assessments of students, staff, or programs such as progress monitoring, screening and diagnostic tests, state accountability exams, teacher observation tools, and formative and summative evaluations of programs.*

As shown in Exhibit 80, this category had the fewest number of enhancement strategies, and all were concentrated in a single subcategory. The "State and Local Assessments" category consisted of strategies relating to preparing students to take the MSA or conducting formative assessments as a means of progress monitoring.

EXHIBIT 80
NEW ACCOUNTABILITY STRATEGIES FROM THE 2006 BTE MASTER PLAN UPDATES

Local School Systems	NCLB "Highly Qualified" Teachers and Teacher Assistants	Targeted Strategies for Improving College Entrance Exam Scores	State and Local Assessments
Allegany	No new strategies identified in the 2006 Updates.	No new strategies identified in the 2006 Updates.	●
Anne Arundel			
Baltimore City			
Baltimore County			
Calvert			
Caroline			
Carroll			
Cecil			●
Charles			●
Dorchester			
Frederick			
Garrett			
Harford			
Howard			
Kent			
Montgomery			
Prince George's			
Queen Anne's			
Somerset			
St. Mary's			
Talbot			●
Washington			
Wicomico			
Worcester			

Source: MGT Analyses of LSSs' 2006 Master Plan Updates.

Enhancement Category 5: Use of Technology and Data Analysis

The fifth enhancement category is, "Use of Technology and Data Analysis," defined as:

> *All activities related to technology enhancements, data collection, data analysis, dissemination, and application of findings to support decision-making processes.*

As shown in Exhibit 81, MGT found "Implementation of Technology in Schools" was the most common subcategory. Strategies in this subcategory included the integration of technology across the curriculum, the purchase and/or upgrade of computer hardware, and the purchase of computer-based instructional programs, mostly for mathematics and reading. The "Optimization of Administrative Technology" consisted of the development of data management systems to allow teachers and administrators to readily access student data for use in curricular decision-making.

EXHIBIT 81
NEW USE OF TECHNOLOGY AND DATA ANALYSIS STRATEGIES FROM THE 2006 BTE MASTER PLAN UPDATES

Local School Systems	Implementation of Technology in Schools	Optimization of Administrative Technology	Improvements to Student Information Systems	Data Warehousing
Allegany	●		No new strategies identified in 2006 Updates.	No new strategies identified in 2006 Updates.
Anne Arundel	●			
Baltimore City	●			
Baltimore County	●			
Calvert	●			
Caroline	●			
Carroll	●			
Cecil	●			
Charles				
Dorchester				
Frederick				
Garrett				
Harford				
Howard				
Kent				
Montgomery	●			
Prince George's				
Queen Anne's		●		
Somerset				
St. Mary's				
Talbot	●			
Washington				
Wicomico		●		
Worcester	●			

Source: MGT Analyses of LSSs' 2006 Master Plan Updates.

BTE Master Plan Updates in 2006 continued to align LSSs' budgets with Articulated School Improvement Strategies in previous plans. Each LSS's plan provided an overview of the successes that resulted from prior improvement efforts and the challenges still faced by the school system. The 2006 Updates identified enhancement strategies that the LSSs planned to employ to address their challenges and then linked the strategies to additional funding that was dedicated to implementing each of these "substantial educational enhancements."

3.4 Revenues Received by Local School Systems

This section of the report examines funding under BTE. For the purposes of this analysis, we selected 2001-02 as the baseline year because it was the year before BTE funds were appropriated to Maryland LSSs. Expenditure data, or the uses of funds, are presented in Section 3.5. State contributions for teacher retirement are excluded from the numbers because LSSs do not have those data when reporting in their Master Plans and Updates.

The exhibits that follow this brief summary provide detailed information on the sources of revenues from 2001-02 to 2007-08. Data on 2005-06, 2006-07, and 2007-08 revenues are budgeted amounts, while data for 2001-02 through 2004-05 are actual revenues.

Evaluation Mandate: Produce an analysis of the amount of funding local governments provide for education each year.

Progress to Date: MGT obtained and analyzed revenue information on each LSS for the years 2001-02 through budgeted 2007-08. We present results of pertinent analyses below.

Current Limitations: Data for 2005-06, 2006-07, and 2007-08 are budgeted, not actual, revenues.

Future Plans: MGT will continue to gather and analyze financial data through the 2008-09 budget year.

Key Interim Findings: Key findings to date are summarized below. The summary is followed by exhibits and narratives that support these findings and provide additional information.

Key Findings:

- FY2007-08 revenues from all sources (excluding state-paid teachers' retirement) are budgeted to have increased by $3.39 billion over 2001-02 revenues, or 48.5 percent. Of this amount, state appropriations increased by $2.029 billion and local appropriations increased by $1.317 billion.
- Local appropriations in support of LSSs as budgeted did not increase as fast as state appropriations did in the six years following enactment of BTE. Local appropriations increased by 34.2 percent statewide, compared to an 80.3 percent increase in state appropriations.
- State revenues comprise a greater share of total budgets in 2007-08 (44 percent) than they did in 2001-02 (36 percent).
- Federal support increased by only $1.7 million, or 0.33 percent, during this period.
- On a per pupil basis, state appropriations increased by 82.8 percent when adjusted for the number of pupils. Similarly, local appropriations increased by 36 percent per pupil, less than half the rate of increase in state appropriations per pupil.
- Increases in local appropriations per pupil varied significantly among LSSs. Local appropriations per pupil increased by $163 in Somerset County Public Schools and

by $3,299 per pupil in Worcester County Public Schools.

- Local appropriations per pupil increased by 5.7 percent in Somerset County Public Schools and by 53.8 percent in Garrett County Public Schools.
- Montgomery County Public Schools received the most local appropriations per pupil both before enactment of BTE and in every year since.
- In contrast, Caroline County Public Schools received the least local appropriations per pupil for every year between 2002-02 and 2007-08.
- The amounts of funding from local appropriations are compounded by the variability in wealth among the jurisdictions. Most State aid is wealth equalized, which provides a higher level of State funding to jurisdictions with lower levels of local wealth.

3.4.1 Revenues From All Sources

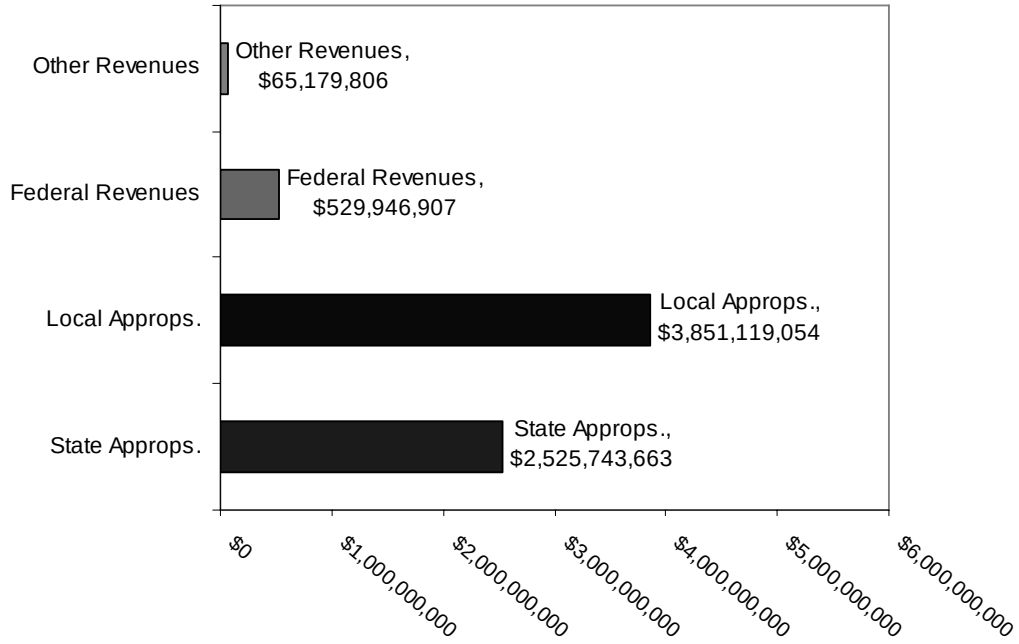
Exhibit 82 displays statewide current revenues by source and the percentage share of total revenues for each component for 2001-02 and 2007-08, while Exhibit 83 displays this information graphically. Exhibit 84 displays total current revenues from all sources for each LSS and for the state, and the changes in those revenues. A total of $6.997 billion was received from all sources for current operations (except state-paid teachers' retirement) in 2001-02; this amount rose to $10.388 billion in 2007-08, an increase of $3.391 billion, or 48.5 percent. The increase in total revenues varied from a low of $3.9 million or 15.7 percent in Kent County to a high of $620.8 million in Montgomery County and 73.2 percent in Charles County.

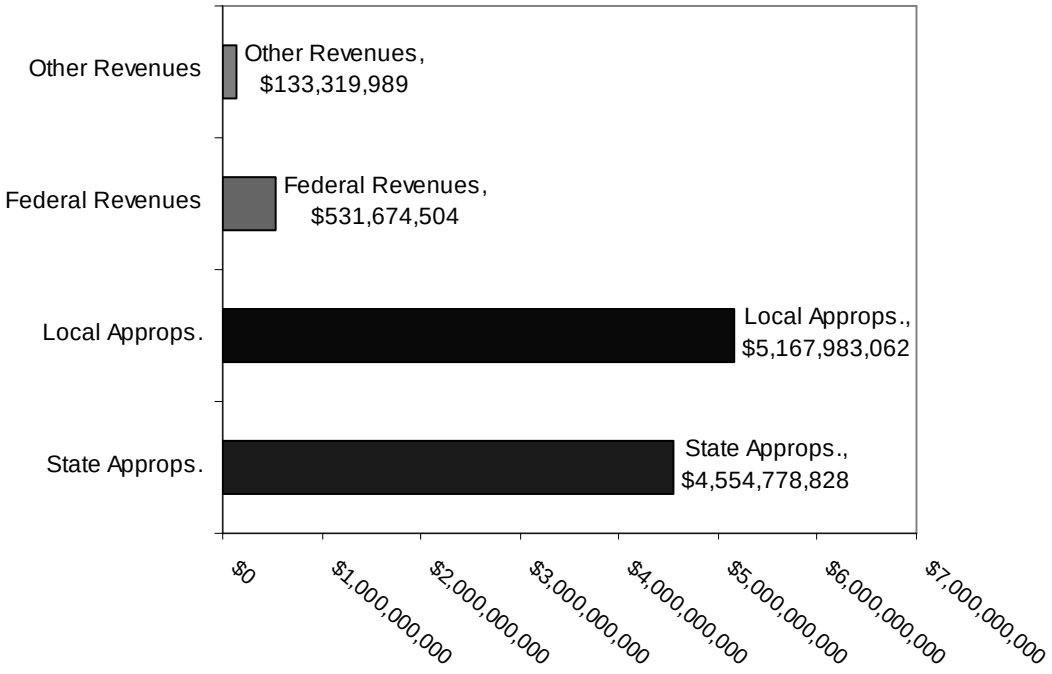
EXHIBIT 82
LOCAL SCHOOL SYSTEM TOTAL REVENUES
2001-02 (PRE-BTE) AND BUDGETED 2007-08

	2001-02		2007-08	
	Amount	% of Total	Amount	% of Total
Total Revenues	$6,997,249,309	100.00%	$10,387,756,383	100.00%
State Appropriations	$2,525,743,663	36.10%	$4,554,778,828	43.85%
Local Appropriations	$3,851,119,054	55.04%	$5,167,983,062	49.75%
Federal Revenues	$529,946,907	7.57%	$531,674,504	5.12%
Other Revenues	$65,179,806	0.93%	$133,319,989	1.28%

Source: MSDE, Selected Financial Statistics, 2001-02; LSS Master Plans and Updates; 2007-08 LSSs' Approved Budgets.

EXHIBIT 83
COMPARISON OF SOURCES OF TOTAL REVENUES ($7.0 BILLION) IN 2001-02 (BEFORE ENACTMENT OF BTE, TOP GRAPH) WITH SOURCES OF TOTAL REVENUES ($10.4 BILLION) IN CURRENT SCHOOL YEAR (2007-2008, BOTTTOM GRAPH)





Source: MSDE, Selected Financial Statistics, 2001-02; LSS Master Plans and Updates; 2007-08 LSSs' Approved Budgets

EXHIBIT 84
TOTAL CURRENT REVENUES FROM ALL SOURCES, 2001-02 TO 2007-08

	2001-2002	2002-03	2003-04	2004-05	Budget 2005-06	Budget 2006-07	Budget 2007-08	$ Change	% Change
Total State	6,997,249,309	7,280,966,006	7,728,889,874	8,151,821,618	8,832,902,756	9,632,246,860	10,387,756,383	3,390,507,074	48.45%
Allegany	81,883,814	84,526,758	87,026,709	89,102,409	97,555,442	111,483,069	125,437,229	43,553,415	53.19%
Anne Arundel	578,719,518	599,054,516	625,976,263	652,348,976	697,418,967	761,206,988	816,950,600	238,231,082	41.17%
Baltimore City	902,041,256	894,485,993	877,516,235	929,132,000	1,015,249,000	1,066,727,618	1,143,838,910	241,797,654	26.81%
Baltimore	874,313,176	903,805,906	947,751,512	987,877,203	1,072,353,541	1,218,115,000	1,220,560,966	346,247,790	39.60%
Calvert	122,036,540	131,688,577	143,238,423	151,990,693	163,596,308	174,207,407	189,712,867	67,676,327	55.46%
Caroline	38,233,558	40,238,603	43,717,252	44,146,452	46,759,782	52,296,135	57,545,155	19,311,597	50.51%
Carroll	197,750,949	209,683,143	226,966,825	246,047,000	263,810,000	286,533,000	308,385,397	110,634,448	55.95%
Cecil	112,233,657	118,995,485	127,369,059	134,864,846	146,495,276	160,559,600	172,216,738	59,983,081	53.44%
Charles	171,274,695	182,423,180	199,338,333	214,530,268	239,972,921	268,657,308	296,672,320	125,397,625	73.21%
Dorchester	37,869,415	39,255,178	41,588,555	42,556,429	44,281,341	46,974,942	51,298,342	13,428,927	35.46%
Frederick	267,107,815	282,942,357	308,797,280	325,546,896	359,369,000	395,216,340	448,776,704	181,668,889	68.01%
Garrett	38,519,118	40,108,026	42,447,961	43,128,727	44,911,231	47,869,429	50,675,644	12,156,526	31.56%
Harford	275,284,244	286,401,641	304,817,836	318,385,953	361,260,395	396,618,848	429,304,878	154,020,634	55.95%
Howard	388,403,285	413,305,020	453,737,247	482,478,912	526,200,150	576,122,080	637,902,620	249,499,335	64.24%
Kent	25,121,274	25,319,574	24,479,299	25,843,175	25,733,274	27,194,172	29,060,226	3,938,952	15.68%
Montgomery	1,309,889,318	1,362,056,266	1,476,462,527	1,560,174,005	1,662,870,043	1,799,444,524	1,930,712,400	620,823,082	47.40%
Prince George's	1,038,096,808	1,109,148,506	1,191,790,081	1,269,815,845	1,376,818,700	1,493,401,600	1,655,211,600	617,114,792	59.45%
Queen Anne's	54,407,313	56,433,574	61,007,911	63,245,582	66,886,775	72,180,143	79,760,889	25,353,576	46.60%
St. Mary's	114,707,388	117,642,103	128,551,444	133,421,000	147,340,000	159,090,196	169,875,946	55,168,558	48.10%
Somerset	26,166,419	27,241,830	27,826,680	28,607,976	30,443,467	34,964,898	38,132,189	11,965,770	45.73%
Talbot	34,068,132	35,109,200	38,438,910	38,433,185	40,394,530	42,850,573	45,402,880	11,334,748	33.27%
Washington	144,623,752	149,285,021	162,337,660	171,550,000	190,254,384	206,866,218	233,547,535	88,923,783	61.49%
Wicomico	105,309,395	109,282,114	119,756,511	126,169,431	137,435,440	151,325,872	167,986,913	62,677,518	59.52%
Worcester	59,188,470	62,533,436	67,949,363	72,424,655	75,492,789	82,340,900	88,787,435	29,598,965	50.01%
Minimum	25,121,274	25,319,574	24,479,299	25,843,175	25,733,274	27,194,172	29,060,226	3,938,952	15.68%
Maximum	1,309,889,318	1,362,056,266	1,476,462,527	1,560,174,005	1,662,870,043	1,799,444,524	1,930,712,400	620,823,082	73.21%

Source: LSS Master Plans and Master Plan Updates; Selected Financial Statistics.

During this period, the number of pupils increased in some LSSs, declined in others, and remained relatively constant in still others. Thus, when MGT examined revenues from the perspective of "per pupil," a slightly different picture emerged. Exhibit 85 displays the number of pupils enrolled in each LSS.

Exhibit 86 provides information on the total current revenues from all sources per pupil. Revenues from all sources per pupil rose from $8,152 in 2001-02 to $12,269 in 2007-08, an increase of $4,117 or 50.5 percent. As would be expected, there was significant variation across LSSs. Revenues from all sources per pupil increased by $2,478 or 32.9 percent in Queen Anne's County, while revenues per pupil increased by $5,916 or 73.5 percent in Allegany County. Despite this variation in increased revenues, many LSSs remained below the state average revenue per pupil. These numbers are shown graphically in Exhibit 87.

3.4.2 Funding From State Appropriations

The majority of the increased funding was received as state appropriations, which increased by $2.029 billion, or 80.3 percent, as shown in Exhibit 88. State appropriations accounted for almost 60 percent of the increase in total revenues, but this pattern varied from LSS to LSS.

Increases in state appropriations varied from a low of $1,867,519 in Kent County, an increase of 23 percent, to a high of $432 million in Prince George's County and 114.5 percent in Washington County. Some of the variation in the percentage increase relates to increases or decreases in the numbers of pupils, and some to changes in the school funding formula under BTE.

LSSs received the majority of the increased funding per pupil as state appropriations, which increased statewide by an average of $2,437 or 82.8 percent. Similarly to the pattern for total revenues, increases varied from a low of $1,051 in Kent County, an increase of 34.7 percent, to a high of $5,429 per pupil or 126 percent in Allegany County. Changes in revenues from state appropriations per pupil were related not only to changes in the number of pupils but also to changes in the relative LSS wealth per pupil. The changes in state appropriations per pupil are shown in Exhibits 89 and 90.

3.4.3 Revenues From Local Appropriations

Revenues from local appropriations showed a different pattern of change than those of state appropriations, as indicated in Exhibit 91. Total local appropriations rose from $3.851 billion to $5.168 billion, an increase of $1.317 billion or 34.19 percent, a percentage change about half of that of the increase in state appropriations. However, local appropriations decreased in Baltimore City. Baltimore City continued to meet maintenance of effort provisions because student enrollment declined and the amount per pupil increased.

The variation in change in local appropriations ranged from a decrease of $2.3 million, or 1.1 percent, in Baltimore City to an increase of $426.9 million in Montgomery County and 59.9 percent in Charles County. Revenues may decrease and county government still be in compliance with the maintenance of effort provisions in the law because enrollment may be declining.

Revenues from local appropriations per pupil showed a different pattern of change than those of state appropriations per pupil, as indicated in Exhibit 92. Statewide, average local appropriations per pupil rose from $4,487 to $6,104, an increase of $1,617 or 36 percent, a percentage change about half of that of the increase in state appropriations. The variation in change in local appropriations per pupil ranged from an increase of $163 or 5.7 percent in Somerset County to an increase of $3,299 in Worcester County and 53.9 percent in Garrett County. These changes are shown graphically in Exhibit 93.

3.4.4 Revenues From Federal Sources

Exhibit 94 displays information on total current revenues from federal sources from 2001-02 to 2007-08. Total federal sources rose slightly statewide from $529.9 million in 2001-02 to $531.7 million in 2007-08, a $1.7 million or 0.33 percent increase.

There was substantial variability across LSSs, with some systems experiencing large increases and some large decreases in federal revenues. These revenues have served as the catalyst for improvements to many programs; thus, a decline in federal revenues may portend a decline in improvement in test scores.

Baltimore City's federal revenues declined by $36.2 million over the time period, while Baltimore County's federal revenues increased by $21.9 million. Federal revenues also declined in the Allegany, Anne Arundel, Caroline, Cecil, Dorchester, Garrett, Harford, Kent, St. Mary's, Somerset, Talbot, Wicomico, and Worcester school systems.

Statewide, average federal revenues per pupil rose from $617 in 2001-02 to $628 in 2007-08, an $11 or 1.7 percent increase. Again, there was substantial variability across LSSs, with some systems experiencing large increases and some large decreases in federal revenues per pupil.

Baltimore City's federal revenues declined by $99 per pupil over the time period, and St. Mary's County's declined by $581 per pupil. Meanwhile, Carroll County's federal revenues per pupil increased by $98. Federal revenues per pupil also declined in the Allegany, Caroline, Cecil, Dorchester, Garrett, Kent, Talbot, Wicomico, and Worchester school systems. These changes in federal funds per pupil are shown in Exhibit 95 and presented graphically in Exhibit 96.

EXHIBIT 85
TOTAL ENROLLMENT, 2001-02 TO 2007-08

	2001-2002	2002-03	2003-04	2004-05	2005-06	2006-07	Projected 2007-08	Change	% Change
Total State	858,298	864,544	866,802	863,285	857,846	849,506	846,660	-11,638	-1.36%
Allegany	10,180	10,128	9,926	9,840	9,715	9,526	8,986	-1,194	-11.73%
Anne Arundel	75,081	74,787	74,508	73,991	73,565	73,066	72,566	-2,515	-3.35%
Baltimore City	95,475	94,031	91,738	88,401	85,468	82,381	77,310	-18,165	-19.03%
Baltimore	107,212	108,297	108,523	107,701	107,043	105,839	105,330	-1,882	-1.76%
Calvert	16,651	17,153	17,423	17,451	17,468	17,474	17,160	509	3.06%
Caroline	5,609	5,535	5,400	5,412	5,570	5,611	5,650	41	0.73%
Carroll	28,127	28,430	28,832	28,792	28,940	28,616	28,700	573	2.04%
Cecil	16,095	16,203	16,475	16,535	16,521	16,421	16,472	377	2.34%
Charles	24,001	24,794	25,610	26,026	26,406	26,623	27,422	3,421	14.25%
Dorchester	4,884	4,817	4,803	4,788	4,654	4,667	4,680	-204	-4.18%
Frederick	38,022	38,559	38,950	39,489	39,672	40,224	41,177	3,155	8.30%
Garrett	4,869	4,833	4,810	4,737	4,668	4,617	4,617	-252	-5.18%
Harford	39,966	40,252	40,200	40,294	40,212	39,568	39,500	-466	-1.17%
Howard	46,257	47,197	47,833	48,219	48,596	49,048	49,515	3,258	7.04%
Kent	2,684	2,629	2,565	2,514	2,440	2,356	2,450	-234	-8.72%
Montgomery	136,895	138,983	139,201	139,393	139,398	137,814	137,007	112	0.08%
Prince George's	135,039	135,439	137,285	136,095	133,325	131,014	133,451	-1,588	-1.18%
Queen Anne's	7,232	7,523	7,526	7,713	7,780	7,786	7,975	743	10.27%
St. Mary's	15,482	16,110	16,261	16,567	16,649	16,665	16,667	1,185	7.65%
Somerset	3,060	2,978	2,951	2,952	2,915	2,941	2,950	-110	-3.59%
Talbot*	4,516	4,498	4,459	4,505	4,482	4,398	4,298	-218	-4.83%
Washington	19,961	20,102	20,338	20,807	21,141	21,594	21,465	1,504	7.53%
Wicomico	14,116	14,395	14,402	14,387	14,491	14,427	14,523	407	2.88%
Worcester	6,884	6,871	6,783	6,676	6,727	6,830	6,789	-95	-1.38%
Minimum	2,684	2,629	2,565	2,514	2,440	2,356	2,450	-18,165	-19.03%
Maximum	136,895	138,983	139,201	139,393	139,398	137,814	137,007	3,421	14.25%

Source: MSDE Student Enrollment Reports, LSS Master Plans and Updates.

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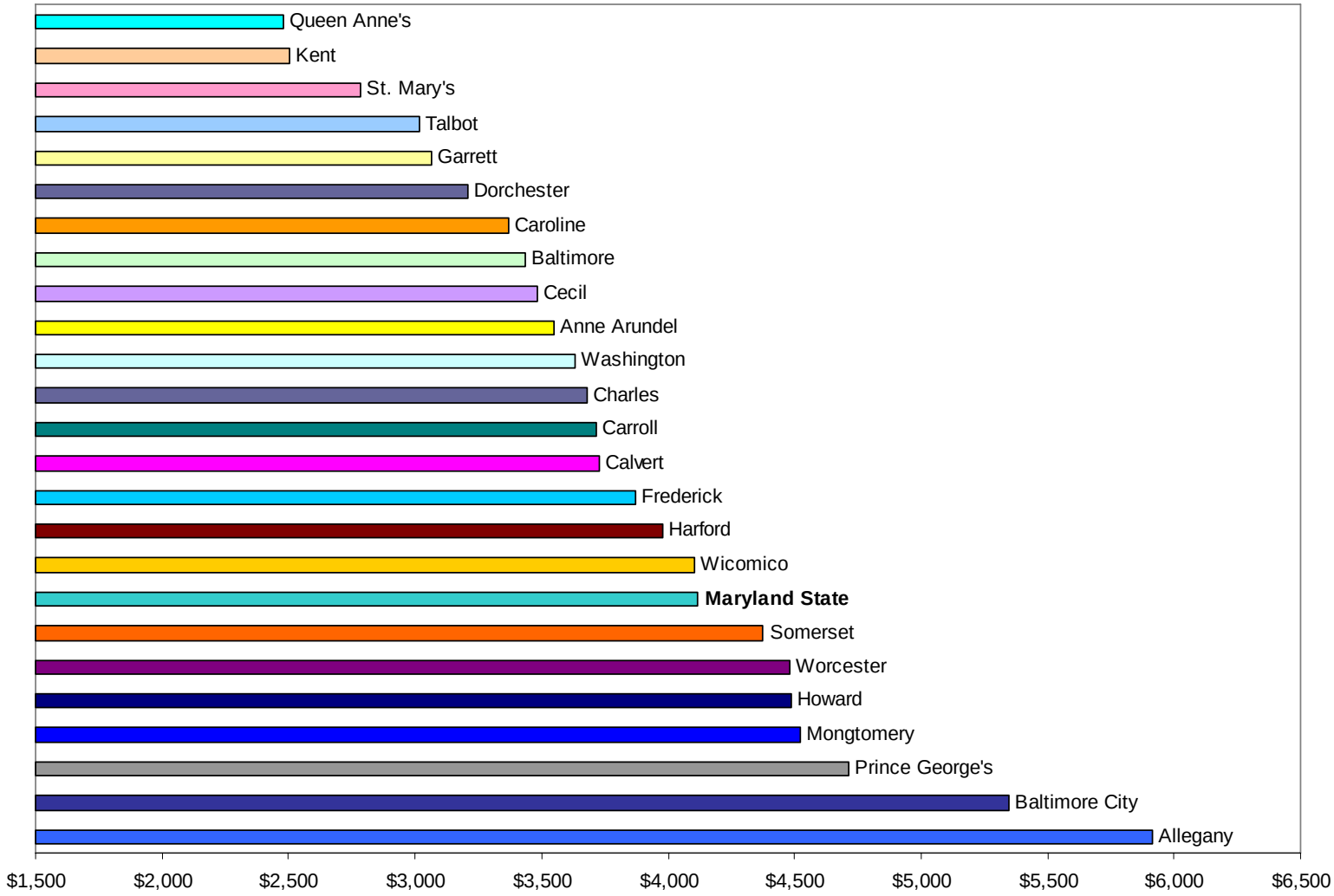
EXHIBIT 86
PER PUPIL TOTAL CURRENT REVENUES, 2001-02 TO 2007-08

	2001-2002	2002-03	2003-04	2004-05	Budget 2005-06	Budget 2006-07	Budget 2007-08	$ Change	% Change
Total State	8,152	8,422	8,917	9,443	10,297	11,339	12,269	4,117	50.50%
Allegany	8,044	8,346	8,768	9,055	10,042	11,703	13,959	5,916	73.54%
Anne Arundel	7,708	8,010	8,401	8,817	9,480	10,418	11,258	3,550	46.06%
Baltimore City	9,448	9,513	9,565	10,510	11,879	12,949	14,795	5,348	56.60%
Baltimore	8,155	8,346	8,733	9,172	10,018	11,509	11,588	3,433	42.10%
Calvert	7,329	7,677	8,221	8,710	9,365	9,970	11,056	3,726	50.84%
Caroline	6,816	7,270	8,096	8,157	8,395	9,320	10,185	3,369	49.42%
Carroll	7,031	7,375	7,872	8,546	9,116	10,013	10,745	3,714	52.83%
Cecil	6,973	7,344	7,731	8,156	8,867	9,778	10,455	3,482	49.93%
Charles	7,136	7,358	7,784	8,243	9,088	10,091	10,819	3,683	51.61%
Dorchester	7,754	8,149	8,659	8,888	9,515	10,065	10,961	3,207	41.37%
Frederick	7,025	7,338	7,928	8,244	9,059	9,825	10,899	3,874	55.14%
Garrett	7,911	8,299	8,825	9,105	9,621	10,368	10,976	3,065	38.74%
Harford	6,888	7,115	7,583	7,902	8,984	10,024	10,868	3,981	57.79%
Howard	8,397	8,757	9,486	10,006	10,828	11,746	12,883	4,486	53.43%
Kent	9,360	9,631	9,544	10,280	10,546	11,543	11,861	2,502	26.73%
Montgomery	9,569	9,800	10,607	11,193	11,929	13,057	14,092	4,524	47.27%
Prince George's	7,687	8,189	8,681	9,330	10,327	11,399	12,403	4,716	61.34%
Queen Anne's	7,523	7,501	8,106	8,200	8,597	9,271	10,001	2,478	32.94%
St. Mary's	7,409	7,302	7,906	8,053	8,850	9,546	10,192	2,783	37.57%
Somerset	8,551	9,148	9,430	9,691	10,444	11,889	12,926	4,375	51.16%
Talbot	7,544	7,806	8,621	8,531	9,013	9,743	10,564	3,020	40.03%
Washington	7,245	7,426	7,982	8,245	8,999	9,580	10,880	3,635	50.17%
Wicomico	7,460	7,592	8,315	8,770	9,484	10,489	11,567	4,107	55.05%
Worcester	8,598	9,101	10,018	10,849	11,222	12,056	13,078	4,480	52.11%
Minimum	6,816	7,115	7,583	7,902	8,395	9,271	10,001	2,478	26.73%
Maximum	9,569	9,800	10,607	11,193	11,929	13,057	14,795	5,916	73.54%

Source: MSDE, Selected Financial Statistics, 2001-02 through 2004-05; LSS Master Plans and Updates; 2007-08 LSS Approved Budget.

EXHIBIT 87
CHANGES IN REVENUES FROM ALL SOURCES PER PUPIL
2001-02 TO 2007-08



Source: MSDE, Selected Financial Statistics, 2001-02 through 2004-05; LSS Master Plans and Updates; 2007-08 LSS Approved Budget.

EXHIBIT 88
TOTAL STATE APPROPRIATIONS, 2001-02 TO 2007-08

	2001-2002	2002-03	2003-04	2004-05	Budget 2005-06	Budget 2006-07	Budget 2007-08	$ Change	% Change
Total State	2,525,743,663	2,720,336,426	2,907,990,888	3,173,623,190	3,572,650,447	4,022,328,883	4,554,778,828	2,029,035,165	80.33%
Allegany	43,877,271	46,121,312	48,178,948	50,890,055	60,086,096	74,130,242	87,517,795	43,640,524	99.46%
Anne Arundel	171,449,890	182,848,879	192,814,737	198,033,425	212,160,002	237,839,260	266,470,100	95,020,210	55.42%
Baltimore City	525,994,730	531,845,887	550,038,363	599,781,000	667,616,000	733,197,435	817,391,358	291,396,628	55.40%
Baltimore	267,506,759	297,103,966	310,381,128	345,545,475	393,406,881	481,572,000	517,168,352	249,661,593	93.33%
Calvert	43,867,809	49,767,334	55,692,783	60,267,696	66,815,096	73,435,408	83,843,485	39,975,676	91.13%
Caroline	22,600,249	25,321,672	27,354,344	28,682,204	31,474,415	38,655,059	41,523,535	18,923,286	83.73%
Carroll	79,617,835	86,530,703	92,539,877	101,965,000	112,073,349	126,346,000	142,131,236	62,513,401	78.52%
Cecil	52,227,544	57,138,217	60,752,253	67,216,157	75,603,650	85,840,073	96,687,340	44,459,796	85.13%
Charles	73,795,943	79,345,510	88,792,214	98,056,465	113,163,928	129,194,834	145,696,274	71,900,331	97.43%
Dorchester	17,869,469	18,256,122	20,435,694	21,958,878	23,749,608	25,472,878	29,965,257	12,095,788	67.69%
Frederick	101,479,817	111,444,675	119,964,611	132,007,285	151,976,000	168,392,243	197,423,282	95,943,465	94.54%
Garrett	17,995,534	19,180,380	19,542,979	20,251,191	20,877,900	22,870,974	24,750,023	6,754,489	37.53%
Harford	114,678,069	122,753,370	134,454,372	144,651,780	164,592,833	185,661,997	207,819,066	93,140,997	81.22%
Howard	92,953,329	104,389,432	118,798,951	126,230,790	140,985,110	156,561,220	182,764,270	89,810,941	96.62%
Kent	8,122,507	8,965,270	7,810,074	8,314,648	8,596,203	9,151,469	9,990,026	1,867,519	22.99%
Montgomery	212,963,825	235,350,450	256,719,824	270,231,632	302,654,736	335,398,368	390,354,770	177,390,945	83.30%
Prince George's	474,254,828	525,133,215	557,348,599	631,415,313	717,350,081	785,318,130	906,299,700	432,044,872	91.10%
Queen Anne's	18,676,440	19,491,388	20,893,986	21,902,869	23,663,957	26,478,196	29,540,026	10,863,586	58.17%
St. Mary's	47,670,436	1,376,100	56,922,685	60,755,000	70,939,319	78,617,760	88,007,701	40,337,265	84.62%
Somerset	12,761,926	14,417,831	14,823,758	16,122,527	18,683,573	21,152,452	23,588,346	10,826,420	84.83%
Talbot*	5,374,824	5,196,220	8,444,673	9,156,122	9,694,881	10,176,599	10,452,749	5,077,925	94.48%
Washington	62,804,815	66,006,839	73,471,018	79,832,000	95,425,830	111,011,110	134,723,637	71,918,822	114.51%
Wicomico	49,084,107	52,748,835	59,238,858	66,531,656	76,260,037	89,997,334	103,905,553	54,821,446	111.69%
Worcester	8,115,707	9,602,820	12,576,160	13,824,023	14,800,962	15,857,842	16,764,947	8,649,240	106.57%
Minimum	5,374,824	5,196,220	7,810,074	8,314,648	8,596,203	9,151,469	9,990,026	1,867,519	22.99%
Maximum	525,994,730	531,845,887	557,348,599	631,415,313	717,350,081	785,318,130	906,299,700	432,044,872	114.51%

Source: MSDE, Selected Financial Statistics, 2001-02 through 2004-05; LSS Master Plans and Updates; 2007-08 LSS Approved Budget.

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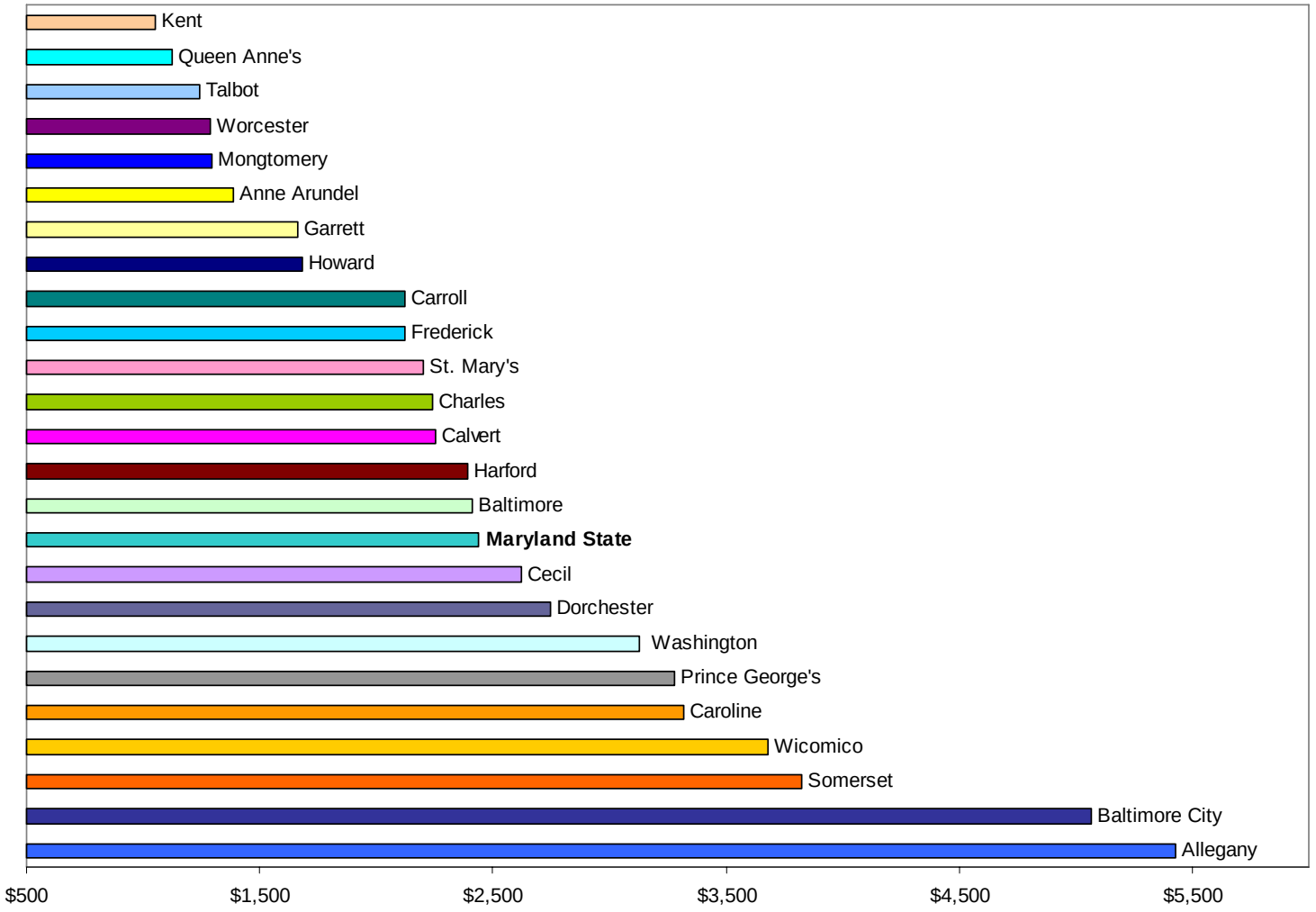
EXHIBIT 89
PER PUPIL CURRENT REVENUES FROM STATE APPROPRIATIONS, 2001-02 TO 2007-08

	2001-2002	2002-03	2003-04	2004-05	Budget 2005-06	Budget 2006-07	Budget 2007-08	$ Change	% Change
Total State	2,943	3,147	3,355	3,676	4,165	4,735	5,380	2,437	82.81%
Allegany	4,310	4,554	4,854	5,172	6,185	7,782	9,739	5,429	125.96%
Anne Arundel	2,284	2,445	2,588	2,676	2,884	3,255	3,672	1,389	60.81%
Baltimore City	5,509	5,656	5,996	6,785	7,811	8,900	10,573	5,064	91.91%
Baltimore	2,495	2,743	2,860	3,208	3,675	4,550	4,910	2,415	96.78%
Calvert	2,635	2,901	3,197	3,454	3,825	4,203	4,886	2,251	85.46%
Caroline	4,029	4,575	5,066	5,300	5,651	6,889	7,349	3,320	82.40%
Carroll	2,831	3,044	3,210	3,541	3,873	4,415	4,952	2,122	74.95%
Cecil	3,245	3,526	3,688	4,065	4,576	5,227	5,870	2,625	80.89%
Charles	3,075	3,200	3,467	3,768	4,286	4,853	5,313	2,238	72.80%
Dorchester	3,659	3,790	4,255	4,586	5,103	5,458	6,403	2,744	75.00%
Frederick	2,669	2,890	3,080	3,343	3,831	4,186	4,795	2,126	79.64%
Garrett	3,696	3,969	4,063	4,275	4,473	4,954	5,361	1,665	45.04%
Harford	2,869	3,050	3,345	3,590	4,093	4,692	5,261	2,392	83.36%
Howard	2,009	2,212	2,484	2,618	2,901	3,192	3,691	1,682	83.68%
Kent	3,026	3,410	3,045	3,307	3,523	3,884	4,078	1,051	34.74%
Montgomery	1,556	1,693	1,844	1,939	2,171	2,434	2,849	1,293	83.15%
Prince George's	3,512	3,877	4,060	4,640	5,380	5,994	6,791	3,279	93.37%
Queen Anne's	2,582	2,591	2,776	2,840	3,042	3,401	3,704	1,122	43.43%
St. Mary's	3,079	3,189	3,501	3,667	4,261	4,718	5,280	2,201	71.49%
Somerset	4,171	4,841	5,023	5,462	6,409	7,192	7,996	3,825	91.73%
Talbot	1,190	1,155	1,894	2,032	2,163	2,314	2,432	1,242	104.34%
Washington	3,146	3,284	3,612	3,837	4,514	5,141	6,276	3,130	99.48%
Wicomico	3,477	3,664	4,113	4,624	5,263	6,238	7,155	3,677	105.76%
Worcester	1,179	1,398	1,854	2,071	2,200	2,322	2,469	1,291	109.46%
Minimum	1,179	1,155	1,844	1,939	2,163	2,314	2,432	1,051	34.74%
Maximum	5,509	5,656	5,996	6,785	7,811	8,900	10,573	5,429	125.96%

Source: MSDE, Selected Financial Statistics, 2001-02 through 2004-05; LSS Master Plans and Updates; 2007-08 LSS Approved Budget.

EXHIBIT 90
CHANGES IN STATE REVENUES PER PUPIL
FOLLOWING THE PASSAGE OF BTE
2001-02 TO 2007-08



Source: MSDE, Selected Financial Statistics, 2001-02 through 2004-05; LSS Master Plans and Updates; 2007-08 LSS Approved Budget.

EXHIBIT 91
TOTAL LOCAL APPROPRIATIONS, 2001-02 TO 2007-08

	2001-2002	2002-03	2003-04	2004-05	Budget 2005-06	Budget 2006-07	Budget 2007-08	$ Change	% Change
Total State	3,851,119,054	3,999,046,147	4,171,051,086	4,385,464,762	4,627,055,781	4,931,163,378	5,167,983,062	1,316,864,008	34.19%
Ex. Talbot									
Allegany	25,999,571	25,657,928	26,218,807	25,630,000	26,630,000	27,380,000	28,380,000	2,380,429	9.16%
Anne Arundel	367,581,500	383,840,000	390,600,000	414,260,500	449,213,960	486,604,350	512,113,900	144,532,400	39.32%
Baltimore City	210,259,915	207,400,244	207,554,999	206,339,000	207,767,000	207,940,795	207,940,795	(2,319,120)	-1.10%
Baltimore	545,983,980	548,228,835	560,334,696	570,512,547	591,733,139	606,302,000	617,766,410	71,782,430	13.15%
Calvert	68,899,949	73,412,612	76,412,612	80,912,612	85,712,612	90,378,744	95,358,284	26,458,335	38.40%
Caroline	10,676,594	10,922,859	10,877,114	10,977,114	11,300,000	11,850,000	12,250,000	1,573,406	14.74%
Carroll	107,234,647	112,826,831	119,534,398	126,687,000	135,585,000	144,760,000	150,926,700	43,692,053	40.74%
Cecil	50,884,355	53,984,355	56,089,930	58,708,711	62,229,000	65,715,090	65,915,162	15,030,807	29.54%
Charles	85,680,500	90,830,500	94,944,200	101,794,000	112,217,000	124,006,000	137,036,032	51,355,532	59.94%
Dorchester	14,358,372	15,069,791	15,068,779	15,220,189	15,422,902	16,344,830	16,569,686	2,211,314	15.40%
Frederick	149,616,400	157,583,145	169,943,808	174,542,485	189,208,000	205,380,682	228,206,754	78,590,354	52.53%
Garrett	15,118,404	15,679,901	17,590,100	18,375,339	18,800,000	19,925,000	22,056,160	6,937,756	45.89%
Harford	138,335,279	146,051,098	148,150,510	154,047,408	175,414,800	189,414,800	199,614,800	61,279,521	44.30%
Howard	274,540,340	292,400,940	310,590,015	334,589,915	363,069,115	393,772,550	427,176,316	152,635,976	55.60%
Kent	13,484,252	13,437,085	13,124,906	13,675,613	14,275,613	15,110,000	16,217,000	2,732,748	20.27%
Montgomery	1,030,002,553	1,065,185,268	1,132,069,738	1,220,526,759	1,285,830,590	1,384,725,787	1,456,912,573	426,910,020	41.45%
Prince George's	468,355,887	500,378,852	527,648,158	551,266,753	562,043,003	602,243,300	615,843,300	147,487,413	31.49%
Queen Anne's	30,978,413	32,757,413	35,007,413	36,587,413	38,037,413	39,940,413	43,940,413	12,962,000	41.84%
St. Mary's	52,520,215	54,534,715	56,214,697	58,900,000	62,634,000	67,811,488	71,844,608	19,324,393	36.79%
Somerset	8,691,732	8,843,759	8,562,017	8,499,357	8,547,712	8,925,712	8,859,324	167,592	1.93%
Talbot	24,071,992	25,804,352	25,845,786	26,359,842	27,897,682	29,848,888	31,728,712	7,656,720	31.81%
Washington	69,563,895	72,070,834	74,824,848	78,817,000	81,986,266	83,303,108	85,564,120	16,000,225	23.00%
Wicomico	43,743,788	44,665,088	45,679,815	46,131,073	46,925,458	48,329,815	49,443,053	5,699,265	13.03%
Worcester	44,536,521	47,479,742	48,163,739	52,104,132	54,575,516	61,150,026	66,318,960	21,782,439	48.91%
Minimum	8,691,732	8,843,759	8,562,017	8,499,357	8,547,712	8,925,712	8,859,324	(2,319,120)	-1.10%
Maximum	1,030,002,553	1,065,185,268	1,132,069,738	1,220,526,759	1,285,830,590	1,384,725,787	1,456,912,573	426,910,020	59.94%

Source: MSDE, Selected Financial Statistics, 2001-02 through 2004-05; LSS Master Plans and Updates; 2007-08 LSS Approved Budget.

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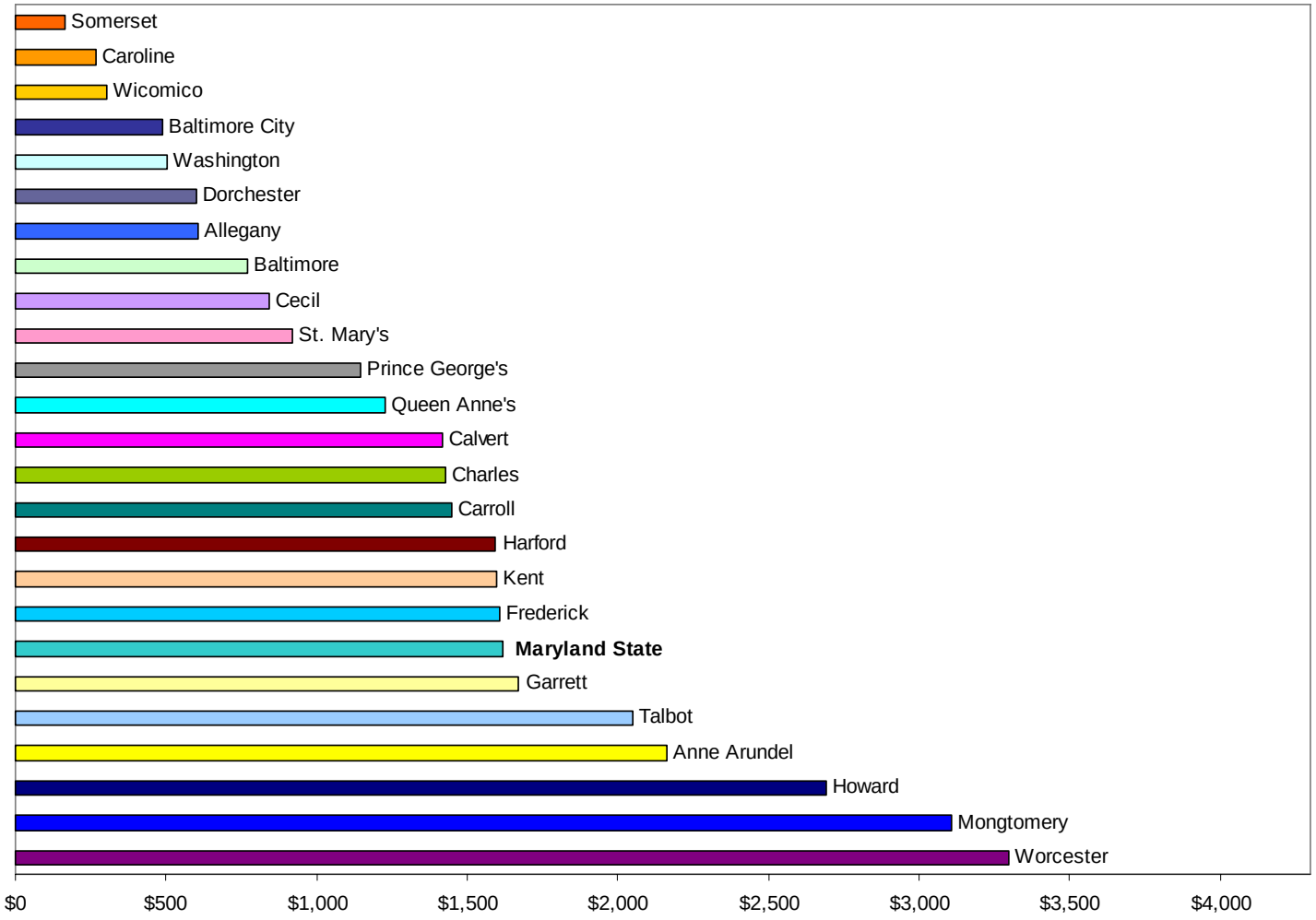
EXHIBIT 92
PER PUPIL REVENUES FROM LOCAL APPROPRIATIONS, 2001-02 TO 2007-08

	2001-2002	2002-03	2003-04	2004-05	Budget 2005-06	Budget 2006-07	Budget 2007-08	$ Change	% Change
Total State	4,487	4,626	4,812	5,080	5,394	5,805	6,104	1,617	36.04%
Allegany	2,554	2,533	2,641	2,605	2,741	2,874	3,158	604	23.66%
Anne Arundel	4,896	5,132	5,242	5,599	6,106	6,660	7,057	2,161	44.15%
Baltimore City	2,202	2,206	2,262	2,334	2,431	2,524	2,690	487	22.13%
Baltimore	5,093	5,062	5,163	5,297	5,528	5,729	5,865	772	15.17%
Calvert	4,138	4,280	4,386	4,637	4,907	5,172	5,557	1,419	34.30%
Caroline	1,903	1,973	2,014	2,028	2,029	2,112	2,168	265	13.90%
Carroll	3,813	3,969	4,146	4,400	4,685	5,059	5,259	1,446	37.93%
Cecil	3,162	3,332	3,405	3,551	3,767	4,002	4,002	840	26.57%
Charles	3,570	3,663	3,707	3,911	4,250	4,658	4,997	1,427	39.99%
Dorchester	2,940	3,128	3,137	3,179	3,314	3,502	3,541	601	20.43%
Frederick	3,935	4,087	4,363	4,420	4,769	5,106	5,542	1,607	40.84%
Garrett	3,105	3,244	3,657	3,879	4,027	4,316	4,777	1,672	53.85%
Harford	3,461	3,628	3,685	3,823	4,362	4,787	5,054	1,592	46.00%
Howard	5,935	6,195	6,493	6,939	7,471	8,028	8,627	2,692	45.36%
Kent	5,024	5,111	5,117	5,440	5,851	6,413	6,619	1,595	31.75%
Montgomery	7,524	7,664	8,133	8,756	9,224	10,048	10,634	3,110	41.33%
Prince George's	3,468	3,694	3,843	4,051	4,216	4,597	4,615	1,146	33.06%
Queen Anne's	4,284	4,354	4,652	4,744	4,889	5,130	5,510	1,226	28.63%
St. Mary's	3,392	3,385	3,457	3,555	3,762	4,069	4,311	918	27.07%
Somerset	2,840	2,970	2,901	2,879	2,932	3,035	3,003	163	5.73%
Talbot	5,330	5,737	5,796	5,851	6,224	6,787	7,382	2,052	38.49%
Washington	3,485	3,585	3,679	3,788	3,878	3,858	3,986	501	14.38%
Wicomico	3,099	3,103	3,172	3,206	3,238	3,350	3,404	306	9.86%
Worcester	6,470	6,910	7,101	7,805	8,113	8,953	9,769	3,299	50.99%
Minimum	1,903	1,973	2,014	2,028	2,029	2,112	2,168	163	5.73%
Maximum	7,524	7,664	8,133	8,756	9,224	10,048	10,634	3,299	53.85%

Source: MSDE, Selected Financial Statistics, 2001-02 through 2004-05; LSS Master Plans and Updates; 2007-08 LSS Approved Budget.

EXHIBIT 93
CHANGES IN LOCAL REVENUES PER PUPIL
FOLLOWING THE PASSAGE OF BTE
2001-02 TO 2007-08



Source: MSDE, Selected Financial Statistics, 2001-02 through 2004-05; LSS Master Plans and Updates; 2007-08 LSS Approved Budget.

EXHIBIT 94
TOTAL FEDERAL REVENUES, 2001-02 TO 2007-08

	2001-2002	2002-03	2003-04	2004-05	Budget 2005-06	Budget 2006-07	Budget 2007-08	$ Change	% Change
Total State	529,946,907	571,042,257	575,840,541	520,207,242	557,375,031	570,184,329	531,674,504	1,727,597	0.33%
Allegany	10,786,918	10,844,497	11,710,150	8,757,427	9,655,568	8,979,976	8,569,263	-2,217,655	-20.56%
Anne Arundel	32,619,037	36,240,602	39,518,655	36,068,166	33,195,315	32,592,378	32,159,900	-459,137	-1.41%
Baltimore City	150,340,122	142,797,908	113,610,304	115,114,000	134,543,000	121,591,720	114,109,089	-36,231,033	-24.10%
Baltimore	51,437,727	61,459,955	67,681,614	63,172,308	75,628,376	95,835,000	73,313,137	21,875,410	42.53%
Calvert	7,000,997	7,545,469	8,781,393	7,964,024	8,152,869	7,226,375	7,419,036	418,039	5.97%
Caroline	4,619,511	4,723,428	4,924,430	4,003,796	3,634,138	3,497,576	3,367,120	-1,252,391	-27.11%
Carroll	9,611,031	11,983,586	13,143,958	15,483,000	14,041,780	12,833,000	12,612,025	3,000,994	31.22%
Cecil	8,468,708	9,014,282	9,789,152	8,520,909	7,944,368	7,633,990	6,784,236	-1,684,472	-19.89%
Charles	10,021,550	12,243,450	13,580,722	11,889,880	12,060,058	12,625,969	12,043,814	2,022,264	20.18%
Dorchester	5,086,032	5,616,463	5,182,024	5,060,871	4,275,257	4,188,495	3,934,020	-1,152,012	-22.65%
Frederick	13,394,817	14,905,849	15,571,457	14,587,187	14,982,000	16,981,629	17,781,629	4,386,812	32.75%
Garrett	5,005,542	4,798,107	5,111,041	4,167,049	3,856,321	3,626,651	3,586,729	-1,418,813	-28.34%
Harford	17,580,365	18,815,235	19,675,189	16,997,661	17,651,625	16,970,290	17,489,731	-90,634	-0.52%
Howard	11,279,746	14,473,857	17,975,285	16,148,754	15,014,158	16,354,173	16,916,540	5,636,794	49.97%
Kent	3,290,198	3,140,879	2,671,228	3,255,343	2,491,456	2,479,115	2,490,300	-799,898	-24.31%
Montgomery	55,403,842	68,992,786	74,629,364	60,386,961	63,953,913	65,014,851	65,014,851	9,611,009	17.35%
Prince George's	83,055,271	87,535,581	94,808,277	76,604,181	86,007,350	93,873,297	91,155,800	8,100,529	9.75%
Queen Anne's	4,279,866	4,607,059	4,453,156	4,282,718	4,304,147	5,199,148	5,286,591	1,006,725	23.52%
St. Mary's	11,271,973	12,052,986	13,069,164	12,949,000	11,720,000	8,814,992	2,450,000	-8,821,973	-78.26%
Somerset	4,610,949	3,988,881	4,212,302	3,711,074	3,152,182	4,726,734	4,600,000	-10,949	-0.24%
Talbot	3,433,428	4,134,635	3,308,308	2,447,247	2,670,967	2,592,086	2,974,419	-841,342	-24.50%
Washington	11,026,455	12,324,931	13,012,358	11,658,000	11,198,789	11,436,833	11,979,454	952,999	8.64%
Wicomico	10,270,028	11,796,343	12,651,976	10,749,517	11,303,222	9,968,051	10,147,686	-122,342	-1.19%
Worcester	6,052,795	7,005,487	6,769,035	6,228,169	5,938,172	5,142,000	5,489,134	-563,661	-9.31%
Minimum	3,290,198	3,140,879	2,671,228	2,447,247	2,491,456	2,479,115	2,450,000	(36,231,033)	-78.26%
Maximum	150,340,122	142,797,908	113,610,304	115,114,000	134,543,000	121,591,720	114,109,089	21,875,410	49.97%

Source: MSDE, Selected Financial Statistics, 2001-02 through 2004-05; LSS Master Plans and Updates; 2007-08 LSS Approved Budget.

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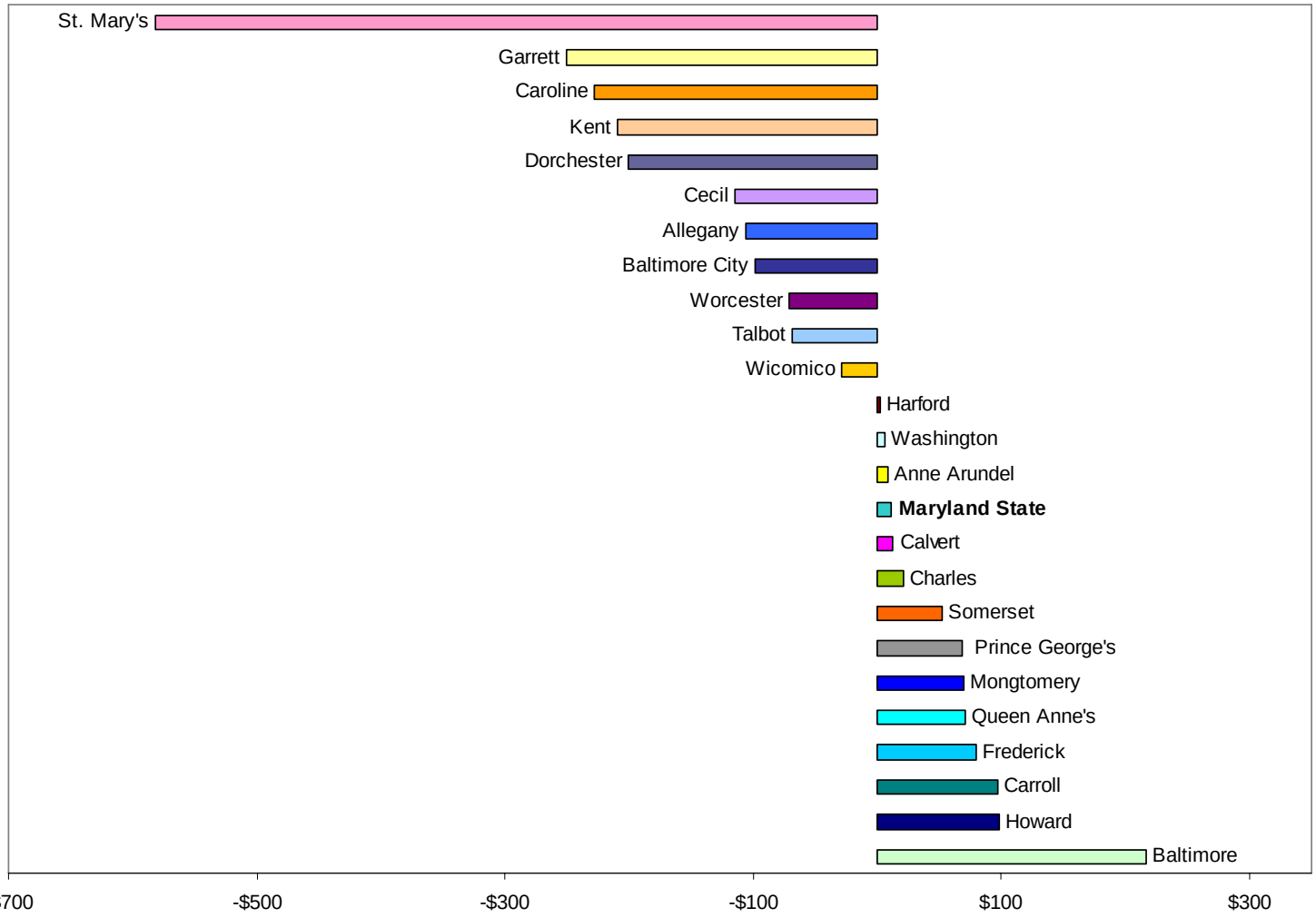
EXHIBIT 95
PER PUPIL REVENUES FROM FEDERAL SOURCES, 2001-02 TO 2007-08

	2001-2002	2002-03	2003-04	2004-05	Budget 2005-06	Budget 2006-07	Budget 2007-08	$ Change	% Change
Total State	617.44	660.51	664.33	602.59	649.74	671.20	627.97	11	1.71%
Allegany	1,059.62	1,070.74	1,179.75	889.98	993.88	942.68	953.62	-106	-10.00%
Anne Arundel	434.45	484.58	530.39	487.47	451.24	446.07	443.18	9	2.01%
Baltimore City	1,574.65	1,518.63	1,238.42	1,302.18	1,574.19	1,475.97	1,475.99	-99	-6.27%
Baltimore	479.78	567.51	623.66	586.55	706.52	905.48	696.03	216	45.07%
Calvert	420.46	439.89	504.01	456.36	466.73	413.55	432.34	12	2.83%
Caroline	823.59	853.37	911.93	739.80	652.45	623.34	595.95	-228	-27.64%
Carroll	341.70	421.51	455.88	537.75	485.20	448.46	439.44	98	28.60%
Cecil	526.17	556.33	594.18	515.33	480.86	464.89	411.86	-114	-21.72%
Charles	417.55	493.81	530.29	456.85	456.72	474.25	439.21	22	5.19%
Dorchester	1,041.37	1,165.97	1,078.91	1,056.99	918.62	897.47	840.60	-201	-19.28%
Frederick	352.29	386.57	399.78	369.40	377.65	422.18	431.83	80	22.58%
Garrett	1,028.04	992.78	1,062.59	879.68	826.12	785.50	776.85	-251	-24.43%
Harford	439.88	467.44	489.43	421.84	438.96	428.89	442.78	3	0.66%
Howard	243.85	306.67	375.79	334.90	308.96	333.43	341.64	98	40.10%
Kent	1,225.86	1,194.70	1,041.41	1,294.89	1,021.09	1,052.26	1,016.45	-209	-17.08%
Montgomery	404.72	496.41	536.13	433.21	458.79	471.76	474.54	70	17.25%
Prince George's	615.05	646.31	690.59	562.87	645.10	716.51	683.07	68	11.06%
Queen Anne's	591.80	612.40	591.70	555.26	553.23	667.76	662.90	71	12.01%
St. Mary's	728.07	748.17	803.71	781.61	703.95	528.95	147.00	-581	-79.81%
Somerset	1,506.85	1,339.45	1,427.42	1,257.14	1,081.37	1,607.19	1,559.32	52	3.48%
Talbot	760.28	919.22	741.94	543.23	595.93	589.38	692.05	-68	-8.97%
Washington	552.40	613.12	639.81	560.29	529.72	529.63	558.09	6	1.03%
Wicomico	727.55	819.48	878.49	747.17	780.02	690.93	698.73	-29	-3.96%
Worcester	879.26	1,019.57	997.94	932.92	882.74	752.86	808.53	-71	-8.04%
Minimum	244	307	376	335	309	333	147	(581)	-79.81%
Maximum	1,575	1,519	1,427	1,302	1,574	1,607	1,559	216	45.07%

Source: MSDE, Selected Financial Statistics, 2001-02 through 2004-05; LSS Master Plans and Updates; 2007-08 LSS Approved Budget.

EXHIBIT 96
CHANGES IN FEDERAL REVENUES PER PUPIL
FOLLOWING THE PASSAGE OF BTE
2001-02 TO 2007-08



Source: MSDE, Selected Financial Statistics, 2001-02 through 2004-05; LSS Master Plans and Updates; 2007-08 LSS Approved Budget.

3.5 Uses of Increased Funding Since Passage of BTE

This section of the report examines the uses of increased funding since the passage of BTE. For the purposes of this analysis, we selected 2001-02 as the baseline year because it was the year before BTE funds were appropriated to Maryland school systems.

This analysis includes expenditures from all sources of revenues because it was not possible under the current accounting systems to separate expenditures from state, local, and federal sources, except for those funds whose use was restricted to special purposes. The intent of the BTE legislation was to leverage additional state funding with local and federal funds to improve student achievement. Thus, the information presented in this section examines how LSSs have been using increased funds from the combination of all sources, including state, local, and federal funds. We first discuss the expenditure of increased or redirected funding by type of expenditure and by program. We then examine the use of redirected funding for strategies that the LSSs have been employing to improve student performance, attain the goals and objectives of their Master Plans, and comply with the requirements of the federal NCLB legislation.

In the past, the deficit in Baltimore City Public Schools had a significant effect on the average expenditures of the state. Baltimore City eliminated its deficit in the first three years following the enactment of BTE. To do this, the LSS reduced expenditures in instruction, administration, and other areas. In addition, enrollment in BCSS declined, so per pupil expenditures stayed relatively constant. Baltimore City reduced its expenditures for educational programs by $46.8 million.

Evaluation Mandate: Provide a detailed description of how LSSs are using state education aid including:

i. *A list for each school system of the substantial educational enhancements that have been implemented by each school system since the enactment of BTE together with the general issue that each enhancement is attempting to address.*

ii. *An estimate of the amount spent to implement each substantial educational enhancement.*

iii. *An estimate of the number of new positions, if any, that have been added to execute each enhancement.*

iv. *A classification of each substantial educational enhancement in terms of being targeted to the general student population or to a specific student population, specific schools, or specific grade levels.*

Progress to Date: MGT obtained and analyzed each LSS's Master Plan and Updates through the 2007 submission to determine how LSSs have been using increased

funding. MGT used data from MSDE's *Selected Financial Statistics* publications and from publications on staffing to evaluate changes in staffing.

Current Limitations: LSSs could not provide specific data on every position related to each substantial educational enhancement.

Future Plans: MGT will continue to refine and gather data to provide more detail on the funding and positions associated with each substantial educational enhancement.

Key Interim Findings: Key findings to date are summarized below. The summary is followed by exhibits and narratives that support these findings and provide additional information.

Since the passage of BTE, LSSs have spent the majority of the additional funding on improvements or enhancements to educational programs and the educational process. These expenditures have been associated with increases in achievement levels in all LSSs, as was shown in the previous section.

Key Findings on Uses of Increased Funding From 2001-02 to 2007-08 by Type of Expenditure:

- LSSs have spent or plan to spend the majority of the additional funding on competitive salaries and benefits, increasing their projected spending by $1.850 billion over 2001-02 levels.
- Expenditures for instruction are projected to increase by $1.15 billion; special education, by $413.1 million; plant operations and maintenance, by $474.8 million; mid-level administration, by $241 million; transportation, by $64.6 million; administration, by $116.6 million; and student and health services, by $60.7 million.[1]

[1] Definitions of program areas may be found in the glossary in the Appendix.

Key Findings on Changes in Expenditures by the Content Analysis Themes of the Master Plan Strategies:

- The greatest increase in expenditures has been in the Instructional Process category, which accounted for $2.537 billion or over 75 percent of all increases in expenditures in the years since the enactment of BTE.

- The deficit in Baltimore City Public Schools had a significant effect on the average expenditures of the state. Baltimore City eliminated its deficit in the first three years following the enactment of BTE. To do this, the LSS cut back on expenditures in instruction, administration, and other areas, and reduced its teaching, support, and administrative staff. In addition, enrollment declined, so per pupil expenditures stayed relatively constant.

- Within the Instructional Process category, the strategy "Competitive Salaries and Benefits" accounted for 53.8 percent of all new revenues projected to be received by LSSs, and totaled $1.793 billion. LSSs used another $279.1 million for new or additional personnel. This was consistent with the time line for achieving the goals of NCLB. School systems were required to have core courses taught by highly qualified teachers by the end of the 2005-06 school year. LSSs attempted to achieve this target by focusing new monies on salaries. In addition, they expended $72.5 million to recruit and retain those highly qualified staff and $28.3 million of new dollars to provide professional development. In total, LSSs expended 64.7 percent or $2.2 billion of the $3.34 billion in additional funding from all sources to achieve NCLB Goal 3, regarding highly qualified teachers.

- All LSSs spent the majority of new resources on the instructional process, which could be attributed to NCLB Goals 1, 2, 3, and 5. These resources included additional personnel and alignment to the Voluntary State Curriculum and Core Learning Goals.

- All LSSs spent additional resources for the increased costs of utilities, transportation, or facilities.

Key Findings on Increased Expenditures in Strategies Categorized as "Potential Best Practices":

- Systemic best practices and best practices at the school level were identified through interviews with LSS administrators, principals, and teachers. Among those strategies for which specific expenditure data were available, LSSs devoted the majority of the additional resources to hiring and retaining highly qualified teachers and providing professional development.
- Actual or planned increases in expenditures for strategies that may be best practices were as follows:

Highly qualified teachers:	$2,194,874,193
Data utilization/analysis:	177,994,574
Research-based programs:	163,566,208
Differentiated instruction:	100,175,214
Graduation enhancement:	63,312,557
Academic intervention/acceleration	50,643,124
Professional development:	28,352,356

Key Findings On Changes in Staffing:

- According to their Staffing Reports, between 2001-02 and 2006-07, LSSs increased the total number of staff employed by 10,933 positions, and the number of teachers increased by 8,274, a 15.3 percent increase.
- The number of students per teacher decreased statewide from 15.9 to an average of 13.6 pupils, a 14.5 percent decrease, as the result of additional teachers, and in some school systems, enrollment declines.
- In their Master Plans and Updates, LSSs reported adding 11,350 new positions related to substantial educational enhancements between 2001-02 and 2007-08.

3.5.1 Estimates of Uses of Increased Revenues

LSSs expended new resources to improve student performance and meet the goals of their Master Plans and of the federal NCLB legislation. Exhibit 97 provides detail by general program category on the total new funds expended by each LSS.

EXHIBIT 97
INCREASED EXPENDITURES BY CATEGORY

	Instruction	Special Education	Administration	Mid-Level Administration	Student Services	Health Services	Student Transportation	Operation of Plant	Maintenance of Plant
Total State	1,146,335,875	413,111,891	116,583,412	241,011,191	38,125,272	22,517,015	64,627,319	90,365,286	384,413,565
Allegany	12,553,687	6,379,788	573,495	2,926,540	219,942	354,771	1,810,789	3,788,614	440,848
Anne Arundel	110,195,129	28,579,111	5,190,598	11,951,507	281,618	0	8,153,017	14,627,766	-685,430
Baltimore City	37,987,642	29,814,205	23,416,652	28,194,866	4,069,512	436,073	5,845,027	17,244,028	6,565,464
Baltimore	65,353,083	29,378,105	10,156,935	17,573,563	1,493,405	1,177,647	11,968,277	32,562,899	9,872,298
Calvert	24,961,623	5,177,759	2,355,196	2,974,321	299,746	265,285	4,397,050	6,476,183	1,033,167
Caroline	7,979,367	2,096,860	926,766	1,454,330	153,372	290,030	1,352,542	1,589,777	333,343
Carroll	45,520,360	12,484,290	1,751,889	9,220,842	511,781	1,521,733	5,556,027	9,992,247	3,789,906
Cecil	20,435,937	8,671,979	2,066,188	4,174,325	231,299	504,945	3,215,889	4,200,724	771,214
Charles	57,398,069	13,078,459	3,603,385	8,060,674	1,729,364	1,183,501	10,337,608	10,783,609	1,847,335
Dorchester	3,219,933	344,741	58,902	1,196,167	204,317	135,358	908,103	1,091,403	98,051
Frederick	69,947,149	21,885,382	2,589,106	11,627,629	1,208,550	2,091,540	7,311,218	14,736,248	3,473,717
Garrett	4,555,812	1,184,360	454,664	618,653	357,939	127,972	1,401,037	1,417,050	-14,938
Harford	54,168,917	19,626,372	6,247,085	8,725,027	553,506	1,477,498	10,878,133	10,993,445	4,988,947
Howard	99,473,320	37,483,446	1,757,450	20,802,513	1,066,038	2,537,153	12,494,034	16,290,259	9,015,024
Kent	694,790	962,548	269,250	412,967	14,840	-25,850	655,465	590,866	84,683
Montgomery	223,645,126	88,115,190	14,174,014	44,311,416	5,367,528	8,988	25,090,090	38,881,623	8,358,761
Prince George's	203,162,176	88,334,856	34,362,262	53,328,495	17,763,865	8,746,024	31,490,078	54,795,736	11,016,368
Queen Anne's	6,227,795	1,376,228	275,530	1,060,136	186,352	162,054	1,844,907	2,066,305	392,141
St. Mary's	16,955,794	3,309,026	708,154	3,991,011	495,598	719,404	4,355,759	5,147,960	1,091,452
Somerset	3,297,580	51,352	51,430	283,189	238,278	59,623	598,549	655,187	5,424
Talbot	3,161,625	1,111,707	154,637	842,975	16,052	0	873,452	1,198,458	859,972
Washington	37,414,816	8,445,567	3,814,783	5,602,375	431,152	132,850	4,061,791	9,533,684	4,868,327
Wicomico	23,695,614	5,694,565	2,315,873	3,405,435	1,225,636	393,568	2,245,929	4,836,474	805,777
Worcester	14,330,529	3,614,124	376,567	1,661,825	167,173	216,847	1,663,752	2,516,640	201,159
Minimum	694,790	51,352	51,430	283,189	14,840	-25,850	598,549	590,866	(685,430)
Maximum	223,645,126	88,334,856	34,362,262	53,328,495	17,763,865	8,746,024	31,490,078	54,795,736	11,016,368

Source: Calculated by MGT from LSS Master Plans and Updates through 2007.

LSSs expended the greatest portion of the new funds on instruction. Exhibit 98 provides information on the change in total instructional expenditures, which increased by $1.146 billion or 35.4 percent during this period, excluding any expenditures for state-paid teachers' retirement. Changes in instructional expenditures varied from an increase of $694,790 or 5.7 percent in Kent County to an increase of $223.6 million in the Montgomery County. Exhibits 99 and 100 provide information on instructional expenditures per pupil, which increased by an average of $1,406 over the time period.

EXHIBIT 98
TOTAL EXPENDITURES FOR INSTRUCTION, 2001-02 TO 2007-08

	2001-2002	2002-03	2003-04	2004-05	Budget 2005-06	Budget 2006-07	Budget 2007-08	$ Change	% Change
Total State	3,237,115,284	3,362,960,710	3,423,683,765	3,570,850,086	3,712,637,713	4,031,232,985	4,383,451,159	1,146,335,875	35.41%
Allegany	35,960,914	36,654,518	38,604,909	39,461,951	42,061,046	44,825,952	48,514,601	12,553,687	34.91%
Anne Arundel	260,930,771	267,275,975	274,887,875	287,769,056	292,122,000	325,076,800	371,125,900	110,195,129	42.23%
Baltimore City	372,048,875	377,273,752	348,122,129	341,535,114	293,927,384	378,100,000	410,036,517	37,987,642	10.21%
Baltimore	401,641,070	402,505,002	417,545,377	430,116,774	424,928,319	443,072,006	466,994,153	65,353,083	16.27%
Calvert	57,229,031	63,041,515	67,308,631	69,630,424	75,105,635	79,325,311	82,190,654	24,961,623	43.62%
Caroline	19,145,144	20,167,709	20,669,177	21,005,929	22,601,746	24,464,979	27,124,511	7,979,367	41.68%
Carroll	92,212,768	100,048,966	104,868,715	112,113,038	120,241,216	128,089,532	137,733,128	45,520,360	49.36%
Cecil	50,692,866	53,335,661	55,891,093	59,122,471	63,614,570	68,160,598	71,128,803	20,435,937	40.31%
Charles	81,062,770	86,799,589	91,630,733	99,894,932	102,355,910	116,941,185	138,460,839	57,398,069	70.81%
Dorchester	17,759,864	18,613,323	19,124,644	20,244,326	18,009,519	19,088,728	20,979,797	3,219,933	18.13%
Frederick	133,196,273	139,115,642	146,985,677	153,988,856	169,048,506	183,251,096	203,143,422	69,947,149	52.51%
Garrett	18,790,529	18,687,730	19,317,121	19,701,903	20,700,230	22,225,250	23,346,341	4,555,812	24.25%
Harford	132,637,135	138,520,808	139,046,609	142,327,929	162,471,471	177,000,034	186,806,052	54,168,917	40.84%
Howard	181,318,700	188,363,154	205,907,268	217,245,281	234,850,234	265,635,360	280,792,020	99,473,320	54.86%
Kent	12,140,896	12,074,727	11,149,403	11,264,775	10,762,931	12,043,823	12,835,686	694,790	5.72%
Montgomery	641,471,702	677,117,955	696,341,947	735,770,621	776,496,910	818,214,058	865,116,828	223,645,126	34.86%
Prince George's	469,195,885	493,143,461	480,963,057	509,479,462	571,516,986	589,866,968	672,358,061	203,162,176	43.30%
Queen Anne's	27,015,696	28,246,508	28,801,815	29,665,066	28,785,653	30,341,054	33,243,491	6,227,795	23.05%
St. Mary's	51,506,378	53,091,195	56,312,706	59,183,905	63,802,013	67,983,572	68,462,172	16,955,794	32.92%
Somerset	12,460,470	12,678,142	13,008,599	13,714,462	12,662,603	14,466,345	15,758,050	3,297,580	26.46%
Talbot	17,348,442	17,834,974	18,727,855	18,361,609	18,768,028	18,807,125	20,510,067	3,161,625	18.22%
Washington	70,045,511	72,445,368	77,886,766	83,696,745	91,318,886	98,297,805	107,460,327	37,414,816	53.42%
Wicomico	51,392,144	53,646,089	56,809,494	59,016,886	58,447,726	64,683,276	75,087,758	23,695,614	46.11%
Worcester	29,911,452	32,278,947	33,772,166	36,538,572	38,038,191	41,272,128	44,241,981	14,330,529	47.91%
Minimum	12,140,896	12,074,727	11,149,403	11,264,775	10,762,931	12,043,823	12,835,686	694,790	5.72%
Maximum	641,471,702	677,117,955	696,341,947	735,770,621	776,496,910	818,214,058	865,116,828	223,645,126	70.81%

Source: Calculated by MGT from LSS Master Plans and Updates through 2007, and from MSDE's Selected Financial Statistics.

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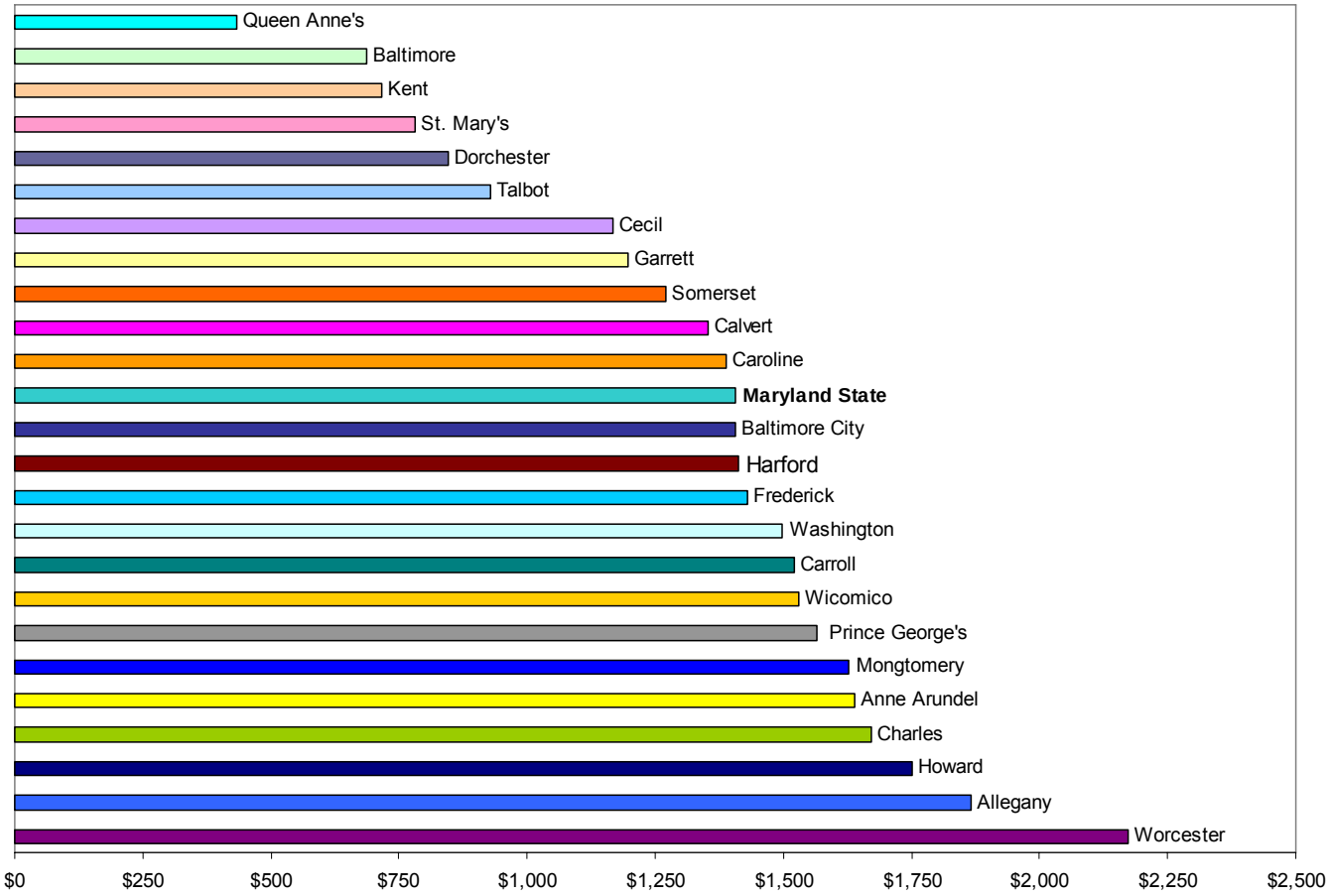
EXHIBIT 99
PER PUPIL EXPENDITURES FOR INSTRUCTION, 2001-02 TO 2007-08

	2001-2002	2002-03	2003-04	2004-05	Budget 2005-06	Budget 2006-07	Budget 2007-08	$ Change	% Change
Total State	3,772	3,890	3,950	4,136	4,328	4,745	5,177	1,406	37.27%
Allegany	3,533	3,619	3,889	4,010	4,329	4,706	5,399	1,866	52.84%
Anne Arundel	3,475	3,574	3,689	3,889	3,971	4,449	5,114	1,639	47.16%
Baltimore City	3,897	4,012	3,795	3,863	3,439	4,590	5,304	1,407	36.11%
Baltimore	3,746	3,717	3,848	3,994	3,970	4,186	4,434	687	18.35%
Calvert	3,437	3,675	3,863	3,990	4,300	4,540	4,790	1,353	39.36%
Caroline	3,413	3,644	3,828	3,881	4,058	4,360	4,801	1,388	40.65%
Carroll	3,278	3,519	3,637	3,894	4,155	4,476	4,799	1,521	46.38%
Cecil	3,150	3,292	3,392	3,576	3,851	4,151	4,318	1,169	37.10%
Charles	3,377	3,501	3,578	3,838	3,876	4,392	5,049	1,672	49.50%
Dorchester	3,636	3,864	3,982	4,228	3,870	4,090	4,483	847	23.28%
Frederick	3,503	3,608	3,774	3,900	4,261	4,556	4,933	1,430	40.83%
Garrett	3,859	3,867	4,016	4,159	4,434	4,814	5,057	1,197	31.03%
Harford	3,319	3,441	3,459	3,532	4,040	4,473	4,729	1,411	42.50%
Howard	3,920	3,991	4,305	4,505	4,833	5,416	5,671	1,751	44.67%
Kent	4,523	4,593	4,347	4,481	4,411	5,112	5,239	716	15.82%
Montgomery	4,686	4,872	5,002	5,278	5,570	5,937	6,314	1,629	34.75%
Prince George's	3,475	3,641	3,503	3,744	4,287	4,502	5,038	1,564	45.01%
Queen Anne's	3,736	3,755	3,827	3,846	3,700	3,897	4,168	433	11.59%
St. Mary's	3,327	3,296	3,463	3,572	3,832	4,079	4,108	781	23.47%
Somerset	4,072	4,257	4,408	4,646	4,344	4,919	5,342	1,270	31.18%
Talbot	3,842	3,965	4,200	4,076	4,187	4,276	4,772	930	24.22%
Washington	3,509	3,604	3,830	4,023	4,320	4,552	5,006	1,497	42.67%
Wicomico	3,641	3,727	3,945	4,102	4,033	4,483	5,170	1,530	42.01%
Worcester	4,345	4,698	4,979	5,473	5,655	6,043	6,517	2,172	49.98%
Minimum	3,150	3,292	3,392	3,532	3,439	3,897	4,108	433	11.59%
Maximum	4,686	4,872	5,002	5,473	5,655	6,043	6,517	2,172	52.84%

Source: Calculated by MGT from LSS Master Plans and Updates through 2007, and from MSDE's Selected Financial Statistics.

EXHIBIT 100
CHANGES IN INSTRUCTIONAL EXPENDITURES PER PUPIL
FOLLOWING THE PASSAGE OF BTE
2001-02 TO 2007-08



Source: Calculated by MGT from LSS Master Plans and Updates through 2007, and from MSDE's Selected Financial Statistics.

Exhibit 101 provides information on the change in total instructional expenditures for salaries and wages, which increased by $1.017 billion or 34.7 percent during this period, excluding any expenditures for state-paid teachers' retirement. Changes in instructional expenditures for salaries and wages varied from an increase of $1.2 million or 4.6 percent in Baltimore City to an increase of $211.3 million in Montgomery County. As was the case for total instructional expenditures, these increases also reflected changes in the number of students.

EXHIBIT 101
INCREASED EXPENDITURES FOR INSTRUCTIONAL SALARIES AND WAGES

	2001-2002	2002-03	2003-04	2004-05	Budget 2005-06	Budget 2006-07	Budget 2007-08	$ Change	% Change
Total State	2,930,868,457	3,077,351,481	3,129,196,587	3,225,116,178	3,431,473,284	3,681,850,940	3,947,816,802	1,016,948,345	34.70%
Allegany	32,128,943	33,206,435	33,974,534	34,912,483	37,623,960	40,462,374	43,171,644	11,042,701	34.37%
Anne Arundel	239,607,015	243,062,171	244,522,000	258,563,506	278,310,400	309,009,900	340,191,500	100,584,485	41.98%
Baltimore City	317,245,918	338,809,142	314,086,041	280,806,624	282,796,000	313,994,000	331,825,289	14,579,371	4.60%
Baltimore	354,976,641	363,204,686	373,784,450	388,634,826	393,789,802	408,507,122	429,121,308	74,144,667	20.89%
Calvert	52,438,650	57,735,203	62,230,447	65,249,194	70,170,773	74,716,713	77,452,114	25,013,464	47.70%
Caroline	16,864,125	17,853,268	18,592,989	19,151,266	20,556,642	22,219,347	24,294,669	7,430,544	44.06%
Carroll	84,014,279	88,577,588	94,614,711	99,755,406	109,174,665	117,008,605	125,735,910	41,721,631	49.66%
Cecil	46,442,286	48,502,455	51,033,162	54,207,475	58,501,215	62,367,493	65,727,155	19,284,869	41.52%
Charles	74,407,221	79,404,597	83,758,459	89,386,686	95,709,095	107,662,888	122,076,071	47,668,850	64.06%
Dorchester	16,040,218	16,500,171	16,702,531	17,615,660	16,707,842	17,695,096	19,365,797	3,325,579	20.73%
Frederick	123,138,416	129,008,554	134,649,688	143,918,608	156,138,788	168,796,430	187,836,798	64,698,382	52.54%
Garrett	16,832,865	17,027,760	17,642,960	18,330,957	18,982,680	20,418,900	21,487,455	4,654,590	27.65%
Harford	122,691,468	127,685,664	128,406,492	131,688,444	149,233,105	162,677,880	172,495,064	49,803,596	40.59%
Howard	169,877,544	176,098,982	192,218,687	205,194,658	219,337,619	251,338,730	261,807,790	91,930,246	54.12%
Kent	10,611,363	10,828,768	10,115,623	10,162,021	10,153,384	11,035,205	11,797,057	1,185,694	11.17%
Montgomery	598,555,601	638,167,149	656,624,875	687,792,861	724,732,056	763,157,963	809,891,362	211,335,761	35.31%
Prince George's	420,782,840	447,540,567	440,503,691	451,467,136	506,410,050	526,201,934	574,533,048	153,750,208	36.54%
Queen Anne's	23,585,348	24,721,547	25,626,527	26,844,096	26,729,348	28,174,749	30,739,512	7,154,164	30.33%
St. Mary's	46,504,325	48,932,089	51,175,586	53,729,157	58,671,337	62,447,414	64,007,561	17,503,236	37.64%
Somerset	10,688,652	10,983,337	11,177,046	11,559,491	11,272,109	12,934,418	14,012,426	3,323,774	31.10%
Talbot	15,830,022	16,272,181	16,710,391	16,562,937	17,192,681	17,413,665	18,349,380	2,519,358	15.92%
Washington	63,517,199	65,577,237	69,064,773	73,259,897	80,978,176	87,383,535	95,091,594	31,574,395	49.71%
Wicomico	47,193,621	49,052,634	51,724,652	53,874,438	54,252,635	59,678,296	67,352,186	20,158,565	42.71%
Worcester	26,893,897	28,599,298	30,256,273	32,448,352	34,048,922	36,548,283	39,454,112	12,560,215	46.70%
Minimum	10,611,363	10,828,768	10,115,623	10,162,021	10,153,384	11,035,205	11,797,057	1,185,694	4.60%
Maximum	598,555,601	638,167,149	656,624,875	687,792,861	724,732,056	763,157,963	809,891,362	211,335,761	64.06%

Source: Calculated by MGT from LSS Master Plans and Updates through 2007, and from MSDE's Selected Financial Statistics.

Exhibit 102 displays information on instructional salaries and wages per pupil, which increased statewide by an average of $1,248 per pupil or 36.6 percent over the time period. Changes in instructional salaries and wages expenditures per pupil varied from an increase of $593 or 18.2 percent in Queen Anne's County to an increase of $1,905 per pupil in Worcester County.

Information on increases in expenditures for the other program categories may be found in Volume 2.

EXHIBIT 102
INCREASED EXPENDITURES FOR INSTRUCTIONAL SALARIES AND WAGES PER PUPIL

	2001-2002	2002-03	2003-04	2004-05	Budget 2005-06	Budget 2006-07	Budget 2007-08	$ Change	% Change
Total State	$ 3,415	$ 3,560	$ 3,610	$ 3,736	$ 4,000	$ 4,334	$ 4,663	1,248	36.55%
Allegany	$ 3,156	$ 3,279	$ 3,423	$ 3,548	$ 3,873	$ 4,248	$ 4,804	1,648	52.22%
Anne Arundel	$ 3,191	$ 3,250	$ 3,282	$ 3,495	$ 3,783	$ 4,229	$ 4,688	1,497	46.90%
Baltimore City	$ 3,323	$ 3,603	$ 3,424	$ 3,177	$ 3,309	$ 3,811	$ 4,292	969	29.17%
Baltimore	$ 3,311	$ 3,354	$ 3,444	$ 3,608	$ 3,679	$ 3,860	$ 4,074	763	23.05%
Calvert	$ 3,149	$ 3,366	$ 3,572	$ 3,739	$ 4,017	$ 4,276	$ 4,514	1,364	43.32%
Caroline	$ 3,007	$ 3,226	$ 3,443	$ 3,539	$ 3,691	$ 3,960	$ 4,300	1,293	43.02%
Carroll	$ 2,987	$ 3,116	$ 3,282	$ 3,465	$ 3,772	$ 4,089	$ 4,381	1,394	46.67%
Cecil	$ 2,886	$ 2,993	$ 3,098	$ 3,278	$ 3,541	$ 3,798	$ 3,990	1,105	38.29%
Charles	$ 3,100	$ 3,203	$ 3,271	$ 3,435	$ 3,625	$ 4,044	$ 4,452	1,352	43.60%
Dorchester	$ 3,284	$ 3,425	$ 3,478	$ 3,679	$ 3,590	$ 3,792	$ 4,138	854	26.00%
Frederick	$ 3,239	$ 3,346	$ 3,457	$ 3,645	$ 3,936	$ 4,196	$ 4,562	1,323	40.85%
Garrett	$ 3,457	$ 3,523	$ 3,668	$ 3,870	$ 4,067	$ 4,423	$ 4,654	1,197	34.62%
Harford	$ 3,070	$ 3,172	$ 3,194	$ 3,268	$ 3,711	$ 4,111	$ 4,367	1,297	42.25%
Howard	$ 3,672	$ 3,731	$ 4,019	$ 4,255	$ 4,513	$ 5,124	$ 5,287	1,615	43.98%
Kent	$ 3,954	$ 4,119	$ 3,944	$ 4,042	$ 4,161	$ 4,684	$ 4,815	862	21.79%
Montgomery	$ 4,372	$ 4,592	$ 4,717	$ 4,934	$ 5,199	$ 5,538	$ 5,911	1,539	35.20%
Prince George's	$ 3,116	$ 3,304	$ 3,209	$ 3,317	$ 3,798	$ 4,016	$ 4,305	1,189	38.16%
Queen Anne's	$ 3,261	$ 3,286	$ 3,405	$ 3,480	$ 3,436	$ 3,619	$ 3,854	593	18.19%
St. Mary's	$ 3,004	$ 3,037	$ 3,147	$ 3,243	$ 3,524	$ 3,747	$ 3,840	837	27.85%
Somerset	$ 3,493	$ 3,688	$ 3,788	$ 3,916	$ 3,867	$ 4,398	$ 4,750	1,257	35.98%
Talbot	$ 3,505	$ 3,618	$ 3,748	$ 3,677	$ 3,836	$ 3,959	$ 4,269	764	21.79%
Washington	$ 3,182	$ 3,262	$ 3,396	$ 3,521	$ 3,830	$ 4,047	$ 4,430	1,248	39.22%
Wicomico	$ 3,343	$ 3,408	$ 3,591	$ 3,745	$ 3,744	$ 4,137	$ 4,638	1,294	38.72%
Worcester	$ 3,907	$ 4,162	$ 4,461	$ 4,860	$ 5,062	$ 5,351	$ 5,811	1,905	48.76%
Minimum	$ 2,886	$ 2,993	$ 3,098	$ 3,177	$ 3,309	$ 3,619	$ 3,840	593	18.19%
Maximum	$ 4,372	$ 4,592	$ 4,717	$ 4,934	$ 5,199	$ 5,538	$ 5,911	1,905	52.22%

Source: Calculated by MGT from LSS Master Plans and Updates through 2007, and from MSDE's Selected Financial Statistics.

3.5.2 Estimates of Amounts Expended to Implement Substantial Educational Enhancements

In their Master Plans and Updates, each LSS has provided information on the strategies they have employed to achieve the goals and objectives outlined in their plans, as well as the goals specified by the federal NCLB legislation. MSDE asked LSSs to report increases in their expenditures over the prior year based on their goals, the five NCLB goals, and the mandatory cost of doing business. It should be emphasized that LSSs reported only those changes in expenditures related to their strategies; many were already devoting significant resources to achieve the goals of their Master Plans. LSSs were not asked to report the resources they were using to support each strategy, only the change in expenditures related to the strategy.

To provide a statewide analysis, expenditure data were aggregated to categories of strategies developed from the content analysis. For a description of the content analysis methodology, please see Chapter 2.0. Summaries for each LSS may be found in the Appendix.

Increases in expenditures were aggregated by six categories of strategies (see Exhibit 103):

- Education Programs
- Instructional Process
- Professional Development
- Accountability Measures
- Use of Technology and Data Analysis
- Other

These six categories of strategies are consistent with the literature and research on the characteristics of improved school systems. Section 3.3 provides information on the strategy trends for each LSS.

Exhibit 104 provides the totals for each of the six categories for each LSS, while Exhibit 105 displays the percentage of the total increased expenditures that each devoted to each of the six categories.

EXHIBIT 103
TOTAL INCREASE IN EXPENDITURES ON SPECIFIC STRATEGIES

Strategy	Increase in Expenditures	% of Total
Education Programs	$ 380,543,101	11.2%
Instructional Process	$ 2,536,982,859	74.6%
Professional Development	$ 28,288,555	0.8%
Accountability Measures	$ 18,495,126	0.5%
Use of Technology and Data Analysis	$ 84,775,921	2.5%
Other	$ 350,661,279	10.3%
Total	$ 3,399,746,841	100.0%

Source: Calculated by MGT from LSS Master Plans and Updates through 2007.

EXHIBIT 104
PROJECTED INCREASES IN EXPENDITURES BY MASTER PLAN CONTENT ANALYSIS CATEGORY

	Ed Programs*	Instructional Process	Professional Development	Accountability Process	Technology/ Data Analysis	Other	Total Increase
Total State	$ 380,543,101	$ 2,536,982,859	$ 28,288,555	$ 18,495,126	$ 84,775,921	$ 350,661,279	$ 3,399,746,841
Allegany	2,721,035	30,978,305	1,128,663	91,685	1,187,652	7,446,075	43,553,415
Anne Arundel	39,070,793	183,117,132	345,336	2,121,392	5,012,729	8,563,700	238,231,082
Baltimore City	(10,495,741)	161,194,395	9,600,000	1,890,000	6,475,000	73,134,000	241,797,654
Baltimore	42,200,467	269,488,007	1,282,989	566,700	4,872,000	27,837,627	346,247,790
Calvert	10,838,379	46,639,452	214,140	427,000	1,523,000	8,034,356	67,676,327
Caroline	2,304,126	13,633,841	148,667	420,424	701,517	2,103,022	19,311,597
Carroll	14,091,324	83,598,454	273,000	0	3,650,519	9,021,151	110,634,448
Cecil	13,357,181	39,064,185	191,482	16,181	2,104,027	5,250,025	59,983,081
Charles	12,513,854	87,629,686	293,000	115,000	3,162,170	21,683,915	125,397,625
Dorchester	2,062,050	9,502,712	101,460	38,000	123,897	1,600,808	13,428,927
Frederick	10,319,378	155,388,466	282,494	94,016	5,207,391	10,377,144	181,668,889
Garrett	2,005,409	8,684,578	43,568	73,200	21,000	1,328,771	12,156,526
Harford	37,004,736	103,391,680	1,105,893	122,523	1,540,222	10,855,580	154,020,634
Howard	15,686,565	213,111,142	291,209	168,960	2,717,320	17,524,139	249,499,335
Kent	534,488	2,991,197	-	0	0	413,267	3,938,952
Montgomery	27,088,378	539,383,503	6,546,723	874,789	11,372,893	35,556,796	620,823,082
Prince George's	134,765,418	377,796,335	3,451,053	10,713,483	25,169,328	65,219,175	617,114,792
Queen Anne's	2,822,547	19,826,823	80,000	75,000	100,000	2,449,206	25,353,576
St. Mary's	4,690,329	53,219,668	90,027	383,738	332,421	5,692,142	64,408,325
Somerset	2,154,766	7,301,336	85,952	0	391,300	2,032,416	11,965,770
Talbot	813,205	7,724,556	154,480	15,970	883,009	1,743,528	11,334,748
Washington	8,235,299	55,120,323	754,285	132,819	3,176,113	21,504,944	88,923,783
Wicomico	3,905,480	45,056,366	1,701,871	126,425	3,899,777	7,987,599	62,677,518
Worcester	1,853,635	23,140,717	122,263	27,821	1,152,636	3,301,893	29,598,965
Minimum	(10,495,741)	2,991,197	-	-	-	413,267	3,938,952
Maximum	134,765,418	539,383,503	9,600,000	10,713,483	25,169,328	73,134,000	620,823,082

Source: Calculated by MGT from LSS Master Plans and Updates through 2007.
* All realigned programs and reductions in federal funding are included in this category. (See Chapter 2 for details.)

EXHIBIT 105
PERCENTAGE SHARE OF INCREASED EXPENDITURES BY CATEGORY OF STRATEGY AFTER PASSAGE OF BTE

	Ed Programs	Instructional Process	Professional Development	Accountability Process	Technology/ Data Analysis	Other	Total Increase
Total State	11.19%	74.62%	0.83%	0.54%	2.49%	10.31%	100.00%
Allegany	6.25%	71.13%	2.59%	0.21%	2.73%	17.10%	100.00%
Anne Arundel	16.40%	76.87%	0.14%	0.89%	2.10%	3.59%	100.00%
Baltimore City	-4.34%	66.66%	3.97%	0.78%	2.68%	30.25%	100.00%
Baltimore	12.19%	77.83%	0.37%	0.16%	1.41%	8.04%	100.00%
Calvert	16.02%	68.92%	0.32%	0.63%	2.25%	11.87%	100.00%
Caroline	11.93%	70.60%	0.77%	2.18%	3.63%	10.89%	100.00%
Carroll	12.74%	75.56%	0.25%	0.00%	3.30%	8.15%	100.00%
Cecil	22.27%	65.13%	0.32%	0.03%	3.51%	8.75%	100.00%
Charles	9.98%	69.88%	0.23%	0.09%	2.52%	17.29%	100.00%
Dorchester	15.36%	70.76%	0.76%	0.28%	0.92%	11.92%	100.00%
Frederick	5.68%	85.53%	0.16%	0.05%	2.87%	5.71%	100.00%
Garrett	16.50%	71.44%	0.36%	0.60%	0.17%	10.93%	100.00%
Harford	24.03%	67.13%	0.72%	0.08%	1.00%	7.05%	100.00%
Howard	6.29%	85.42%	0.12%	0.07%	1.09%	7.02%	100.00%
Kent	13.57%	75.94%	0.00%	0.00%	0.00%	10.49%	100.00%
Montgomery	4.36%	86.88%	1.05%	0.14%	1.83%	5.73%	100.00%
Prince George's	21.84%	61.22%	0.56%	1.74%	4.08%	10.57%	100.00%
Queen Anne's	11.13%	78.20%	0.32%	0.30%	0.39%	9.66%	100.00%
St. Mary's	7.28%	82.63%	0.14%	0.60%	0.52%	8.84%	100.00%
Somerset	18.01%	61.02%	0.72%	0.00%	3.27%	16.99%	100.00%
Talbot	7.17%	68.15%	1.36%	0.14%	7.79%	15.38%	100.00%
Washington	9.26%	61.99%	0.85%	0.15%	3.57%	24.18%	100.00%
Wicomico	6.23%	71.89%	2.72%	0.20%	6.22%	12.74%	100.00%
Worcester	6.26%	78.18%	0.41%	0.09%	3.89%	11.16%	100.00%
Minimum	-4.34%	61.02%	0.00%	0.00%	0.00%	3.59%	
Maximum	24.03%	86.88%	3.97%	2.18%	7.79%	30.25%	

Source: Calculated by MGT from LSS Master Plans and Updates through 2007.

Exhibit 106 provides information on the subcategories under the category Education Programs:

- Early Childhood/Pre-Kindergarten Programs
- Kindergarten Programs
- Reading Programs
- Mathematics Programs
- Other Core Subject Programs
- Special Education Programs, Including Private Placements
- ELL Programs
- Academic Intervention Programs
- Cultural Diversity Programs
- Graduation Enhancement Programs
- Safe School Programs
- Realignment of Programs and Changes in Federal Funding

EXHIBIT 106
PROJECTED INCREASES IN EXPENDITURES FOR EDUCATION PROGRAMS

Education Agency	Early Childhood Pre-K Programs	Kindergarten Programs	Reading Programs	Mathematics Programs	Other Core Programs	Special Education Programs
Total State	$ 37,182,144	$ 78,138,536	$ 8,075,936	$ 165,100	$ 860,801	$ 172,474,079
Allegany	324,419	-	-	0	0	1,323,809
Anne Arundel	3,454,397	15,809,448	-	0	0	15,186,168
Baltimore City	1,800,000	-	-	0	0	20,530,000
Baltimore	165,517	3,900,474	4,717,660	0	657,000	20,599,104
Calvert	-	2,262,100	3,358,276	33,688	0	4,369,908
Caroline	28,500	112,100	-	0	0	1,367,545
Carroll	361,000	7,036,943	-	0	51,000	3,477,381
Cecil	-	6,056,936	-	0	0	4,599,894
Charles	1,067,231	4,342,750	-	0	0	4,461,173
Dorchester	-	739,662	-	0	0	463,976
Frederick	286,888	2,611,648	-	0	0	4,001,935
Garrett	293,000	1,145,000	-	0	0	193,198
Harford	666,662	8,587,781	-	131,412	0	22,264,872
Howard	-	6,565,133	-	0	0	1,769,000
Kent	-	70,100	-	0	0	453,633
Montgomery	2,174,924	9,365,051	-	0	103,801	13,035,992
Prince George's	25,729,003	5,021,860	-	0	0	43,485,084
Queen Anne's	-	841,100	-	0	0	632,350
St. Mary's	-	1,137,258	-	0	0	1,935,527
Somerset	-	241,543	-	-	-	563,398
Talbot	-	-	-	0	0	768,205
Washington	485,603	1,523,253	-	0	0	4,407,305
Wicomico	-	608,000	-	0	42,000	1,324,000
Worcester	345,000	160,396	-	0	7,000	1,260,622
Minimum	-	-	-	-	-	193,198
Maximum	25,729,003	15,809,448	4,717,660	131,412	657,000	43,485,084

EXHIBIT 106 (Continued)
PROJECTED INCREASES IN EXPENDITURES FOR EDUCATION PROGRAMS

Education Agency	ELL Programs	Academic Intervention Programs	Cultural Diversity Programs	Graduation Enhancement Programs	Safe School Programs	Realignment/ Reductions*	Total
Total State	$ 11,485,393	$ 52,981,438	$ 672,992	$ 66,226,958	$ 11,058,932	$ (58,779,208)	380,543,101
Allegany	0	-	-	339,401	0	733,406	2,721,035
Anne Arundel	780,900	2,400,542	-	1,659,428	0	-220,090	39,070,793
Baltimore City	625,000	12,510,000	-	19,691,000	0	-65,651,741	(10,495,741)
Baltimore	4,000,000	5,761,827	253,530	2,145,355	0	0	42,200,467
Calvert	116,000	-	-	368,842	329,565	0	10,838,379
Caroline	105,500	258,825	-	52,500	0	379,156	2,304,126
Carroll	521,000	1,071,000	-	654,000	919,000	0	14,091,324
Cecil	78,175	579,000	-	2,003,176	40,000	0	13,357,181
Charles	0	385,000	-	2,257,700	0	0	12,513,854
Dorchester	50,000	-	-	599,706	0	208,706	2,062,050
Frederick	283,455	-	-	75,300	255,600	2,804,552	10,319,378
Garrett	0	207,400	-	166,811	0	0	2,005,409
Harford	17,946	1,795,404	250,278	1,271,268	849,214	1,169,899	37,004,736
Howard	1,906,760	1,696,980	-	3,479,210	0	269,482	15,686,565
Kent	0	-	-	-	0	10,755	534,488
Montgomery	245,115	511,985	154,184	2,867,962	1,088,799	-2,459,435	27,088,378
Prince George's	2,032,615	24,140,116	-	26,097,295	7,313,454	945,991	134,765,418
Queen Anne's	66,000	-	-	100,000	0	1,183,097	2,822,547
St. Mary's	0	-	-	128,178	0	1,489,366	4,690,329
Somerset	143,937	415,000	15,000	512,588	263,300	0	2,154,766
Talbot	45,000						813,205
Washington	185,029	275,000	-	149,434	0	1,209,675	8,235,299
Wicomico	156,000	782,441	-	993,039	0	0	3,905,480
Worcester	126,961	190,918	-	614,765	0	-852,027	1,853,635
Minimum	-	-	-	-	-	(65,651,741)	(10,495,741)
Maximum	4,000,000	24,140,116	253,530	26,097,295	7,313,454	2,804,552	134,765,418

Source: Calculated by MGT from LSS Master Plans and Updates through 2007.

* All realigned programs and reductions in federal funding are included in this category. (See Chapter 2 for details.)

Twenty-one LSSs expended a total of $78.1 million of new revenues for kindergarten programs, and 14 LSSs expended another $37.2 million on early childhood or pre-kindergarten programs. School systems were required to have all-day kindergarten in all schools and pre-kindergarten programs for economically disadvantaged students by the 2007-08 school year. A total of $115.3 million in new or reallocated resources were expended to implement these programs. Several Maryland LSSs already had full-day kindergarten programs in place when BTE funding began and therefore did not report increased expenditures.

All LSSs reported increased expenditures for special education programs, including special education private placements. While in the first year's report, only Baltimore County and Howard County reported expenditures of new resources for additional or expanded ELL programs, by the 2007-08 year all LSSs except Allegany, Charles, Garrett, Kent, and St. Mary's reported expenditures of new resources for ELL programs.

Exhibit 107 provides information on the subcategories under the category Instructional Process:

- Competitive Salaries and Benefits
- New Personnel or Positions Added (due to change in program focus or enrollment growth)
- Recruitment and Retention of Highly Qualified Teachers/ Paraprofessionals
- Class Size Reduction
- Alignment to the VSC and State Testing Program
- Improvement of Communications/Community Partnerships
- Improvement of Instructional Practices
- Implementation of Mathematics Programs
- Implementation of Reading Programs
- Implementation of Other Academic Programs
- Implementation of Safe and Drug-Free School Strategies
- Improvements of NCLB Subgroups

EXHIBIT 107
PROJECTED INCREASES IN EXPENDITURES FOR THE INSTRUCTIONAL PROCESS

Education Agency	Competitive Salaries/Benefits	New/Add'l Personnel	Recruit/Retain Professionals	Class Size Reduction	Alignment to VSC & Testing	Communications Partnerships	Instructional Practices
Total State	1,793,578,260	279,106,350	72,549,205	59,737,846	86,951,565	15,641,859	104,058,857
Allegany	23,264,495	2,382,025	154,292	0	2,230,783	32,000	974,594
Anne Arundel	148,475,545	4,571,515	9,433,300	6,816,000		522,630	1,220,000
Baltimore City	56,364,910	1,500,000	7,900,000	1,500,000	17,697,867	2,091,000	26,692,618
Baltimore	215,440,000	12,379,957	1,943,700	8,803,470	2,600,000	998,075	18,975,872
Calvert	35,945,670	9,009,384	406,448	0	1,008,874	0	0
Caroline	9,393,222	1,130,937	1,435,433	543,101	831,574	42,200	67,874
Carroll	69,214,569	9,886,000	301,920	699,000	827,650	127,000	629,081
Cecil	23,173,011	10,256,152	64,000	56,000	3,457,049	30,000	1,392,472
Charles	59,042,124	19,206,912	-	0	4,332,600	0	1,213,900
Dorchester	6,088,515	656,416	120,400	983,255	929,517	0	277,750
Frederick	115,961,904	19,989,047	460,717	4,519,270	8,553,918	353,258	3,516,456
Garrett	7,295,233	702,247	3,000	0	436,182	2,500	111,087
Harford	82,753,228	14,544,980	1,934,080	963,846	1,298,674	13,531	1,689,319
Howard	144,897,770	33,696,033	4,056,180	11,402,691	7,913,075	1,087,000	4,911,618
Kent	2,670,946	170,100	-	0	86,069	52,701	0
Montgomery	437,195,326	61,242,213	-	13,657,266	14,085,073	1,469,480	8,532,098
Prince George's	214,743,219	42,086,551	33,175,678	8,862,933	14,078,810	8,099,094	28,435,693
Queen Anne's	14,732,789	2,937,746	310,100	276,000	0	0	1,420,188
St. Mary's	37,021,311	10,237,524	279,449	0	1,065,535	0	793,763
Somerset	4,320,371	1,134,022	94,900	0	127,704	83,000	102,928
Talbot	6,997,858	272,449	20,000	0	299,249	0	0
Washington	38,992,487	10,913,479	981,112	0	2,268,989	456,056	1,408,005
Wicomico	19,706,567	9,161,000	9,406,108	0	2,079,475	138,407	1,371,290
Worcester	19,887,190	1,039,661	68,388	655,014	742,898	43,927	322,251
Minimum	2,670,946	170,100	-	-	-	-	0
Maximum	437,195,326	61,242,213	33,175,678	13,657,266	17,697,867	8,099,094	28,435,693

EXHIBIT 107 (Continued)
PROJECTED INCREASES IN EXPENDITURES FOR THE INSTRUCTIONAL PROCESS

Education Agency	Mathematics Programs	Reading Programs	Other Core Programs	Safe/Drug-free Schools	NCLB Groups	Total
Total State	15,823,630	33,897,133	17,981,674	40,142,879	17,513,601	2,536,982,859
Allegany	109,600	951,016	-	873,500	6,000	30,978,305
Anne Arundel	2,436,400	4,026,798	1,143,400	2,707,144	1,764,400	183,117,132
Baltimore City	3,150,000	19,918,000	905,000	23,475,000	0	161,194,395
Baltimore	4,620,000	227,313	2,197,900	184,756	1,116,964	269,488,007
Calvert	-	269,076	-	0	0	46,639,452
Caroline	-	129,000	-	55,500	5,000	13,633,841
Carroll	677,000	403,000	-	833,234		83,598,454
Cecil	-	-	227,000	408,501		39,064,185
Charles	604,800	1,206,500	288,000	0	1,734,850	87,629,686
Dorchester	207,705	-	70,000	169,154		9,502,712
Frederick	849,428	329,048	186,111	669,309	0	155,388,466
Garrett	-	-	-	30,729	103,600	8,684,578
Harford	-	-	-	76,548	117,474	103,391,680
Howard	594,000	1,293,065	-	2,441,710	818,000	213,111,142
Kent	-	-	-	0	11,381	2,991,197
Montgomery	400,000	985,872	-	1,237,796	578,379	539,383,503
Prince George's	733,037	2,595,819	11,447,551	2,521,006	11,016,944	377,796,335
Queen Anne's	65,000	-	40,000	45,000	0	19,826,823
St. Mary's	688,120	808,000	793,848	1,494,718	37,400	53,219,668
Somerset	-	161,000	-	1,209,202	68,209	7,301,336
Talbot	-	-	-	0	135,000	7,724,556
Washington	-	100,195	-	0	0	55,120,323
Wicomico	551,350	281,150	674,864	1,686,155	0	45,056,366
Worcester	137,190	212,281	8,000	23,917	0	23,140,717
Minimum	-	-	-	-	-	2,991,197
Maximum	4,620,000	19,918,000	11,447,551	23,475,000	11,016,944	539,383,503

Source: Calculated by MGT from LSS Master Plans and Updates through 2007.

LSSs reported spending $2.536 billion in new revenues for enhancements to the instructional process. Expenditures for competitive salaries and benefits not only are the largest in this category, but also make up 52.7 percent of all increased expenditures, as was mentioned earlier.

Fourteen LSSs identified a total of $59.7 million in new funds to reduce class size. This is consistent with the research literature that relates smaller classes to improved performance.

LSSs expended $279.1 million on new or additional personnel and $87 million on strategies that could be categorized as alignment to the VSC or state testing programs. The research on characteristics of improved school districts points out that alignment of the curriculum with standards and assessments is a characteristic of improved districts. All but two of the school systems (Anne Arundel and Queen Anne's) spent new resources on strategies that MGT characterized as alignment to the VSC and testing.

Relatively little was attributed to the instructional process related to reading, mathematics, or other core programs. LSSs reported relatively few additional expenditures on mathematics programs ($15.8 million) compared to $34 million specifically for reading programs. In the list of strategies MGT compiled for the content analysis, there were many strategies related to mathematics programs, and many more on reading programs. There appear to have been higher achievement gains in reading scores than in math scores. Perhaps the expenditures focused on reading have contributed to these greater achievement gains.

Exhibit 108 provides information on increased expenditures for professional development. MGT attributed the following subcategories to this category:

- Provision of Professional Development (Unspecified)
- Provision of Targeted Professional Development for NCLB Subgroups
- Provision of Targeted Professional Development for Core Content Areas
- Provision of Targeted Professional Development for School Improvement

EXHIBIT 108
PROJECTED INCREASES IN EXPENDITURES FOR PROFESSIONAL DEVELOPMENT

Education Agency	Unspecified	Targeted to NCLB Subgroups	Core Content Areas	School Improvement	Total
Total State	$ 9,081,179	$ 4,741,994	$ 11,573,543	$ 2,891,839	$ 28,288,555
Allegany	925,109	187,500	-	16,054	1,128,663
Anne Arundel	-	345,336	-	0	345,336
Baltimore City	-	-	9,600,000	0	9,600,000
Baltimore	-	401,984	485,700	395,305	1,282,989
Calvert	214,140	-	-	0	214,140
Caroline	148,667	-	-	0	148,667
Carroll	-	-	273,000	0	273,000
Cecil	191,482	-	-	0	191,482
Charles	133,000	160,000	-	0	293,000
Dorchester	101,460	-	-	0	101,460
Frederick	282,494	-	-	0	282,494
Garrett	-	43,568	-	0	43,568
Harford	295,880	480,081	329,932	0	1,105,893
Howard	210,493	-	59,960	20,756	291,209
Kent	-	-	-	0	-
Montgomery	3,476,343	383,181	227,475	2,459,724	6,546,723
Prince George's	1,415,313	1,696,444	339,296	0	3,451,053
Queen Anne's	80,000	-	-	0	80,000
St. Mary's	90,027	-	-	0	90,027
Somerset	60,772	-	25,180	0	85,952
Talbot	154,480			0	154,480
Washington	754,285			0	754,285
Wicomico	424,971	1,043,900	233,000	0	1,701,871
Worcester	122,263	-	-	0	122,263
Minimum	-	-	-	-	-
Maximum	3,476,343	1,696,444	9,600,000	2,459,724	9,600,000

Source: Calculated by MGT from LSS Master Plans and Updates through 2007.

LSSs used the majority of expenditures in this category to provide professional development in the core content areas. All LSSs except Kent reported expending new resources totaling $28.3 million on professional development. Most LSSs had professional development embedded in base funding.

Exhibit 109 provides information by LSS on the increased expenditures for accountability measures, which MGT classified into the following subcategories:

- Activities Related to NCLB High Quality Teachers/Paraprofessionals
- Increased Participation and Improved Performance on College Entrance Exams
- State and Local Assessments to Evaluate Student Performance

EXHIBIT 109
PROJECTED INCREASES IN EXPENDITURES FOR THE ACCOUNTABILITY PROCESS

Education Agency	NCLB High Quality Staff	Performance on Entrance Exams	State/Local Assessments	Total
Total State	$ 191,340	$ 709,380	$ 17,594,406	$ 18,495,126
Allegany		22,200	69,485	91,685
Anne Arundel	-	-	2,121,392	2,121,392
Baltimore City	-	-	1,890,000	1,890,000
Baltimore	28,000	-	538,700	566,700
Calvert	-	-	427,000	427,000
Caroline	-	25,000	395,424	420,424
Carroll	-	-	-	-
Cecil			16,181	16,181
Charles	-	-	115,000	115,000
Dorchester	-	-	38,000	38,000
Frederick	-	-	94,016	94,016
Garrett	-	28,200	45,000	73,200
Harford	92,523	-	30,000	122,523
Howard	-	-	168,960	168,960
Kent	-	-	-	-
Montgomery	-	399,000	475,789	874,789
Prince George's	-	-	10,713,483	10,713,483
Queen Anne's	-	-	75,000	75,000
St. Mary's	9,998	119,010	254,730	383,738
Somerset	-	-	-	-
Talbot	-	15,970	-	15,970
Washington	47,819	85,000	-	132,819
Wicomico	13,000	15,000	98,425	126,425
Worcester	-	-	27,821	27,821
Minimum	-	-	-	-
Maximum	92,523	399,000	10,713,483	10,713,483

Source: Calculated by MGT from LSS Master Plans and Updates through 2007.

A relatively small proportion ($18.5 million or 0.6 percent) of the total increased expenditures have been devoted to this category, as LSSs have focused on improving education programs, implementing full-day kindergarten, and hiring and retaining highly qualified teachers.

Exhibit 110 provides information by LSS on the increased expenditures for the use of technology and data analysis since the passage of BTE, which MGT classified into the following subcategories:

- Implementation of Technology in Schools
- Optimization of Administrative Technology
- Optimization of Technology for Analyzing Student Achievement
- Implementation of New Student Information Systems
- Implementation of Data Warehousing

EXHIBIT 110
PROJECTED INCREASES IN EXPENDITURES FOR TECHNOLOGY AND DATA ANALYSIS

Education Agency	Implementation in Schools	Optimization of Administrative Technology	Optimization for Achievement	New Systems	Data Warehouses	Total
Total State	52,363,883	19,195,957	8,662,302	3,136,358	1,417,421	84,775,921
Allegany	705,138	371,414	111,100			1,187,652
Anne Arundel	5,012,729	-	-	0	0	5,012,729
Baltimore City	5,175,000	1,300,000	-	0	0	6,475,000
Baltimore	2,730,000	-	-	1,892,000	250,000	4,872,000
Calvert	1,223,000	300,000	-	0	0	1,523,000
Caroline	502,667	198,850	-	0	0	701,517
Carroll	1,846,519	-	1,804,000	0	0	3,650,519
Cecil	624,000	438,000	1,042,027			2,104,027
Charles	1,932,170	1,230,000	-	0	0	3,162,170
Dorchester	30,427	93,470	-	0	0	123,897
Frederick	5,207,391	-	-	0	0	5,207,391
Garrett	21,000					21,000
Harford	1,323,810	216,412	-	0	0	1,540,222
Howard	1,831,320	-	886,000	0	0	2,717,320
Kent	-	-	-	0	0	-
Mongtomery	5,938,105	1,905,626	2,465,870	1,063,292	0	11,372,893
Prince George's	12,540,070	11,169,123	718,069	67,066	675,000	25,169,328
Queen Anne's	100,000	-	-	0	0	100,000
St. Mary's	-	-	-	0	332,421	332,421
Somerset	-	-	391,300	0	0	391,300
Talbot	883,009					883,009
Washington	1,932,332	633,781	450,000	0	160,000	3,176,113
Wicomico	1,737,996	1,261,781	786,000	114,000	0	3,899,777
Worcester	1,067,200	77,500	7,936	0	0	1,152,636
Minimum	-	-	-	-	-	-
Maximum	12,540,070	11,169,123	2,465,870	1,892,000	675,000	25,169,328

Source: Calculated by MGT from LSS Master Plans and Updates through 2007.

Over half ($52.3 million) of the $84.8 million of expenditures in this category have been for the implementation of technology in schools.

Exhibit 111 provides information by LSS on the increased expenditures for what MGT has called “Other Items” since the passage of BTE, classified into the following subcategories:

- Utilities Costs
- Transportation Costs
- Facilities Costs
- Debt Reduction

EXHIBIT 111
PROJECTED INCREASES IN EXPENDITURES FOR "OTHER ITEMS" INCLUDING UTILITIES AND TRANSPORTATION

Education Agency	Utilities	Transportation	Facilities	Deficit Reduction	Total
Total State	$ 110,632,238	$ 97,814,567	$ 94,774,474	$ 47,440,000	$ 350,661,279
Allegany	1,741,277	959,548	4,745,250		7,446,075
Anne Arundel	1,000,000	7,563,700	-	-	8,563,700
Baltimore City	5,383,000	3,301,000	17,010,000	47,440,000	73,134,000
Baltimore	18,411,856	2,635,703	6,790,068	-	27,837,627
Calvert	2,319,383	4,644,973	1,070,000	-	8,034,356
Caroline	669,450	1,150,297	283,275		2,103,022
Carroll	3,958,031	2,762,747	2,300,373		9,021,151
Cecil	1,610,814	2,364,638	1,274,573	-	5,250,025
Charles	4,794,900	7,289,000	9,600,015	-	21,683,915
Dorchester	846,571	594,385	159,852		1,600,808
Frederick	4,442,200	4,023,721	1,911,223	-	10,377,144
Garrett	-	1,001,681	327,090	-	1,328,771
Harford	3,687,157	4,493,204	2,675,219	-	10,855,580
Howard	8,366,806	9,157,333	-	-	17,524,139
Kent	140,108	273,159	-	-	413,267
Montgomery	21,085,885	10,260,412	4,210,499	-	35,556,796
Prince George's	19,198,539	23,586,646	22,433,990	-	65,219,175
Queen Anne's	900,000	1,483,234	65,972	-	2,449,206
St. Mary's	2,631,402	3,060,740	-	-	5,692,142
Somerset	396,750	374,251	1,261,415	-	2,032,416
Talbot	386,108	911,522	445,898		1,743,528
Washington	5,561,575	3,170,423	12,772,946	-	21,504,944
Wicomico	1,094,000	1,997,095	4,896,504		7,987,599
Worcester	2,006,426	755,155	540,312	-	3,301,893
Minimum	-	273,159	-	-	413,267
Maximum	21,085,885	23,586,646	22,433,990	47,440,000	73,134,000

Source: Calculated by MGT from LSS Master Plans and Updates through 2007.

LSSs devoted a total of $350.7 million of new revenues to increased utilities, transportation, facilities, or deficit reduction.

Exhibit 112 displays information on the amounts each LSS earmarked for selected categories of what MGT called potential best practices, as described in Section 3.3. Systemic best practices and best practices at the school level were identified through interviews with LSS administrators, principals, and teachers. Among those strategies for which specific expenditure data were available, the majority of the additional resources were devoted to hiring and retaining highly qualified teachers and providing professional development.

EXHIBIT 112
INCREASES IN EXPENDITURES FOR SELECTED "POTENTIAL BEST PRACTICES"

	Data Utilization/ Analysis	Professional Development	Differentiated Instruction	Academic Intervention/ Acceleration	Highly Qualified Teachers	Research-Based Programs	Graduation Enhancement	Total
Total State	180,025,069	28,288,555	104,058,857	52,981,438	2,145,233,815	163,755,839	66,226,958	2,740,570,531
Allegany	1,257,137	1,128,663	974,594	-	25,800,812	3,291,399	339,401	32,792,006
Anne Arundel	7,134,121	345,336	1,220,000	2,400,542	162,480,360	7,606,598	1,659,428	182,846,385
Baltimore City	10,290,000	9,875,000	25,761,618	12,510,000	82,221,180	39,841,867	17,511,000	198,010,665
Baltimore	5,410,700	1,282,989	18,975,872	5,761,827	256,374,780	15,453,684	2,145,355	305,405,207
Calvert	1,950,000	214,140	0	-	45,361,502	4,669,914	368,842	52,564,398
Caroline	1,096,941	148,667	67,874	258,825	11,959,592	960,574	52,500	14,544,973
Carroll	3,650,519	273,000	629,081	1,071,000	79,402,489	1,958,650	654,000	87,638,739
Cecil	2,120,208	191,482	1,392,472	579,000	33,493,163	3,684,049	2,003,176	43,463,550
Charles	3,277,170	293,000	1,213,900	385,000	78,249,036	6,431,900	2,257,700	92,107,706
Dorchester	181,897	119,960	277,750	-	9,065,408	1,172,759	387,936	11,205,710
Frederick	1,943,743	160,000	2,169,977	-	123,583,861	10,135,216	75,300	138,068,097
Garrett	54,000	43,568	111,087	207,400	7,821,942	556,790	122,824	8,917,611
Harford	1,275,161	1,105,893	1,689,319	1,782,063	96,061,556	1,430,086	1,271,268	104,615,346
Howard	1,769,460	291,209	4,017,238	604,230	184,708,393	10,577,520	3,211,080	205,179,130
Kent	-	-	0	-	2,841,046	86,069	-	2,927,115
Montgomery	11,848,682	6,546,723	8,532,098	511,985	498,437,539	15,574,746	2,867,962	544,319,735
Prince George's	34,666,276	3,451,053	28,426,922	23,207,893	326,336,198	29,992,580	26,097,295	472,178,217
Queen Anne's	75,000	130,000	549,591	-	17,231,407	105,000	100,000	18,190,998
St. Mary's	478,724	90,027	788,323	-	39,912,937	2,642,711	176,664	44,089,386
Somerset	391,300	85,952	102,928	115,000	5,819,635	288,704	512,588	7,316,107
Talbot	883,009	154,480	0	-	7,290,307	299,249	-	8,627,045
Washington	3,176,113	754,285	1,408,005	275,000	50,887,078	2,369,184	149,434	59,019,099
Wicomico	3,998,202	1,701,871	1,371,290	782,441	38,273,675	3,628,839	993,039	50,749,357
Worcester	1,175,393	119,540	495,275	190,918	18,550,604	1,107,369	355,765	21,994,864
Minimum	-	-	-	-	-	-	-	-
Maximum	34,666,276	9,875,000	28,426,922	23,207,893	498,437,539	39,841,867	26,097,295	544,319,735

Source: Calculated by MGT from LSS Master Plans and Updates through 2007.

3.5.3 Estimates of Positions Added to Execute Enhancements

Exhibit 113 shows the total number of new positions employed by each LSS since the enactment of BTE; 2006-07 was the last year for which actual data on employees were available.

Instructional staff includes teachers, aides, and other personnel engaged in teaching functions at the elementary, middle, and secondary levels. Statewide, LSSs employed 6,782.5 more instructional staff members in 2006-07 than in 2001-02. Montgomery County added the most instructional staff positions, 1,197.4 FTEs, while Baltimore City cut 399.5 FTEs due to reduced enrollment. Garrett, Kent, and Talbot counties also cut instructional positions.

Statewide, LSSs employed 8,274 more teachers in 2007-08 than in 2001-02, a 15.3 percent increase, as shown in Exhibit 114. As a result of both the increase in the number of teachers and enrollment shifts, the average pupil/teacher ratio declined from 15.9 to 13.6 pupils per teacher (Exhibit 115). LSSs used or plan to use some of the additional resources to reduce class size. Research studies report that smaller class sizes lead to higher achievement levels, especially for minorities, FARMS, and ELL students.

Exhibit 116 displays the number of positions associated with those strategies identified by LSSs as “substantial educational enhancements.”. These numbers do not total to the number of new positions displayed in Exhibit 113 because some positions were added in areas that were not identified as substantial enhancements, and because the data in Exhibit 117 reflect budgeted information through 2007-08, not actual positions added through 2006-07 as shown in Exhibit 113.

Between 2001-02 and 2007-08, LSSs added or expected to add 11,350 positions related to “substantial educational enhancements.” Of these 11,350 positions, 10,350 or 93.8 percent fell in the categories of Educational Programs and Educational Processes.

EXHIBIT 113
CHANGE IN NUMBER OF POSITIONS EMPLOYED BY LSSs
2001-02 TO 2006-07

Local Education Agency	Total Add'l Staff Employed	Elementary	Middle & Combined	Secondary	Non-instructional Staff	Additional Instructional Staff
Total State	10,933.1	1,710.1	2,030.6	3,041.7	4,150.6	6,782.5
Allegany	20.2	33.6	-45.1	3.5	28.2	-8.0
Anne Arundel	806.8	377.7	162.4	186.6	80.1	726.7
Baltimore City	234.6	-1,126.3	663.3	63.5	634.1	-399.5
Baltimore County	471.0	200.9	-78.5	383.9	-35.4	506.4
Calvert	313.1	52.8	15.3	106.1	139.0	174.1
Caroline	59.2	4.7	11.2	17.4	25.9	33.3
Carroll	608.0	168.1	61.4	163.6	214.8	393.2
Cecil	301.9	149.0	63.9	93.9	-4.9	306.8
Charles	621.1	182.7	108.8	175.2	154.3	466.8
Dorchester	33.5	6.0	-9.9	10.9	26.4	7.1
Frederick	700.5	320.2	91.4	171.3	117.6	582.9
Garrett	4.9	-10.0	-2.0	3.3	13.6	-8.7
Harford	746.5	250.0	164.2	113.9	218.3	528.2
Howard	1,085.9	189.5	275.4	334.0	287.0	798.9
Kent	-31.5	-14.5	-13.7	-0.5	-2.7	-28.8
Montgomery	2,275.7	378.6	169.9	648.0	1,079.3	1,196.4
Prince Georges'	1,597.4	171.2	284.8	323.0	818.5	778.9
Queen Anne's	90.9	42.9	26.4	14.3	7.2	83.7
St. Mary's	271.8	101.7	35.4	42.6	92.1	179.7
Somerset	38.8	14.0	-26.5	48.5	2.8	36.0
Talbot	-52.5	-36.1	-7.0	2.0	-11.3	-41.2
Washington	267.7	95.5	20.9	69.8	81.4	186.3
Wicomico	304.0	81.1	34.3	31.2	157.4	146.6
Worcester	163.6	76.6	24.3	35.6	27.1	136.5

Source: Calculated by MGT from data in MSDE Staff Employed at Schools and Central Office, 2001 and 2006.

EXHIBIT 114
TEACHERS EMPLOYED, 2001-02 THROUGH 2007-08

	2001-2002	2002-03	2003-04	2004-05	Budget 2006-07	Budget 2007-08	Change	% Change
Total State	54,120	55,631	55,248	55,111	60,707	62,393	8,274	15.29%
Allegany	676	688	690	702	793	787	111	16.35%
Anne Arundel	4,441	4,513	4,504	4,603	5,244	5,366	925	20.82%
Baltimore City	6,349	6,466	6,168	5,351	6,112	6,220	-129	-2.03%
Baltimore	6,933	7,140	7,337	7,408	7,298	7,287	355	5.12%
Calvert	960	1,010	1,038	1,057	1,143	1,178	217	22.65%
Caroline	344	354	360	357	384	420	76	22.20%
Carroll	1,591	1,666	1,722	1,771	1,950	1,983	392	24.65%
Cecil	1,071	1,071	1,042	1,051	1,190	1,234	163	15.23%
Charles	1,352	1,404	1,447	1,507	1,725	1,844	492	36.41%
Dorchester	326	318	313	318	354	379	53	16.28%
Frederick	2,322	2,417	2,412	2,475	2,600	2,725	403	17.35%
Garrett	358	360	360	366	376	375	17	4.86%
Harford	2,522	2,545	2,303	2,378	2,812	2,841	319	12.65%
Howard	3,110	3,205	3,325	3,362	3,878	4,137	1,027	33.02%
Kent	180	175	169	162	174	176	-4	-2.22%
Montgomery	8,697	9,055	9,050	9,173	10,256	10,261	1,564	17.98%
Prince George's	8,130	8,446	8,193	8,191	8,950	9,580	1,450	17.83%
Queen Anne's	439	454	461	472	531	553	114	26.04%
St. Mary's	961	970	1,006	1,011	1,103	1,141	180	18.78%
Somerset	217	209	215	205	255	267	51	23.33%
Talbot	310	308	307	293	298	317	7	2.10%
Washington	1,343	1,341	1,293	1,333	1,547	1,575	232	17.24%
Wicomico	998	1,013	1,021	1,028	1,131	1,130	133	13.30%
Worcester	491	504	514	539	604	617	126	25.73%
Minimum	180	175	169	162	174	176	(129)	-2.22%
Maximum	8,697	9,055	9,050	9,173	10,256	10,261	1,564	36.41%

Source: Calculated by MGT from data in MSDE Staff Employed at Schools and Central Office, 2001 and 2006, and from LSS Master Plans and Updates.

EXHIBIT 115
NUMBER OF PUPILS PER TEACHER

	2001-2002	2002-03	2003-04	2004-05	Budget 2006-07	Budget 2007-08	Change	% Change
Total State	15.9	15.5	15.7	15.7	14.0	13.6	-2.3	-14.44%
Allegany	15.1	14.7	14.4	14.0	12.0	11.4	-3.6	-24.13%
Anne Arundel	16.9	16.6	16.5	16.1	13.9	13.5	-3.4	-20.01%
Baltimore City	15.0	14.5	14.9	16.5	13.5	12.4	-2.6	-17.35%
Baltimore	15.5	15.2	14.8	14.5	14.5	14.5	-1.0	-6.54%
Calvert	17.3	17.0	16.8	16.5	15.3	14.6	-2.8	-15.97%
Caroline	16.3	15.6	15.0	15.2	14.6	13.5	-2.9	-17.57%
Carroll	17.7	17.1	16.7	16.3	14.7	14.5	-3.2	-18.14%
Cecil	15.0	15.1	15.8	15.7	13.8	13.3	-1.7	-11.19%
Charles	17.8	17.7	17.7	17.3	15.4	14.9	-2.9	-16.24%
Dorchester	15.0	15.2	15.3	15.1	13.2	12.4	-2.6	-17.59%
Frederick	16.4	16.0	16.1	16.0	15.5	15.1	-1.3	-7.72%
Garrett	13.6	13.4	13.4	12.9	12.3	12.3	-1.3	-9.57%
Harford	15.8	15.8	17.5	16.9	14.1	13.9	-1.9	-12.26%
Howard	14.9	14.7	14.4	14.3	12.6	12.0	-2.9	-19.53%
Kent	14.9	15.0	15.2	15.5	13.5	13.9	-1.0	-6.65%
Montgomery	15.7	15.3	15.4	15.2	13.4	13.4	-2.4	-15.17%
Prince George's	16.6	16.0	16.8	16.6	14.6	13.9	-2.7	-16.13%
Queen Anne's	16.5	16.6	16.3	16.3	14.7	14.4	-2.1	-12.51%
St. Mary's	16.1	16.6	16.2	16.4	15.1	14.6	-1.5	-9.37%
Somerset	14.1	14.3	13.8	14.4	11.5	11.0	-3.1	-21.83%
Talbot	14.6	14.6	14.5	15.4	14.8	13.6	-1.0	-6.78%
Washington	14.9	15.0	15.7	15.6	14.0	13.6	-1.2	-8.28%
Wicomico	14.1	14.2	14.1	14.0	12.8	12.8	-1.3	-9.19%
Worcester	14.0	13.6	13.2	12.4	11.3	11.0	-3.0	-21.56%
Minimum	13.6	13.4	13.2	12.4	11.3	11.0	-3.6	-24.13%
Maximum	17.8	17.7	17.7	17.3	15.5	15.1	-1.0	-6.54%

Source: Calculated by MGT from data in MSDE Staff Employed at Schools and Central Office, 2001 and 2006, and from LSS Master Plans and Updates.

EXHIBIT 116
PROJECTED INCREASES IN POSITIONS BY MASTER PLAN CONTENT ANALYSIS CATEGORY, 2001-02 AND 2007-08

	Ed Programs	Instructional Process	Professional Development	Accountability Process	Technology/ Data Analysis	Other	Total Increase
Total State	4,895	5,755	75	24	219	382	11,350
Allegany	5	34	0	0	4	1	44
Anne Arundel	558	295	6	22	17	0	898
Baltimore City	388	446	30	0	9	20	893
Baltimore	285	294	0	1	45	24	648
Calvert	58	129	0	0	1	2	189
Caroline	20	31	0	0	1	7	58
Carroll	241	106	1	0	7	7	361
Cecil	189	127	1	0	12	14	343
Charles	270	514	0	0	15	0	799
Dorchester	25	34	0	0	0	8	67
Frederick	75	544	0	0	13	25	657
Garrett	3	4	0	0	0	1	8
Harford	415	203	1	0	16	41	676
Howard	345	751	0	0	2	0	1,098
Kent	8	3	0	0	0	0	11
Montgomery	498	487	17	0	21	22	1,044
Prince George's	1,102	1,224	19	0	39	183	2,566
Queen Anne's	22	56	0	1	1	0	79
St. Mary's	66	168	0	0	2	3	239
Somerset	15	23	0	0	2	3	43
Talbot	1	0	0	0	0	0	1
Washington	167	169	0	0	5	15	356
Wicomico	96	77	0	0	6	5	183
Worcester	47	41	0	0	2	3	93
Minimum	1	0	0	0	0	0	1
Maximum	1,102	1,224	30	22	45	183	2,566

Source: Calculated by MGT from LSS Master Plans and Updates through 2007.

3.5.4 Issues Each Enhancement Is Addressing

Please refer to the appendix in Volume II for the NCLB classifications for all enhancements.

3.5.5 Classification of Targeted Populations for Enhancements

The 2006 Master Plan Updates contained strategies that were characterized as "substantial educational enhancements." These strategies were typically those that had a significant, positive impact on student achievement and other improvement efforts throughout the school district. In addition to identifying particular strategies as being "substantial educational enhancements", many of the strategies were also closely aligned with either the general student population in the school system or with targeted NCLB groups, namely, FARMS, ESOL, and special education. In addition, many strategies targeted students in specific grade levels. Exhibit 117 displays strategies with targeted student populations. Instances where multiple populations are identified next to a strategy indicate that the strategy was listed for a targeted sub-group in some LSS Updates and for the general student population in others. The targeted school levels (e.g., elementary, middle, and/or high) are also identified.

EXHIBIT 117
CLASSIFICATION OF TARGETED POPULATIONS FOR ENHANCEMENTS

SUBSTANTIAL EDUCATIONAL ENHANCEMENTS	FARMS	ELL	SPED	GENERAL STUDENT POPULATION	SCHOOL LEVEL (E) ELEMENTARY (M) MIDDLE (H) HIGH
PROGRAMS					
Expanded Pre-K Programs			●	●	E
Hiring Additional Special Ed Teachers			●		E, M
Hiring Additional ESOL Teachers		●			E, M
College Preparation Programs				●	H
Positive Behavior Intervention Systems				●	E, M, H
AVID	●				H
Open Court Reading				●	E
Harcourt Math				●	E
Extended Day/Year	●				E
PROCESSES					
Hiring Additional Pupil Personnel Workers	●				M, H
Hiring Highly Qualified Staff				●	E, M, H
Family Involvement Activities				●	E, M, H
Revise Instructional Materials	●	●			E, M, H
Maintain Small Class Size				●	E
Mentoring New Teachers				●	E, M, H
Reduce Class Size				●	M, H
VSC Alignment				●	E, M, H
Revise Instructional Methods	●	●	●		E, M, H
Academic Progress Monitoring	●	●	●		E, M, H
Provide for Safe and Drug-Free Schools				●	E, M, H

EXHIBIT 117 (Continued)
CLASSIFICATION OF TARGETED POPULATIONS FOR ENHANCEMENTS

SUBSTANTIAL EDUCATIONAL ENHANCEMENTS	FARMS	ELL	SPED	GENERAL STUDENT POPULATION	SCHOOL LEVEL (E) ELEMENTARY (M) MIDDLE (H) HIGH
PROFESSIONAL DEVELOPMENT					
Instructional Strategies for ESOL		●			E, M, H
Instructional Strategies for SPED			●		E, M, H
Instructional Strategies for Core Subjects	●	●	●		E, M, H
ACCOUNTABILITY/ASSESSMENT					
ESOL Assessments		●			E, M, H
Formative Assessments	●	●			E, M, H
MSA/HSA Preparation	●	●	●		M. H
TECHNOLOGY AND DATA ANALYSIS					
Purchase subject area software to enhance instruction	●	●	●		E, M, H
Electronic IEPs (Individual Education Plans)			●		E, M, H

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4.0 SUMMARY FINDINGS, PRELIMINARY CONCLUSIONS, AND AREAS OF ADDITIONAL STUDY

4.0 SUMMARY FINDINGS, PRELIMINARY CONCLUSIONS, AND AREAS OF ADDITIONAL STUDY

All key findings from the previous chapter are reprinted below followed by preliminary conclusions and areas of additional study. They will guide MGT's approach to the final year of the evaluation.

4.1 Key Findings

From Section 3.1 Comparisons of Improvements in Student Performance Since BTE Implementation

- In the years following the implementation of BTE, LSSs demonstrated substantial improvements in the percentages of their student populations who were proficient in reading and mathematics, as measured by the MSA. More important, in the three-year period from 2004 to 2007, the gap in the percentages of Maryland students who needed to demonstrate proficiency to meet the NCLB goal of 100 percent proficiency by 2014 was closed by:
  - 35 percent in reading and 42 percent in math for the statewide aggregate of students in the elementary school grades (3 to 5).
  - 17 percent in reading and 30 percent in math for the aggregate of students in the middle school grades (6 to 8).
- As measured by the extent to which they improved, students in Grades 3 to 5 with limited English proficiency (LEP) outperformed:
  - The entire student population.
  - The students eligible for free and/or reduced price meals (FARMS).
  - Special education (SPED) students.
- In both reading and math, LEP students closed nearly half of the gap between their proficiency level in 2004 and NCLB's 100 percent proficiency goal.
- Although the statewide middle school population continued to have higher MSA reading proficiency levels than the three special population subsets of students, LEP and SPED students narrowed their gaps toward reaching the 100 percent proficiency goal to a greater extent than FARMS students or the entire population of middle school students.

- The statewide population of middle school students had slightly greater improvements in the percent proficient as measured by MSA math than did the three special populations.

- All ethnic groups of elementary and middle school students improved their reading and math proficiency levels. Asian/Pacific Islander students consistently outperformed and made greater relative improvements than other ethnic groups. Hispanic and African-American students made less relative improvement than other ethnic groups.

- Statewide, elementary school students had relatively higher reading and math proficiency levels (for the grades they were in) and relatively higher improvements in their proficiency levels than did middle school students.

- At the high school level, the English 2 HSA was the only statewide test that could be used to make reasonable comparisons among NCLB groups of students and among Maryland's 24 LSSs. Passing rates on the English 2 HSA improved in all 24 LSSs between the first statewide administration of the test in 2005 and the 2007 administration. However, the 2007 test takers had a greater incentive to pass because they were the first group required to do so to graduate.

- Passing rates and relative improvements in passing rates on the English 2 HSA varied greatly among LSSs, ethnic groups, and special populations of high school students

- White high school students outperformed and showed greater improvements in relative passing rates than non-White students or those in any of the special populations (i.e., FARMS, SPED, LEP).

From Section 3.2 Programs or Factors That Consistently Produce Positive Results

Based on MGT's site visits, the following are the most promising candidates for best practices that will undergo additional study in the current BTE evaluation.

Systemic best practices findings are based on interviews with LSS officials and supported by school-level findings. These six systemic best practices support and complement one another.

- Strategic planning

- Data utilization for instructional decision-making, based on electronic data warehousing and ease of availability to teachers and administrators

- Professional Learning Communities

- Ongoing, targeted professional development
- Teacher specialists
- Differentiated instruction and individualized approach to teaching and learning

Principal interviews and data collection yielded 520 strategies, programs, and approaches as potential best practices, which fall into the following 11 categories:

- Academic intervention and acceleration
- Professional development/highly qualified teachers
- Research-based, effective core programs and general instruction
- Data analysis and technology
- Teacher specialists
- Differentiated instruction/Individualized Learning Plans
- Professional Learning Communities
- Inclusion and co-teaching for SPED and ELL students
- Behavior modification programs (e.g., PBIS)
- Graduation enhancement programs (e.g., AVID)
- Other (e.g., school culture of high expectations)

Contextual factors play an important role as well. Principals and LSS officials reported that much variation in student achievement from LSS to LSS and from school to school could be explained by the amount of resources available, level of poverty in the community, number of ELL students, and other factors. Additionally, some LSSs have had years of outstanding leadership that have enabled schools to create productive and nurturing environments for both teachers and students. Stable and effective leadership at the central administration level as well as in schools is an important factor to consider in analyzing discrepancies in student achievement.

Comparative analysis of the reported potential best practices of higher- and lower-achieving schools in the sample was reflective of these key findings. For example:

- Principals of higher-performing elementary schools cited almost three times more frequently strategies in the “Teacher specialist” and “Academic intervention” categories and twice as frequently strategies in the “Differentiated instruction/Individualized Learning Plans” and “Professional Learning Community” categories, compared to principals of lower-performing elementary schools.
- At the middle school level, the “Differentiated instruction/Individualized Learning Plans” category was frequently mentioned by principals of higher-performing schools and was not mentioned at all by principals of lower-performing schools.
- Principals of higher-performing high schools mentioned data utilization for instructional decision-making five times more frequently than principals of lower-performing high schools.

From Section 3.3 LSSs' Success in Implementing the Master Plans Required by §5-401 of the Annotated Code of Maryland

Key Findings From Focus Groups and Point of Contact Interviews:

- In the majority of LSSs, the master planning process has evolved into a collaborative effort involving multiple stakeholders.
- In the majority of LSSs, priorities have not changed since the passage of BTE.
- Increased strategic planning and accountability and improved instruction were cited as the main changes in the LSSs attributable to BTE.
- A decrease in the reporting burden and modification of the update submission time line were the two most frequently cited recommendations for improving the master planning process.

Key Findings From the Interviews With Superintendents:

- Superintendents emphasized investments in teaching staff, research-based core and intervention programs, data analysis, and early childhood programs as strategies that significantly contributed to improvements in student achievement.
- Superintendents cited the following as the most significant steps in implementing BTE requirements: improved strategic planning, data utilization, increased communication and stakeholder involvement, and increased quality and quantity of teaching staff.
- To improve BTE implementation, superintendents recommended reducing paperwork and differentiating annual reporting requirements based on the LSS's size and performance.

Key Findings From the Interviews With Assistant Superintendents:

- Assistant superintendents identified the following key factors as contributing to improved student achievement:
  - Investments in teaching staff.
  - Strategic planning.
  - Core and intervention programs.
  - Data-driven instruction.
  - Differentiated instruction.
  - A collaborative approach to instruction.

They also emphasized the role of leadership at the school and system level.

- To improve BTE implementation, assistant superintendents recommended reducing paperwork and differentiating annual reporting requirements based on the LSS's size and performance.

Key Findings From 2006 Master Plan Updates:

- All LSS budgets are aligned with articulated school improvement strategies.

- Emphasis on early learning continues to be a priority for LSSs, with more than half of the 24 school systems either expanding the number of Pre-K programs and/or increasing the number of full-day kindergarten programs.

- Advancement Via Individual Determination (AVID) was the most frequently implemented graduation enhancement program, with a third of LSSs either adopting or expanding the program.

- Hiring of additional staff was consistently tied to specific enhancement strategies in the 2006 Master Plan updates. This included providing instructional support for core subject areas, Special Education, and ESOL, and increasing personnel for the enhancement of school safety efforts.

- All 24 LSSs continue to focus on recruiting and retaining high quality personnel by providing competitive salaries.

From Section 3.4 Revenues Received by Local School Systems

- FY2007-08 revenues from all sources (excluding state-paid teachers' retirement) are budgeted to have increased by $3.39 billion over 2001-02 revenues, or 48.5 percent. Of this amount, state appropriations increased by $2.029 billion and local appropriations increased by $1.317 billion.

- Local appropriations in support of LSSs as budgeted did not increase as fast as state appropriations did in the six years following enactment of BTE. Local appropriations increased by 34.2 percent statewide, compared to an 80.3 percent increase in state appropriations.

- State revenues comprise a greater share of total budgets in 2007-08 (44 percent) than they did in 2001-02 (36 percent).

- Federal support increased by only $1.7 million, or 0.33 percent, during this period.

- On a per pupil basis, state appropriations increased by 82.8 percent when adjusted for the number of pupils. Similarly, local appropriations increased by 36 percent per pupil, less than half the rate of increase in state appropriations per pupil.

- Increases in local appropriations per pupil varied significantly among LSSs. Local appropriations per pupil increased by $163 in Somerset County Public Schools and by $3,299 per pupil in Worcester County Public Schools.

- Local appropriations per pupil increased by 5.7 percent in Somerset County Public Schools and by 53.8 percent in Garrett County Public Schools.

- Montgomery County Public Schools received the most local appropriations per pupil both before enactment of BTE and in every year since.

- In contrast, Caroline County Public Schools received the least local appropriations per pupil for every year between 2001-02 and 2007-08.

- The amounts of funding from local appropriations are compounded by the variability in wealth among the jurisdictions. Most State aid is wealth equalized, which provides a higher level of State funding to jurisdictions with lower levels of local wealth.

Key Findings on Uses of Increased Funding From 2001-02 to 2007-08 by Type of Expenditure:

- LSSs have spent or plan to spend the majority of the additional funding on competitive salaries and benefits, increasing their projected spending by $1.850 billion over 2001-02 levels.

- Expenditures for instruction are projected to increase by $1.15 billion; special education, by $413.1 million; plant operations and maintenance, by $474.8 million; mid-level administration, by $241 million; transportation, by $64.6 million; administration, by $116.6 million; and student and health services, by $60.7 million.[1]

Key Findings on Changes in Expenditures by the Content Analysis Themes of the Master Plan Strategies:

- The greatest increase in expenditures has been in the Instructional Process category, which accounted for $2.537 billion or over 75 percent of all increases in expenditures in the years since the enactment of BTE.

- The deficit in Baltimore City Public Schools had a significant effect on the average expenditures of the state. Baltimore City eliminated its deficit in the first three years following the enactment of BTE. To do this, the LSS cut back on expenditures in instruction, administration, and other areas, and reduced its teaching, support,

[1] Definitions of program areas may be found in the glossary in the Appendix.

and administrative staff. In addition, enrollment declined, so per pupil expenditures stayed relatively constant.

- Within the Instructional Process category, the strategy "Competitive Salaries and Benefits" accounted for 53.8 percent of all new revenues projected to be received by LSSs, and totaled $1.793 billion. LSSs used another $279.1 million for new or additional personnel. This was consistent with the time line for achieving the goals of NCLB. School systems were required to have core courses taught by highly qualified teachers by the end of the 2005-06 school year. LSSs attempted to achieve this target by focusing new monies on salaries. In addition, they expended $72.5 million to recruit and retain those highly qualified staff and $28.3 million of new dollars to provide professional development. In total, LSSs expended 64.7 percent or $2.2 billion of the $3.34 billion in additional funding from all sources to achieve NCLB Goal 3, regarding highly qualified teachers.

- All LSSs spent the majority of new resources on the instructional process, which could be attributed to NCLB Goals 1, 2, 3, and 5. These resources included additional personnel and alignment to the Voluntary State Curriculum and Core Learning Goals.

- All LSSs spent additional resources for the increased costs of utilities, transportation, or facilities.

Key Findings on Increased Expenditures in Strategies Categorized as "Potential Best Practices":

- Systemic best practices and best practices at the school level were identified through interviews with LSS administrators, principals, and teachers. Among those strategies for which specific expenditure data were available, LSSs devoted the majority of the additional resources to hiring and retaining highly qualified teachers and providing professional development.

- Actual or planned increases in expenditures for strategies that may be best practices were as follows:

  - Highly qualified teachers: $2,194,874,193
  - Data utilization/analysis: 177,994,574
  - Research-based programs: 163,566,208
  - Differentiated instruction: 100,175,214
  - Graduation enhancement: 63,312,557
  - Academic intervention/acceleration 50,643,124
  - Professional development: 28,352,356

Key Findings on Changes in Staffing:

- According to their Staffing Reports, between 2001-02 and 2006-07, LSSs increased the total number of staff employed by 10,933 positions, and the number of teachers increased by 8,274, a 15.3 percent increase.
- The number of students per teacher decreased statewide from 15.9 students per teacher to 13.6 students per teacher, a 14.4 percent decrease, as a result of additional teachers and, in some school systems, enrollment declines.
- In their Master Plans and Updates, LSSs reported adding 11,350 new positions related to substantial educational enhancements between 2001-02 and 2007-08.

4.2 Preliminary Conclusions and Areas of Additional Study

4.2.1 Improvements in the Performance of Students, Schools, and School Systems

MGT's key findings to date lead us to conclude that in the few years following passage of BTE and the full implementation of the MSA, student proficiency levels statewide have improved at the elementary and middle school levels for all NCLB groups. However, some groups are closing their gaps toward achieving the goal of 100 percent proficiency in reading and/or math at a much faster rate than other groups. Similarly, comparisons of progress made by NCLB groups or by the entire population of MSA-tested students reveals much variation among Maryland's 24 LSSs

Preliminary data using only the English 2 HSA also show that high school students' proficiency levels have improved since this assessment was first administered in 2005. However, large differences in relative levels of improvement are seen when the 24 LSSs or the NCLB groups are compared.

After data from the 2008 assessments are available, additional study is needed to:

- Determine which NCLB groups (if any) are unlikely to meet reach NCLB's 100 percent proficiency goal unless their improvement trends accelerate.
- Identify the relationships between substantial educational enhancements implemented by schools and improvements in student proficiency levels for the different NCLB groups.
- Assess progress on additional HSAs and on other measures of performance including dropout and graduation rates and improvements in the rate of postsecondary matriculation without the need for remedial courses.

4.2.2 Programs or Factors that Consistently Produce Positive Results

Although MGT cannot draw conclusions about programs or factors that consistently produce positive results until the final year of the study, we have substantial information at this time to identify and categorize what LSS administrators and educators perceive to be best practices. Six systemic factors (potential best practices) were strongly supported by the school observations and interviews with 150 principals:

1. Strategic planning
2. Data utilization for instructional decision making, based on electronic data warehouse and ease of availability to teachers and administrators.
3. Professional Learning Communities (PLCs)
4. Ongoing, targeted professional development
5. Teacher specialists
6. Differentiated instruction and individualized student approach to teaching and learning

These six systemic potential best practices are likely to support and complement one another. The educators we interviewed believe that these practices are most effective when they work together. Strategic planning is enabled by data analysis; data is examined during the collaborative process of PLCs to inform regular and differentiated instruction; professional development addresses teacher needs, and teacher specialists provide leadership in all or most of these processes. Comparative analyses of the reported potential best practices of higher and lower achieving schools in the site visit sample supported these preliminary conclusions.

Additionally, MGT site visit teams identified a number of specific programs and strategies that school administrators and teachers believe produce positive results for student populations. In the final year of the evaluation, MGT will identify which of the potential best practices at the systemic and individual school levels consistently have resulted in improved student outcomes.

4.2.3. LSSs' Success in Implementing the Master Plans Required by §5-401 of the Annotated Code of Maryland

Since the inception of the Bridge to Excellence Act, the master planning process underwent significant changes in most LSSs. Interviewed administrators reported that it evolved to engage relevant groups of stakeholders into a collaborative process of master planning and implementation cycles.

In 71 percent of LSSs, administrators reported that they expect the biggest improvements in NCLB Goal 1 (student achievement) as a direct result of the increased state aid. School Improvement Plans (SIP) were reported to be the main vehicle for achieving master plan goals. SIPs are aligned with master plans and incorporate school-specific strategies to accomplish goals and priorities.

LSS administrators we interviewed attributed the following main changes in their LSS to BTE:

1. Increased strategic planning, accountability and alignment of goals throughout the system.

2. Data utilization for planning and instructional decision making.

3. Increased quality and quantity of teaching staff.

4. Increased communication and stakeholder involvement.

5. Improved instructional methods.

These changes were cited as directly connected to improved student achievement throughout Maryland. In the last year of the evaluation, MGT will collect system-level and school-level data on the implementation of the master plans, and will link this data to student achievement. We will then be able to draw conclusions regarding LSSs' success in implementing their master plans.

LSS administrators interviewed during the site visits indicated that the master planning process affects their success in implementing their CMPs. The administrators and principals recommended that MSDE take the following steps to improve the process of BTE implementation:

- Decrease the reporting burden by streamlining and simplifying reporting requirements, and reducing the number of requirements.

- Differentiate annual reporting requirements based on the school system's size and performance.

- Modify the timeline of update submission to synchronize it with budget development with January 1 most frequently recommended as a better alternative.

4.2.4 Changes in Funding

In the six years following implementation of BTE, total funding from all sources will have increased $3.4 billion from $6.963 billion to $10.388 billion. State funding for LSSs (not including state retirement contributions) increased $2.029 billion dollars, or $2,437 on a per pupil basis, an 82.8 percent increase. Local appropriations increased $1.317 billion, or $1,617 per pupil, a 36.0 percent increase. When MGT examined state and local funding by LSS, large variations were seen during this time period, with increases in per pupil state funding varying from 34.7 percent to 126.0 percent, and increases in local funding per student ranging from 5.7 percent to 53.9 percent.

These large differences in changes in state and local per pupil funding likely are due to differences in the wealth of the jurisdiction and the interactions of local wealth within the school finance formula as well as the ability of local governments to increase funding for public education.

MGT will complete additional study in the third year of the project to:

- Examine if differing levels of state and local per pupil funding are having an impact on student performance.
- Identify any impacts of the small increase statewide in federal support and the wide variation in the changes in federal support by LSS: e.g., one LSS experienced an 80 percent decrease in per pupil federal funding while another had an increase of 45 percent.

4.2.5 Uses of Increased Funding

Since the passage of the BTE initiative as well as the federal NCLB legislation, Maryland schools have been undergoing a systemic shift from focusing on improving learning by the general student population to focusing on individual student achievement and NCLB subgroups. However, to accomplish goals set by BTE and NCLB, schools and local administrations require additional resources for:

- Data collection and analysis.
- Providing individualized attention that struggling students often need.
- Providing adequate professional development to the teaching staff.
- Hiring additional teaching staff to reduce class sizes.
- Acquiring technology and materials that a modern classroom needs.

BTE funding has been and continues to be instrumental in assisting Maryland schools during this transition.

Since the passage of BTE, LSSs have spent the majority of the additional funding on improvements or enhancements to educational programs and the educational process, including increases to salaries and benefits to maintain competitive positions in hiring and retaining highly qualified teachers and staff. Less than one percent of the new revenues were spent on professional development; a significant amount was devoted to professional development before BTE enactment and because new educational programs came with embedded professional development included in the price LSSs employed staff in over 10,900 new positions, almost 8,300 or 80 percent of these were teaching positions.

MGT found that LSSs spent or plan to spend $2.779 billion or 80 percent of the increased revenues on strategies that LSS administrators and educators identified as potential best practices. In the final year of the evaluation research, MGT will identify which of the potential best practices at systemic and individual school levels have resulted in improved student outcomes, and thus, what level of resources were devoted to best practices in improving student achievement.

4.3 Future Plans

As the evaluation continues into its third and final year, MGT will:

- Design and conduct a Web-based survey in which all Maryland public schoolteachers and administrators will be encouraged to participate. The survey will identify the extent to which potential best practices and combinations of practices, identified in this Interim Report, have been implemented in Maryland schools.

- Continue to gather and analyze MSA and HSA data, including analyses at the school level for those schools that provided sufficient input about their implementation of potential best practices.

- Conduct analyses that examine the relationships between the implementation of potential best practices and combinations of practices and improvements in student performance using MSA and HSA data and other appropriate and available measures of student proficiency and achievement.

- Examine additional indicators of student, school, and school system performance, including dropout rates, performance on college entrance exams, graduation rates, and reductions in the percentages of Maryland public high school graduates who require remediation as they enter the workforce or higher education.

- Determine the extent to which differing levels of state and local per pupil funding are having an impact on student performance.

- Identify impacts of the small increase statewide in federal support and the wide variation in the changes in federal support by LSS.

- Conduct site visits and produce brief case studies of schools that are implementing potential best practices or combinations of practices that appear to be related to significant improvement in student performance.

- Produce a *Final Report* that fully addresses each of the five major evaluation mandates from the General Assembly.