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

Final Report (Volume I)

Submitted to:

MARYLAND STATE DEPARTMENT OF EDUCATION

Achievement Matters Most

Submitted by:

MGT OF AMERICA, INC.

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EXECUTIVE SUMMARY

Introduction

MGT of America, Inc., presents this Final Report 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 after the first year of its evaluation and an Interim Report after the second year.1 This Final Report builds upon and supplements the information presented in the earlier reports.

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 Plan were required to document

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each 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 identify how they plan to spend increased aid and their actual expenditures. 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

- Wealth equalization across LSSs
- Adequate funding that will enable all students to meet Maryland’s rigorous performance targets
- Quality education for all students in terms of a variety of performance measures
- Local control in determining how resources are allocated
- Community involvement in planning to address the unique needs of each local school system

The last three items are included in this evaluation; however, the first two items go 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.

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.4

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

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3 Personal communication from MSDE, October 24, 2006.
4 Senate Bill 907 amended §5-402 by requiring the submission of an Interim Report in December 2007 and added the requirements shown in italics for evaluation mandates 3 and 5.
Executive Summary

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 used a variety of appropriate methods to gather and analyze information and data to address each of the evaluation requirements. Our methods included:

- Analyses of all Master Plans and Annual Master Plan Updates developed by each Maryland LSS
- Analyses of financial, staffing, salary, and enrollment data for each LSS
- Identification of changes in local, state, and federal funding for public education in each LSS before and during the first six years following the passage of the BTE
- Analyses of improvements in student proficiency levels on the Maryland School Assessment (MSA) and the High School Assessment (HSA)
- Meetings and interviews with state-level officials and education stakeholders
- Meetings and interviews with all LSS Superintendents, other key LSS administrators, and with committee members who developed each LSS’s Master Plan and Updates
- Site visits to all LSSs and to 170 schools
- The largest survey of Maryland public school educators ever conducted (16,432 respondents) plus additional surveys of each LSS’s Master Planning Committees and school principals
- Statistical analyses of the relationships between educational practices in schools and changes in student proficiency levels in schools that implement different practices

On the pages that follow, we summarize our findings and conclusions from the application of these methods to address each of the five evaluation mandates.
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.

**Study Limitations:** The MSA is the only elementary and middle school testing program used by all schools, thus enabling student performance comparisons of schools and LSSs. The MSA was not operational prior to BTE and did not become fully operational until 2004. Thus, trend analyses of improvements can assess only the period from 2004 to 2008.

The HSA is the only test battery used by all LSSs as one of the criteria to determine each student’s eligibility to earn a high school diploma beginning with the Class of 2009. Therefore, very limited data are available to compare trends in students’ improvements on the HSA. Analyses of the HSA English 2 assessments were included in the 2007 *Interim Report*. The 2008 HSA results were not available in time for analysis and use in this *Final Report*.5

The *Interim Report* analysis showed slight improvements statewide in high school graduation rates and slight reductions in dropout rates since the implementation of BTE, but widespread variation among LSSs. Since the methods that states use to calculate these measures are now undergoing revision, no additional information on these measures is relevant for this *Final Report*.

**What MGT Did:** MGT obtained and analyzed available MSA and HSA data from 2003 to 2008 for all students and for the No Child Left Behind (NCLB) subgroups in Maryland schools.6 We used a metric specifically developed for this evaluation that compared the progress that students made statewide and in every LSS in toward reaching NCLB’s 100 percent proficiency goal in reading and mathematics by the year 2014.

**What MGT Found:** In the years since the implementation of BTE, LSSs demonstrated substantial improvements in the percentages of their student populations who were proficient in reading and mathematics.

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5 The review draft of this Final Report had a deadline prior to the release of the 2008 HSA data.
6 MGT’s *Initial Report* included 2003 to 2006 MSA data and noted that better trend data would be available for the next two reports. The *Interim Report* used 2004 to 2007 MSA data since 2004 was the first year that all grades from 3 to 8 were assessed. The Interim Report is the only one that had some HSA trend data available in time to be included in one of this study’s reports. This final report focuses upon MSA data and improvements made during the five annual assessments conducted from 2004 to 2008.
More important, the gaps in the percentages of Maryland students who needed to demonstrate proficiency to meet the NCLB goal of 100 percent proficiency by 2014 were closed by 51 percent in reading and 49 percent in math for the statewide aggregate of students in the elementary school grades (3 to 5) and 36 percent in reading and 39 percent in math for the aggregate of students in the middle school grades (6 to 8).

In terms of closing their proficiency gaps in both reading and math, elementary school students with limited English proficiency (LEP) outperformed the other special services subgroups: 1) the students eligible for free and/or reduced price meals (FARMS), i.e., economically disadvantaged students, and 2) students receiving special education services (SPED).

At the middle school level, economically disadvantaged students narrowed their proficiency gaps in both reading and math to a greater extent than did middle school students who were in SPED or LEP programs.

All race/ethnic groups of elementary and middle school students improved their reading and math proficiency levels. Asian/Pacific Islander students usually outperformed and made greater relative improvements than other race/ethnic groups. Statewide, Hispanic and African-American students made less relative improvement than other race/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. However, because both high and low performing schools are found in all LSSs, we focused most of our research at the school level rather than at the LSS-level as we proceeded to identify factors that are consistently related to positive student outcomes. These are described below.

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 LSSs.

Study Limitations: Due to widespread variation in the way schools and LSSs implement the same or similarly named educational programs and practices, no simple listing of effective programs would adequately address this mandate.

Although Maryland educators perceive that the programs and practices they implement are effective, most LSSs and schools could not produce empirical evidence demonstrating that specific programs and practices led to improved student outcomes.
Study Limitations
(Continued)

achievement. Therefore, MGT’s methods included identifying the extent to which different programs and practices were being implemented in each LSS and school and then studying the relationship between levels of implementation and impacts on student achievement.

MGT’s analyses were constrained further because financial data are available only at the LSS level and not at the school or classroom level.

What MGT Did:
MGT conducted preliminary surveys and then gathered educators’ perceptions of their educational best practices through on-site visits to 150 schools and all LSSs. MGT followed this with the largest survey of public school educators ever completed in Maryland (16,432 respondents) to identify the programs and practices implemented in their schools. MGT then visited an additional 20 schools and the central offices of four LSSs to gather information needed to produce case studies documenting the similarities and differences in the ways schools and LSSs implemented educational best practices that MGT identified. Finally, MGT analyzed the relationships between best practices, demographic factors, increases in LSS per pupil expenditures, and improvements in student achievement in a sample of 640 schools.

What MGT Found:
Survey responses in 2008 from 16,432 educators in 1,201 Maryland public schools validated MGT’s 2007 findings from a sample of 150 schools that educators perceive that nine categories of educational best practices contribute to improvements in student achievement:

1. Team Strategic Planning
2. Data Analysis
3. Professional Learning Communities
4. Teacher Specialists
5. Targeted Professional Development
6. Aligned and Effectively Delivered Core Curricula
7. Student-Centered Approach to Teaching and Learning
8. Inclusion and Co-Teaching with Support for Special Education and LEP Students
9. Supportive School Environment and Effective Leadership

Although the MGT surveys found that a large majority of Maryland’s schools are implementing many of the best practices, there are notable variations in their implementation:

- More best practices are being implemented in elementary and middle schools than in high schools.
What MGT Found  
(Continued)

- The frequency and intensity of best practice implementation varied across schools of all levels (elementary, middle, high schools) as well as across local school systems.
- Two of the best practices as perceived by educators (having teacher specialists and data utilization through an electronic data warehouse) have been in place in many schools for only one or two years.

The site visits revealed that best practices can be grouped into three distinct categories that are very interrelated:

1. A planning and support system for teachers with emphasis on weekly (or more frequent) meetings of teacher teams to plan and discuss student-level data and instructional processes. Planning and support best practices work most effectively when implemented as a system, when they are teacher-driven, and when they are adequately supported by training and materials.

2. An aligned, individualized, and inclusive instructional process that includes systematic assessments and adjustment of instructional delivery. Practices include aligning curricula and assessments with the Voluntary State Curriculum, a variety of student-centered instructional strategies, heterogeneous groupings of students, and the inclusion of students receiving special education services into the regular education program with support.

3. A supportive and positive school environment of high expectations from administrators, teachers, and students. School-level as well as system leadership is critically important in establishing such school environment and empowering teachers to respond to the toughest challenges.

MGT performed multiple regression analyses of educational best practices and their impacts on student achievement by subject area. The results revealed that there is a statistically significant cumulative effect of five intensively used planning and support practices on student achievement. These five practices are:

1. Grade/subject area team meetings for planning
2. Use of student-level data for planning instruction
3. Discussing instructional practices in team meetings
4. Reading and Math teacher specialists
5. Targeted, embedded professional development
Additionally, teachers’ perceptions of the quality of leadership provided by their principal was found to be the most important individual factor influencing the extent to which schools closed their students’ proficiency gaps in both reading and mathematics.

MGT’s analyses of data for schools with high versus low percentages of economically disadvantaged\(^7\) students revealed that intensively used planning and support practices are more powerful in explaining the increases in student achievement in schools with high percentages of economically disadvantaged students. We also found that the practice of differentiated instruction is statistically significant in predicting higher reading achievement in schools with high percentages of economically disadvantaged students.

MGT conducted additional statistical analyses and found a significant positive relationship between the percentage of a school’s classes taught by highly qualified teachers\(^8\) and the percentage of student proficiency gap closure in both reading and math at the middle school level. As expected, we did not find a significant relationship between these variables at the elementary school level, because elementary school teachers are not required to have subject-specific certification.

MGT’s hierarchical linear modeling found that the additional per pupil expenditures contributed to improvements in student achievement. For every $1,000 of increased per pupil expenditures since the enactment of BTE, the proficiency gaps in both reading and math were closed by four percent at the elementary school level and eight percent at the middle school level.

3. **Local School Systems’ 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.

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\(^7\) The percentage of MSA-tested students in a school who were eligible for free and/or reduced price meals was used as the indicator of the percentage of economically disadvantaged students in that school.

\(^8\) Highly Qualified Teachers is defined by NCLB as those classes that are taught by teachers who are certified to teach the grade levels or subjects of those classes. A teacher may be highly qualified to teach some classes, but not qualified to teach other classes, NCLB requires reporting of the percentage of classes taught by teachers who are not highly qualified teachers.
Study Limitations: Although the LSSs will have submitted their fall 2008 Master Plan Updates by the time this Final Report is disseminated, and MSDE routinely monitors their progress toward implementing their Master Plans and Updates, information from the 2008 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.

What MGT Did: In 2006, MGT surveyed principals and members of each LSS’s Master Planning Team and conducted telephone interviews with LSS superintendents to obtain stakeholders’ opinions about their experiences and success in developing CMPs and aligning these plans with their budgets. In 2007, MGT visited every LSS and interviewed each superintendent, assistant superintendent, BTE point of contact, and chief financial officer, as well as the principals of 150 schools, and members of each LSS’s master planning committee.

MGT also performed content analyses of all initial Master Plans and of the fall 2004 through fall 2007 Master Plan Updates that LSSs had submitted for approval by MSDE.

What MGT Found: Our 2006 interview with superintendents and surveys of principals and LSS master planning teams found that they were overwhelmingly positive about BTE requirements and the potential benefits. They believe that LSSs’ Master Plans and Updates clearly link funding from federal, state, and local sources for school improvement. This commingling of funds to more effectively leverage their use was one of the intents of BTE.

Our initial review of all Master Plans and our continued review of annual Master Plan Updates found that:

- Priority emphasis has been placed throughout the state on strategies related to NCLB Goal 1: Improve Performance of All Students in Reading/Language Arts and Mathematics.
- Master Plan strategies in all LSSs were primarily process-focused. Improvement efforts were concentrated on enhancing “ways of working” (e.g., collaborating between and among grade levels, departments and schools, reviewing/revising teaching methods and materials) as a means of improving instructional practices and, ultimately, student achievement.
- There was a significant increase in emphasis on providing high quality professional development to enhance teachers’ ability to work effectively with NCLB subgroups.
What MGT Found
(Continued)

and provide quality instruction in core subject areas.

- The recruitment and retention of high quality personnel was a consistent area of emphasis in the majority of LSSs. Processes were established to provide mentoring and support for new teachers and as well as supportive strategies for all teachers to obtain Highly Qualified designation.

All LSS budgets were aligned with articulated school improvement strategies.

4. **Revenues Received by Local School Systems**

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

**Study Limitations:** Although we report actual revenues received by LSSs for the years 2001-02 though 2004-05, the financial data used for 2005-06 through 2007-08 are budgeted, not actual, revenues, at the request of the General Assembly. Differences in budgeted and actual revenues are assumed to be very minor.

**What MGT Did:** MGT gathered and analyzed not only changes in local education funding, but also examined trends in federal and state funding from the year before implementation of BTE, 2001-02, through the 2007-2008 school year.

**What MGT Found:**

FY2007-08 revenues from all sources (excluding state-paid teachers’ retirement) increased by $3.4 billion over 2001-02 revenues, or 48.6 percent. Of this amount, state appropriations increased by $2.029 billion and local appropriations increased by $1.321 billion.

Local appropriations in support of LSSs did not increase as fast as state appropriations did in the six years following enactment of BTE. Local appropriations increased by 34.3 percent statewide, compared to an 80.4 percent increase in state appropriations.

State revenues comprised a greater share of total budgets in 2007-08 (44 percent) than they did in 2001-02 (36 percent).

Federal support increased by $10.17 million, or 1.92 percent, during this period. There was great variability among the LSSs in the changes to federal funding, from large increases to large decreases.

On a per pupil basis, state appropriations increased by 82.8 percent when adjusted for the number of pupils. Local appropriations increased by 36 percent per pupil, less than half the rate of increase in state appropriations per pupil.
What MGT Found  
(Continued)

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 in this study.

The amounts of funding from local appropriations are compounded by the variability in wealth among the jurisdictions. Under the school finance formula (guaranteed tax base program), additional aid is provided to less wealthy jurisdictions that appropriate more education aid than their calculated local share of the Foundation Program for the prior fiscal year.

5. Uses of Increased Funding Since Passage of BTE

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

- 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
- An estimate of the amount spent to implement each substantial educational enhancement
- An estimate of the number of new positions, if any, that have been added to execute each enhancement
- 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 level

Study Limitations: LSSs combine the additional dollars they receive from state education aid with the additional funding they receive from local and federal sources to implement the strategies presented in their Master Plans and Master Plan Updates. Accounting systems used by LSSs do not specifically track how the additional state funding from BTE was spent. Instead, increases in funding from the aggregate of all sources provide the only financial data that could be used to document how LSSs used their additional financial resources.
LSSs could not provide specific data on every position related to each substantial educational enhancement.

**What MGT Did:**
MGT obtained and analyzed each LSS’s Master Plan and Update 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.

MGT produced a multi-page summary (Appendix F) for each LSS that provides all of the information required by the four bullets in the evaluation mandate specified above.

**What MGT Found:**
As noted previously, increases in per pupil expenditures were shown to be positively related to improvements in student achievement. LSSs spent 52.8 percent of the additional funding on competitive salaries and benefits, increasing their spending by $1.85 billion over 2001-02 levels.9

Expenditures for instruction increased 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.

The greatest increase in expenditures has been in the Instructional Process category, which accounted for $2.537 billion, over 75 percent of all increases in expenditures, since the enactment of BTE through 2007-08. Within the Instructional Process category, the strategy “Competitive Salaries and Benefits” accounted for 52.8 percent of all new revenues projected to be received by LSSs, and totaled $1.794 billion through 2007-08. 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 retain those highly qualified educators and $28.2 million of new dollars to provide professional development.10 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.

The deficit in Baltimore City Public Schools at the beginning of

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9 In this report “expenditures” include both actual expenditures for the years 2001-02 through 2004-05 and budgeted expenditures for the remaining years through 2007-2008.

10 LSSs spent additional amounts on resource teachers and mentor teachers who provide professional development to teachers. Data were not available to quantify these amounts, which are not included in the new expenditures for professional development.
Executive Summary

What MGT Found
(Continued)

this decade 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.

All LSSs earmarked some additional resources for the increased costs of utilities, transportation, or facilities.

Conclusions

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

In the few years following passage of BTE and the full implementation of the MSA, proficiency levels statewide have improved dramatically for all students and for NCLB groups. Schools and LSSs have focused most of their additional resources on strategies to improve the proficiency levels of elementary school students. In the last four years, this focus has closed more than half of the proficiency gap that elementary students statewide had in 2004 to reach the NCLB goal of 100 percent proficiency by 2014.

Although student proficiency levels in all 24 LSSs have improved, some schools and LSSs are progressing at a much faster rate than others. Reasons for these differences are presented below.

Programs or Factors that Consistently Produce Positive Results

Public schooling is a labor intensive endeavor. Common sense dictates that dollars spent wisely to recruit and retain the best educators and to provide them with needed instructional tools and continuing professional development should positively impact their students. This evaluation confirmed that investing more dollars per pupil resulted in increased closure of student proficiency gaps. The evaluation also showed that student proficiency levels improve faster in schools that have higher percentages of classes taught by highly qualified teachers. Further, MGT found that strong leadership practices infused throughout the schools and school systems strongly contribute to improvements in student achievement.

Additionally, there are critical educational practices that this evaluation found make a significant impact on improving student proficiency levels. These “best practices” include five intensively and highly interrelated planning and support activities. When more of these educational best practices are in place in schools and when their operational frequency increases, students make more progress toward elimination of proficiency level gaps. The educational best practices must operate within a supportive and positive school environment with effective leadership and include aligned, individualized, and inclusive instructional processes.
The evaluation results clearly showed that accountability paired with bringing the decision-making process to the school to meet the specific needs of their students, produces positive learning outcomes. Through effective support of frontline educators, LSSs in Maryland have achieved impressive student achievement gains.

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

All LSS’s have successfully developed Master Plans and Annual Updates to those plans. The process has evolved to engage relevant groups of stakeholders into a collaborative process of master planning and implementation cycles.

School Improvement Plans (SIPs) have been the main vehicle for achieving master plan goals. SIPs are aligned with Master Plans and incorporate school-specific strategies to accomplish goals and priorities.

**Changes in Funding**

In the six years following implementation of BTE, total funding from all sources have increased $3.4 billion from $6.963 billion to $10.397 billion. State funding for LSSs (not including state retirement contributions) increased $2.029 billion dollars, or $2,438 on a per pupil basis, an 82.8 percent increase. Local appropriations increased $1.317 billion, or $1,621 per pupil, a 36.2 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, 80 percent, of these were teaching positions.
**Recommendations**

MGT offers the following recommendations based on findings from this evaluation and MGT’s professional judgment as a firm that has worked with schools and school systems throughout the nation.

- Continue the BTE master planning process that links strategies to improve student achievement with budgets to accomplish these improvements. Through BTE, Maryland has led the nation in requiring its LSSs to identify and prioritize their educational needs and to leverage increased aid from the state with funding from other sources to address those needs by applying additional resources to substantial educational enhancements.

- Maintain the current per-pupil levels of state and local aid for education until the 2012 adequacy study mandated by BTE re-addresses the adequacy issue that was beyond the scope of this evaluation.

- Continue to track LSSs’ progress in closing student proficiency gaps to reach the 100 percent proficiency goal of NCLB by 2014.

- Ensure widespread and economical distribution and availability of the findings from this evaluation through state and local Web sites.

- Schools that are having less success at improving student achievement should model themselves after the educational best practices that this evaluation identified as contributing most to improvements in student academic proficiency as implemented in high performing schools.

- Provide resources for schools and LSSs that need assistance to fully implement the educational best practices described in this evaluation.

- LSSs should continue and/or better support school administrators and their instructional staff to tailor educational best practices for the needs of their school/students, while holding them accountable for student achievement results.

- When conducting research on a program’s impact, use a larger more stable subgroup cell size at the LSS level to reduce fluctuation in the results used for student achievement comparisons from year to year. While this reduces the number of schools and LSSs that would be analyzed, the results would be more meaningful in a multi-year analysis.\(^{11}\)

- To enable better comparisons of the cost-effectiveness of educational programs at the school level, Maryland should move to a financial reporting system that shows complete revenue and expenditure data at the school level rather than at the LSS level.

\(^{11}\) For purposes of school and LSS accountability, smaller cell sizes are appropriate because schools and LSSs are primarily accountable for student performance on an annual basis, not over several years.