#### Joint Legislative Committee on Performance Evaluation and Expenditure Review (PEER)

Report to the Mississippi Legislature



## Improving the Efficiency of Mississippi's School Districts: Phase Two

School districts should apply a disciplined approach of identifying their needs so that cost savings can be effectively redirected into an area that will improve the district's efficiency and academic performance. The Legislature's current effort to revitalize performance budgeting requires increased accountability for the efficient and effective use of public resources, including the expenditure of tax dollars by the state's public school districts.

PEER sought to identify efficiency drivers and metrics utilized by fourteen selected school districts with the purpose of compiling a list of best practices that could be shared with other districts to yield efficiency improvements. PEER had proposed that by selecting districts that exhibited low support expenditures and high academic performance, as well as those districts that exhibited high support expenditures and low academic performance, distinct practices and procedures could be identified in order to establish drivers and metrics deemed as more efficient.

By using an interview protocol based on school district efficiency review processes in other states, PEER targeted nine functional areas in the fourteen selected districts: district leadership and organization, financial management, human resources, purchasing and warehousing, educational service delivery, transportation, facilities, food service, and information technology. Three major themes were exhibited within the selected school districts.

- Regardless of whether the district was more efficient or less efficient (as defined by PEER in this report), no distinct efficiency drivers were identified that could be implemented as best practices.
- Within each functional area, multiple decisions had been made with a focus on academic performance without consideration of efficiency.
- While efficiency decisions and procedures were mentioned by district staff at various levels, often these efficiency decisions had been made by district leadership in a manner that was not accountable, based on available data and transparency of the decisionmaking process.

Because PEER could not identify specific efficiency drivers within the selected school districts as initially theorized, PEER proposes that all school districts work toward a disciplined datadriven decisionmaking process to improve efficiency and accountability.

#### PEER: The Mississippi Legislature's Oversight Agency

The Mississippi Legislature created the Joint Legislative Committee on Performance Evaluation and Expenditure Review (PEER Committee) by statute in 1973. A joint committee, the PEER Committee is composed of seven members of the House of Representatives appointed by the Speaker and seven members of the Senate appointed by the Lieutenant Governor. Appointments are made for four-year terms, with one Senator and one Representative appointed from each of the U. S. Congressional Districts and three at-large members appointed from each house. Committee officers are elected by the membership, with officers alternating annually between the two houses. All Committee actions by statute require a majority vote of four Representatives and four Senators voting in the affirmative.

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The Committee assigns top priority to written requests from individual legislators and legislative committees. The Committee also considers PEER staff proposals and written requests from state officials and others.

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December 9, 2014

Honorable Phil Bryant, Governor Honorable Tate Reeves, Lieutenant Governor Honorable Philip Gunn, Speaker of the House Members of the Mississippi State Legislature

On December 9, 2014, the PEER Committee authorized release of the report entitled **Improving the Efficiency of Mississippi's School Districts: Phase Two.** 

Laucy Udame Coffiis

Senator Nancy Adams Collins, Chair

This report does not recommend increased funding or additional staff.

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# Improving the Efficiency of Mississippi's School Districts: Phase Two

### **Executive Summary**

#### Introduction

In this review, PEER conducted a comprehensive efficiency review of selected school districts in Mississippi.<sup>1</sup> PEER sought to identify best practices exhibited by districts with both low support expenditures and high academic performance in order to determine what actions or efforts these districts have implemented that could be implemented by other districts with reasonable expectation of similar results.

PEER established a sample of fourteen districts<sup>2</sup> based on a methodology that utilized relative measures of efficiency and academic performance<sup>3</sup> applicable only to the purposes of this review. For a detailed description of the methodology utilized to select the districts, see Appendix A on page 85 of the report.

#### PEER's Theory in Phase Two of Improving Efficiency in Mississippi School Districts

School districts should apply a disciplined approach of identifying their needs so that cost savings can be effectively redirected into an area that will improve the district's efficiency and academic performance. Also, the Legislature's current effort to revitalize performance budgeting requires increased accountability for the efficient and effective use of public resources, including the expenditure of tax dollars by the state's public school districts.

PEER sought to identify efficiency drivers and metrics utilized by the selected districts with the purpose of compiling a list of

<sup>1</sup>On November 12, 2013, PEER issued Report #578, *Identifying Options for Improving the Efficiency of Mississippi's School Districts: Phase One.* That report proposed a Phase Two that would include a comprehensive efficiency review of selected school districts with the goal of identifying best practices.

<sup>2</sup>PEER's sample included the Aberdeen, Amite County, DeSoto County, Enterprise, George County, Hattiesburg, Itawamba County, Jefferson County, Jones County, Lamar County, Moss Point, Okolona, Rankin County, and Tunica County school districts.

<sup>3</sup>To determine measures of efficiency and academic performance, PEER utilized data provided by the Mississippi Department of Education for the 2012-2013 school year.

best practices that could be shared with other districts to yield efficiency improvements. PEER had proposed that by selecting districts that exhibited low support expenditures and high academic performance, as well as those districts that exhibited high support expenditures and low academic performance, distinct practices and procedures could be identified in order to establish drivers and metrics deemed as more efficient.

By using an interview protocol based on school district efficiency review processes in other states, PEER targeted nine functional areas in the fourteen selected districts: district leadership and organization, financial management, human resources, purchasing and warehousing, educational service delivery, transportation, facilities, food service, and information technology. Three major themes were exhibited within the selected school districts.

- Regardless of whether the district was more efficient or less efficient (as defined by PEER in this report), no distinct efficiency drivers were identified that could be implemented as best practices.
- Within each functional area, multiple instances of decisions had been made with a focus on academic performance without consideration of efficiency.
- While efficiency decisions and procedures were mentioned at various levels, often these efficiency decisions were made by district leadership in a manner that was not accountable, based on available data and transparency of the decisionmaking process.

Because PEER could not identify specific efficiency drivers within the selected school districts as initially theorized, PEER proposes that all districts work toward a disciplined approach that is both efficient and accountable through a data-driven decisionmaking process.

#### A Data-Driven Decisionmaking Model for School Districts

*Data-driven decisionmaking* is a dynamic, disciplined process of utilizing data to make well-informed decisions on how to target resources in meeting needs and educational goals. The Data Driven Decision Making (DDDM) model is derived from the Total Quality Management (TQM)<sup>4</sup> model, which states that organizational improvement can be achieved through directed review and analysis of data to set and benchmark goals (i. e., to set measurable objectives by which progress toward goals can be measured). A DDDM model for school districts would seek to establish a process wherein data is used to formulate

<sup>&</sup>lt;sup>4</sup>Total Quality Management, Organizational, Learning, and Continuous Improvement (TQM) are management technique models practiced by private industry and manufacturing to increase efficiencies in the quality and delivery of goods by emphasizing that organizational improvement can be achieved through directed review and analysis of data to set and benchmark goals.

education policy and to measure the effectiveness of those policies with the end goal of targeting resources to those educational goals, objectives, and programs that show the most impact and return on investment.<sup>5</sup>

In order to utilize the DDDM model successfully, districts should gather data, convert this data into information through analysis, produce actionable knowledge by coupling this information with statewide and district priorities for public education, and arrive at district goals, objectives, and program decisions based on the information provided by the preceding steps. To construct, administer, and maintain an effective DDDM system successfully, districts must collect, report, and utilize reliable data and operate in a school culture that is receptive to such. Further, districts should be aware and take steps not to overwhelm themselves with data and know that the use of this data will be for the betterment of the district and not for alternative purposes.

#### **Observations Within the Selected School Districts**

While PEER could not identify specific best practices based on observations within the fourteen selected districts, PEER did note efficiency elements that could be incorporated into a datadriven decisionmaking process, as well as deficiency areas in need of a disciplined approach to making decisions.

- District leadership and financial management--District leadership and organization affect the operation of all functions. Efficiency decisions are a reflection of a district's leadership and financial management. As noted previously, these decisions should be based on data, should be documented (for future reference or for third-party review), should be critical parts of the district's planning process, and should be made in a disciplined manner in order to achieve the desired balance of efficiency and quality as determined by the district's needs.
- *Human resources*--The selected districts rarely had a disciplined approach for data collection and formal application of data related to human resources issues. For example, PEER could not find evidence that service contracts were the most efficient or economical decision when utilized by the selected districts.
- *Purchasing and warehousing--*The selected districts often reported that they sought the best price when purchasing

<sup>&</sup>lt;sup>5</sup>The RAND Corporation is a nonprofit, nonpartisan research organization that was initially founded in 1948. While RAND researches multiple policy areas, its research on pre-K, K-12, and higher education covers issues such as assessment and accountability, choice-based and standards-based school reform, vocational training, and the value of arts education and policy in sustaining communities and promoting a well-rounded community. In 2006, RAND Education issued a report entitled *Making Sense of Data-Driven Decision Making in Education*, from which PEER drew this model applied specifically to education.

goods (e. g., by state purchase list or by competitive bid against the state purchase list as a benchmark). However, PEER observed that some critical information relating to district purchases and inventories is not being utilized to its fullest extent. For example, some districts collect and report equipment items in their inventory, but they do not utilize this inventory to forecast potential future needs or expenditures.

- *Educational service delivery*--Of the fourteen districts sampled, those districts rated as A or B<sup>6</sup> spent an average of \$6,672 per student for educational service delivery, while the districts rated as C, D, or F spent an average of \$9,539 per student for educational service delivery.
- *Facilities*--All of the selected districts collect and track data regarding facilities to some degree (e. g., square footage, age of buildings, custodial staffing). However, it was not readily apparent for most of the selected districts how this data was utilized.
- *Transportation*-All of the selected districts maintained some form of fleet inventory, but most of the decisions regarding bus maintenance and replacement appeared to be driven by the availability of funding from year to year rather than by a formal schedule. Also, while the selected districts often reported that they sought the best price when purchasing fuel (e. g., through Fuelman or by competitive bid), districts had no comparative data that could distinguish the more efficient method. Finally, while multiple districts reported that they had access to a routing and scheduling software program, this program did not interface with the districts' student information database.
- *Food service*-Food service is the only functional area in school districts with a separate source of revenue. It should be financially independent from the district by reducing costs associated with personnel, inventory, and equipment and facilities.
- *Information technology*--The selected districts collected a large amount of data regarding information technology costs or needs, but often this data was not compiled and analyzed in a way that would take into account the true cost of ownership for information technology equipment, was not developed into formal equipment replacement schedules, nor did the data enable the district's leadership to establish an accurate picture of the information technology needs within the district.

<sup>&</sup>lt;sup>6</sup>PEER utilized academic performance ratings of districts developed by the Mississippi Department of Education for the 2012-2013 school year.

#### **Opportunities for Data-Driven Decisionmaking**

PEER proposes that districts move to a disciplined approach of a data-driven decisionmaking process implemented through outsourcing, shared services, strategic human resources management, and strategic facilities and equipment management.

- *Outsourcing-*-By utilizing performance-based contracting and make-versus-buy analysis techniques, districts could improve the efficiency of their outsourced contracts and increase the return on investment of such contracts.
- *Shared services*--Shared service arrangements could allow districts to pool both resources and expertise regarding a particular issue in order to maximize purchasing power and available resources to be mobilized in combating the issue.
- *Strategic human resource management*--School districts' human resources personnel should keep vigil not only on developments affecting the future of the district, but also should monitor and reexamine the work done and the need for all district personnel.
- *Strategic facility and equipment management--*Districts should develop a comprehensive strategy to maintain and update/replace district infrastructure such as buildings, buses, and computers.

Also, the Mississippi Department of Education (MDE) should work with the districts and with legislative staff to identify the performance metrics that should be collected and reported for each administrative and support program in the districts' program inventories. Administrative and support programs and measures should be uniform from district to district, which would facilitate unit cost comparisons. Once these programs and associated performance metrics have been identified, MDE should establish a mechanism for capturing the data in a central database that is integrated with district expenditure data in order to facilitate data analysis. Further, once the program-based school district data collection and analysis system is fully operational, MDE should work with the districts to develop a data dashboard that reports efficiency metrics for each district in a format that is complementary to the No Child Left Behind district report cards for academic accountability.

#### Conclusions

Because PEER observed that the fourteen selected school districts did exhibit some elements that could be considered components of a larger efficiency and accountability framework, PEER proposes that Mississippi's school districts adopt a disciplined approach to examine, review, and guide their decisionmaking process and improve efficiency, such as the Data Driven Decisionmaking (DDDM) model. Pages 57 through 60 of the report provide an example of application of the data-driven decisionmaking process to a school district's decision of whether to continue contracting out janitorial services.

While several possible models exist regarding how to implement and organize DDDM, four key elements are universal to any model:

- a district must gather raw data tailored to tracking the outcome of a specific goal;
- this data must be distilled into a usable form to produce information offering insight into the goal;
- this information must be coupled with the priorities of the district and the relative merits of the goals; and,
- all of this information should be weighed by the district to establish, refine, and reexamine the goals of the district.

Based on PEER's observations within the selected districts, many data sets are already being tracked and reported by the districts that could be utilized in data-driven decisionmaking. The ultimate goal is for the schools and districts to improve their decisionmaking through ongoing analysis of data (including making unit cost comparisons where valid and reliable) and implementation of improvements based on knowledge gained through analysis.

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# Improving the Efficiency of Mississippi's School Districts: Phase Two

## Introduction

#### Authority

The PEER Committee conducted this review pursuant to the authority granted by MISS. CODE ANN. Section 5-3-51 et seq. (1972).

#### **Problem Statement**

The PEER Committee received a legislative request in 2013 to identify cost savings that could result if school districts were to establish shared service arrangements for certain functions or programs. On November 12, 2013, PEER issued Report #578 entitled *Identifying Options for Improving the Efficiency of Mississippi's School Districts: Phase One*, which proposed a Phase Two of the review.

In this review (i. e., Phase Two of the project), PEER conducted a comprehensive efficiency review of selected school districts in Mississippi. PEER sought to identify best practices exhibited by districts with both low support expenditures and high academic performance in order to determine what actions or efforts (i. e., shared service arrangements or other efficiency efforts) these districts have implemented that could be implemented by other districts with reasonable expectation of similar results.

#### **Scope and Purpose**

PEER sought to address the following objectives:

- conduct a comprehensive efficiency review of selected school districts;
- based on the results of the comprehensive efficiency review, identify best practices exhibited by districts with both low support expenditures and high academic performance in order to determine what actions or efforts (i. e., shared service arrangements or other efficiency

efforts) these districts have implemented that could be implemented by other districts with reasonable expectation of similar results; and,

• present options to the Legislature for ensuring or encouraging other school districts to improve their efficiency through the use of shared service arrangements or other efficiency efforts identified in the comprehensive efficiency review.

#### **Scope Limitations**

PEER notes the following scope limitations to this review:

- PEER utilized information from the Mississippi Department of Education (MDE) and from the sample of school districts that was self-reported by each district. Therefore, PEER notes that varying levels of accuracy may be present and that PEER did not test the fidelity of each individual data set provided.
- PEER excluded districts from its sample methodology that offer specialized education, test pilot educational programs (e. g., Excellence for All Program), and school districts that were recently consolidated or are in the planning phases for consolidation in the next two years.
- PEER established a sample of fourteen districts based on a methodology that utilized relative measures of efficiency and academic performance applicable only to the purposes of this review.

#### During this review, PEER: conducted a literature review on improving efficiency in school districts (including shared services, consolidation, and outsourcing): interviewed personnel and examined records of the Mississippi Department of Education regarding school districts' expenditures, average daily membership, and other reported measures for student and teacher data; reviewed the United States Department of Education's state • educational expenditure data: reviewed efficiency studies of school districts in other • states (in particular, Texas and Arizona); selected nine functional areas within school districts' • operations to examine for efficiency best practices;

• district leadership and organization;

Method

- financial management;
- human resources;
- purchasing and warehousing;
- educational service delivery;
- o facilities and maintenance;
- transportation;
- food service; and,
- information technology;
- developed an interview protocol to identify best practice areas within each of the nine functional areas selected; and,
- conducted a statistical analysis of the Mississippi Department of Education's expenditure data and academic performance data by school district in order to obtain a sample of school districts for the efficiency review.

Based on the results of this analysis of relative performance measures regarding efficiency and academic performance, the following fourteen school districts were selected (listed in alphabetical order):

- Aberdeen;
- Amite County;
- DeSoto County;
- Enterprise;
- George County;
- Hattiesburg;
- Itawamba County;
- Jefferson County;
- Jones County;
- Lamar County;
- Moss Point;
- Okolona;
- Rankin County; and,
- Tunica County.

For a detailed description of the methodology utilized to select the fourteen school districts, see Appendix A on page 85.

Once the sample of the school districts was determined, PEER then:

 interviewed personnel and reviewed documentation at each of the fourteen selected school districts regarding the nine targeted functional areas;

- developed comparison profiles for each of the fourteen selected school districts regarding various expenditure per student measures; and,
- identified general efficiency principles and criteria that school districts should adhere to, including any observed best practices.

## Background

This chapter seeks to address the following objective:

- Conduct a comprehensive efficiency review of selected school districts. This selection will use screening criteria and methods that incorporate economic and non-economic efficiency and educational outcomes.
  - *Economic efficiency criteria* include percentage of funds spent on instruction, cost per square foot, cost per student of operations, cost per student of specific school functions such as transportation, and ratio of general administration cost to school administration cost.
  - Non-economic efficiency criteria include number of students per square foot, teacher and administrator experience, percentage of teachers with advanced degrees, number of Carnegie units offered, and student-teacher ratio.
  - *Educational outcome criteria* include SAT scores and MDE assessment tests.

To address this objective, PEER answered the following questions:

- What was the purpose of Phase Two of PEER's project on improving school district efficiency?
- How did PEER establish efficiency measures to select school districts for Phase Two?
- How did PEER establish academic performance measures to select school districts for Phase Two?
- How did PEER select school districts for Phase Two?

#### What was the purpose of Phase Two of PEER's project on improving school district

#### efficiency?

In Phase Two of PEER's comprehensive efficiency review of selected school districts, PEER sought to identify best practices of those districts with both low support expenditures and high academic performance.

The PEER Committee received a legislative request in 2013 to identify cost savings that could result if school districts were to establish shared service arrangements for certain functions

or programs. The request was prompted by a legislator's interest in a Deloitte Research report entitled *Driving More Money into the Classroom: The Promise of Shared Services.* PEER initially hypothesized that Mississippi would have similar results as concluded by the Deloitte report and that the information could be used to identify school districts of a similar size that would be the best possible candidates for implementing shared service arrangements to improve the districts' efficiency.

However, as noted in PEER Report #578 (*Identifying Options for Improving the Efficiency of Mississippi's School Districts: Phase One*), PEER could not establish the same correlation in Mississippi between school district size and efficiency that Deloitte had found in its research. Therefore, PEER sought to present criteria for selecting support functions that could be candidates for shared service arrangements and identify shared service models or related arrangements that could be implemented in Mississippi.

PEER planned in Phase Two to conduct a comprehensive efficiency review of a sample of school districts in Mississippi that sought to identify best practices exhibited by districts with both low support expenditures and high academic performance in order to determine what actions or efforts (i. e., shared service arrangements or other efficiency efforts) these districts have implemented that could be implemented by other districts with reasonable expectation of similar results.

For additional information regarding Phase One of the review, see Appendix B, page 100, for the Executive Summary of PEER Report #578.

#### How did PEER establish efficiency measures to select school districts for Phase Two?

PEER utilized data provided by the Mississippi Department of Education to establish relative efficiency measures such as spending per student by various operational areas (e. g., total cost per student, instructional cost per student, administrative cost per student). PEER then ranked the school districts through relative comparisons of how each district performed on each of the established efficiency measures.

> PEER determined four major functional area categories to analyze for each of the school districts. Within each of these four major categories, PEER selected various efficiency metrics. These functional areas and their metrics include:

- *Instruction*--instructional cost per student, Carnegie units offered, average years of teacher experience, percent of teachers with advanced degrees, student teacher ratio, and percentage of instructional spending to total expenditures;
- *Administration*--administrative cost per student, ratio of general administration cost to school administration cost, and average number of years of administrator experience;

- *Operations and Maintenance--*cost per square foot, number of students per square foot, and utility cost per student; and,
- *Ancillary and Add-On Programs*-cost per student for support functions (e. g., attendance and social work services, guidance services, health services), cost per student for non-instructional functions (e. g., food service operations, enterprise operations, community service operations), transportation cost per transported student, and transportation cost per mile traveled.

In addition to the above four categories, PEER also calculated the total cost per student overall. This total cost was divided by the average daily membership or ADM (i. e., the total enrollment of students in the district minus withdrawals, transfers, and expulsions averaged over the school year) for each district. The total cost is composed of all district costs except for costs for sixteenth section, facilities and construction services, debt service, other financing uses, and direct decreases in fund equity. The total cost includes calculated costs used in instruction, administration, physical plant, and ancillary and add-ons, plus other costs not included in those calculations.

For the purposes of this review, PEER defined a school district as efficient if it exhibited lower costs per student in the areas of administration, operations, ancillary and add-on programs, and total cost per student overall. PEER also assigned a higher ranking to districts with higher instructional costs per student as one metric.

For a more detailed description of the methodology utilized to establish the efficiency measures and subsequently select the school districts for a sample, see Appendix A on page 85.

#### How did PEER establish academic performance measures to select school districts for

#### Phase Two?

PEER utilized data provided by the Mississippi Department of Education to establish seven relative academic performance measures based on various state testing results (e. g., MCT2, SATP2). PEER then ranked the school districts through relative comparisons of how each district performed for each of the established academic performance measures.

> PEER determined seven academic performance categories to analyze for each of the school districts. These performance categories and how PEER measured each are explained below:

> • *English 3rd grade through 8th grade performance:* percentage of 3rd through 8th grade students who scored proficient and advanced in English on the Mississippi Curriculum Test, Second Edition (MCT2) in FY 2013;

- *Math 3rd grade through 8th grade performance:* percentage of 3rd through 8th grade students who scored proficient and advanced in Math on the MCT2 in FY 2013;
- *Science 5th grade and 8th grade performance:* percentage of 5th and 8th grade students who scored proficient and advanced in Science on the MCT2 in FY 2013;
- *Algebra subject performance:* percentage of high school seniors who passed Algebra on the Subject Area Testing Program, Second Edition (SATP2) in FY 2013;
- *History subject performance:* percentage of high school seniors who passed History on the SATP2 in FY 2013;
- *Biology subject performance:* percentage of high school seniors who passed Biology on the SATP2 in FY 2013; and,
- *English subject performance:* percentage of high school seniors who passed English on the SATP2 in FY 2013.

For the purposes of this review, PEER defined a school district as having high academic performance if it exhibited higher cumulative performance percentages based on the number of times it ranked in the top quartile for each academic performance measure.

For a more detailed description of the methodology utilized to establish the academic performance measures and subsequently select the school districts for the sample, see Appendix A on page 85.

#### How did PEER select school districts for Phase Two?

PEER conducted a relative comparison of the school districts based on various efficiency and academic performance measures to rank school districts. Once the districts were ranked, PEER selected districts based on levels of spending (high and low), academic performance (high and low), as well as other factors such as geographic location and the school district's size. This process yielded fourteen school districts that were included in PEER's sample for efficiency reviews.

In order to select school districts for efficiency reviews, PEER analyzed efficiency metrics based on districts' financial data and academic performance measures based on districts' state test results (as noted in the previous sections on pages 6 through 8). According to MDE, as of February 27, 2014, Mississippi had 156 school districts within the state. PEER considered 134 of these districts in its selection process to establish a sample.

School districts that were excluded from consideration for the efficiency review were those offering specialized education programs (three agricultural schools, Mississippi School for Math and Science, Mississippi School for the Blind, Mississippi School for the Deaf, and Mississippi School for the Arts), testing pilot educational programs (e.g., three districts participating in the Excellence for All Program), and school

districts that had recently been consolidated or were in the planning phase for consolidation within the next two years (i.e., twelve school districts).

The remaining 134 school districts were ranked based on a relative comparison of how they performed to each other. Based on the results of this ranking process, PEER selected seven school districts with lower levels of support expenditures (and higher levels of instructional spending) and higher levels of academic performance. PEER also selected seven school districts with higher levels of support spending and lower levels of academic performance.

In addition to measures of efficiency and academic performance, PEER took into consideration both the locations and sizes of the school districts for the purposes of establishing the sample. For a map showing the locations of the fourteen selected school districts chosen for the sample, see Appendix C on page 106.

For a more detailed description of the methodology utilized to select the school districts, see Appendix A on page 85.

## PEER's Theory in Phase Two of Improving Efficiency in Mississippi School Districts

PEER sought to complete the following objective for this phase of the efficiency review:

• Based on the results of the comprehensive efficiency review, identify best practices that are exhibited by districts with both low support expenditures and high academic performance in order to determine what actions or efforts (i. e., shared service arrangements or other efficiency efforts) these districts have implemented that could be implemented by other districts with reasonable expectation of similar results.

However, for reasons discussed later in this chapter, PEER could not identify specific efficiency drivers within the selected school districts that could be compiled into a best practices list. Therefore, PEER reframed this objective so that the results of observations within the districts could be later compared to elements of a disciplined approach to a data-driven decisionmaking process (discussed in more detail on pages 19 through 26).

In order to detail how PEER sought to address the initial objective, PEER answered the following questions:

- Why should school districts be concerned with efficiency improvements?
- What was PEER's theory behind this phase of the review?
- What functional areas were selected for efficiency review?
- What themes emerged from the observations of the operational environments within the selected school districts?
- How did PEER's approach in this phase of the review change based on initial conclusions?

#### Why should school districts be concerned with efficiency improvements?

School districts should apply a disciplined approach of identifying their needs so that cost savings can be effectively redirected into an area that will improve the district's efficiency and academic performance. Also, the Legislature's current effort to revitalize performance budgeting requires increased accountability for the efficient and effective use of public resources, including the expenditure of tax dollars by the state's public school districts.

# Efficiency Gains Should be Utilized to Address the Greatest Identified Needs of the District

Efficiency decisions are a reflection of a school district's leadership and financial management. These decisions should be based on analysis of data, should be documented (for future reference or for third-party review), should be critical parts of the district's planning process, and should be made in a disciplined manner in order to achieve the desired balance of both efficiency and quality as determined by the district's needs.

PEER notes that a disciplined approach to making informed decisions is necessary to identify the needs of the school district so that cost savings can be effectively redirected into an area that will improve the district's efficiency and academic performance. Any cost savings that a school district might yield from an efficiency gain in one functional area should be utilized in a manner that addresses the greatest identified need of the district (with supporting data), whether that be for a different program or purpose within the same functional area as the cost savings or in another functional area.

For example, one generally accepted assumption is that if a school district is not performing at maximum potential, more money should be spent in the classroom. While the original request was to focus on the efficiency of district operations and not the improvement of academic performance, when choosing the sample, PEER noted that those districts with lower academic performance ratings assigned by MDE were already spending more money per student for educational service delivery purposes than many other districts (as discussed on pages 34 through 38). Although fourteen districts is not a sufficient sample from which to draw conclusions regarding the state as a whole, the observed spending trends raise interesting questions regarding the expenditure of funds on education. Although adequate funding is extremely vital in the education process, as discussed on pages 34 through 38, higher expenditures per student do not necessarily result in better student and school performance.

Thus PEER notes that efficiency decisions by district leadership and effective financial management of available resources are important factors in achieving the desired balance of efficiency and quality as determined by the district's needs.

#### The State's Current Performance Budgeting Revitalization Effort Focuses on Accountability

The Legislature's current effort to revitalize performance budgeting requires increased accountability for the efficient and effective use of public resources, including the expenditure of tax dollars by the state's public school districts.

#### Impetus Behind Revitalization Effort

The impetus behind the Legislature's efforts to revitalize performance budgeting was the realization that state agencies' plans and performance information had not been integrated into the appropriations process.

One major reason for school districts to be concerned with efficiency improvements is the Legislature's current effort to improve accountability for the efficient and effective use of public resources through revitalization of performance budgeting. While the intent of the Mississippi Performance Budget and Strategic Planning Act of 1994 was to improve the state's budgeting process by changing its focus from what government is *buying* (traditional line-item budgeting) to what government is *accomplishing* (performance budgeting), twenty years after passage of the act, its intent had not been fully realized.

In 2013, legislative leadership tasked its members and staff to develop better ways to integrate agency planning and performance information into the appropriations process. It was understood that in order to improve the utility of the data and information in the appropriations process, agencies would have to improve the quality of the data being reported (e. g., to include measures of program efficiency and effectiveness), the data would have to tie to progress made on achieving priority goals and objectives established in agency strategic plans, and the data would have to be vetted for accuracy and reliability, analyzed, and presented in a way that legislators could use in making budgetary decisions.

# Implications of Revitalization Effort for Mississippi's Public School Districts

As key players in the success of the state's revitalization of performance budgeting, Mississippi's public school districts should align their efforts with the goals and benchmarks for public education established in the statewide strategic plan, hold their efforts accountable through development of a comprehensive inventory of their programs (including associated expenditure and performance data), and direct their resources toward educational intervention programs proven to work through evidence-based research.

> As recipients of a significant portion of the state's budget, Mississippi's public school districts are key players in the success of the state's performance budgeting revitalization efforts. The efficient and effective achievement of significant

improvements in public school education outcomes hinges on the successful implementation of all three key components of the state's performance budgeting revitalization effort:

- development of a statewide strategic plan to focus the efforts of state government;
- development of a comprehensive inventory of state government programs and associated performance measures to provide the framework for understanding the specific efforts that public resources are funding and what is being accomplished with those efforts and resources; and,
- implementation of the Pew-MacArthur Results First Initiative,<sup>1</sup> which seeks to direct public resources to costeffective programs that are proven to work through evidence-based research.

#### School Districts and the Statewide Strategic Plan

With respect to the statewide strategic plan, performance on the state's educational benchmarks for public schools must be tracked and improved at the district and school level in order to meet the statewide goal set by the Legislature for public school education. (See Appendix D, page 107, for the statewide goal and benchmarks for public schools).

#### School Districts and the Comprehensive Program Inventory

Regarding the comprehensive inventory of state government programs and associated performance measures, the Mississippi Department of Education is one of four pilot agencies identified in MISS. CODE ANN. Section 27-103-159 (1972) for which the program/activity inventory and associated performance measures must be completed in time for use in the 2016 budget cycle, which begins in June 2015. Creation of a comprehensive program inventory to track the efficient and effective utilization of public dollars flowing through the Department of Education requires the development and maintenance of a comprehensive program inventory not only at the department level, but also at the level of individual public school districts and schools.

<sup>&</sup>lt;sup>1</sup>The Pew-MacArthur Results First Initiative works with states to implement an innovative approach to evidence-based policymaking. The Results First cost-benefit analysis model was originally developed by the Washington State Institute for Public Policy and continues to be refined in partnership with that body. In implementing the model, states assess the universe of programs offered to determine which programs have been tested and are considered to be effective or promising, based on national research. States then compare the expense of public programs to the returns they deliver, enabling policymakers to direct limited dollars toward the most cost-effective programs and policies while curbing spending on those programs that have proven to be ineffective.

For example, while the Department of Education maintains a record of the distribution of Title I funds to each public school district, the individual public schools within each district maintain the data and information necessary to determine the specific programs that are being operated with these funds and the outcomes that these programs are trying to achieve.

Similarly, while the public school chart of accounts captures broad categories of intervention programs such as "gifted education programs," follow-up contact with individual districts and schools will be necessary to compile an inventory of the specific gifted education programs being offered through the state's public school system. In contrast to intervention programs, the public school chart of accounts provides a breakout of administrative expenses--e. g., purchasing services, internal auditing services, payroll services. This breakout provides a good foundation for moving toward unit cost comparisons and analyses, which would provide a disciplined approach to identifying opportunities to reduce a school district's administrative work flow and/or through the sharing of administrative services.

#### School Districts and Results First

The Pew-MacArthur Results First Initiative is in the process of inventorying public school programs according to their research basis (e. g., evidence of their effectiveness or ineffectiveness or no basis in research) and developing the model that will allow for the calculation of a return on investment for each evidence-based program. Legislative staff is working with the Department of Education and individual school districts to identify all programs, including the subset of those programs that are "evidence-based," as a first step towards ultimately testing their efficiency and effectiveness in achieving expected outcomes.

#### What was PEER's theory behind this phase of the review?

PEER sought to identify efficiency drivers and metrics utilized by the selected districts with the purpose of compiling a list of best practices that could be shared with other districts to yield efficiency improvements. PEER had proposed that by selecting districts that exhibited low support expenditures and high academic performance, as well as those districts that exhibited high support expenditures and low academic performance, distinct practices and procedures could be identified in order to establish drivers and metrics deemed as more efficient.

> As noted on pages 6 through 8, PEER selected school districts for an efficiency review based on a comparison of relative performance measures for both efficiency and academic performance. Noting that to achieve efficiency takes a disciplined approach, PEER established a theory that those districts in the sample that ranked low in support spending

and high in academic performance would have the potential to provide clear and distinct efficiency drivers and metrics either through policy and procedure, management decisions and processes, or prudent financial management practices. Based on PEER's relative performance ranking, these districts were at least initially defined as more efficient districts. PEER also selected districts with high support expenditures and low academic performance and initially defined them as less efficient.

The purpose of selecting this mix of districts was to compare more efficient districts with less efficient districts in order to identify efficiency drivers and metrics within the selected districts that yielded potential efficiency best practices. The other purpose of this comparison was to determine whether these efficiency drivers were exclusive to the more efficient districts and to highlight potential deficiency areas in the selected districts and offer possible solutions to issues shared across districts.

Also, PEER sought to identify whether these efficiency drivers were apparent in both more efficient and less efficient selected districts by focusing on nine targeted functional areas within the districts, as discussed in the following section. Some examples of these efficiency metrics and comparisons made by PEER for the selected districts are illustrated in the district profiles on pages 69 through 82.

#### What functional areas were selected for efficiency review?

PEER conducted efficiency reviews that targeted nine functional areas through an interview protocol based on school district efficiency review processes from other states.

PEER reviewed efficiency audit processes from other states in order to establish an audit protocol to be utilized for the fourteen school districts. In addition to areas on which other states' reviews had focused, because the initial request that prompted this review focused on districts' functional areas that could be amenable to shared service arrangements, PEER identified nine functional areas for review. These areas were:

- *District leadership and organization--*governance structure, organizational structure, staff management, planning and decisionmaking processes, strategies, goals, objectives, policies, and procedures.
- *Financial management*--departmental planning and decisionmaking processes, budgeting, accounting, internal controls, debt management, and auditing.
- *Human resources*--departmental staffing, recruitment and hiring processes, training, retention and compensation, information and reporting systems, and external charges and complaints.

- *Purchasing and warehousing*-activities involved in the identification and purchase of supplies, equipment, and services needed by the district, as well as storage and distribution of goods.
- *Educational service delivery-*-continuing education, enrollment, class size, class loads, performance, and curriculum contracts.
- *Transportation*--maintenance and management of district fleet, designation of bus routes, bus mileage, and transportation decisionmaking.
- *Facilities*--planning for aging facilities, utilization of portable classrooms, custodial services, building size and capacity, preventative and deferred maintenance, utility costs, and energy management.
- *Food service*--cost per meal, participation rate in free and reduced meals, departmental profit or loss, and food waste.
- *Information technology*--technology planning, availability of hardware and software, and inventory control.

By focusing on these nine functional areas, PEER developed an audit protocol that incorporated questions specific to each area as well as corresponding documentation requests, where applicable. As noted previously, the purpose of this protocol was to identify both best practices of efficiency overall and best practices by functional areas in order to conduct a relative comparison among the sampled districts that other districts could implement to potentially yield efficiency gains.

#### What themes emerged from the observations of the operational environments within

#### the selected school districts?

PEER observed three major themes exhibited within the fourteen selected school districts.

- Regardless of whether the district was more efficient or less efficient (as defined by PEER in this report), no distinct efficiency drivers were identified that could be implemented as best practices.
- Within each functional area, multiple instances of decisions had been made with a focus on academic performance without consideration of efficiency.
- While efficiency decisions and procedures were noted at various levels, often these efficiency decisions had been made by district leadership in a manner that was not accountable, based on available data and transparency of the decisionmaking process.

As noted on page 5, PEER proposed an initial theory that those selected districts with low support expenditures and high academic performance (based on PEER's comparison of relative performance measures) would provide efficiency drivers and metrics that PEER could identify as potential best practices. However, once PEER conducted the efficiency reviews for the selected districts, no distinct efficiency drivers were identified that could be implemented as potential best practices.

Furthermore, PEER found no distinction between how districts ranked as more efficient and districts ranked as less efficient conducted their operations. In general terms, the environment within each of the selected districts is that they each utilize their own local approach with their own respective needs in mind in order to utilize all available resources (e. g., revenue, staffing, inventory).

PEER also observed that within each of the selected districts the primary focus was on academic performance without much consideration of efficiency. When PEER inquired of districts' staff and leadership regarding decisions within the targeted functional areas, in most cases, specific academic goals or reasons were provided as the rationale or justification for such decisions. (PEER does not imply that the selected districts do not make decisions without considering efficiency, only that it often was a secondary factor, if mentioned within a decisionmaking process.)

Finally, while efficiency decisions and procedures were noted at various levels, often these decisions had been made by district leadership in a manner that was not accountable, based on available data and transparency of the decisionmaking process. *Transparency* in this context is defined as the ability of an external third party to take an established set of data and replicate the decisionmaking process utilized by the selected districts in order to reach the same conclusion or to note that a different conclusion might have been more appropriate.

Again, PEER is not implying that the districts are not making efficient decisions, only that these decisions often lacked the transparency needed for an external party to replicate the process used by the district to reach the same conclusion. Often, PEER analysis of district data and interviews with district leadership noted efficiency improvements as a result of certain decisions, but the data required to replicate the decisionmaking process was not available. Furthermore, PEER noted that all of the selected districts collect and retain voluminous amounts of data, but PEER could determine exactly how or why the district would analyze the data to reach certain conclusions.

#### How did PEER's approach in this phase of the review change based on initial

#### conclusions?

Because PEER could not identify specific efficiency drivers within the selected school districts as initially theorized, PEER proposes that all districts work toward a disciplined approach that is both efficient and accountable through a data-driven decisionmaking process.

After review of MDE data, examination, and interviews with multiple districts' staffs, PEER could not isolate a unifying best practice or procedure utilized by one or multiple districts in regard to the major functional areas. In examining the fourteen districts, PEER observed that there are fourteen different ways that districts accomplish their goals in the functional areas reviewed. While common themes and trends were observed (as discussed on pages 27 through 50), what districts did with the particular information or circumstances they were presented with varied greatly. This is not to say that districts arrived at or made improper decisions in regard to the functional areas reviewed, but that as a third-party reviewer attempting to replicate decisions from a snapshot of district information, PEER could not verify decisionmaking processes. Therefore, PEER reframed the initial approach of identifying observations made within each of the selected districts (discussed on pages 27 through 50) to focus on a disciplined approach that works toward efficient and accountable decisions.

PEER proposes that Mississippi's school districts adopt a datadriven decisionmaking model to examine, review, and guide their decisionmaking processes and improve efficiency (as discussed on pages 19 through 26). This reframed approach analyzes the observations noted within the selected districts to look at what data is being collected by the districts, how this data is utilized by the districts, and how this information relates to the needs of the districts in order to help achieve their respective goals.

# A Data-Driven Decisionmaking Model for School Districts

This chapter seeks to describe a data-driven decisionmaking model and to identify the necessary components that school districts should take into consideration in order to make efficiency decisions with accountability and transparency.

In this chapter, PEER answered the following questions:

- What is data-driven decisionmaking?
- What are the components necessary to make data-driven decisions?
- What is needed to ensure a successful data-driven decisionmaking process?

#### What is data-driven decisionmaking?

*Data-driven decisionmaking* is a dynamic, disciplined process of utilizing data to make well-informed decisions on how to target resources in meeting needs and educational goals.

The Data Driven Decision Making (DDDM) model in the educational setting refers to the process of superintendents, principals, teachers, and other administrators collecting and analyzing data to guide them in their decisionmaking efforts to improve the success of both students and the schools.

The DDDM model is derived from the Total Quality Management (TQM)<sup>2</sup> model, which states that organizational improvement can be achieved through directed review and analysis of data to set and benchmark goals (i. e., to set measurable objectives by which progress toward goals can be measured). This model emphasizes that organizational improvement can be enhanced by examining and responding to various types of data. Instead of relying on "random acts of improvement," where educators do not set clear targets for improvement and do not gather data to track the progress toward those goals and objectives, DDDM seeks to establish a process wherein data is used to formulate education policy and to measure the effectiveness of those policies with the end goal of targeting resources to those educational goals, objectives,

<sup>&</sup>lt;sup>2</sup>Total Quality Management, Organizational, Learning, and Continuous Improvement (TQM) are management technique models practiced by private industry and manufacturing to increase efficiencies in the quality and delivery of goods by emphasizing that organizational improvement can be achieved through directed review and analysis of data to set and benchmark goals.

and programs that show the most impact and return on investment.<sup>3</sup>

#### What are the components necessary to make data-driven decisions?

In order to utilize the DDDM model successfully, districts should gather data, convert this data into information through analysis, produce actionable knowledge by coupling this information with statewide and district priorities for public education, and arrive at district goals, objectives, and program decisions based on the information provided by the preceding steps.

> DDDM could be used to allow school districts to develop, revise, and target particular goals and objectives based on measurable, successful outcomes. While the process of setting goals and measurable objectives is integral to the DDDM model and is an important step, the model also offers flexibility to school districts in that it allows for the incorporation of existing goals and objectives into the analysis framework. Several possible models exist on how to implement and organize DDDM, but four key elements are universal:

- a district must gather raw data tailored to tracking the outcome of a specific goal/objective;
- this data must be distilled into a usable form to produce information offering insight into the goal/objective;
- this information must be coupled with the priorities of the district and the relative merits of the goals/objectives; and,
- all of this information should be weighed by the district to establish, refine, and reexamine the goals/objectives of the district.

This framework is visually represented in Exhibit 1, page 21. While represented as a cyclical process, DDDM is actually more fluid in nature. Districts may go back and forth between the various steps multiple times before achieving actionable knowledge. For example, after analyzing and/or summarizing available data, districts may determine that a different type of data is required to assess programs or goals. Similarly, the process should not end after a decision has been made. Decisions should be periodically reevaluated to make sure that the district took the correct course of action. Further, as indicated in Exhibit 1, this process may be utilized for decisionmaking at most any level within the school district.

<sup>&</sup>lt;sup>3</sup>In 2006, RAND Education issued a report entitled *Making Sense of Data-Driven Decision Making in Education,* from which PEER drew this model applied specifically to education. The RAND Corporation is a nonprofit, nonpartisan research organization that was initially founded in 1948. While RAND researches multiple policy areas, its research on pre-K, K-12, and higher education covers issues such as assessment and accountability, choice-based and standards-based school reform, vocational training, and the value of arts education and policy in sustaining communities and promoting a well-rounded community.

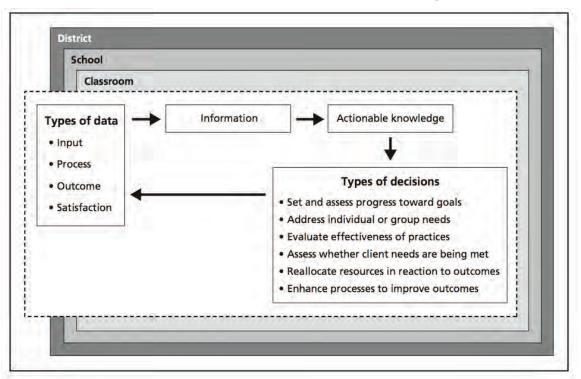


Exhibit 1: Conceptual Framework of Data-Driven Decisionmaking

SOURCE: RAND Education, Making Sense of Data-Driven Decision Making in Education, 2006.

The following sections briefly describe critical components of each of the major steps within the data-driven decision process shown in Exhibit 1.

#### Types of Data

In order to establish a DDDM model, districts should strive to develop a base level of data use and exposure based on proper data quality, data capacity, and data culture of the district. From this, districts will be able to set benchmarks based on inputs, processes, outcomes, and satisfaction of programs/initiatives within the district.

While data collection is already an endeavor undertaken by all districts, for a successful DDDM model to operate, certain conditions for data use must be established. It should be the goal of each district to transform the data and data gathering techniques already in use in the districts to a systemic data use policy.

Systemic data use is where data is routinely and collaboratively used at all levels of the district to inform organizational, program, and instructional improvement decisions directed at improving student outcomes. To accomplish this, three criteria should be present: data quality, data capacity, and data culture.

#### Data Quality

*Data quality* refers to data that uses multiple measures to ensure relevance and the ability of the data to isolate the targeted program/policy and that is well organized, accurate, standardized, and timely.

- *Quality of Data:* Data gathered to be used in the DDDM process must be accepted as valid by all stakeholders in order for the model to operate as intended. One example is state test scores. These tests are viewed by some stakeholders (parents and teachers), either real or perceived, as not accurately reflecting student achievement and as a result, the sole reliance on these metrics to arrive at a curriculum policy change could result in the lack of total buy-in by these groups. For DDDM to function, buy-in by all groups is necessary and may require metrics being gathered from several vantage points to appease all interested parties.
- *Timeliness of Data:* In order for data to be used effectively, it must captured, analyzed, and reported within the time frame of the decisionmaking process. Data that is not reported until after decisions are made can have no impact on those decisions and is of little value. This problem occurs often with state test scores, as the results of such tests are not readily available to districts until after the time to act on this information has passed for a particular student sample.

#### Data Capacity

*Data capacity* refers to the district's ability to not only make use of technology to integrate data from multiple sources, access data by multiple users in an easy-to-understand format, but also to have staff with the skills necessary to gather and interpret the data.

• *Staff Capacity and Support:* District staff should have the technical knowledge, skill, and professional development necessary to collect, analyze, and summarize the data needed to conduct DDDM reviews.

#### Data Culture

*Data culture* refers to the district personnel's commitment to gather the data and belief that such data can be used to improve the district and that all invested personnel are accountable and committed to make use of the data in decisionmaking.

• *Motivation for Use of the Data:* District leadership should inform district personnel that the gathering and use of data for DDDM purposes is for the improvement of the district, school, and classroom functioning. Fears that such data might be used as a basis for reward or punishment for

attainment/failure to meet certain targets could result in lack of buy-in by district personnel.

• *Accessibility of Data:* All interested stakeholders need to be granted access to not only the data, but to the data in an understandable form.

#### Setting Benchmarks (Measurable Objectives)

Once a district has committed itself to DDDM, it should establish the benchmarks (i. e., measurable objectives) that it is trying to achieve pursuant to each of its goals.

Once a district has established that it can guarantee the quality of data, has the capacity to gather that data, and has committed itself to a culture of data-driven decisionmaking, the district should establish the benchmarks (i. e., measurable objectives) that it is trying to achieve pursuant to each of its goals. Each objective should be stated in terms that can be measured, including an explicit unit of measurement, a targeted level of performance based on the chosen unit of measurement, and an explicit date for accomplishment. For example, pursuant to a district's goal of improving the efficiency of its janitorial services, a district might select an objective of reducing the cost per square foot by a specified amount by a specific date. The district should identify the best way to achieve this improvement in efficiency (see the hypothetical example on pages 57 through 60 of this report).

#### Information

Information is the end product of the district's data-gathering efforts combined with the analysis necessary to transform this raw data into a usable metric from which district personnel can then draw conclusions.

> Once the raw data relating to a particular topic or issue has been accumulated, this data must then be converted into some useful form so that district decisionmakers are able to make use of it. Through a process of analysis and summarization, this data must be organized and combined with the district's understanding of the particular situation faced by the district (any explanation the district may have for the observed data) to arrive at a set of facts that present a true representation of the district environment, to include metrics revealing the true cost and benefit of a particular action; the result of this process produces "information." Data distilled into information could include such things as cost per student for a particular program, increase/decrease in a particular proficiency area as a result of a new program, or cost savings as a result of outsourcing a particular school function.

#### Actionable Knowledge

Actionable knowledge combines the information distilled by the district with the district's larger goals (judgment, priorities, and merits of a program) to arrive at a district-wide picture of the results or projected results of a given program or initiative.

After the raw data has been converted into useful information, the DDDM model now requires that this information be made available to be used as "actionable knowledge." Actionable knowledge refers to the district's synthesizing of information into the larger picture of the district--that is, the information must be put into context of the district as a whole. Information must now be coupled with the district's judgment, priorities, and the weight of relative merits of each policy/program action to arrive at possible solutions for how such matters are to be addressed. It is at this point that nonquantitative data--i.e., satisfaction data--enter into the equation to help guide and inform the district on possible solutions to the problems that it is facing.

#### **Types of Decisions**

Having accumulated the raw data, information, and actionable knowledge necessary to review a particular action, the district should then formulate, implement, and alter possible courses of action to refine its ability to achieve the goal it has set.

At this point, actionable knowledge, information, and even the raw data can now be used by district leadership to arrive at and determine what types of decisions must be made in regard to a particular issue area for a district. Generally, decisions fall into two major categories: decisions that require using data to inform, identify, or clarify a particular issue (identifying goals, objectives, or needs) and decisions that require using data to act (changing curriculum or reallocating resources).

Once a decision to act upon the available information has been made, the DDDM process begins anew, building upon that data and data-collecting framework that already exists. New data points or sources can be added to the collection process to begin assessing the effectiveness of the new actions or to better understand the existing ones, creating and maintaining a continuous cycle of collection, organization, and synthesis of data to support decisionmaking for the district.

#### What is needed to ensure a successful data-driven decisionmaking process?

In order to construct, administer, and maintain an effective DDDM system successfully, a district must collect, report, and utilize reliable data and operate in a school culture that is receptive to such. Further, a district should be aware and take steps not to overwhelm itself with data and know that the use of this data will be for the betterment of the district and not for alternative purposes.

> In order to implement and maintain a DDDM system successfully in any school district, two overarching concerns must be addressed and constantly monitored to ensure effective use of the DDDM model: collection of reliable data and committed organizational culture and leadership.

#### **Factors Needed for Success**

For a DDDM model to operate as intended, the district should use accurate data retention and analysis techniques and leadership should articulate the benefits of DDDM.

Data is the bedrock upon which the DDDM process is built. Without quality, reliable data being inserted into and acted upon in the decisionmaking process, the system will not operate as constructed and the process will yield results that do not accurately reflect the true effectiveness of district action. When districts capture, retain, and analyze data, certain factors regarding use of the data must be remembered. The aspects of data on page 22 should always be at the forefront in the districts when they are designing and capturing data for the DDDM model.

Also paramount to a successful DDDM model are district leaders who can articulate the benefits of the DDDM system. It is imperative that the board, superintendent, and principals understand the vision and help others in the district realize the advantages of data-driven decisionmaking, as well as the investment in time and resources it will entail. These leaders must convey the message that the DDDM process is a group effort, with the ultimate goal of achieving better results for the classroom, the school, and the district as a whole. Leadership must stress that DDDM is a continuous effort of improvement and that when done correctly, is a self-sustaining information loop. Further, district leadership must convey this message to the public at large, for without parental involvement and understanding, the DDDM process cannot function as intended. District leaders should involve and inform all stakeholders in the district of its mission and goals and how DDDM will be used to meet and improve the mission and goals.

#### **Potential Barriers to Success**

#### Factors such as information overload, hesitancy of district personnel to embrace the model, and the investment in time and money needed to ensure the model's efficiency are all potential barriers to success.

One barrier to school districts' effective use of a DDDM model is the challenge of getting district personnel to understand how to align data to the instructional or departmental practice. DDDM requires more than just compilation and examination of numbers or statistics. This data in and of itself is meaningless unless educators understand how and what to do with this information and how it will benefit both educators and their students. Having staff and leadership with the capacity to gather, interpret, and communicate quality data to all interested parties will determine the effectiveness of the DDDM process.

Also, there may be cultural, technical, or political limitations to the success of DDDM. If the culture in a particular district is resistant to or skeptical of the use of DDDM, implementation of such a system will be hindered and its success will be greatly diminished. Regarding the cultural aspect, a district may also have difficulty in altering or impressing upon established political players and relationships the need and benefit of such a model for decisionmaking. Further, districts may, and probably will, face challenges in the human capacity, available technology, and infrastructure of the district to meet the data gathering and analysis requirements of a DDDM model.

Finally, the adoption and implementation of a DDDM system is both time consuming and labor intensive, and depending on the infrastructure attainment of the district, may be expensive. While the districts already perform data collection, the specific and technical nature of the data needed for a DDDM system to operate may require establishment of new data gathering procedures in addition to the existing ones and could add to the responsibilities of staff already tasked with data collection. As with any new system, uncertainty, inexperience, and resistance will limit the outcomes of the DDDM system and increase the initial cost to achieve its goal. However, with time, experience, expertise, and confidence, these barriers will be lessened and the true potential of DDDM can be achieved.

### **Observations Within the Selected School Districts**

As noted on page 10, the initial theory of the efficiency review of the selected districts was based on the following objective:

• Based on the results of the comprehensive efficiency review, identify best practices that are exhibited by districts with both low support expenditures and high academic performance in order to determine what actions or efforts (i. e., shared service arrangements or other efficiency efforts) these districts have implemented that could be implemented by other districts with reasonable expectation of similar results.

However, because PEER did not observe specific efficiency drivers that could be utilized to produce a compilation of best practices, PEER reframed the theory of the review to analyze the observations within the selected districts based on both the environment within the districts and whether the necessary components of a data-driven decision model were present.

In this chapter, PEER answered the following question:

• What observations were noted for each functional area within the audit protocol?

#### What observations were noted for each functional area within the audit protocol?

PEER reviewed district leadership and organization, financial management, human resources, purchasing and warehousing, educational service delivery, transportation, facilities, food service, and information technology to identify efficiency drivers. While overall PEER could not identify specific best practices based on the observations within the selected districts, PEER did note efficiency elements that could be incorporated into a data-driven decisionmaking process as well as deficiency areas in need of a disciplined approach to making decisions.

> As noted on page 2, PEER identified nine functional areas in order to collect data about school district operations for efficiency review. The following sections describe the observations noted during the course of the efficiency reviews for the selected school districts based on their respective functional areas in terms of how efficiency elements could be incorporated into a data-driven decisionmaking process and general strengths and weaknesses within the district environments.

#### **District Leadership and Financial Management**

District leadership and organization affect the operation of all functions. Efficiency decisions are a reflection of a district's leadership and financial management. These decisions need to be based on data, should be documented (for future reference or for third-party review), should be critical parts of the

#### district's planning process, and should be made in a disciplined manner in order to achieve the desired balance of efficiency and quality as determined by the district's needs.

The two primary functional areas that affect all operations of a school district are district leadership and financial management. As discussed on page 11, PEER notes that a disciplined approach to make informed decisions is necessary to identify the needs of the district so that cost savings can be effectively redirected into an area that will improve the district's overall efficiency. Any cost savings that the district may yield from an efficiency gain in one functional area should be utilized in a manner that addresses the greatest identified need of the district (with supporting data), whether that be for a different program or purpose within the same functional area as the cost savings or another functional area.

Therefore, it is the responsibility of district leadership to identify such needs and how leadership manages its finances will help ensure that these needs are being met based on most efficient allocation of available resources.

#### District Leadership and Organization

In PEER's sample of school districts, district leadership universally reported gathering data elements to make decisions, but often how a district used information to reach a conclusion was not readily apparent to an external third party.

District policy and goals should drive all of the operations within a district. The school board of each district is responsible for establishing district policy. The board, typically in conjunction with the superintendent, establishes the goals for the school district. It is then the responsibility of the superintendent to handle the day-to-day administration of the district in accordance with these policies and goals. Several districts also had assistant superintendents who were responsible for handling specific functional areas or groups of functional areas. Decisions made at the district level are then implemented at the school level by the principals and their respective staffs.

Therefore, leadership is a critical component in driving efficiency because leaders should have the necessary data and information available to identify the needs and goals of the district, establish policy on how to achieve these goals most appropriately, and make well-informed decisions that can be implemented throughout the various levels within the district.

PEER initially sought to determine whether one particular organizational structure was more likely to yield a more efficient decisionmaking process. For example, board members and/or superintendents can be elected or appointed depending on the governing structure already established for the district. PEER observed no major distinction between the efficiency of districts with elected or appointed board members and superintendents.

Additionally, PEER sought to determine whether leadership utilized a disciplined approach to its decisionmaking processes. PEER interviewed the superintendents and assistant superintendents of all fourteen selected districts. District leadership universally reported gathering data elements to make decisions, but often how the district used information to reach a conclusion was not readily apparent to an external third party. For example, some districts anecdotally reported using cost-benefit analysis or comparing the cost prior to and after implementation of new programs; however, no documentation of the observed outcome of the cost-benefit analysis could be provided. As noted on page 17, there should be transparency in the district's decisionmaking process so that districts can be held accountable for how they allocate resources.

#### **Financial Management**

PEER observed that each school district had its own unique environment and that each of the selected districts approached financial management based on individual needs.

One goal of prudent financial management is to maximize how district leadership allocates its resources. School districts have three primary sources of revenue: state funds, local funds, and federal funds. These funding sources may increase or decrease annually depending on economic conditions beyond a school district's control. A school district's ability to raise additional revenue through a tax increase often proves to be unpopular with taxpayers and therefore school districts are reluctant to seek additional funding through this method. As a result, a district's financial managers must be prudent with expenditures to ensure that the educational goals of a district are funded to the greatest extent possible.

District administrators and financial personnel should conduct the district's financial business with a goal of expending public funds as effectively and efficiently as possible and maintain a system of monitoring expenditures. Given the variety of operating conditions and the wide range of student populations existing in districts throughout the state, a single set of financial standards or financial policies would not reasonably apply to all districts. However, regardless of district size, each district should operate from a budget so that expenditures can be monitored and evaluated throughout the year. Further, districts should maintain a reserve fund balance based on their identified needs to be prepared for a possible reduction in funding without severely impacting the district's educational operations.

PEER originally sought to identify best practices in how those districts with low support expenditures and high academic performance conducted their financial management. PEER

observed that each school district had its own unique environment and that each of the selected districts approached financial management based on individual needs. For example, some districts chose to budget by major functional object at the district level and some districts budgeted at the school level.

#### **Human Resources**

After review of the fourteen selected districts, PEER observed that districts rarely have a disciplined approach for data collection and formal application of data related to human resources issues. For example, PEER could not find evidence that service contracts were the most efficient or economical decision when utilized by the selected districts.

> Generally, seventy percent of a school district's budget will be spent on personnel and associated costs (i. e., salaries, insurance, and retirement). For such a large budget item, information relating to the planning and decisionmaking in the human resources area can offer districts options for how to accomplish the many goals of the district. For a compilation of spending by operational areas within the selected districts, see pages 62 through 82.

#### **Employment Data**

While the selected districts all noted that they prioritized personnel funding in their budgeting processes, they rarely tracked employee workload/production to determine when additional staff were warranted or whether personnel in the current positions were producing sufficiently based on district needs.

Measuring employee production levels is one of the most basic metrics of the human resources function. Establishing a baseline level of expected work to be performed by a particular position per work hour, day, or week informs the employer not only of the capability of the workforce and allows for more accurate time management practices, but also provides the employee with a benchmark to measure his or her own performance and clearly articulates the expected job performance at the given position. By tracking and recording this data, districts can more effectively analyze which positions are under- or over-staffed in the district and make corrections accordingly or identify specific duties that may require targeted training or equipment needs to increase production rates.

Additionally, from this data districts would be able to develop their own staffing formulas. These formulas, articulating expected production per labor unit per unit of time, could then be coupled with budgetary calculations to conduct a costbenefit analysis on the benefit derived from adding or subtracting employees. PEER is not suggesting that such formulas or metrics should be the sole deciding factor in human resources reasoning, but rather that such measures could be used to help make more informed decisions about when additional staffing is needed, thus allowing the district to maximize its personnel resources.

In the review performed by PEER, such workload measures and employee staffing formulas were only seen in the food service operation and were based on suggested guidelines of the Mississippi Department of Education. After examination of food preparation time and food worker production, MDE suggests that school cafeterias should aim to achieve fourteen to eighteen meals per labor hour.

#### **Forecasting Future Needs**

The districts should forecast staffing trends and anticipate future staffing needs (e. g., knowing when senior employees will be retiring and taking away institutional knowledge, having reduction strategies in place for times of contraction in the district).

While ensuring that the day-to-day operations of the district are handled by current staff should be one of the main focuses of the human resources department, knowing the future needs of the schools and the district as a whole must also be considered in making employment decisions for the district. One of the more easily accomplished forecasting measures would be that of tracking employee succession. Tracking retirement eligibility and the retirement plans of individual employees would allow districts to prepare for the departure of senior personnel and their institutional knowledge. Such information would allow human resources departments to begin the search for hard-to-find skill sets well in advance of the departure of the current personnel, helping to alleviate disruptions in the transition period, or in the alternative, such tracking would allow for districts to develop mentorship or apprenticeship programs within the district to develop a talent pool to fill the vacated positions eventually.

Forecasting trends in the local community is also necessary for the human resources department to prepare for district needs. While not unique to human resources functioning, events such as the loss of the area's largest employer, exodus of citizens from the community, or an aging district service area all will have impacts on the expected number of positions that a school will need to fill. Staying abreast of this information and having plans for either expansion or reduction in the district workforce would allow the district to prepare and budget more effectively for such eventualities.

#### Service Contracts

While the selected districts often noted that service contracts were utilized to yield cost savings, PEER could not replicate these decisions to contract because the districts could not provide formal cost-benefit analyses when requested.

Prior to the adoption of any contract for a service, a district should first perform and document a cost-benefit analysis on

the impact of such a contract. This analysis should include a review of all associated costs of the function (e.g., time to complete, materials, personnel) to arrive at a true cost and then a comparison to the proposed private vendor rate. Further, non-monetary factors, such as quality of the service now compared to that of the proposed private vendor, loss of control over the contracted personnel, a need assessment, and impact on district morale should be incorporated into the discussion when making the decision to outsource a function.

### Districts should periodically assess service contracts to verify cost savings, quality, and need.

Should a district decide that outsourcing a specific function is in its best interest, follow-up on the performance of the contract is paramount to its successful implementation. At specified periods, district personnel should assess the advertised stipulations of the contract versus the actual performance on the contract through examination of performance goals and milestones. A district should ensure that the proposed or sought-after savings in either time or cost is actually gained in the operation of the contract. This review should also incorporate any changes in the level of quality of the service or any unforeseen consequences that have arisen as a result of the contract. Further, once a contract is awarded, districts must determine and monitor whether the contract as agreed upon is accomplishing the goal for which it was issued. Changes in regional demographics, employment opportunities, or district priorities may result in the contracted service no longer being needed or it could be determined that the function could more easily be accomplished by in-house personnel.

#### Purchasing and Warehousing

The selected districts often reported that they sought the best price when purchasing goods (e. g., by state purchase list or by competitive bid against the state purchase list as a benchmark). However, PEER observed that some critical information relating to district purchases and inventories is not being utilized to its fullest extent. For example, some districts collect and report equipment items in their inventory, but they do not analyze the inventory to forecast potential future needs or expenditures.

> Purchasing goods and services is one of the basic functions required of a school district to accomplish its mission. Districts should make all purchases with the goal of yielding the most return on investment and on a priority scale for the district's needs. To accomplish this goal, information relating to how, when, and what type of good or service to purchase should be maintained and regularly reviewed by the district to ensure that the district utilizes its resources to the fullest and to ensure the best product or service available.

The selected districts often noted that they sought the best price when purchasing goods for the district and the schools. One primary method the selected districts utilized was the state purchase list. The districts also noted that they utilized the state purchase list as a benchmark in order to seek competitive bids. Furthermore, PEER observed that a few districts noted recently utilizing online vendors to make bulk purchases (e. g., Amazon).

#### **District Purchase Information**

PEER observed that some critical information relating to district purchases and inventories was not being utilized to its fullest extent. For example, some districts collect and report equipment items in their inventory, but they do not analyze this inventory to forecast potential future needs or expenditures. Also, several districts noted that this information was not communicated beyond the person responsible for making the purchase; thus, information regarding district facilities, equipment, and durable goods is not conveyed to incoming personnel, creating a knowledge vacuum when senior personnel leave.

> In some districts, staff did not regularly record critical data regarding major district purchases and expenses. In one of the districts reviewed, due to high employee turnover and insufficient documentation in facility maintenance records, the incoming director did not know that some schools in the district no longer housed students (due to contraction in the district's student population), but were still on a normal utility cost payment cycle (minimum payments for services). It was not until almost a year at his position before he was made aware of this utility cost and contacted the local utility companies to arrange to have the buildings put on a reduced payment schedule.

> In another district, information such as equipment and material inventories was once kept, but the recording process had become lax toward the end of the previous director's tenure. When his replacement was hired, the majority of the first several months of his employment involved assessing what the district had in its possession. Information such as this is important not only for the district in cases in which new personnel are incoming, but also to reduce wasteful spending.

### Districts should periodically assess district expenditures to verify cost savings over time and to ensure that resources are being allocated appropriately.

Common to many districts was the lack of year-to-date expenditure reviews by the purchasing staff of the districts. A formal year-to-date review basically entails a snapshot of district expenditures from a month in one fiscal year to the following fiscal year and can be used to review and analyze any differences that might occur for trending data. This kind of review is helpful in examining costs over time to help the district identify replacement prioritization, expenditure areas that would benefit from modernization of equipment used to accomplish the task and the efficiencies that new products offer, but also in contract compliance and need verification.

In one of the districts reviewed, the district hired energy-saving consultants to assess and recommend energy-saving steps the district could take to reduce its energy consumption. However, the district did not examine the energy costs and usage of the district on a yearly basis to track the energy-saving efforts or to determine whether the suggestions had any impact on consumption.

#### **Group Purchasing**

Cooperative purchasing arrangements were primarily utilized within food service (i. e., the purchase of food commodities). The selected school districts reported that regional educational service agencies are not currently utilized for group purchasing.

PEER found that cooperative purchasing agreements (i. e., arrangements wherein multiple districts pool their resources to purchase goods or commodities at reduced rates) were not utilized by any of the districts other than in food service. While several districts said that at one time they had tried to enter into such arrangements for particular purchases, these districts found that the competing and varying interests of the districts limited their utility to the point that they were no longer seen as a viable option.

PEER would suggest that the districts, in order to increase their purchasing power, review group purchasing as an option for district purchases. As noted in PEER Report #578 (*Identifying Options for Improving the Efficiency of Mississippi's School Districts: Phase One*), one potential option for Mississippi's school districts to coordinate group purchasing is through the mechanism of regional educational service agencies (RESAs). However, none of the selected districts reported that they utilize RESAs for group purchasing.

#### **Educational Service Delivery**

# Of the fourteen districts sampled, those districts rated as A or B spent an average of \$6,672 per student for educational service delivery, while the districts rated as C, D, or F spent an average of \$9,539 per student for educational service delivery.

For the purposes of this report, PEER considered educational service delivery costs, including selected expenditures coded in MDE's data set as instructional or support services expenditures.

• *Instructional expenditures* included items coded by schools for instructional programs for pre-kindergarten, elementary, middle or junior high school, high school, summer school, and special programs such as gifted and special education. Additional expenditures under the instructional category for athletics, student activities, adult

education, and items coded as "Other" were excluded from instructional expenditures.

• *Support services* included student support (counseling, guidance, speech, audiology), instructional staff support (improvement of instruction, media services), district administration (considered by PEER to be board of education, superintendent, and other district-wide administration), office of the principal, and support services (business functions, operation and maintenance, transportation, planning, research, evaluation, and data processing).

Non-instructional services such as food service and other items such as sixteenth section administration, debt service, and facility acquisition and construction were not included by PEER as education service delivery expenditures and are therefore not included in the expenditures discussed in this section.

Please note that PEER determined the average expenditures for educational service delivery by dividing total expenditures by the total average daily membership for each group (schools rated A or B as one group and schools rated C, D, or F as the other group) rather than calculating an average of the individual averages of the schools in each group. Using total expenditures divided by total average daily membership for each group determines a weighted average expenditure per pupil that presents a more accurate picture of educational service delivery expenditures. Otherwise, a small school district such as Enterprise (with less than 1,000 students) would carry the same weight in average calculations as a large school district such as DeSoto County (that has over 32,000 students).

It should also be noted that any trends discussed only apply to the fourteen school districts selected for the efficiency review and do not necessarily reflect how educational service delivery costs per student compare to school district ratings for the state as a whole. Furthermore, given that educational service delivery includes expenditures from over one hundred accounts at each school, extensive study would be required to determine factors leading to the difference in expenditures.

Using FY 2013 expenditure data provided by MDE, PEER focused on expenditures in the instructional category and the support services category (as noted above) to determine educational service delivery expenditures for the fourteen districts sampled. Districts rated as C, D, or F spent an average of \$2,867 more per student on educational service delivery than districts rated as A or B. See Exhibit 2, page 36, for the educational service delivery cost per student for the fourteen sampled districts.

Educational service delivery costs per student ranged from \$6,102 per student in DeSoto County, an A district, to \$10,071 in Moss Point, a D district. Overall, within the fourteen selected districts, districts rated as an A or B spent less per student for educational service delivery than districts rated C or below.

# Exhibit 2: Educational Service Delivery Cost per Student for the Sampled School Districts for FY 2013, in Ascending Order by Educational Service Delivery Cost per Student

School District	Educational Service Delivery Cost per Student <sup>1</sup>	MDE District Letter Grade <sup>2</sup>
DeSoto County	\$6,102	А
George County	\$6,460	В
Itawamba County	\$6,703	В
Jones County	\$6,715	В
Enterprise	\$6,864	А
Rankin County	\$7,270	А
Lamar County	\$7,445	А
Jefferson County	\$8,185	F
Aberdeen	\$8,470	D
Hattiesburg	\$9,674	С
Amite County	\$9,762	D
Okolona	\$9,797	D
Tunica County	\$10,020	F
Moss Point	\$10,071	D

<sup>1</sup>Educational service delivery cost per student is based on FY 2013 expenditure data received from MDE for elementary, middle school, high school, other special programs, summer school students, student support services, staff support services, and district administration using ADM. Costs associated with athletics and student activities are excluded. See page 35 for PEER's method of determining average expenditures for the high- and low-performing district groups.

<sup>2</sup>MDE district letter grades are based on MDE's accountability formula as of the 2012-2013 school year.

SOURCE: PEER analysis of MDE financial data for FY 2013.

Of the fourteen districts sampled, districts rated as A or B spent an average of \$4,112 per student on instructional items compared to an average of \$5,220 per student expended by districts rated C, D, or F.

Of the fourteen districts sampled, districts rated as C, D, or F spent approximately 27% more on instructional items than districts rated as A or B. On average, districts rated C, D, or F spent \$1,108 more per student on instructional items than districts rated A or B. (See Exhibit 3, page 37.)

Instructional costs per student ranged from \$3,650 per student in DeSoto County, an A district, to \$5,618 in Tunica County, an F district. Overall, districts rated A or B spent less per student on instructional items than districts rated C or lower.

While additional study would be required to determine specific contributing factors leading to this range, PEER notes that a major component of instructional cost per student is teacher

salaries and fringe benefits. These items are in turn affected by local district salary supplements that are in addition to state-mandated salaries, the number of teachers receiving additional salary for higher degrees such as a master's degree, and the years of teaching experience, since teachers receive a small salary increase for each year of experience up to thirtyfive years of experience.

Exhibit 3: Instructional Cost per Student for the Sampled School Districts for FY 2013,	
in Ascending Order by Instructional Cost per Student	

School District	Instructional Cost per Student <sup>1</sup>	MDE District Letter Grade <sup>2</sup>
DeSoto County	\$3,650	А
George County	\$4,217	В
Itawamba County	\$4,386	В
Jones County	\$4,438	В
Rankin County	\$4,461	А
Lamar County	\$4,509	А
Enterprise	\$4,548	А
Aberdeen	\$4,640	D
Jefferson County	\$4,769	F
Moss Point	\$4,896	D
Hattiesburg	\$5,370	С
Okolona	\$5,564	D
Amite County	\$5,598	D
Tunica County	\$5,618	F

<sup>1</sup>Instructional cost per student is based on FY 2013 expenditure data received from MDE for elementary, middle school, high school, other special programs, and summer school students using ADM. This instructional cost per student also excludes costs associated with athletics and student activities. See page 35 for PEER's method of determining average expenditures for the high- and lowperforming district groups.

<sup>2</sup>MDE district letter grades are based on MDE's accountability formula as of the 2012-2013 school year.

SOURCE: PEER analysis of MDE financial data for FY 2013.

Of the fourteen districts sampled, districts rated as A or B spent an average of \$2,560 per student on support services compared to an average of \$4,319 per student expended by districts rated C, D, or F.

Of the fourteen districts sampled, districts rated as C, D, or F spent approximately 69% more on support services than districts rated as A or B. On average, districts rated C, D, or F spent \$1,759 more per student on support services than districts rated A or B. (See Exhibit 4, page 38.)

Support services costs per student ranged from \$2,242 per student in George County, a B district, to \$5,174 in Moss Point, a D district. Overall, districts rated A or B spent less on support services than districts rated C, D, or F. Within the category of support services, a wide range of expenditures existed. For example, Okolona spent \$1,446 per student on instructional staff support while Enterprise spent \$137 per student in the same category. District-wide administration ranged from \$676 in Aberdeen to \$113 in Jones County.

School District	Support Services per Student <sup>1</sup>	MDE District Letter Grade <sup>2</sup>
George County	\$2,242	В
Jones County	\$2,278	В
Enterprise	\$2,317	А
Itawamba County	\$2,318	В
DeSoto County	\$2,452	А
Rankin County	\$2,809	А
Lamar County	\$2,936	А
Jefferson County	\$3,416	F
Aberdeen	\$3,830	D
Amite County	\$4,165	D
Okolona	\$4,233	D
Hattiesburg	\$4,305	С
Tunica County	\$4,402	F
Moss Point	\$5,174	D

### Exhibit 4: Support Services Cost per Student for the Sampled School Districts for FY 2013, in Ascending Order by Support Services Cost per Student

<sup>1</sup>Support services cost per student is based on FY 2013 expenditure data received from MDE and includes student support for counseling, guidance, speech, audiology, and instructional staff support, district-wide administration, office of the principal, and other support services such as business, operation and maintenance, transportation, and data processing. See page 35 for PEER's method of determining average expenditures for the high- and low-performing district groups.

<sup>2</sup>MDE district letter grades are based on MDE's accountability formula as of 2012-2013 school year.

SOURCE: PEER analysis of MDE financial data for FY 2013.

#### Facilities

All of the selected districts collect and track data to some degree regarding facilities (e. g., square footage, age of buildings, custodial staffing). However, it was not readily apparent for most of the selected districts how this data was utilized.

The initial purpose of looking for efficiency best practices within facilities was to identify trends regarding how the needs of the facilities were being met, such as the condition of the buildings themselves (e. g., total square footage, cleanable square footage), maintenance of the facilities (e. g., building age, custodial staffing, preventative maintenance plan), and whether the districts were maintaining a safe and efficient environment (e. g., building capacity, number of portable buildings, utility costs, energy management plans).

#### Square Footage

MDE maintains square footage data for each facility in each school district. While the districts track this data, none of the districts utilized the data to determine the cleanable square footage that could be useful in determining custodial staffing levels.

> Knowing the total square footage of its buildings is important for district leadership to be able to utilize and assign resources in terms of budgeting for anticipated facility and maintenance needs. Most of the districts maintained their total square footage data per facility in the form of a building inventory document. Furthermore, MDE maintained the total square footage of each facility in each school district broken out by heated and non-heated space.

> While the districts track and maintain general square footage data, none of the selected districts documented or reported utilizing this data to identify needs within the district. For example, none of the districts maintained the cleanable square footage of facilities. Maintaining data on cleanable square footage is one example of a metric that districts could track in order to establish a staffing standard for custodians (e. g., one custodian per x amount of cleanable square footage) in order to control and predict this aspect of costs.

#### **Custodial Staffing**

While some districts reported that contracting out custodial services versus keeping the function in-house was more efficient, the districts could not provide documentation that reflected whether they had conducted a formal cost-benefit analysis regarding which method would be more cost-efficient based on needs.

Maintaining and evaluating data on custodial staffing options is important for a district in order to make efficient decisions regarding whether to contract out the custodial function or staff it in-house.

Half of the selected districts PEER reviewed maintained their custodial staffs in-house, while the remaining districts either had contractual custodial staff or a mix of in-house and contractual. While districts provided varying anecdotal responses regarding which methods were more or less efficient, PEER did not observe which method was more or less efficient. Furthermore, PEER noted that while some district staffs reported that they had explored the costs of contracting this function versus keeping it in-house, they did not provide documentation that reflected whether the district had conducted a formal cost-benefit analysis regarding which method would be more cost efficient for the district based on its needs.

#### **Building Age**

Even though most of the selected districts track the ages of their buildings, most of the districts reported that they did not have a formal preventative maintenance plan in place that would allow the districts to establish facility priorities and anticipate potential future maintenance expenditures.

> Tracking the ages of a district's buildings is important because this data can potentially be used to conduct an analysis on which buildings might have higher maintenance and utility costs and also to know when to plan building replacements. Such analysis would allow the districts to control and predict related costs in the budgeting process.

Most of the selected districts PEER reviewed maintained the ages of their buildings in the form of a building inventory document. However, although such data was tracked, the districts did not indicate how they utilized this data. For example, this data could be a key indicator in developing a preventative maintenance plan.

Having a preventative maintenance plan is important to gain an understanding of the preparedness of a district to address maintenance problems. Most of the selected districts reported that they did not have a formal preventative maintenance plan in place. Furthermore, there were varying means for budgeting for maintenance in the districts' budgets. For example, one district reported that it was about to earmark funds for facility maintenance in the district budget for the first time in the upcoming fiscal year (noting that previously, each school had maintained its own maintenance budget).

Having a formal preventative maintenance plan could potentially be more cost-effective and efficient by anticipating future expenditures rather than addressing issues on an asneeded basis. Having such a plan could also help districts in controlling costs by establishing a threshold regarding when to replace versus when to repair.

#### **Building Capacity**

Only one of the selected districts kept track of its building capacity in comparison to student enrollment. Tracking building capacity in comparison to enrollment trends is one key example of how districts could anticipate facility and maintenance needs.

Maintaining data on building capacity is important in determining to what extent districts are utilizing available facilities (e. g., under- or over-utilization in comparison to capacity standards). This capacity standard can serve as a threshold for districts in determining their available facility resources in comparison to trends in their enrollment (e. g., when to utilize a portable classroom versus when a proposal for a new school or facility is needed). Also, tracking building capacity allows districts to determine to what extent facilities are being utilized in order to complement the preventative maintenance plan and predict future maintenance expenditures. Only one of the selected districts kept track of its building capacity versus student enrollment in such a way that the information was readily available when requested.

#### Transportation

All of the selected districts maintained some form of fleet inventory, but most of the decisions regarding bus maintenance and replacement appeared to have been driven by the availability of funding from year to year rather than by a formal schedule. Also, while the selected districts often reported that they sought the best price when purchasing fuel (e.g., through Fuelman or by competitive bid), the districts had no comparative data that could distinguish the more efficient method. Finally, while multiple districts reported that they had access to a routing and scheduling software program, the program did not interface with the districts' student information databases.

MISS. CODE ANN. Section 37-41-3 (1972) requires school districts to provide transportation to all students who live one mile or more from the school that they attend. A district may operate the transportation service itself or it may contract with another entity to provide the service for its students.

The initial purpose of looking for efficiency best practices within transportation was to identify trends in how the needs of the districts were being met in fleet management (e. g., inventory and preventative maintenance), fuel management, and scheduling and routing.

#### **Fleet Management**

Overall, in the selected districts, fleet management appeared largely driven by the availability of funds from year to year, with no real formal or disciplined approach. Only one of the selected districts had a formally documented preventative maintenance plan for its transportation fleet.

> All of the districts maintained some form of fleet inventory record in order to track data about their buses. Such data can be used to inform bus replacement schedules, estimate repair costs, and estimate fuel costs for each bus and the fleet as a whole. While the transportation departments of all districts reviewed by PEER maintained fleet inventory records, these records varied greatly in terms of what data was tracked and how they were utilized. Therefore, PEER could not distinguish among the selected districts as to which fleet management process might be more or less efficient.

> Districts' fleet inventory records should contain the data necessary for tracking bus replacement and maintenance. For example, districts that track purchase price, estimated replacement cost, and estimated useful life might more accurately forecast when bus replacement will be necessary.

Fuel use and annual mileage data can be used to identify buses with high rates of fuel consumption. Districts that track the age, mileage, and/or condition of vehicles can more accurately estimate future maintenance costs. The exact data tracked may vary depending on each district's needs and goals.

One key reason for tracking data in a fleet inventory record is to develop a formal preventative maintenance plan. A preventative maintenance plan requires systematic inspection, detection, correction, and prevention of problems in vehicles and equipment before they become actual or major faults. While all districts PEER reviewed anecdotally reported preventative maintenance and inspection of buses, only one of the selected districts had a formally documented preventative maintenance plan. Although most districts did not report having formal preventative maintenance plans, they reported complying with the bus fleet inspection schedule established by MDE's Department of Safe and Orderly Schools.

Regarding bus replacement, some districts reported using replacement schedules, while other districts reported replacing buses as needed. No clear distinction could be made on what schedule or replacement plan was most efficient, with several districts noting that a ten-year cycle would be an ideal schedule. For example, one district reported that it replaced enough buses to keep the average age of the transportation fleet between twelve and fifteen years old.

Overall, the selected districts' fleet management appeared largely driven by the availability of funds from year to year, with no real formal or disciplined approach. Quantifying the cost of repair on buses past their useful life in comparison to purchasing new buses could help leadership invest in the most cost-effective improvements.

One of the sampled districts has outsourced transportation. With this arrangement, the contractor purchases and maintains buses for the school. The contract provides for the company to slowly replace all buses owned by the district with buses owned by the company so that the district does not plan to replace any buses.

#### **Fuel Management**

All of the selected districts reported that they sought the best prices when purchasing fuel (e. g., by Fuelman or competitive bidding), but no comparative data (e. g., documented cost-benefit analysis) was available that could distinguish which method was more efficient.

The selected districts acquired fuel either by purchasing through Fuelman, by private bid (on a weekly, monthly, or daily basis), or by private bid on percentage or amount over market price. Most districts seemed to continue whichever method had previously been implemented. None of the selected districts could provide evidence of a cost-benefit analysis regarding the method that was the most cost-effective approach or why the decision was made to implement the method chosen.

Most of the districts that utilized Fuelman cited that they used this method because of the availability of detailed reports of fuel usage and not having to maintain tanks or private pumps. Districts that have private pumps either utilize a competitive bid on fuel or purchase fuel through bids for a set percentage over cost.

#### Scheduling and Routing

While multiple districts reported that they had access to a routing and scheduling software program designed to establish the most efficient routes, the program did not interface with their student information databases. Also, while districts often noted varying reasons for how or why they route buses, no disciplined analyses of data to replicate such decisions were provided.

PEER observed two methods for scheduling and routing within the selected districts: using scheduling and routing software or mapping routes manually. About half of the selected districts reported using scheduling and routing software called Transfinder. The software is designed to plot the most efficient route based on the location of students in the district as entered into the software.

One frequently reported issue by the districts is that this software does not communicate and interface with the districts' student information databases. These districts noted that in order to utilize Transfinder, they would have to enter the student information into their normal operational database and then re-enter this same information into Transfinder. Many of these districts that utilize the software noted that this duplicative data entry process either required additional temporary workers to be hired to enter the data or that fulltime staff were hired solely for data entry purposes.

Another issue reported by the districts was that this software generates routes based on the location of students entered into the system and not on the students who actually ride the bus. This software appeared to be the most helpful to those selected districts with high population growth, large transient populations, or very large transportation systems.

The remaining districts manually mapped their bus routes. Of these districts, many noted that they inherited these routes from previous transportation staff and only made changes as needed. None of the districts appeared to review these manually mapped routes for efficiency. However, one district had placed a request for bids for an evaluation of routes by an external third party.

Overall, a meaningful comparison between routing methods could not be performed because districts do not collect and document data supporting routing decisions. For example, some districts reported a need to run two routes through the same area for elementary/middle school students and for high school students to decrease behavioral problems. Running two routes increases mileage and transportation costs. Districts did not report data on the number of behavioral incidents before and after using two routes.

Some districts have more students than bus capacity and thus the districts run two or three routes to compensate for a smaller bus fleet. No comparison between the cost to run extra routes and the cost for more buses was reported. Districts should collect and document data to support these managerial choices so that the transportation staff can evaluate the effectiveness of its decisions.

#### **Food Service**

Food service is the only functional area within the districts with a separate source of revenue. It should be financially independent from the district by reducing costs associated with personnel, inventory, and equipment and facilities.

The food service functional area varied from the others because it aims to be a break-even operation. While the other functional areas all rely primarily on the district's budget, the food service functions operate not only from the district's annual operating budget, but also by federal assistance and revenues received from students for meal participation. Both the federal government and the Mississippi Department of Education heavily regulate aspects of the food service function within the districts.

Because this functional area varied from the others, PEER examined the food service function to identify efficiency best practices the selected districts used to keep food service financially independent (e. g., federal assistance, MDE assistance, personnel, food costs, and equipment and facilities).

#### **Federal Assistance**

Districts receive substantial federal assistance to provide food service efficiently.

Because food service is more regulated than the other functional areas, primarily because of federal nutritional requirements, several United States Department of Agriculture (USDA) programs are available to the districts with the goals of providing meals that are both nutritious and cost-effective. Some of the primary federal programs that provide assistance include:

• *National School Lunch Program*--a federal meal program that provides free or reduced cost meals to qualifying students. The USDA provides reimbursements for each eligible meal served. For example, in the 2014-2015 school year, the districts received \$2.93 per meal reimbursement for free lunch, \$2.53 per meal reimbursement for reduced

price lunches, and \$0.28 per meal reimbursement for paid lunches.

- *School Breakfast Program*--a USDA meal reimbursement program similar to the National School Lunch Program, but it is based on the number of breakfast meals served.
- *Community eligibility provision* (CEP)--offers additional federal reimbursement to districts with high percentages of students qualifying for free and reduced priced lunches. CEP offers federal reimbursement based on information from other programs such as Supplemental Nutrition Assistance Program (SNAP) and the Temporary Assistance Program for Needy Families (TANF).
- USDA Foods (previously called USDA Commodities)--is a program whereby foods are purchased by USDA in bulk and then provided to districts in exchange for the payment of small administrative, storage, delivery and processing fees. These foods vary in terms of what USDA purchases (i. e., seasonal vegetables), but the advantage to the districts is that these foods are often below market price and the districts often only pay the transportation or warehousing costs and not the actual costs to obtain the food.

A district's eligibility or participation in these various programs influences how well the district is able to work toward an independent operation for the food service function.

#### **MDE** Assistance

Districts receive substantial state assistance to provide food service efficiently.

In addition to the federal programs available to the districts, MDE has developed a compilation of recipes compliant with federal nutritional requirements to assist the districts. These recipes are included in a software package available to all districts in the state. The software can also be used for meal planning and purchasing by food service. All districts reviewed by PEER used the software for these purposes.

MDE has also helped to establish a shared service arrangement for cooperative purchasing in order to reduce costs. Districts can purchase food, spices, paper supplies, etc. Participation is not mandatory, but all districts reviewed by PEER participated in cooperative purchasing. According to MDE's Office of Child Nutrition, the only districts in the state that do not participate in cooperative purchasing are Biloxi Public School District and Jackson Public School District. However, since those districts were not included in the fourteen selected districts in PEER's sample, no information was obtained on why those districts chose not to participate in the program.

As noted previously, MDE recommends that each food service employee should produce between fourteen and sixteen meals per labor hour (MPLH).<sup>4</sup> MPLH is an industry standard that measures employee productivity by averaging the number of meals produced per hour by each employee.

#### **Operating Fund**

Food service is the only school function with a separate revenue stream that can operate as an independent enterprise. The food service operations of six of the fourteen districts reviewed by PEER operated at a loss during the 2012-2013 school year.

Food service is the only school function with a separate revenue stream. It can potentially operate as an independent enterprise without additional revenue from the district. Federal regulations require that money for food service be kept in a separate fund. A district can put money into the food service fund, but a district cannot take money out of the fund for any purpose not related to food service.

The goal of a separate food service operating fund is to have a sufficient balance available should a district operate at a loss for a given period. For example, of the fourteen selected districts PEER reviewed, the food service operations of six of these districts operated at a loss during the 2012-2013 school year. However, the districts that operated at a loss all had sufficient money in the food service reserve balance to cover the loss. This food service operating fund may also be used for capital improvements to equipment and facilities.

MDE monitors the food service operation within the districts by using total expenditures and total revenues to determine whether a district operates at a profit or at a loss. While MDE's cost analysis may prove a useful tool for food service, often this is tracked in a manner that does not take into account onetime purchases and could potentially skew the true day-to-day operations of the function.

#### Personnel

### MDE recommends that food service employees produce fourteen to sixteen meals per labor hour. All districts within this range operated at a profit.

The largest expense of food service operations within the districts is personnel. Therefore, it is important to monitor and track employee productivity when focusing on efficiency. While most of the selected districts reported using productivity data to control personnel costs, a few of the districts reported that they do not apply industry productivity standards to their staff.

PEER observed that the food service function of every selected district that operated at a loss had not complied with MDE's

<sup>&</sup>lt;sup>4</sup>According to MDE staff, the department commissioned a study by Food Services Operational Professionals approximately thirty years ago to calculate the meals per labor hour recommendation.

recommended range of MPLH. While PEER notes that this adherence to this performance measure alone is not enough to determine whether a food service function operates at a profit or a loss, it does merit further consideration by districts that opt not to adhere to MDE's recommendation.

#### Food Costs

Districts reduce food costs through federal assistance, cooperative purchasing of inventory, and increasing student participation in the food service program.

The second largest expense in food service is inventory costs. Food service staff aim to keep the costs of food low by using the state's shared service arrangement for cooperative purchasing. All districts reviewed by PEER used the cooperative purchasing system. Also, all of the selected districts noted that they utilized the USDA foods program.

Another way to reduce food costs is by increasing student participation. In very general terms, those districts with a higher percentage of students receiving free and reduced lunches had higher participation rates. All of the selected districts noted that they focus on increasing participation. For example, several districts allowed students to eat breakfast in their classrooms in order to encourage more students to eat breakfast at the school through their meal program.

Even with each of the selected districts reporting that they work to increase participation, PEER observed that some of the selected districts' food service programs that had high participation rates still operated at a loss. Therefore, participation rates alone cannot be the sole efficiency driver for the food service operation.

#### **Equipment and Facilities**

Equipment and facilities improvements may be required by district needs or by new federal or state regulations.

The third largest expense to districts food service is equipment and facility improvements. Equipment and facility costs may be required by need or by new federal or state regulations. For example, federal and state nutritional guidelines require all districts to switch from using fryers to using combination ovens or steamer ovens in the food preparation process. Combination ovens use both dry heat and steam to cook food on high heat without burning or drying out meals. While these ovens may serve as a quick way to prepare healthier meals for students, this conversion requires districts to make major purchases that can affect the food service fund balance.

PEER asked questions in the selected districts regarding the age and condition of food service facilities and equipment. While several of the districts reported a need for facility or equipment upgrades, only one district reported that it was developing an equipment maintenance plan and equipment replacement schedule.

#### Information Technology

PEER observed that the selected districts collected a large amount of data regarding information technology costs or needs, but that often this data was not compiled and analyzed in a way that would take into account the true cost of ownership for information technology equipment, was not developed into formal equipment replacement schedules, nor did the data enable the district's leadership to establish an accurate picture of the information technology needs within the district.

PEER examined the information technology actions of the districts because of the increasing importance of the function not only for educating students for the future, but also for the implementing new testing requirements mandated by curriculum changes. Districts should make technology decisions based on the best available data and with an eye toward the future needs of the district. Further, districts should be aware of the true costs of technology decisions, the replacement costs of these decisions, and how the districts make use of information technology data.

#### True Cost of Ownership

Most of the selected districts focused primarily on the initial costs of information technology equipment and did not plan for the associated costs to install, upgrade, and maintain the equipment.

When recording the value of information technology equipment and its cost, very few of the selected districts included in their records the true cost to own a particular piece of equipment. The true cost of any information technology purchase, as well as any other purchase of the district, includes more than the retail price for the item. Much like the purchase and construction of a new building or the acquisition of a new bus for the district, information technology equipment incurs costs after the initial purchase. Additional expenses such as the time and staff power needed to install, upgrade, and maintain the equipment, power use rates over the life of the equipment, software purchases and patches, specialized training for users of the equipment, and replacement costs are just some of the items that should be considered and included in the true cost of ownership.

Many of the districts reviewed by PEER exhibited a tendency to fund information technology budgets at levels to maintain existing equipment and to include a supplement or expansion to the budget only in years when large purchases are made.

While PEER recognizes the limitations of district budgets and funding, such is a haphazard approach to maintaining and developing an information technology inventory. By allocating funds to the information technology budget based on an informed calculation of maintenance costs, replacement costs, upgrading costs, and new purchase costs, information technology directors could plan for the future needs of the district and what equipment that will entail as well as providing the opportunity to replace equipment as needed.

#### **Equipment Replacement Schedules**

While the selected districts noted that they tracked equipment age and had ideal equipment life spans in mind, most of the districts did not have a formal replacement schedule in place for information technology; rather, the districts only made equipment replacements or upgrades when funds allowed.

> The lack of adherence to an information technology equipment replacement schedule was one element common to nearly all the districts reviewed by PEER. While districts tracked the age of their equipment and knew when they would like to replace it, limitations on the budget and the effort it would take to make and integrate these purchases into the district limited when purchases could occur.

However, in several districts PEER observed equipment being used with an age that was more than double its expected useful life, potentially placing extreme burdens in time and money on several districts' staffs to maintain these systems. Rather than patching the equipment together until the next purchasing round, the districts should use cost-benefit analysis techniques to determine when a machine has become too expensive for the district not to replace. Additionally, incorporating the replacement cost of the equipment into the budget can reduce the one-time financial impact of large purchases and the time it takes to bring those systems online.

One method for establishing a formal equipment replacement schedule is to conduct an assessment of information technology needs within the district. Many of the selected districts do not perform and document a needs assessment of the types of equipment and software needed to fulfill the specific tasks of the district. For example, a complete Microsoft Office package may be imperative for district and school administrative staff to accomplish its mission, but for students in the classroom only a portion of this software may be needed (e. g., Word or Excel). Districts should assess what is expected of each user group in the district and tailor purchases specifically to meet those needs.

Such needs assessments should also be conducted when considering equipment costs when other funding sources such as grants become available to a district. Districts must always be aware that this is typically one-time money and that the grant may not always be available in the future. For example, some of the districts PEER observed made large purchases of computers with grant money several years in the past. Now these machines are nearing the end of their life cycles and the grant is no longer available. The burden is now on the districts to replace these machines with their own money, in addition to the new computers they must purchase to meet any additional needs in the district. Districts must be aware of what types of information technology they can afford to maintain and at what levels.

#### Information Technology Data

Often the information technology data collected by the selected districts was not presented in a formal report that could allow district leadership to review and make decisions based on information technology needs.

> While all the districts maintained systems for tracking both maintenance issues with information technology equipment and usage of equipment and software, this information was rarely used. Most districts reported that the information gathered in these systems was only acted upon when either a teacher or administrator specifically requested or noticed issues with the equipment or system (e. g., abuse of internet, breaking through or around the firewall, machines not being utilized in the classroom, not using software).

If this information were compiled regularly for district leadership to review, districts could transition from being reactive with this information to a more proactive stance. This information could be utilized in a needs assessment for software and equipment and could inform the district's leadership of which technology directions would be the ones most likely to offer the most benefit to their district. This information could offer insight into trouble areas for the district that might need additional resources allocated to alleviate problem areas and assist leadership in establishing goals and priorities for the information technology department.

### **Opportunities for Data-Driven Decisionmaking**

Based on observations within the fourteen selected school districts, PEER sought to identify broad operational areas in which districts could yield potential efficiency improvements by utilizing a disciplined approach such as the data-driven decisionmaking model.

In this chapter, PEER answered the following questions:

- What steps can districts take toward achieving efficiency improvement and data-driven decisionmaking?
- What is an example of how a data-driven decisionmaking process would work in a school district?
- How can districts report and present data in a way that tracks their progress toward their respective goals?

What steps can districts take toward achieving efficiency improvements and data-

#### driven decisionmaking?

PEER proposes that districts move to a disciplined approach of a data-driven decisionmaking process implemented through outsourcing, shared services, strategic human resources management, and strategic facilities and equipment management.

PEER proposes that districts move to a disciplined approach of leadership and financial management through a data-driven decisionmaking process. This chapter includes a discussion of broad principles and criteria by functional area that all districts should implement to work toward a data-driven decisionmaking process:

- outsourcing;
- shared services;
- strategic human resources management; and,
- strategic facilities and equipment management.

This chapter also includes an example of how this process could work within a district.

#### Outsourcing

By utilizing performance-based contracting and make-versus-buy analysis techniques, districts could improve the efficiency of their outsourced contracts and increase the return on investment of such contracts.

Districts could achieve efficiency improvements by incorporating data-driven decisionmaking into their outsourcing activities through performance-based contracting and make-versus-buy analysis.

#### **Performance-Based Contracting**

A performance-based contract should contain performance goals for desired results, measurable performance standards, a quality assurance plan for the contractor's performance, and incentives to achieve the desired outcome.

As explained in PEER Report #539, *Opportunities for Improving the Accountability of the Mississippi Department of Education,* according to the U. S. Government Accountability Office (GAO), performance-based contracts clearly spell out the desired end result expected of the contractor, while the manner in which the work is to be performed is left up to the contractor.

The Office of Management and Budget (OMB) and the Council for Excellence in Government offer an explanation of the difference among the common terms *inputs, outputs,* and *outcomes*.

- *inputs*: resources used to produce outputs and outcomes (e. g., funding, staffing);
- *outputs*: the goods and services produced by a program or organization (e. g., the number of assessments administered); and,
- *outcomes*: describe the intended result or consequence that will occur from carrying out a program or activity (e. g., percentage of graduating students who were placed in military, post-secondary education, or employment).

The following paragraphs describe the key elements that can be applied to any performance-based contract.

The first key element of a performance-based contract is that it must describe the requirements in terms of results required rather than the methods of performance of the work. Districts should structure the purpose and performance work statements in contracts around what is to be performed rather than how to perform it.

The second key element of a performance-based contract is that it includes measurable performance standards. The standards should be established in terms of quality, timeliness, and any other applicable requirements or desired outcomes. A district should ensure that each standard is necessary, carefully chosen, and not impede the contractor's ability to achieve the desired result. If these factors are not taken into consideration, the result could be unnecessarily increased contract costs to both the contractor and the district. Districts should also consider that the standards are not set so high that they could drive up the cost of service or so low that they might act as a disincentive to good contract performance.

The third key element of a performance-based contract focuses on how the contractor's performance will be evaluated through a formal quality assurance plan. A good quality assurance plan should include a surveillance schedule and clearly state the surveillance methods that will be utilized. The plan should focus on the quality, quantity, and timeliness of the overall performance to be delivered by the contractor and not on the steps required or methods used to produce the service.

The fourth key element of a performance-based contract focuses on utilizing incentives, both positive and negative if applicable, to the desired outcome or service to be achieved. A district should use incentives if such will yield better quality performance. These incentives should apply to the most important aspects of the work, rather than to every individual task implemented to achieve the desired outcome.

An example of how school districts could achieve the principles of performance-based contracting is notable in the functional area of purchasing and warehousing, Specifically, the purchasing and warehousing function should re-examine its contract(s) after a set period, which should include an assessment of deliverables stated in the contract(s) in comparison to the actual performance by the vendor and what the actual outcomes of the contract were and whether they accomplished the goals of the district.

#### Make-versus-Buy Analysis

To conduct a make-versus-buy analysis, a district should examine its own costs to perform a specific task and compare that cost to the proposed contractor's price to arrive at the most economical decision.

As noted in PEER Report #567, *Analysis of the Potential for Further Privatization of Mississippi's Child Support Enforcement Services*, according to an article adapted from a publication of the Government Finance Officers Association (GFOA), the cost component of a make-versus-buy analysis involves four basic steps:

- 1. *Define the service in terms of quantity and quality--*the government entity should clearly define what service is being considered for outsourcing. A vague or incorrect definition could result in an incorrect calculation of inhouse costs. This necessitates:
  - specifying the quality and quantity of service expected; and,
  - specifying expected output and outcomes.
- 2. Determine net present value of the in-house costs that would be saved or avoided by outsourcing-to do so:
  - calculate total government costs that would either be avoided or saved (either eliminated immediately or after a brief period of transition) over a multiyear period by outsourcing, including all direct and indirect costs.
- 3. Determine net present value of net costs of outsourcing the activity or service--calculate the total costs of outsourcing the service over a multi-year period,

including the contractor's bid price, the government's contract administration costs, and the government's transition costs. Subtract any new revenue resulting from outsourcing.

4. *Compare cost savings from outsourcing to the costs of outsourcing-*-calculate the difference between the costs saved by outsourcing a service and the costs incurred. If the costs saved are significantly greater than the costs incurred, then outsourcing might make financial sense.

In addition to the make-versus-buy example on pages 57 through 60, the districts could achieve the principles of the make-versus-buy analysis in areas such as educational service delivery by maintaining curriculum contracts and documenting the process of data-driven decisions regarding these contracts.

#### Shared Services

# Shared service arrangements could allow districts to pool both resources and expertise regarding a particular issue in order to maximize purchasing power and available resources to be mobilized in combating the issue.

Shared services is an organizational concept that provides for "the consolidation of administrative or support functions (such as human resources, finance, information technology and procurement) from several departments or districts into a single, stand-alone organizational entity whose only mission is to provide services as efficiently and effectively as possible."<sup>5</sup> Limited resources are combined into a single, separate entity, thereby freeing the individual districts or departments to focus on the essential functions and goals of the organization, as well as the customers who benefit from the provided services, instead of the administrative and support functions currently performed by each department.

A shared services organization can provide the district with a reduction in costs, "increased transparency of services and results, and improved accountability in serving citizens."<sup>6</sup>

For example, several districts might find it advantageous to combine the purchases of computers for the districts into one large order. By combining the purchases of several districts for items that are not routinely purchased every year, districts would be able to not only acquire the computers at the best available price as a result of the bulk of the order, but also to nominate specific personnel for the assignment of purchasing for the several districts, allowing other information technology workers to concentrate on the day-to-day operations of their own specific districts.

<sup>&</sup>lt;sup>5</sup>PEER Report #518, *Enterprise Mississippi: A Vision for State Government*, December 9, 2008. <sup>6</sup>Deloitte Consulting, LLC, *State of Illinois Savings Validation Results*, 2005, p. 1.

#### Strategic Human Resources Management

School districts' human resources personnel should keep vigil not only on developments affecting the future of the district, but also should monitor and reexamine the work done and the need for all district personnel.

School districts could take any of the following actions to ensure the maximum utilization of staffing positions in their respective districts:

- conduct long-range district organizational planning;
- recommend elimination of non-essential positions, and;
- recommend consolidation of positions and activities when duplication of functions is indicated.

Further, the districts should take advantage of ways to crosstrain and reallocate support positions across the district based on needs. Support positions are necessary to assist with administrative tasks such as answering the telephone; however, they do not directly contribute to improvement of instruction or use of data in decisionmaking. Therefore, the district should consider ways to provide efficiency in this area.

Some districts, schools, or functional areas need more administrative support staff than others. The number of support positions in a district, school, or functional area should reflect the level of routine administrative duties performed in that office. By having a high number of support staff, a district would have fewer financial resources to devote to other areas that more directly impact the education system. By having more support personnel in districts, schools, or functional areas where they might be underutilized, the district might be wasting an opportunity to place them in areas where they are needed and potentially wasting money hiring contract workers to serve in support roles. Allowing support staff mobility between schools or functional areas would give them opportunities to expand their knowledge and skill sets in other areas within the district.

For example, human resources professionals should examine clerical positions in the district to determine when most of their workload occurs. Should it be discovered that some clerical positions in the district see most or all of their work performed at the beginning and end of the school year, human resources personnel might need to assess whether the positions should be full-time or part-time.

#### **Strategic Facilities and Equipment Management**

### Districts should develop a comprehensive strategy to maintain and update/replace district infrastructure such as buildings, buses, and computers.

School districts substantially invest in infrastructure. Any entity, public or private, that has a significant investment in infrastructure typically adheres to a preventative maintenance plan in order to extend the useful life of its assets. Such a plan may be defined as maintaining equipment and facilities in satisfactory operating condition through the systematic inspection, detection, and correction of failures either before they occur or before they develop into major defects.

A formal preventative maintenance plan would allow the district to do the following:

- encourage frequent inspection of facilities and equipment based on objective criteria;
- describe routine scheduled maintenance;
- collect information necessary to identify maintenance needs, plan maintenance projects, set project priorities to target resources toward highest needs, and estimate costs;
- schedule a timeline for projects and prepare procedures for managing projects;
- develop a work order system and keep systematic maintenance records;
- ensure that maintenance employees have appropriate training to complete the tasks expected of them in a competent and safe manner;
- include appropriate maintenance employees in decisions on facility matters; and,
- still allow the district's staff to address day-to-day upkeep issues.

Furthermore, districts should develop a replacement schedule for all equipment and facilities based on the estimated remaining useful life of each item.

After allocating available resources to cover current expenses, additional funds should be designated to maintain the replacement schedule. This schedule should be designed to spread purchases out over several years.

For example, maintenance staff should determine the estimated remaining life of assets. If the district knows roof replacement will be needed in five years, then the district should allocate available resources over that period to cover the expenses when replacement is needed.

#### What is an example of how a data-driven decisionmaking process would work in a

#### school district?

PEER provides an example of application of the data-driven decisionmaking process to a school district's decision of whether to continue contracting out janitorial services.

The following represents a hypothetical application of the DDDM process to the contracting of janitorial services to a private firm by a school district and the benefits to cost ratio derived from it. The contracting of janitorial services affects not only the facility upkeep of the district, but also plays a role in the human resources decisionmaking process, district budget and financials, and ultimately in the quality of education delivered in the district. Gathering data and basing decisions on data should offer the district opportunities to not only increase the quality of janitorial services, but also to do so at the most economical level.

This hypothetical application of the DDDM to a school district's janitorial contract is meant to exemplify what might be expected in a DDDM process, rather than act as template. Further, the DDDM model is flexible in its application; the amount of time, energy, and money a district is willing to or can spend on the DDDM process will vary. As long as a district acts upon each step of the process, the DDDM model will function as designed. The level of detail that the district wishes to use is its own choice, but the greater the detail, the more likely that the model will be effective.

#### Step I: Types of Data to Gather

While it could be interpreted from the DDDM process chart on page 21 that districts should begin with data accumulation in a given functional area, this is not necessarily the case in all instances. In this hypothetical example, PEER assumes that the district has already contracted out its janitorial services to a private vendor. Thus the district has already made a decision, but has done so without the benefit of having first established baseline knowledge upon which to base future janitorial decisions. Rather than preventing the application of DDDM, this gives the district the opportunity to customize a datacollecting regimen specifically to the performance and quality of the private janitorial vendor. With such knowledge, district leadership can make sound decisions in the future about the janitorial contract and whether such a contract is the best option for the district.

When gathering data to examine the effectiveness, quality, and cost of the contracted janitorial service, district leaders should ask themselves a range of questions: what is expected of the service? what will its cost be? is this the best option for the district? Raw data that can be used to answer these questions is the crux of the data-gathering step and the more effort put into isolating and refining the types of questions that the districts wants answered, the more valuable the data will become in the decisionmaking process.

While not an exhaustive list, the following is a guide as to what type of data would be pertinent and helpful in measuring the success of a janitorial service.

- What is the total maintenance cost for the district? (input)
- How many total square feet are in the district that need custodial services? (input)
- What is the organizational structure of the custodial staff? (process)
- What services are currently provided in-house? (process)
- What is the current performance data? (e. g., amount of square feet cleaned in a given work day) (outcome)
- What have been the experiences of other districts? (satisfaction)
- What are the reviews of the potential contractors? (satisfaction)
- What is the total estimated cost to contract out?
- What is the estimated cost that could be avoided by contracting out?

#### Step II: Information to be Refined

Once the district has gathered raw data, it must then be transformed through analysis and summarization into some sort of usable form for the district. This step basically requires the district to distill the data it has, including any explanations or insights that might have been uncovered from examination, and couple it with an understanding of the current situation of the district and its goal.

For this example, information could include:

- What is the current maintenance cost per square foot?
- What is the total estimated cost to contract out (per square foot)?
- What is the net estimated cost of contracting out (per square foot)?
- What are the pros and cons of the current arrangement versus a change (e. g., loss of control over contracted personnel)?

• What are the school staffs' and students' satisfaction compared to expectations?

#### Step III: Actionable Knowledge

At this step in the process, the district has had the opportunity to examine the information gathered to establish a basic metric for which to measure the success of the janitorial contract. With concrete information, districts must now incorporate their own judgments into the equation to determine the merits of the contract. The following questions present the types of answers and information that must be arrived at for the district to make fully informed decisions and what actions to take next. Along with the questions, districts must also place a priority level that the janitorial services hold in the hierarchy of district needs.

- Is the current contractual structure preferred over another organizational structure (i. e., in-house)?
- Is the district satisfied with the current custodial performance?
- What factors are most important in making this decision? (e. g., performance, cost, structure)
- What are some possible solutions?

#### **Step IV: Types of Decisions**

In this example, the process reaches full circle with the opportunity for the district to reexamine the merits of the janitorial contract. After reviewing all the information and actionable knowledge gathered from the experiences with the program, districts should now decide to continue as is, amend, or abandon the contract based on available information sources. The information gathered should inform the district as to the accomplishments, limitations, and future needs of the district's janitorial services. Ultimately, the district should ask itself: based on the data, information, and knowledge from steps I through III, should the district continue with the contracted janitorial services as implemented now? Why or why not?

After a district makes a decision to act, the district should continue to gather and analyze data related to janitorial services in order to confirm and maintain the level of production that the district demands. Districts may go back and forth between the various steps multiple times before achieving actionable knowledge. For example, after analyzing and/or summarizing available data, districts might determine that a different type of data is required to access programs or goals. Similarly, the process should not end after a decision has been made. Decisions should be evaluated by data-driven decisionmaking to make sure that the district took the best course of action. Further, the districts need to document the decisions taken at each step for both the district's own future use or for review by independent parties.

#### How can districts report and present data in a way that tracks their progress toward

#### their respective goals ?

MDE should work with the districts and with legislative staff to identify the performance metrics that should be collected and reported for each administrative and support program in the districts' program inventories. Administrative and support programs and measures should be uniform from district to district, which would facilitate unit cost comparisons. Once these programs and associated performance metrics have been identified, MDE should establish a mechanism for capturing the data in a central database that is integrated with district expenditure data in order to facilitate data analysis. Further, once the program-based school district data collection and analysis system is fully operational, MDE should work with the districts to develop a data dashboard that reports efficiency metrics for each district in a format that is complementary to the No Child Left Behind district report cards for academic accountability.

Based on PEER's observations within the fourteen selected school districts, the districts collect a large amount of data within each of the functional areas chosen for efficiency review, but in many cases this data was not utilized to its fullest extent in regard to the analysis of efficiency (e. g., how or why decisions were made). Often this data was provided in a separate document or spreadsheet based on a single data point or metric specific to the functional area.

Through its current performance budgeting revitalization efforts, legislative staff, working with MDE and the state's public school districts, will develop a standard inventory of administrative and support programs and associated performance measures. The collection and analysis of this data through a central database maintained by MDE and linked to the department's detailed database of district expenditures will facilitate unit cost comparisons among the districts and the identification of districts with comparatively low unit costs for each administrative and support program. Because low unit costs do not necessarily reflect most efficient operations, MDE could study districts with low costs for each program to determine whether the low costs are the result of efficient practices (e.g., streamlined processes, most cost-efficient inputs) or are due to expenditures insufficient to achieve and sustain service quality (e.g., failure to maintain buildings in good condition).

Once the program inventories and performance metrics have been established and analyzed, MDE should work with the districts to identify the best way to compile and present large amounts of available data in such a way that staff can analyze longitudinal data to compare trends over time, identify opportunities and areas for improvement, and to help align strategic goals with management initiatives. Rather than listing individual data points, a dashboard would allow for a district to collaborate and analyze the data it already collects with the goal of making more well-informed decisions that focus on both academic performance and the efficiency of the district's operations. Some of the potential benefits of using a data dashboard include:

- presenting key performance indicators in an easy-tounderstand way that will potentially allow for faster decisionmaking that varying levels of staff will understand and therefore support the resulting decision;
- focusing on a consistent set of information and metrics so that the district personnel can work together toward common goals rather than making potentially fragmented decisions based on separate data sets;
- promoting transparency in the decisionmaking process, because if district staff have agreed on a consistent set of goals and metrics, then there is less opportunity to choose a specific data set that would potentially reflect an environment that might not necessarily be the case when taking into account all of the data elements or factors; and,
- tracking progress consistently over time, either by looking at how the district itself compared to a point in time (e. g., fall and spring semesters or one school year to another) or potentially how the district compared to another district within the state.

The districts already implement such a mechanism on the academic performance aspect of district operations through the district report cards required by No Child Left Behind. These report cards are designed so that similar information is captured, compiled, and reported for various academic performance metrics for each district (e.g., state accountability information, teacher quality, assessment participation rates). However, while these report cards can provide useful comparative information for the districts, they do not reflect how efficiently the districts are achieving their respective levels of performance. Therefore, the districts should develop such a mechanism that would complement the existing report cards with efficiency metrics (e.g., cost per student or cost per unit) so that a district can monitor and report on both the district's goals for academic performance as well as how efficiently the district is achieving those goals over time.

While these data dashboards would allow some form of comparison with other districts within the state, the dashboards should align with current initiatives at the state level such as performance budgeting revitalization and the Pew-MacArthur Results First Initiative (as discussed on pages 13 through 14). Ideally, the districts would work with the Mississippi Department of Education to establish a central framework for how this mechanism would capture and report efficiency metrics to achieve both local goals and support any existing or future statewide goals.

### Profiles of the Selected School Districts

In addition to the observations by functional areas for the selected districts as noted on pages 27 through 50, PEER sought to provide a snapshot of the environment for the selected districts. In doing so, PEER compiled information based on various data sources (e. g., Mississippi Department of Education, U. S. Bureau of the Census) in order to provide a profile page for each of the fourteen districts.

Regarding the selected districts and their respective profiles, PEER answered the following questions:

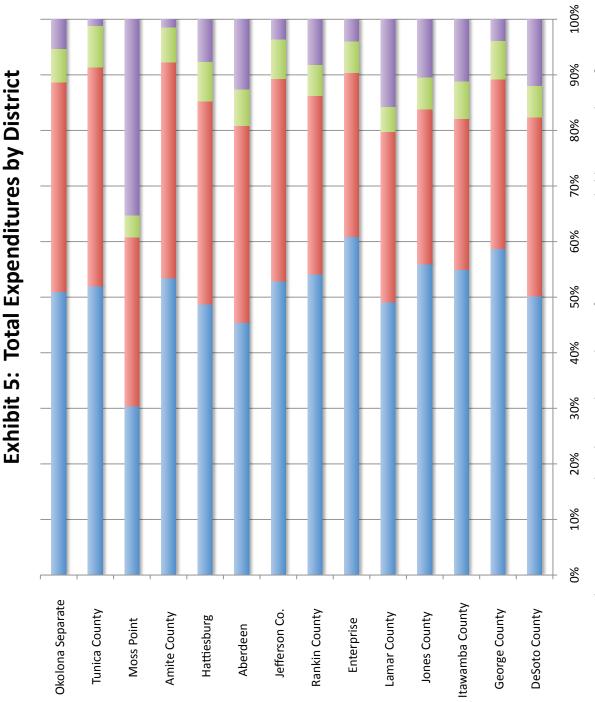
- What were the sampled school districts' total expenditures for FY 2013?
- How did the sampled school districts compare to each other in terms of "day-to-day" operations and spending?

#### What were the sampled school districts' total expenditures for FY 2013?

The largest expenditures for the sampled school districts included instruction and support in FY 2013.

PEER reviewed the FY 2013 expenditures reported by the school districts to the MDE. Excluding facility construction expenditures at the Moss Point district, instructional expenditures was the largest category of expenditures for the fourteen sampled districts. For the Itawamba County, Jones County, and Enterprise districts, instructional expenditures totals were over twice the amount of support services totals, the next largest category. For the remaining eleven districts sampled, support services expenditures ranged from 52% of instructional expenditures in the George County district to virtually equaling instructional expenditures in the Moss Point district.

See Exhibit 5, page 63.



Non-Instructional Services

Other

Support Services

Instruction

NOTE: These categories are based on total expenditure information as provided by MDE and vary from SOURCE: PEER analysis of FY 2013 school district expenditures as reported to MDE. the PEER categories discussed on pages 88 through 91.

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#### How did the sampled school districts compare to each other in terms of "day-to-day"

#### operations and spending?

PEER developed a profile for each of the selected districts in order to highlight some of the "day-to-day" operational expenditures (e. g., spending by operational area and cost measures relative to state median) and student performance (e. g., student performance on state assessments). The purpose of the profiles is to present efficiency and academic performance metrics in a manner that allows districts to compare trends and identify differences in view of possible improvements in operational spending.

> As noted previously, the purpose of this phase of the review was to identify best practices for improving efficiency with school districts based on the observations made in a sample of districts. One component of this was to establish a profile for each of the selected districts in order to conduct comparisons of trends and to allow other districts to identify differences that they might seek to explore self-improvement within a particular area or aspect of their operations.

> Using information provided by the Mississippi Department of Education (MDE), PEER compiled the data necessary to create a profile for each of the fourteen districts. These profiles may be found on pages 69 through 82. Also, PEER compared various cost measures for the selected districts in comparison to the state average (see the explanation of color coding for the cost measures relative to state averages on pages 65 through 66).

The profiles divide the information presented into operational expenditures and student performance. The section on operational expenditures reflects the economic efficiency of a district. The section on academic performance reflects student achievement.

A detailed description of the data used to create the profiles is in Appendix E, page 110.

#### **Operational Expenditures**

The operational expenditure section of the profile pages provides data on the day-to-day spending of each district. This section provides information on spending by operational area, cost measures relative to state averages, and per student spending by operational area. This data reflects the economic efficiency of each district.

#### Spending by Operational Area

The profiles chart expenditures in major district functional areas by the percentage of operational funds spent in each area.

School district expenditures were sorted into functional categories such as instruction for the purpose of measuring the operational efficiency of the district. With this goal in mind, a

pie chart of school district expenditures shows the following categories: instruction, administration, plant operations, food service, transportation, student support, and other expenditures.

These categories vary slightly from those used by MDE in its annual Superintendent's Report. Changes were made to remove non-classroom expenditures such as athletics from instructional spending. Central technology support services were also included under administration rather than treated as a separate category. Nonrevenue transactions were excluded from the pie chart in order to capture the total current operational expenditures.

Furthermore, the districts' total expenditures for the 2012-2013 school year were provided. For the purposes of the district profile pages, PEER sought to use expenditures that were more reflective of "day-to-day" operations of the districts. For example, the total expenditures for the Moss Point School District in FY 2013 showed approximately \$14 million for the construction of a new school facility. However, because this capital expenditure was a one-time expense, it was excluded from the operational spending profiles to reflect more consistent and predictable expenditures.

While PEER utilized the *Accounting Manual for Mississippi Public School Districts* to obtain function and object codes, because these expenditures are self-reported by the districts, there may be variations of function and object assignment between districts. Therefore, these operational spending charts should offer only a point of comparison between districts and may not represent actual expenditures.

#### Cost Measures Relative to State Averages

Performance measures may be used in budgeting, accountability review, and analysis to improve operations. The profiles present seven performance measures for non-instructional operational areas (administration, plant operations, food service, and transportation). District performance and state averages are presented to allow relative comparison.

The profiles present performance measures for administration, plant operations, food service, and transportation. These are major areas of non-instructional spending that were examined during PEER's efficiency review of the districts.

PEER applied a color-coding scheme to the cost measures for the selected districts in comparison to the state medians. These colors range from most efficient (green) to least efficient (red) for each of the selected districts' measures except for the cost per meal equivalent (as noted in Appendix E on page 110, because MDE provided this information only for the fourteen selected districts and not for all school districts, no relative comparison was performed for this particular metric).

In order to assign a particular color to a metric, PEER performed a quantile comparison regarding how the selected

district's performance measure compared to the state median for the same respective measure. This quantile comparison utilized the district's measures and then compared these measures to the state medians by assigning a relative ranking. This way districts can be grouped into five different relative efficiency categories as noted on the profile pages (most efficient, more efficient, comparable, less efficient, and least efficient). The median was utilized in this comparison in order to rank the selected districts based on how far away they were from the central tendency (comparable [or yellow on the profile pages]) of the data and to minimize the effect of extreme outliers. It should be noted that these colors do not necessarily define a district as being efficient, but they do allow a district to see how efficient it may be in comparison to other school districts within the state for a particular measure.

Performance measures for administration included cost per student and number of students per administrator. Average daily membership (ADM) was used to determine the number of students attending the district for the purposes of this review. ADM refers to the total enrollment of students in the district minus withdrawals, transfers, and expulsions averaged over the school year. Administrative expenditures (described on page 114) divided by ADM generated the cost per student performance measure.

ADM was also used to calculate the number of students per administrator. A description of administrative positions used is described on page 114.

Performance measures for plant operations include cost per square foot and square feet per student. Plant operation expenditures were divided by total square feet to generate a cost per square foot. This measure allows comparison between districts of varying sizes. The measure of square feet per student provides data on the capacity of each district.

The performance measure of food service is the cost per meal equivalent. Cost per meal equivalent is calculated by dividing total food service expenditures by total meals served. If cost is high in this area, then the district might choose to identify ways to reduce expenditures or try to increase the number of meals sold.

Performance measures for transportation include transportation cost per mile and transportation cost per rider. The cost per mile was calculated using the total annual mileage transporting students on regular routes. It excludes the miles buses traveled without transporting students, special education mileage, and activity trip mileage. The cost per rider was calculated by dividing transportation costs by the number of students who use the district's transportation system.

The performance measures described above do not represent an exhaustive list. Districts may increase operational efficiency by examining a wide range of performance measures that address workload, efficiency, and effectiveness for major functional areas within the district.

#### Per Student Spending by Operational Area

The cost per student of operational areas allows districts with different student population sizes to be compared to one another. State averages are also presented to allow for relative comparisons.

Average daily membership (ADM) was used to determine the number of students attending the district. Based on each of the operational areas listed within the district profiles, PEER divided the total expenditures in each area (less capitalized expenditures, as noted on page 111) by the ADM. This generated a cost per student for classroom instructional expenditures and non-classroom expenditures.

Non-classroom expenditures include administration, plant operation, food service, transportation, student support, noninstructional expenditures, and other expenditures. A detailed description of the contents of each category is on pages 112 and 113.

Operational spending per student allows comparison between districts of varying sizes. Comparison without per student spending would not generate meaningful results when comparing one district with another if the districts vary greatly in size.

State averages also allow evaluation of a district's performance against other districts in the state as a whole.

#### **Academic Performance**

The academic performance section of the school district profile pages provides data on student achievement. This section provides information on district and school letter grades, student performance on state assessments, and student and teacher performance measures.

In addition to looking at aspects of a district's operational efficiency, PEER included various academic performance measures as well as other profile information that could be useful for a district in comparing its district environment to other districts within the state.

#### **District and School Letter Grades**

MDE uses letter grades (A, B, C, D, and F) to classify the performance of all school districts. The profiles provide each district's letter grade and the number of schools within the district that received each of the letter grades assigned by MDE based on the 2012-2013 school year.

MDE uses letter grades to classify the performance of districts and schools. This classification is based on student achievement on state assessment tests and on the degree to which student performance has improved over time. A description of the classification process is on page 117.

#### **Student Performance on State Assessments**

Students are required by state and federal law to take state assessment tests. The profiles present district performance and state averages for all state assessment tests for the selected districts.

This profile section contains two bar charts representing the percentage of students performing "proficient" and above on tests for math, English language arts, and the subject area tests.<sup>7</sup> High school students must pass the subject area teats to be eligible for graduation.

On each profile page, the green bars represent the district's percentages of proficient and above scores. The blue bars represent the state's average percentages of proficient and above scores.

#### **Other District Profile Information**

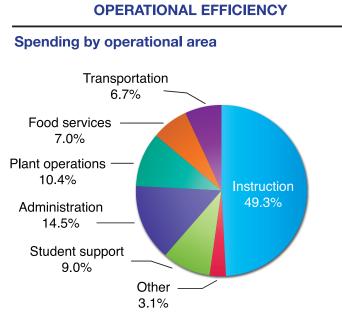
Other factors could be considered for comparison among districts within the state in order to obtain a better understanding of the districts' environments (e. g., attendance rate, graduation rate, poverty rate, average years of teacher experience).

The district profiles also present other factors within the selected districts (i. e., student measures, teacher measures, and other environmental factors) that could be potential areas for comparison among districts within the state and could help in obtaining a better understanding of the districts' operational environments. PEER included the following measures for the selected districts and their respective state averages: attendance rate, graduation rate, poverty rate, students per teacher, average teacher salary, and average years of teacher experience. As noted in Appendix E on page 110, no state average was calculated for the students per teacher ratio because of the way MDE calculates this information in comparison to how PEER requested the data.

<sup>&</sup>lt;sup>7</sup>A determination will be made [by MDE] as to the percentage of students that are minimal, basic, proficient, and advanced in each school. The definition of minimal, basic, proficient and advanced shall be developed for each grade, based on a demonstrated range of performance in relation to content as reflected in the Mississippi Curriculum Frameworks. This range of performance must be established through a formal procedure including educators, parents, community leaders, and other stakeholders. (MISS. CODE ANN. Section 37-18-1 [1972])

### Aberdeen School District - 2012-2013 school year

Monroe County Average daily membership: 1,382 Number of schools: 4



#### Cost measures relative to state averages

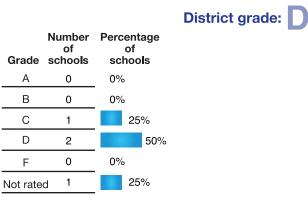
Operational Area	Measure	District	State Average
	Cost per student	\$1,359.14	\$940.76
Administration	Students per administrator	52.80	68.08
Plant	Cost per square foot	3.52	4.85
operations	Square footage per student	278.94	183.55
Food services	Cost per meal equivalent	2.77	2.85
Transportation	Cost per mile	5.53	5.47
Tanoportation	Cost per rider	772.05	478.14
Most efficient	More efficient	e Less efficient	Least efficient

#### Per student spending by operational area

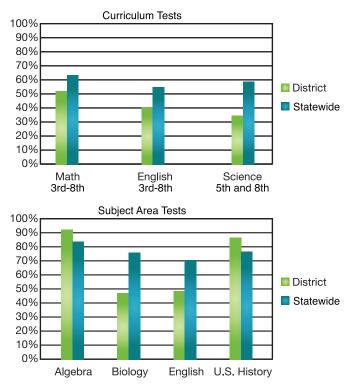
	District	State Average
Total	\$9,412.94	\$8,334.72
Instructional dollars	4,640.17	4,547.62
Non-instructional dollars	4,772.77	3,787.10
Administration	1,359.14	940.76
Plant operations	981.14	834.41
Food services	658.17	515.91
Transportation	632.23	422.10
Student support	849.74	825.13
Other	292.35	248.79

#### ACADEMIC PERFORMANCE

#### **District and school letter grades**



#### Student performance on state assessment tests



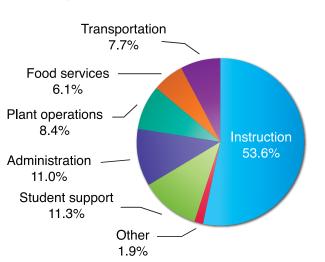
Measure	District	State Average
Attendance rate	92.76%	83.42%
Graduation rate	65.70%	74.88%
Poverty rate	30.10%	25.42%
Students per teacher	22.23	
Average teacher salary	\$39,466.00	\$41,328.97
Average years of teacher experience	9.01	11.66

# Amite County School District - 2012-2013 school year

Amite County

Average daily membership: 1,074 Number of schools: 2

# OPERATIONAL EFFICIENCY Spending by operational area



#### Cost measures relative to state averages

Operational Area	Measure	District	State Average
	Cost per student	<mark>\$1,140.65</mark>	\$940.76
Administration	Students per administrator	52.10	68.08
Plant	Cost per square foot	3.12	4.85
operations	Square footage per student	280.10	183.55
Food services	Cost per meal equivalent	2.66	2.85
Transportation	Cost per mile	3.70	5.47
manaportation	Cost per rider	831.58	478.14
Most efficient	More efficient	Less efficient	Least efficient

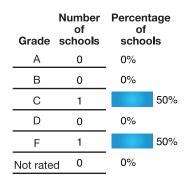
#### Per student spending by operational area

	District	State Average
Total	\$10,372.37	\$8,334.72
Instructional dollars	5,560.10	4,547.62
Non-instructional dollars	4,812.28	3,787.10
Administration	1,140.65	940.76
Plant operations	873.05	834.41
Food services	633.09	515.91
Transportation	798.97	422.10
Student support	1,171.77	825.13
Other	194.75	248.79

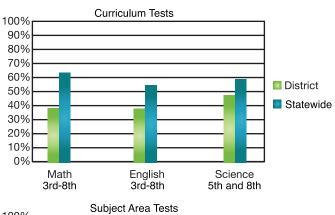
#### ACADEMIC PERFORMANCE

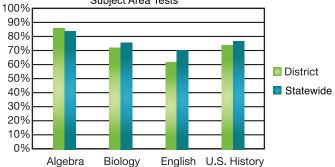
#### **District and school letter grades**





#### Student performance on state assessment tests





Measure	District	State Average
Attendance rate	76.82%	83.42%
Graduation rate	60.70%	74.88%
Poverty rate	28.40%	25.42%
Students per teacher	16.97	
Average teacher salary	\$44,265.00	\$41,328.97
Average years of teacher experience	12.55	11.66

# DeSoto County School District - 2012-2013 school year

DeSoto County Average daily membership: 32,399 Number of schools: 38

#### **OPERATIONAL EFFICIENCY** Spending by operational area Transportation 5.5% Food services 5.8% Plant operations 9.5% Instruction 55.3% Administration -11.7% Student support 9.0% Other 3.2%

#### Cost measures relative to state averages

Operational Area	Measure	District	State Average
	Cost per student	<b>\$771.78</b>	\$940.76
Administration	Students per administrator	84.50	68.08
Plant	Cost per square foot	7.10	4.85
operations	Square footage per student	87.99	183.55
Food services	Cost per meal equivalent	3.13	2.85
Transportation	Cost per mile	7.94	5.47
	Cost per rider	408.91	478.14
Most efficient	More efficient	Less efficient	Least efficient

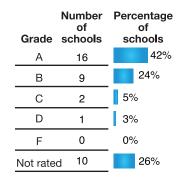
#### Per student spending by operational area

	District	State Average
Total	\$6,599.07	\$8,334.72
Instructional dollars	3,648.87	4,547.62
Non-instructional dollars	2,950.21	3,787.10
Administration	771.78	940.76
Plant operations	628.45	834.41
Food services	383.08	515.91
Transportation	360.68	422.10
Student support	595.88	825.13
Other	210.34	248.79

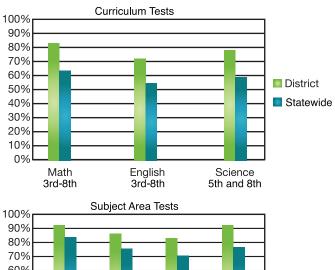
#### ACADEMIC PERFORMANCE

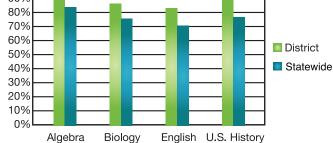
#### **District and school letter grades**





#### Student performance on state assessment tests



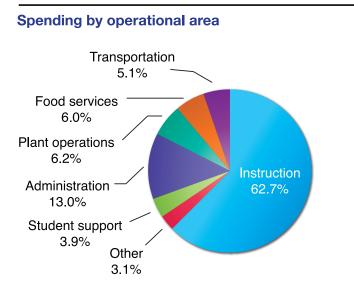


Measure	District	State Average
Attendance rate	80.34%	83.42%
Graduation rate	84.70%	74.88%
Poverty rate	10.20%	25.42%
Students per teacher	27.00	
Average teacher salary	\$40,319.00	\$41,328.97
Average years of teacher experience	9.96	11.66

### Enterprise School District - 2012-2013 school year

Clarke County Average daily membership: 968 Number of schools: 3

### OPERATIONAL EFFICIENCY



#### Cost measures relative to state averages

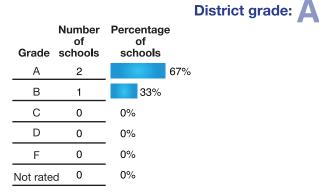
Operational Area	Measure	District	State Average
	Cost per student	<b>\$944.73</b>	\$940.76
Administration	Students per administrator	96.80	68.08
Plant	Cost per square foot	2.91	4.85
operations	Square footage per student	155.05	183.55
Food services	Cost per meal equivalent	2.79	2.85
Transportation	Cost per mile	3.43	5.47
	Cost per rider	386.10	478.14
Most efficient	More efficient	Less efficient	Least efficient

#### Per student spending by operational area

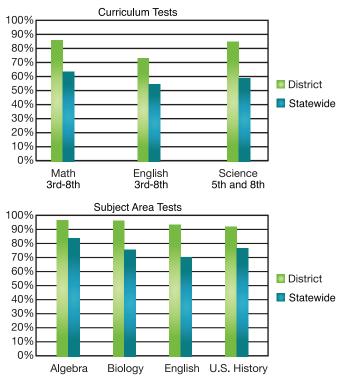
	District	State Average
Total	\$7,252.98	\$8,334.72
Instructional dollars	4,547.68	4,547.62
Non-instructional dollars	2,705.30	3,787.10
Administration	944.73	940.76
Plant operations	451.54	834.41
Food services	432.00	515.91
Transportation	371.40	422.10
Student support	282.14	825.13
Other	223.50	248.79

#### ACADEMIC PERFORMANCE

#### **District and school letter grades**



#### Student performance on state assessment tests

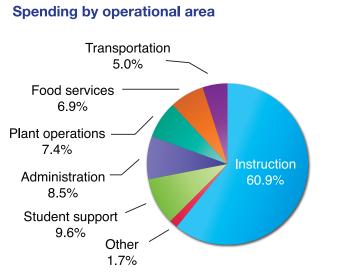


Measure	District	State Average
Attendance rate	86.36%	83.42%
Graduation rate	90.60%	74.88%
Poverty rate	15.80%	25.42%
Students per teacher	20.76	
Average teacher salary	\$39,447.00	\$41,328.97
Average years of teacher experience	12.61	11.66

# George County School District - 2012-2013 school year

George County Average daily membership: 4,122 Number of schools: 8

### OPERATIONAL EFFICIENCY ACAD



#### Cost measures relative to state averages

Operational Area	Measure	District	State Average
	Cost per student	\$587.74	\$940.76
Administration	Students per administrator	87.40	68.08
Plant	Cost per square foot	4.41	4.85
operations	Square footage per student	115.98	183.55
Food services	Cost per meal equivalent	2.68	2.85
Transportation	Cost per mile	2.87	5.47
	Cost per rider	351.42	478.14
Most efficient	More efficient	Less efficient	Least efficient

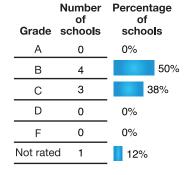
#### Per student spending by operational area

	District	State Average
Total	\$6,925.47	\$8,334.72
Instructional dollars	4,217.17	4,547.62
Non-instructional dollars	2,708.29	3,787.10
Administration	587.74	940.76
Plant operations	511.78	834.41
Food services	481.78	515.91
Transportation	348.14	422.10
Student support	663.74	825.13
Other	115.12	248.79

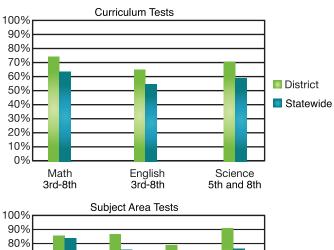
#### ACADEMIC PERFORMANCE

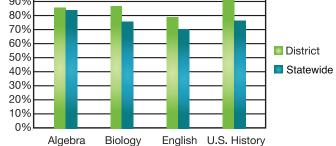
#### **District and school letter grades**





#### Student performance on state assessment tests



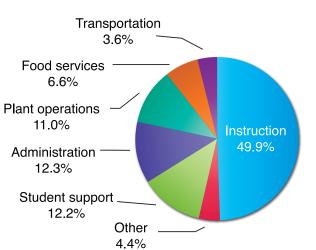


Measure	District	State Average
Attendance rate	74.67%	83.42%
Graduation rate	80.60%	74.88%
Poverty rate	17.60%	25.42%
Students per teacher	20.90	
Average teacher salary	\$40,101.00	\$41,328.97
Average years of teacher experience	11.49	11.66

## Hattiesburg School District - 2012-2013 school year

Forrest and Lamar Counties Average daily membership: 4,495 Number of schools: 8

# OPERATIONAL EFFICIENCY Spending by operational area



#### Cost measures relative to state averages

Operational Area	Measure	District	State Average
	Cost per student	\$1,322.67	\$940.76
Administration	Students per administrator	51.10	68.08
Plant	Cost per square foot	5.62	4.85
operations	Square footage per student	210.23	183.55
Food services	Cost per meal equivalent	2.73	2.85
Transportation	Cost per mile	9.62	5.47
Tansportation	Cost per rider	603.85	478.14
Most efficient	More efficient	efficient	Least efficient

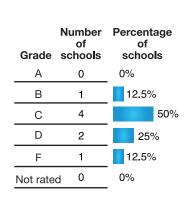
#### Per student spending by operational area

	District	State Average
Total	\$10,739.90	\$8,334.72
Instructional dollars	5,359.28	4,547.62
Non-instructional dollars	5,380.62	3,787.10
Administration	1,322.67	940.76
Plant operations	1,180.54	834.41
Food services	709.98	515.91
Transportation	390.92	422.10
Student support	1,304.40	825.13
Other	472.11	248.79

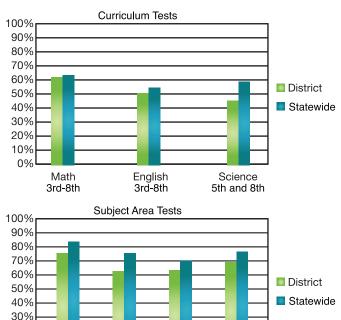
#### ACADEMIC PERFORMANCE

District grade:

#### **District and school letter grades**



#### Student performance on state assessment tests



0% Algebra Biology English U.S. History

#### **District profile**

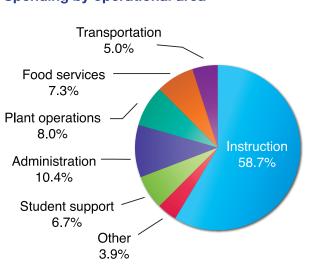
20% 10%

Measure	District	State Average
Attendance rate	83.56%	83.42%
Graduation rate	74.20%	74.88%
Poverty rate	36.00%	25.42%
Students per teacher	21.60	
Average teacher salary	\$41,370.00	\$41,328.97
Average years of teacher experience	9.03	11.66

### Itawamba County School District - 2012-2013 school year

Itawamba County Average daily membership: 3,513 Number of schools: 6

### **OPERATIONAL EFFICIENCY** Spending by operational area



#### Cost measures relative to state averages

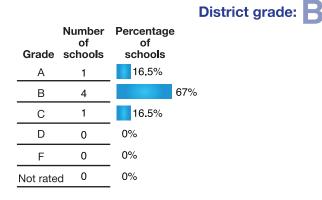
Operational Area	Measure	District	State Average
	Cost per student	\$774 <mark>.93</mark>	\$940.76
Administration	Students per administrator	91.70	68.08
Plant	Cost per square foot	3.54	4.85
operations	Square footage per student	168.76	183.55
Food services	Cost per meal equivalent	2.94	2.85
Transportation	Cost per mile	3.36	5.47
	Cost per rider	375.40	478.14
Most efficient	More efficient	Less efficient	Least efficient

#### Per student spending by operational area

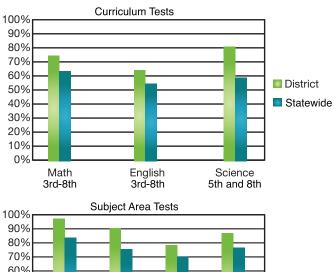
	District	State Average
Total	\$7,469.46	\$8,334.72
Instructional dollars	4,385.76	4,547.62
Non-instructional dollars	3,083.69	3,787.10
Administration	774.93	940.76
Plant operations	599.03	834.41
Food services	548.86	515.91
Transportation	369.93	422.10
Student support	498.51	825.13
Other	292.43	248.79

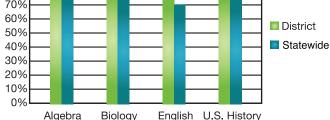
#### ACADEMIC PERFORMANCE

#### **District and school letter grades**



#### Student performance on state assessment tests





Algebra Biology

Measure	District	State Average
Attendance rate	80.98%	83.42%
Graduation rate	82.00%	74.88%
Poverty rate	13.80%	25.42%
Students per teacher	19.89	
Average teacher salary	\$41,063.00	\$41,328.97
Average years of teacher experience	12.65	11.66

### Jefferson County School District - 2012-2013 school year

Jefferson County Average daily membership: 1,358 Number of schools: 4

#### **OPERATIONAL EFFICIENCY** Spending by operational area Transportation 6.4% Food services 6.2% Plant operations 9.1% Instruction Administration 52.9% 12.4% Student support . 10.0% Other 3.0%

#### Cost measures relative to state averages

Operational Area	Measure	District	State Average
	Cost per student	<mark>\$1,116.86</mark>	\$940.76
Administration	Students per administrator	62.70	68.08
Plant	Cost per square foot	4.21	4.85
operations	Square footage per student	194.06	183.55
Food services	Cost per meal equivalent	2.64	2.85
Transportation	Cost per mile	16.26	5.47
	Cost per rider	575.03	478.14
Most efficient	More efficient	Less efficient	Least efficient

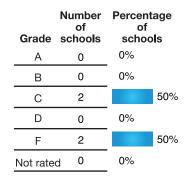
#### Per student spending by operational area

	District	State Average
Total	\$9,012.59	\$8,334.72
Instructional dollars	4,768.56	4,547.62
Non-instructional dollars	4,244.03	3,787.10
Administration	1,116.86	940.76
Plant operations	817.09	834.41
Food services	558.18	515.91
Transportation	578.68	422.10
Student support	899.83	825.13
Other	273.40	248.79

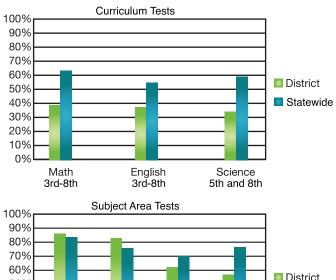
#### ACADEMIC PERFORMANCE

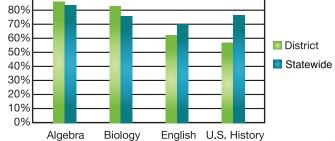
#### **District and school letter grades**





#### Student performance on state assessment tests





Measure	District	State Average
Attendance rate	80.34%	83.42%
Graduation rate	71.90%	74.88%
Poverty rate	41.10%	25.42%
Students per teacher	18.71	
Average teacher salary	\$41,835.00	\$41,328.97
Average years of teacher experience	10.13	11.66

# Jones County School District - 2012-2013 school year

Jones County

Average daily membership: 8,440 Number of schools: 9

#### **OPERATIONAL EFFICIENCY** Spending by operational area Transportation 6.7% Food services 6.4% Plant operations 7.4% Instruction 60.8% Administration 9.5% Student support 7.4% Other 1.8%

#### Cost measures relative to state averages

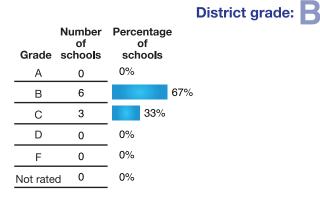
Operational Area	Measure	District	State Average
	Cost per student	\$690.85	\$940.76
Administration	Students per administrator	83.20	68.08
Plant	Cost per square foot	3.54	4.85
operations	Square footage per student	152.88	183.55
Food services	Cost per meal equivalent	2.94	2.85
Transportation	Cost per mile	3.44	5.47
Indrisportation	Cost per rider	503.72	478.14
Most efficient	More efficient	Less efficien	Least efficient

#### Per student spending by operational area

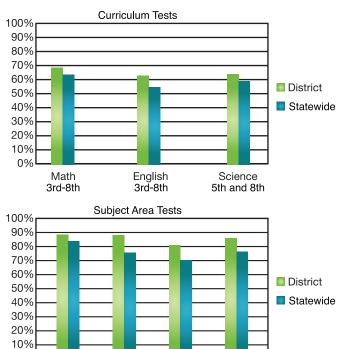
	District	State Average
Total	\$7,297.99	\$8,334.72
Instructional dollars	4,435.01	4,547.62
Non-instructional dollars	2,862.99	3,787.10
Administration	690.85	940.76
Plant operations	541.54	834.41
Food services	465.05	515.91
Transportation	492.43	422.10
Student support	540.82	825.13
Other	132.30	248.79

#### ACADEMIC PERFORMANCE

#### **District and school letter grades**



#### Student performance on state assessment tests



Algebra Biology English U.S. History

#### **District profile**

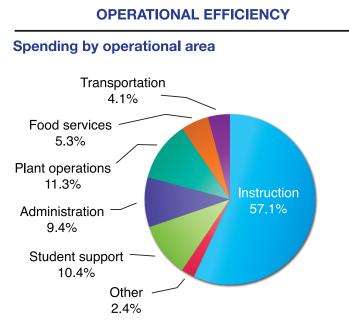
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Measure	District	State Average
Attendance rate	79.16%	83.42%
Graduation rate	79.90%	74.88%
Poverty rate	20.80%	25.42%
Students per teacher	26.44	
Average teacher salary	\$42,669.00	\$41,328.97
Average years of teacher experience	13.47	11.66

### Lamar County School District - 2012-2013 school year

Lamar County

Average daily membership: 9,311 Number of schools: 13



#### Cost measures relative to state averages

Operational Area	Measure	District	State Average
	Cost per student	\$738.44	\$940.76
Administration	Students per administrator	71.40	68.08
Plant	Cost per square foot	8.93	4 <u>.</u> 85
operations	Square footage per student	99.55	183.55
Food services	Cost per meal equivalent	2.93	2.85
Transportation	Cost per mile	2.99	5.47
Tansportation	Cost per rider	348.94	478.14
Most efficient	More efficient	Less efficient	Least efficient

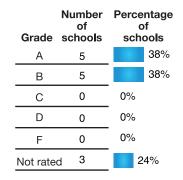
#### Per student spending by operational area

	District	State Average
Total	\$7,896.73	\$8,334.72
Instructional dollars	4,508.79	4,547.62
Non-instructional dollars	3,387.94	3,787.10
Administration	738.44	940.76
Plant operations	891.58	834.41
Food services	420.77	515.91
Transportation	326.76	422.10
Student support	824.53	825.13
Other	185.85	248.79

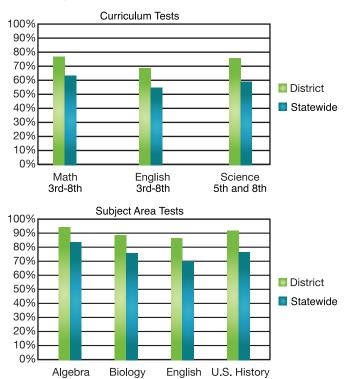
#### ACADEMIC PERFORMANCE

#### **District and school letter grades**





#### Student performance on state assessment tests



Measure	District	State Average
Attendance rate	84.96%	83.42%
Graduation rate	86.20%	74.88%
Poverty rate	15.20%	25.42%
Students per teacher	24.18	
Average teacher salary	\$41,138.00	\$41,328.97
Average years of teacher experience	11.72	11.66

### Moss Point School District - 2012-2013 school year

Jackson County Average daily membership: 2,353 Number of schools: 5

#### **OPERATIONAL EFFICIENCY** Spending by operational area Transportation 4.8% Food services 6.1% Plant operations -13.6% Instruction 44.8% Administration -14.0% Student support 14.0% Other 2.7%

#### Cost measures relative to state averages

Operational Area	Measure	District	State Average
	Cost per student	\$1,523.03	\$940.76
Administration	Students per administrator	38.10	68.08
Plant	Cost per square foot	5.43	4.85
operations	Square footage per student	273.67	183.55
Food services	Cost per meal equivalent	2.83	2.85
Transportation	Cost per mile	6.03	5.47
	Cost per rider	527 <b>.</b> 21	478.14
Most efficient	More efficient	Less efficient	Least efficient

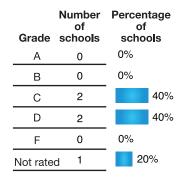
#### Per student spending by operational area

	District	State Average
Total	\$10,926.39	\$8,334.72
Instructional dollars	4,892.94	4,547.62
Non-instructional dollars	6,033.45	3,787.10
Administration	1,523.03	940.76
Plant operations	1,488.21	834.41
Food services	670.68	515.91
Transportation	521.72	422.10
Student support	1,531.55	825.13
Other	298.27	248.79

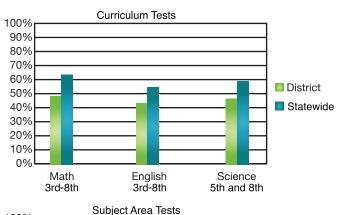
#### ACADEMIC PERFORMANCE

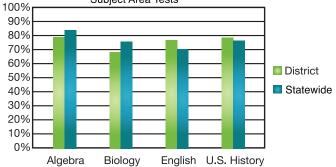
#### **District and school letter grades**





#### Student performance on state assessment tests

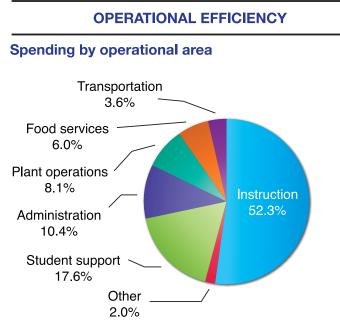




Measure	District	State Average
Attendance rate	81.34%	83.42%
Graduation rate	63.70%	74.88%
Poverty rate	17.40%	25.42%
Students per teacher	22.21	
Average teacher salary	\$43,113.00	\$41,328.97
Average years of teacher experience	11.18	11.66

### Okolona School District - 2012-2013 school year

Chickasaw County Average daily membership: 671 Number of schools: 2



#### Cost measures relative to state averages

Operational Area	Measure	District	State Average
	Cost per student	<mark>\$1,106.44</mark>	\$940.76
Administration	Students per administrator	62.50	68.08
Plant	Cost per square f	oot 3.20	4.85
operations	Square footage p student	er 269.18	183.55
Food services	Cost per meal equivalent	2.36	2.85
Transportation	Cost per mile	4.64	5.47
Tanoportation	Cost per rider	397.04	478 <u>.</u> 14
Most efficient	More efficient	rable Less efficien	Least t efficient

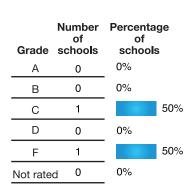
#### Per student spending by operational area

	District	State Average
Total	\$10,646.28	\$8,334.72
Instructional dollars	5,564.40	4,547.62
Non-instructional dollars	5,081.88	3,787.10
Administration	1,106.44	940.76
Plant operations	860.99	834.41
Food services	641.38	515.91
Transportation	388.62	422.10
Student support	1,876.68	825.13
Other	207.77	248.79

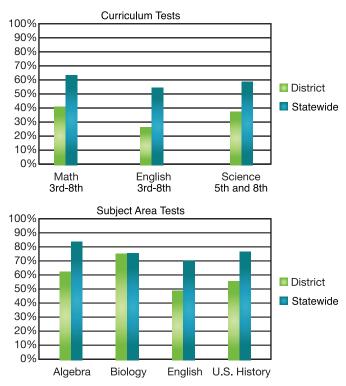
#### ACADEMIC PERFORMANCE

District grade:

#### **District and school letter grades**



#### Student performance on state assessment tests



Measure	District	State Average
Attendance rate	92.25%	83.42%
Graduation rate	73.90%	74.88%
Poverty rate	27.00%	25.42%
Students per teacher	20.08	
Average teacher salary	\$36,852.00	\$41,328.97
Average years of teacher experience	7.17	11.66

# Rankin County School District - 2012-2013 school year

Rankin County Average daily membership: 19,309 Number of schools: 26

#### **OPERATIONAL EFFICIENCY** Spending by operational area Transportation 4.0% Food services 4.8% Plant operations 9.4% Instruction Administration 56.2% 10.6% Student support 10.1% Other 4.9%

#### Cost measures relative to state averages

Operational Area	Measure	District	State Average
	Cost per student	<mark>\$8</mark> 43.76	\$940.76
Administration	Students per administrator	81.40	68.08
Plant	Cost per square foot	6.42	4.85
operations	Square footage per student	115.40	183.55
Food services	Cost per meal equivalent	3.15	2.85
Transportation	Cost per mile	3.50	5.47
mansportation	Cost per rider	335.38	478.14
Most efficient	More efficient	Less efficient	Least efficient

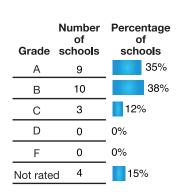
#### Per student spending by operational area

	District	State Average
Total	\$7,931.71	\$8,334.72
Instructional dollars	4,457.98	4,547.62
Non-instructional dollars	3,473.73	3,787.10
Administration	843.76	940.76
Plant operations	741.00	834.41
Food services	378.35	515.91
Transportation	320.35	422.10
Student support	803.93	825.13
Other	386.34	248.79

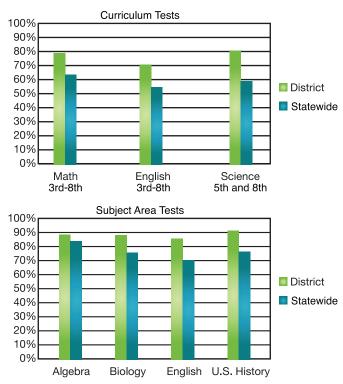
#### ACADEMIC PERFORMANCE

District grade:

#### **District and school letter grades**



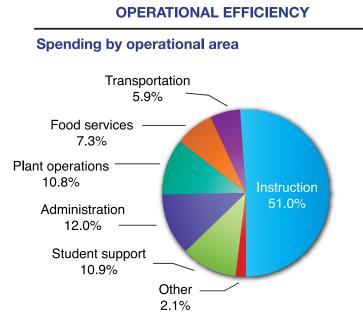
#### Student performance on state assessment tests



Measure	District	State Average
Attendance rate	81.16%	83.42%
Graduation rate	85.50%	74.88%
Poverty rate	11.10%	25.42%
Students per teacher	22.70	
Average teacher salary	\$40,860.00	\$41,328.97
Average years of teacher experience	10.36	11.66

# Tunica County School District - 2012-2013 school year

Tunica County Average daily membership: 2,162 Number of Schools: 5



#### Cost measures relative to state averages

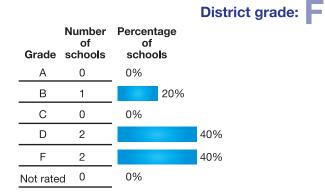
Operational Area	Measure	•	District	State Average
	Cost per s	student	<mark>\$1,312.16</mark>	\$940.76
Administration	Students administra		52.30	68.08
Plant	Cost per s	square foot	5.26	4.85
operations	Square fo student	otage per	225.27	183.55
Food services	Cost per meal equivalent		2.79	2.85
Transportation	Cost per ı	nile	4.85	5.47
Indrisportation	Cost per ı	rider	665.71	478.14
Most efficient	More efficient	Comparable	Less efficient	Least efficient

#### Per student spending by operational area

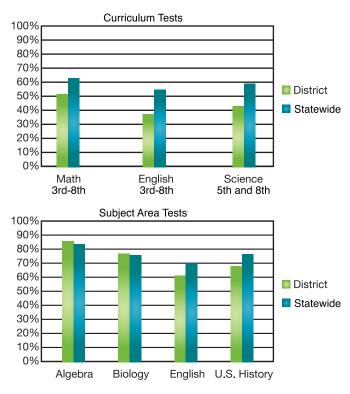
	District	State Average
Total	\$10,973.86	\$8,334.72
Instructional dollars	5,597.20	4,547.62
Non-instructional dollars	5,376.66	3,787.10
Administration	1,312.16	940.76
Plant operations	1,184.16	834.41
Food services	802.67	515.91
Transportation	649.08	422.10
Student support	1,197.15	825.13
Other	231.44	248.79

#### ACADEMIC PERFORMANCE

#### **District and school letter grades**



#### Student performance on state assessment tests



Measure	District	State Average
Attendance rate	88.39%	83.42%
Graduation rate	59.70%	74.88%
Poverty rate	30.30%	25.42%
Students per teacher	21.19	
Average teacher salary	\$43,228.00	\$41,328.97
Average years of teacher experience	8.84	11.66

### Conclusions

PEER initially proposed a theory that districts with low support expenditures and high academic performance (based on PEER's comparison of relative performance measures) would be able to provide efficiency drivers and metrics that PEER could identify as potential best practices.

Upon review of the fourteen selected school districts, PEER observed the following themes:

- regardless of whether the district was more efficient or less efficient (as defined by PEER in this report), no distinct efficiency drivers were identified that could be implemented as best practices;
- within each functional area, multiple decisions had been made with a focus on academic performance without consideration of efficiency; and,
- while efficiency decisions and procedures were mentioned at various levels, often these efficiency decisions were made by district leadership in a manner that was not accountable, based on available data and transparency of the decisionmaking process.

Because PEER observed that the districts did exhibit some elements that could be considered components of a larger efficiency and accountability framework, PEER proposes that Mississippi's school districts adopt a disciplined approach to examine, review, and guide their decisionmaking process and improve efficiency, such as the Data Driven Decisionmaking (DDDM) model. As noted on page 19, the DDDM model in the educational setting refers to the process of superintendents, principals, teachers, and other administrators collecting and analyzing data to guide them in their decisionmaking efforts to improve the success of both the students and the schools.

While several possible models exist regarding how to implement and organize DDDM, four key elements are universal to any model:

- a district must gather raw data tailored to tracking the outcome of a specific goal;
- this data must be distilled into a usable form to produce information offering insight into the goal;
- this information must be coupled with the priorities of the district and the relative merits of the goals; and,
- all of this information should be weighed by the district to establish, refine, and reexamine the goals of the district.

Based on PEER's observations within the selected districts, many data sets are already being tracked and reported by the districts that could be utilized in a DDDM model.

MDE should work with the districts and with legislative staff to identify the performance metrics that should be collected and reported for each administrative and support program in the districts' program inventories. Administrative and support programs and measures should be uniform from district to district, which would facilitate unit cost comparisons. Once these programs and associated performance metrics have been identified, MDE should establish a mechanism for capturing the data in a central database that is integrated with district expenditure data in order to facilitate data analysis. Further, once the program-based school district data collection and analysis system is fully operational, MDE should work with the districts to develop a data dashboard that reports efficiency metrics for each district in a format that is complementary to the No Child Left Behind district report cards for academic accountability.

The ultimate goal is for the schools and districts to improve their decisionmaking through ongoing analysis of data (including making unit cost comparisons where valid and reliable) and implementation of improvements based on knowledge gained through the analysis.

# Appendix A: Methodology for Sampling School Districts

This appendix addresses the following questions:

- How did PEER determine which school districts to remove from the selection process?
- What performance metrics did PEER use to select school districts?
- What efficiency metrics did PEER use to select school districts?
- How did PEER rank the districts?
- How did PEER select districts from the performance and efficiency ranks?

#### How did PEER determine which school districts to remove from the selection

#### process?

PEER removed twenty-two school districts from its selection process based on the following reasons:

- they were specialized educational institutions not readily comparable to the majority of school districts in the state; or,
- they were participating in the Excellence for All Program using curricula not used in other school districts in the state; or,
- they had recently been consolidated or would soon be consolidated, resulting in overarching changes in all aspects of the combined school districts.

As noted previously, according to MDE, as of February 27, 2014, Mississippi had 156 school districts within the state. In order to select school districts for efficiency reviews, PEER analyzed educational outcomes, financial data, and efficiency metrics for 134 of these districts for FY 2013. School districts offering specialized education programs, testing pilot educational programs, or recently consolidated or slated for consolidation in the next two years were removed from the selection process.

#### **Specialized Educational Institutions**

PEER removed all seven specialized educational institutions because these school districts are not readily comparable to the majority of school districts in the state. The following are specialized educational institutions not considered for this efficiency review:

• Coahoma County Agricultural High School;

- Forrest County Agricultural High School;
- Hinds County Agricultural High School;
- Mississippi School for Math and Science;
- Mississippi School for the Blind;
- Mississippi School for the Deaf; and,
- Mississippi School for the Arts.

#### **Districts Participating in Excellence for All Program**

PEER removed all three school districts participating in the Excellence for All Program during the 2012-2013 school year. The State Board of Education had authorized participating districts to teach alternative pilot curriculums in 2011. The Gulfport school district piloted the ACT Quality Core curriculum. The Corinth and Clarksdale school districts implement the Cambridge International Exams curriculum. Since these curricula are part of a pilot program and are not taught in other school districts within the state, the following districts were not considered for efficiency review:

- Clarksdale Municipal School District;
- Corinth School District; and,
- Gulfport School District.

#### **Consolidated Districts**

School district consolidation combines two or more school districts with the goal of improving economic or educational benefits through creation of a new school district. School district consolidation can occur through voluntary action between two or more school districts, administrative consolidation by the Department of Education, or statutory consolidation by the Legislature. Consolidation creates overarching changes in all aspects of the combined school districts. The following twelve recently consolidated districts and districts to be consolidated were not considered for efficiency review:

- Benoit School District;
- Clay County School District;
- Drew School District;
- Indianola School District;

- Mound Bayou Public School District;
- North Bolivar School District;
- Oktibbeha County School District;
- Shaw School District;
- Starkville School District;
- Sunflower County School District;
- West Bolivar School District; and,
- West Point School District.

#### What performance metrics did PEER use to select school districts?

To determine performance metrics, PEER used FY 2013 state test scores for third through eighth grade English and Math, fifth and eighth grade science, and subject area test scores for high school graduates in Algebra, History, Biology, and English.

PEER chose seven performance categories to analyze for each of the remaining 134 school districts. These performance categories and how PEER measured each are explained in this section.

- English 3<sup>rd</sup> grade through 8<sup>th</sup> grade performance--PEER obtained the percentages of 3<sup>rd</sup> through 8<sup>th</sup> grade students who scored proficient and advanced in English on the Mississippi Curriculum Test, Second Edition (MCT2) in FY 2013 from MDE's website. PEER then determined the summed percentage of English proficient plus advanced students for each of the six grades (3<sup>rd</sup> through 8<sup>th</sup>). A higher summed percentage for each of the six grades indicated higher performance.
- *Math 3rd grade through 8th grade performance-*-PEER obtained the percentages of 3<sup>rd</sup> through 8<sup>th</sup> grade students who scored proficient and advanced in Math on the MCT2 in FY 2013 from MDE's website. PEER then determined the summed percentage of Math proficient plus advanced students for each of the six grades (3<sup>rd</sup> through 8<sup>th</sup>). A higher summed percentage for each of the six grades indicated higher performance.
- *Science* 5<sup>th</sup> *grade and* 8<sup>th</sup> *grade performance*-PEER obtained the percentages of 5<sup>th</sup> and 8<sup>th</sup> grade students who scored proficient and advanced in Science on the MCT2 in FY 2013 from MDE's website. PEER then determined the summed percentage of Science proficient plus advanced students for each of the two grades (5<sup>th</sup> and 8<sup>th</sup>). A higher summed

percentage for each of the two grades indicated higher performance.

- *Algebra graduation subject performance--*PEER obtained the percentage of high school seniors who passed Algebra on the Subject Area Testing Program, Second Edition (SATP2) in FY 2013 from MDE's website. A higher percentage indicated higher performance.
- *History graduation subject performance--*PEER obtained the percentage of high school seniors who passed History on the SATP2 in FY 2013 from MDE's website. A higher percentage indicated higher performance.
- *Biology graduation subject performance--*PEER obtained the percentage of high school seniors who passed Biology on the SATP2 in FY 2013 from MDE's website. A higher percentage indicated higher performance.
- *English graduation subject performance--*PEER obtained the percentage of high school seniors who passed English on the SATP2 in FY 2013 from MDE's website. A higher percentage indicated higher performance.

#### What efficiency metrics did PEER use to select school districts?

To determine efficiency metrics, PEER used FY 2013 data pertaining to instruction, administration, cost of operations and maintenance of the physical plant, ancillary and add-on programs, and total cost per student.

PEER determined four major functional areas to analyze for each of the 134 school districts, as well as a total cost per student. These functional areas and their components are described in this section.

#### Instruction

#### Cost per Student

PEER calculated the cost per student by dividing each district's cost of instruction by its average daily membership. The cost of instruction was comprised of the expenses for regular programs and special programs. PEER calculated the number of students (average daily membership) by averaging the daily membership at the district over the nine months of the school year. A lower cost per student indicated a higher efficiency.

#### **Carnegie** Units

A Carnegie unit is a measure of the amount of time a student has studied a subject. A larger number of Carnegie units indicated a higher efficiency.

#### Average Teacher Experience

Average teacher experience is measured in years. A higher average number of years of teacher experience indicated a higher efficiency.

#### Percent of Teachers with Advanced Degrees

An advanced degree is defined as a master's degree or an educational specialist degree. A higher percentage of teachers with advanced degrees indicated a higher efficiency.

#### **Student Teacher Ratio**

The student teacher ratio is the number of students per teacher. A higher number of students per teacher indicated a higher efficiency.

#### Percentage of Instructional Spending to Total Expenditures

The district's cost of instruction (regular programs and special programs) was divided by its total expenditures (over all functional areas) to calculate the percentage of instructional spending to total expenditures. A higher percentage of instructional spending to total expenditures indicated a higher efficiency.

#### Administration

#### Cost per Student

PEER calculated the cost per student by dividing each district's cost of administration by its average daily membership. The cost of administration was comprised of the expenses for total general administration and total school administration. PEER calculated the number of students (average daily membership) by averaging the daily membership at the district over the nine months of the school year. A lower cost per student indicated a higher efficiency.

#### Ratio of General Administration to School Administration

This ratio is the amount of general administration dollars spent for each school administration dollar spent. A lower ratio of general administration to school administration indicated a higher efficiency.

#### Average Administrator Experience

Average administrator experience is measured in years. A higher average administrator experience indicated a higher efficiency.

#### **Cost of Operations and Maintenance of Physical Plant**

#### Cost per Square Foot

The cost per square foot was calculated by dividing each district's total facilities cost for FY 2013 by its square footage as of February 2014. The total facilities cost was comprised of the support services expenses for operations and maintenance of plant services, less vehicle expenses and property expenses. The square footage included both heated and unheated spaces for each district. A lower cost per square foot indicated a higher efficiency.

#### Students per Square Foot

PEER calculated the number of students per square foot by dividing each district's average daily membership by its total square footage. A higher number of students per square foot indicated a higher efficiency.

#### Utility Cost per Student

PEER calculated the utility cost per student by dividing each district's utility cost by its average daily membership. The utility cost was comprised of the utility services expenses within the support services expenses for operations and maintenance of plant services, less vehicle expenses and property expenses. A lower utility cost per student indicated a higher efficiency.

#### **Ancillary and Add-On Programs**

#### Cost per Student for Support Functions

PEER calculated the cost per student for support functions by dividing each district's support costs by its average daily membership. The support cost was comprised of the support services expenses for students (attendance and social work services, guidance services, health services, psychological services, speech pathology and audiology services, and other student support services) and support services expenses for instructional staff (improvement of instruction services, educational media services, and other instructional staff support services). A lower cost per student for support functions indicated a higher efficiency.

#### Cost per Student for Non-Instructional Functions

PEER calculated the cost per student for non-instructional functions by dividing each district's non-instructional costs by its average daily membership. The non-instructional cost was comprised of the expenses for food service operations, enterprise operations, community service operations, other non-instructional services, scholarship awards, and subsidies to other local education agencies. A lower cost per student for non-instructional functions indicated a higher efficiency.

#### Cost per Transported Student

PEER calculated the cost per transported student by dividing each district's transportation costs (supervision of student transportation services, vehicle operation services, monitoring services, vehicle servicing and maintenance services, and other student transportation services) by its average daily attendance for transported students, which was reported in the MDE Superintendent's Report. A lower cost per transported student indicated a higher efficiency.

#### Cost per Mile Traveled

PEER calculated the cost per mile traveled by dividing each district's transportation costs by its total annual mileage traveled on regular routes while transporting students.<sup>8</sup> A lower cost per mile traveled indicated a higher efficiency.

#### **Total Cost per Student**

In addition to instruction, administration, physical plant, and ancillary and add-ons, PEER also calculated the total cost per student overall. PEER divided this total cost by the average daily membership. The total cost was comprised of all district costs except for sixteenth section, facilities and construction services, debt service, other financing uses, and direct decreases in fund equity. The total cost included calculated costs used in instruction, administration, physical plant, and ancillary and add-ons, plus other costs not included in those calculations. A lower total cost per student indicated a higher efficiency.

<sup>&</sup>lt;sup>8</sup>Durant School District did not report any mileage traveled but did report transportation costs. Therefore PEER assigned 1 mile to its mileage traveled for FY 2013.

#### How did PEER rank the districts?

For each of the 134 school districts, PEER determined a composite performance rank based on the analysis of the performance metrics, determined composite efficiency ranks for each functional area (instruction, administration, physical plant, and ancillary and add-ons) based on the analysis of each function area's efficiency metrics, and determined a composite efficiency rank for total cost per student.

#### Performance

For each of the 134 school districts, PEER calculated one composite performance rank as follows:

- For each calculated performance metric for each grade, PEER ranked each district. The highest performing district was ranked 134 and the lowest performing district was ranked 1. There were eighteen separate performance metrics (six metrics for 3<sup>rd</sup>-8<sup>th</sup> grade English, six metrics for 3<sup>rd</sup>-8<sup>th</sup> grade Math, two metrics for 5<sup>th</sup> and 8<sup>th</sup> grade Science, and four metrics for each high school subject).
- For each district, its eighteen performance ranks were summed to produce a sum of ranks.
- PEER ranked the 134 sums of ranks from the districts. The overall highest performing district was ranked 134 and the overall lowest performing district was ranked 1.

#### Efficiency

Similarly, for each of the 134 school districts, PEER calculated one composite efficiency rank for each functional area as follows:

#### Instruction

- For each of the instruction components previously listed in the efficiency metrics section, the districts were ranked with the highest rank (134) indicating the most efficiency and the lowest rank (1) indicating the least efficiency, as follows:
  - *Cost per student:* the lowest cost per student was ranked 134 and the highest cost per student was ranked 1.
  - *Carnegie units:* the highest Carnegie units were ranked 134 and the lowest Carnegie units were ranked 1.
  - *Average teacher experience:* the highest average teacher experience was ranked 134 and the lowest average teacher experience was ranked 1.

- *Percent of teachers with advanced degrees:* the highest percent of teachers with advanced degrees was ranked 134 and the lowest percent of teachers with advanced degrees was ranked 1.
- *Student-teacher ratio:* the highest student teacher ratio was ranked 134 and the lowest student-teacher ratio was ranked 1.
- *Percentage of instructional spending to total expenditures:* the highest percentage of instructional spending was ranked 134 and the lowest percentage of instructional spending was ranked 1.
- For each district, its six ranks were summed to produce a sum of ranks.
- The 134 sums of ranks from the districts were ranked. The district with the overall highest sum of ranks in the instruction function was ranked 134 and the district with the overall lowest sum of ranks in the instruction function was ranked 1.

#### Administration

- For each of the administration components previously listed in the efficiency metrics section, the districts were ranked with the highest rank (134) indicating the most efficiency and the lowest rank (1) indicating the least efficiency, as follows:
  - *Cost per student:* the lowest cost per student was ranked 134 and the highest cost per student was ranked 1.
  - *Ratio of general administration to school administration:* the lowest ratio was ranked 134 and the highest ratio was ranked 1.
  - *Average administrator experience:* the highest average administrator experience was ranked 134 and the lowest average administrator experience was ranked 1.
- For each district, its three ranks were summed to produce a sum of ranks.
- The 134 sums of ranks from the districts were ranked. The overall highest sum of ranks in the administration function was ranked 134 and the overall lowest sum of ranks in the administration function was ranked 1.

#### Cost of Operations and Maintenance of the Physical Plant

• For each of the costs of operations and maintenance of the physical plant components previously listed in the efficiency metrics section, the districts were ranked, with the highest rank (134) indicating the most efficiency and

the lowest rank (1) indicating the least efficiency, as follows:

- *Cost per square foot:* the lowest cost per square foot was ranked 134 and the highest cost per square foot was ranked 1.
- *Students per square foot:* the highest number of students per square foot was ranked 134 and the lowest number of students per square foot was ranked 1.
- *Utility cost per student:* the lowest utility cost per student was ranked 134 and the highest utility cost per student was ranked 1.
- For each district, its three ranks were summed to produce a sum of ranks.
- The 134 sums of ranks from the districts were ranked. The overall highest sum of ranks in the cost of operations and maintenance of the physical plant function was ranked 134 and the overall lowest sum of ranks in the cost of operations and maintenance of the physical plant function was ranked 1.

#### Ancillary and Add-On Programs

- For each of the ancillary and add-on program components previously listed, the districts were ranked with the highest rank (134) indicating the most efficiency and the lowest rank (1) indicating the least efficiency, as follows:
  - *Cost per student for support functions:* the lowest cost per student for support functions was ranked 134 and the highest cost per student for support functions was ranked 1.
  - *Cost per student for non-instructional functions:* the lowest cost per student for non-instructional functions was ranked 134 and the highest cost per student for non-instructional functions was ranked 1.
  - *Cost per transported student:* the lowest cost per transported student was ranked 134 and the highest cost per transported student was ranked 1.
  - Cost per mile traveled: the lowest cost per mile traveled was ranked 134 and the highest cost per mile traveled was ranked 1.<sup>9</sup>
- For each district, its two transportation metrics were summed to produce a sum of ranks for transportation.

<sup>&</sup>lt;sup>9</sup>Durant School District did not report any mileage traveled but did report transportation costs. Therefore PEER assigned 1 mile to its mileage traveled for FY 2013. This resulted in Durant ranking the worst, or 1, in cost per mile traveled.

- Then, for each district, its three ranks (cost per student for support, cost per student for non-instruction, and transportation) were summed to produce a sum of ranks.
- The 134 sums of ranks from the districts were ranked. The overall highest sum of ranks in the ancillary and add-on programs was ranked 134 and the overall lowest sum of ranks in the ancillary and add-on programs was ranked 1.

#### **Total Cost Per Student**

In addition to the ranks for instruction, administration, physical plant, and ancillary and add-ons, PEER also ranked the total cost per student overall. The lowest total cost per student was ranked 134 and the highest total cost per student was ranked 1.

#### How did PEER select districts from the performance and efficiency ranks?

From the performance and efficiency ranks, PEER charted each school district's ranked performance score against each of its functional area efficiency scores, then selected the seven districts with the best combination of scores in the most functional areas and the seven with the lowest combination of scores in the most functional areas.

#### Quadrant Graphs

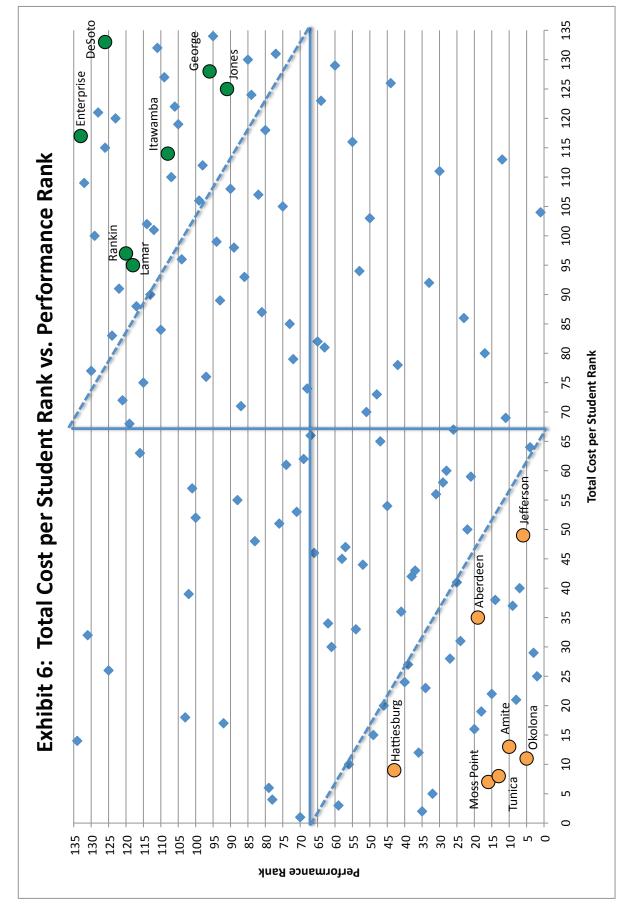
PEER produced five quadrant graphs, one for each functional area (instruction, administration, cost of operations and maintenance of the physical plant, and ancillary and add-on programs) and one for total cost per student. Each quadrant graph's x-axis shows the ranks of the school districts for each of the five efficiency measures, while the y-axis shows each district's rank in performance. (See Exhibit 6, page 96.)

#### Results

PEER compared the results in the top half of the upper-right quadrants and the bottom half of the bottom left quadrants of each of the five quadrant graphs.

#### Top-Ranking Districts in Performance and Efficiency

The upper right quadrants of the quadrant graphs show those districts that rank above the median in both performance and



efficiency function. The top half of that quadrant (illustrated by a diagonal line from [67,134],[134,67]) shows the highest ranking among those.

PEER compared the results among the five graphs and determined that the following five school districts consistently ranked in the top half of the upper-right quadrants of all five graphs:

- DeSoto County School District;
- George County School District;
- Itawamba County School District;
- Jones County School District; and,
- Lamar County School District.

The following fourteen districts ranked in the top half of the upper-right quadrants of four of the five graphs:

- Enterprise School District;
- Kosciusko School District;
- Pontotoc City Schools;
- Union Public School District;
- Clinton Public School District;
- Jackson County School District;
- Lincoln County School District;
- Union County School District;
- Rankin County School District;
- Pearl River County School District;
- Hancock County School District;
- Grenada School District;
- Neshoba County School District; and,
- Ocean Springs School District.

#### Bottom-Ranking Districts in Performance and Efficiency

The bottom-left quadrants of the quadrant graphs show those districts that rank below the median in both performance and efficiency function. The bottom half of that quadrant (illustrated by a diagonal line from [0,67],[67,0])shows the lowest ranking among those.

PEER compared the results among the five graphs and determined that the following eight school districts consistently ranked in the bottom half of the bottom-left quadrants of all five graphs:

- Jefferson County School District;
- Aberdeen School District;
- Hattiesburg Public School District;
- West Tallahatchie School District;
- Amite County School District;
- Moss Point Separate School District;
- Tunica County School District; and,
- Okolona Separate School District.

The following twelve districts ranked in the bottom half of the bottom-left quadrants of four of the five graphs:

- Lumberton Public School District;
- East Jasper Consolidated School District;
- Jefferson Davis County School District;
- Kemper County School District;
- Hazlehurst City School District;
- Montgomery County School District;
- North Panola Schools;
- Quitman County School District;
- Natchez-Adams School District;
- Noxubee County School District;
- Leflore County School District; and,

Holmes County School District.

#### Selection

PEER decided to visit fourteen school districts (seven top districts and seven bottom districts). Because five districts ranked high in all functional areas, PEER chose two additional districts from those that ranked in four of five functional areas. PEER selected the following seven top districts to visit:

- DeSoto County School District;
- George County School District;
- Itawamba County School District;
- Jones County School District;
- Lamar County School District;
- Rankin County School District; and,
- Enterprise School District.

PEER selected Rankin and Enterprise districts based on geography and size. Rankin is a larger school district and centrally located, while Enterprise is a small district with uncharacteristically low costs per student for a small district.

Although eight districts ranked low in all functional areas, PEER visited only seven. PEER selected the following seven bottom districts to visit:

- Jefferson County School District;
- Aberdeen School District;
- Hattiesburg Public School District;
- Amite County School District;
- Moss Point Separate School District;
- Tunica County School District; and,
- Okolona Separate School District.

PEER did not select West Tallahatchie because geographically it is in the same region as Tunica and DeSoto.

SOURCE: PEER analysis.

Appendix B: Executive Summary: Identifying Options for Improving the Efficiency of Mississippi's School Districts: Phase One (PEER Report #578)

#### Introduction

#### **Initial Request to the PEER Committee**

PEER received a legislative request to identify cost savings that could result if school districts were to establish shared service arrangements for certain functions or programs. This request was prompted by the legislator's interest in a Deloitte Research report entitled *Driving More Money into the Classroom: The Promise of Shared Services*.

Deloitte noted in its report that in most states, sixty percent of every dollar spent on education is used on instruction and forty percent is spent on support. Deloitte considered school districts with support expenditures higher than forty percent of total expenditures to be candidates for efficiency efforts such as shared services. According to the results of Deloitte's research, the most efficient school districts were those with enrollments of 2,000 to 4,000 students, with some smaller efficiency gains for districts with up to 6,000 students. (This did not take into account educational outcomes such as school district performance.)

PEER hypothesized that Mississippi would have similar results and that the information could be used to identify school districts of a similar size that would be the best possible candidates for implementing shared service arrangements to improve the districts' efficiency. Then PEER would be able to use data from the identified districts to estimate the amount of possible savings or cost avoidance that could be achieved at these particular districts through shared service arrangements.

#### PEER's Reframing of the Project

Using statewide district-level data obtained from the Mississippi Department of Education, PEER could not establish the same correlation in Mississippi between school district size and efficiency that Deloitte had found in its research. Thus PEER would need a different approach to determine which school districts would be the best candidates for shared service arrangements and the amount of possible savings or cost avoidance that could be achieved. The implications of what PEER learned from its initial scoping necessitated dividing the project into two phases.

#### **Scope Limitations**

PEER notes the following scope limitations in Phase One of this project:

- Phase One does not incorporate or determine any potential correlation of a district's efficiency as it relates to educational outcomes such as school district performance.
- Phase One focuses primarily on the potential for reducing *non-instructional* expenditures (i. e., support expenditures) and does not address any potential cost savings or cost avoidance that could result from shared services arrangements for *instructional* functions.

#### Background

*Shared services* arrangements take a specific function and share responsibility and decisionmaking for that function among two or more school districts, whereas *consolidation* combines functions for two or more school districts through the creation of a new school district, which results in a loss of direct supervision and decisionmaking for persons in those districts as they existed prior to consolidation. While *outsourcing* typically also focuses on a specific function, the school district contracts performance of the service out to a third-party provider.

#### Determining Criteria for Shared Services Implementation

School functions amenable to shared services may be divided into direct functions that provide services to students and indirect functions that provide services to staff or infrastructure. Direct functions include transportation, food service and nutrition, instructional, safety and security, and health services. Indirect functions include purchasing, finance and payroll, facilities and real estate, human resources, technology services and administration.

At the district level, school districts should individually select support functions through an efficiency assessment based on the school district's needs, such as a detailed decision tree analysis referenced within the Deloitte research study. PEER notes that in regard to the selection of support functions for possible shared services arrangements, what is appropriate for one district may not be appropriate for another.

School districts could use one of the following mechanisms to implement shared services arrangements:

- *Boards of Cooperative Educational Service*--These boards could provide member school districts with the opportunity to pool their resources to advance benefits to students, taxpayers, and educators. This mechanism would need to be created in statute and should establish a separate board that supervises the shared services function(s) for member school districts.
- *Regional Educational Service Agencies (RESAs)*--A regional educational service agency is a group of twelve or more school districts formed to pool their collective resources in order to provide more cost-efficient services to member districts. Mississippi law already provides authority for RESAs (MISS. CODE ANN. § 37-7-345 [1972]) and six are currently operating in the state. These entities presently provide services and programs to their member districts such as professional development, instructional materials, educational technology, and curriculum development.
- *Interlocal Agreements*--An interlocal agreement is a contract between two or more governmental units that work together to provide services to the public by sharing their budgets to reach a common goal that they might not be able to reach separately. Mississippi law has a provision for interlocal agreements (MISS. CODE ANN. § 17-13-1 et seq. [1972]), but the agreement must meet requirements set forth in the statute.

#### Determining Potential Candidates for Improving Efficiency in Mississippi's School

Districts

As noted previously, the Deloitte study reported that in most states sixty percent of school districts' expenditures are for instruction, while forty percent of school districts' expenditure are for support functions. Using this observation as a conservative standard, if Mississippi implemented efficiency options such as shared services to achieve the goal of having at least sixty percent of all school districts' budgets devoted to instructional support, the result could be approximately \$7.3 million in funds that, depending on their source, could possibly be redirected to instruction. Efficiency goals that would drive the percentage of instructional dollars even higher could significantly increase that figure.

Based on the work completed in Phase One of reviewing the potential for use of shared services in school districts, PEER believes that an efficient and robust screening procedure could be developed to identify school districts that could benefit from shared services arrangements by looking at the percentage of instructional spending to total expenditures, the total average operating cost per student, or by reviewing the cost per student for a specific support function or functions.

# Next Steps in Identifying Options for Improved Efficiency of Mississippi's School

#### Districts

#### Phase Two of PEER's Project

In Phase Two of PEER's project, which will commence in January 2014, PEER will:

- conduct a comprehensive efficiency review of selected school districts, basing that selection on screening criteria and methods described in this report;"
- based on the results of the comprehensive efficiency review, identify best practices that are exhibited by districts with both low support expenditures and high academic performance in order to determine what actions or efforts (i. e., shared services arrangements or other efficiency efforts) these successful districts have implemented that could be implemented by other districts with reasonable expectation of similar results; and,
- present options to the Legislature for ensuring or encouraging other school districts to improve their efficiency through the use of shared services arrangements or other efficiency efforts identified in the comprehensive efficiency review.

# Potential Options for Ensuring or Encouraging Improved School District Efficiency

The ultimate goal of school district efficiencies (not just shared services arrangements) would be cost savings or cost avoidance. Depending on their source, these funds could potentially be redirected into instruction.

School districts that could most benefit from efficiency improvements should determine, based on the results of Phase Two of this project, how to achieve efficiency improvements in accordance with their needs and preferences by implementing shared services arrangements, consolidation, outsourcing, or other efficiency efforts.

Ideally, school districts would want to operate more efficiently. However, should school districts not take the initiative to bring about improvements in efficiency, a range of potential options for ensuring or encouraging participation at the school district level could include incentives, penalties, and mandates. Examples of these options could include:

<sup>&</sup>lt;sup>•</sup>PEER notes that the Mississippi Commission on School District Efficiency recommended a targeted efficiency review of selected school districts in its August 2013 report.

- grant funding for feasibility studies on improving the efficiency of a specific function (e. g., a specific shared services arrangement for transportation services);
- grant funding for start-up costs associated with new school district projects designed to improve efficiency;
- additional state funding for schools that exhibit efficiency improvements beyond a specified benchmark;
- reduction in state funding for school districts that fall below a specified benchmark (e. g., districts that spend below a specified percentage of total expenditures on instruction); or,
- legislative mandate that a district's instructional spending be at or above a specified percentage of total expenditures (e. g., Texas currently mandates that a specified percentage of total expenditures be spent for instructional purposes).

#### Recommendations Regarding Mechanisms with Which to Implement Shared Services Arrangements for School Districts

Should the Legislature choose to support implementation of shared services arrangements prior to completion of Phase Two, PEER has recommendations regarding each of the three possible mechanisms for implementation.

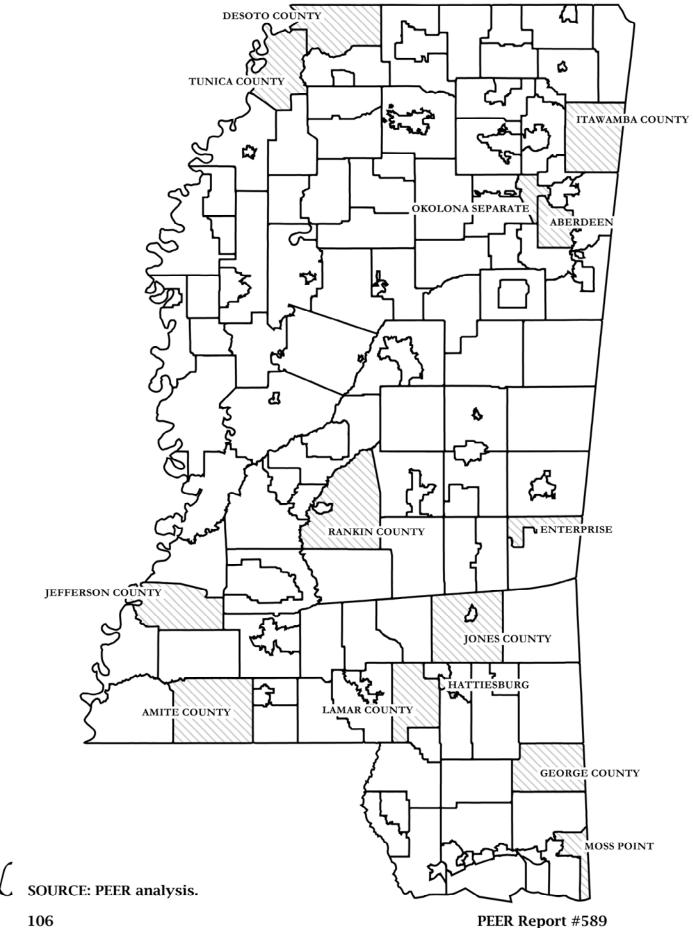
Prior to the completion of Phase Two and PEER's resulting report, the Legislature could take one or more of the following steps.

- Should the Legislature support the use of interlocal agreements to facilitate shared services arrangements, it could require the Department of Education to make available on its website model agreements for shared services arrangements.
- Should the Legislature support the use of regional educational service agencies to facilitate shared services arrangements, the Legislature could amend MISS. CODE ANN. Section 37-7-345 (1972) to improve the transparency and accountability of regional educational service agencies. An example of such an accountability measure would be a requirement that regional educational service agencies provide both the Legislature and the Department of Education with copies of strategic plans, annual audited financial statements, and operating agreements entered into with respective member school districts identifying shared services provided and applicable goals or performance objectives.
- Should the Legislature support the use of boards of cooperative educational service to facilitate shared services

arrangements, it should provide statutory authority that would allow two or more school districts to form boards of cooperative educational service with which to implement shared services arrangements.

SOURCE: PEER Report #578.

### Appendix C: Mississippi School Districts Selected for Phase Two of the Efficiency Review



## Appendix D: Mississippi's Goals and Objectives for Education (Public Schools) from the Statewide Strategic Plan

#### **Statewide Goal**

To make available a quality K-12 public education for all Mississippians that prepares them, upon high school graduation, to either enter the labor force with an employable skill or to successfully complete a higher education program

#### Benchmarks

#### **Special Education**

- Number and percentage of special education students taking assessment tests, by test and grade level
- Breakdown of the performance of special education students on assessment tests, by grade level, test, achievement level on the test (number and percentage of students scoring at each achievement level), and scaled score range for each achievement level
- Number and percentage of special education students who are alternately assessed, by test and grade level
- Breakdown of the performance of special education students who are alternately assessed by grade level, test, achievement level on the test (number and percentage of students scoring at each achievement level), and scaled score range for each achievement level
- Number and percentage of special education students graduating from high school with a standard diploma

#### Career and Technical Education

- Percentage of high school students enrolled in a career and technical education program
- Percentage of high school students enrolled in career and technical education programs who earn an approved Industry Certification, by career pathway
- Percentage of students earning an approved Industry Certification who obtain a job in Mississippi in their area of certification
- Average starting salary of students earning an approved Industry Certification who obtain a job in Mississippi in

#### **Basic Education**

#### **Student Readiness**

- Breakdown of the performance of children entering public school kindergarten on the Kindergarten Readiness Test by achievement level on the test (number and percentage of children scoring at each achievement level) and scaled score range for each achievement level
- Breakdown of the performance of students entering the first grade on a valid and reliable testing instrument by achievement level on the test (number and percentage of students scoring at each achievement level) and scaled score range for each achievement level
- Percentage of students at risk for academic failure as evidenced by the percentage of students, by grade level, in grades 3 through 8 who score below the cutoff score for *Basic* achievement on assessment tests, by test and scaled cutoff score
- Percentage of students at risk for academic failure as evidenced by the percentage of students, by grade level, in grades 9 through 12 who fail subject area tests, by test and scaled cutoff score for failure
- Number and percentage of students enrolled in remedial instructional programs, by grade level and course
- Public high school dropout rate, by student cohort

#### Student Academic Achievement

- Percentage of public school students exiting the 3rd grade scoring proficient or above in reading on the statewide assessment test, by achievement level and scaled score range for each achievement level
- Breakdown of the performance of students on assessment tests (including subject area tests), by grade level, test, achievement level on the test (number and percentage of students scoring at each achievement level), and scaled score range for each achievement level
- Average composite ACT score for 11th grade public school students
- Public high school 4-year graduation rate, by student cohort
- Public high school completion rate, by student cohort
- Percentage of population age 25 and older with high school or more education

#### **Quality of Learning Environment**

- Percentage of public school core academic subject classes staffed with teachers who are highly qualified according to No Child Left Behind criteria
- Percentage of public school teachers certified through alternative programs
- Percentage of public school teachers who continue teaching

in public school classrooms five years and ten years from their initial hire date

- Average number of years of teaching experience of full-time public school teachers
- Percentage of full-time public school teachers with less than 3 years of teaching experience
- Breakdown of performance of public school principals on the Mississippi Principal Evaluation System by performance level and score range for each performance level
- Percentage of public school students who attend public schools rated A or B in a valid and reliable accountability rating system
- Percentage of public school students who attend public schools rated F in a valid and reliable accountability rating system
- Number and percentage of public schools that improved performance in a valid and reliable accountability rating system by one or more letter grades from the previous year
- Number and percentage of public schools that increased their accountability score in a valid and reliable accountability rating system from the previous year's score
- Number and percentage of public schools whose performance declined in a valid and reliable accountability rating system by one or more letter grades from the previous year
- Number and percentage of public schools and districts that meet federal Annual Measurable Objectives
- Percentage of public school students attending classes in buildings that are in poor condition
- Number and percentage of students served under a school choice option, by type of option
- Cost
- State cost per student
- Total cost per student

SOURCE: Building a Better Mississippi: The Statewide Strategic Plan for Performance and Budgetary Success, July 2014.

# Appendix E: Technical Appendix for School District Profiles

This technical appendix outlines the information used to create the school district profiles located on pages 69 through 82. PEER created the profiles using information provided by the Mississippi Department of Education (MDE). Each profile identifies the district, the county in which the district is located, the number of schools in the district, and the number of students attending the district.

Average daily membership (ADM) was used to determine the number of students attending the district. ADM refers to the total enrollment of students in the district averaged over the school year. Withdrawals, transfers or expulsions may cause changes in enrollment during the year. ADM accounts for these changes by averaging student enrollment.

PEER selected ADM over average daily attendance (ADA). ADA calculates the frequency at which students attend school in the district.

PEER created profile pages for the following fourteen school districts:

- Aberdeen School District;
- Amite County School District;
- DeSoto County School District;
- Enterprise School District;
- George County School District;
- Hattiesburg Public School District;
- Itawamba County School District;
- Jefferson County School District;
- Jones County School District;
- Lamar County School District;
- Moss Point Separate School District;
- Okolona Separate School District;
- Rankin County School District; and,

• Tunica County School District.

An explanation of the methodology used to select these districts is located in Appendix A on page 85 of this report.

The profiles group data under the categories of operational efficiency and academic performance.

#### **Operational Efficiency**

The operational efficiency section of each district's profile provides data on the efficiency of each district in order to identify areas ripe for improvement. This section provides information on spending by operational area, cost measures relative to state averages, and per student spending by operational area.

#### Spending by Operational Area

School district expenditures were sorted into functional categories such as instruction for the purpose of measuring the operational efficiency of the district. With this goal in mind, a pie chart of school district expenditures was created using the following categories: instruction, administration, plant operations, food service, transportation, student support, and other expenditures.

These categories vary slightly from those used by MDE in its annual Superintendent's Report. PEER removed non-classroom expenditures such as athletics from instructional spending. Central technology support services were also included under administration rather than treated as a separate category. Note that nonrevenue transactions were excluded from the pie chart in order to capture the total current operational expenditures.

A detailed breakout of the types of expenditures included in each category is located below (pages 112 through 113). The numbers following each type of expenditure are a reference to the *Accounting Manual for Mississippi Public School Districts*. This manual is available to the public on MDE's website.

Section M: Expenditure/Expense Function and Object Codes assigns a function code and object code to all school district expenditures. Function codes refer to the category of spending such as elementary programs. Object codes are used to further break down expenditures into salaries, benefits, inventory, etc. Each category generally includes all object codes to capture spending fully in each area. Certain categories exclude object codes for capitalized equipment, all object codes in the 700s, as these are not operational expenditures. The exclusions are noted by the relevant function code. Instruction expenditures:

- Pre-Kindergarten Programs (1105)
- Kindergarten Programs (1110)
- Elementary Programs (1120)
- Middle-Junior High Programs (1130)
- High School Programs (1140)
- Vocational Educational Programs (1142)
- Other Regular Programs (1191 through 1199)
- Gifted Education Programs (1210)
- Special Education Programs (1220)
- Alternative School Programs (1230)
- Title I Programs (1250)
- Other Special Programs (1290)

#### Administration:

- Board of Education Services (2310 through 2319)
- Executive Administration Services (2320 through 2329)
- Special Area Administration Services (2330)
- Office of the Principal Services (2410)
- Other Support Services School Administration (2490)
- Fiscal Services (2510 through 2519)
- Purchasing Services (2520)
- Warehousing and Distributing Services (2530)
- Printing Publishing and Duplicating Services (2540)
- Other Support Services Business (2590)
- Planning, Research, Development and Evaluation Services (2810 excludes capitalized equipment)
- Information Services (2820 through 2829 excludes capitalized equipment)
- Staff Services (2830 through 2839 excludes capitalized equipment)
- Data Processing Services (2840 through 2849 excludes capitalized equipment)

Plant:

- Supervision of Operation and Maintenance of Plant Services (2610 excludes capitalized equipment)
- Operating Buildings Service (2620 excludes capitalized equipment)
- Care and Upkeep of Grounds Services (2630 excludes capitalized equipment)
- Care and Upkeep of Equipment Services (2640 excludes capitalized equipment)
- Vehicle Operation and Maintenance Services Other Than Student Transportation Vehicles (2650 excludes capitalized equipment)
- Security Services (2660 excludes capitalized equipment)
- Other Operation and Maintenance of Plant Services (2690 excludes capitalized equipment)

Food Service:

• Food Service (3100 excludes capitalized equipment)

#### Transportation:

- Supervision of Student Transportation Services (2710 excludes capitalized equipment)
- Vehicle Operation Services (2720 excludes capitalized equipment)
- Monitoring Services (2730 excludes capitalized equipment)
- Vehicle Servicing and Maintenance Services (2740 excludes capitalized equipment)
- Other Student Transportation Services (2790 excludes capitalized equipment)

#### Student Support Services:

- Attendance and Social Work Services (2110 through 2119)
- Guidance Services (2120 through 2129)
- Health Services (2130 through 2139)
- Psychological Services (2140 through 2149)
- Speech Pathology and Audiology Services (2150 through 2159)
- Other Support Services Student (2190)
- Improvement of Instruction Services (2210 through 2219)
- Educational Media Services (2220 through 2229)
- Other support services instructional staff (2290)

#### Other Expenditures:

- Adult Basic Education Programs (1310)
- Advanced Adult Education Programs (1320)
- Occupational Programs (1330)
- Upgrading in Current Occupation Programs (1340)
- Retraining for New Occupation Programs (1350)
- Special Interest Programs (1360)
- Life Enrichment Programs (1370)
- Other Adult/Continuing Education Programs (1390)
- Elementary Summer School (1410)
- Secondary Summer School (1420)
- Athletic Activities (1910)
- Student Activities (1920)
- Other instructional programs (1930 through 1990)
- Enterprise Operations (3200 excludes capitalized equipment)
- Community Services Operations (3300 excludes capitalized equipment)
- Other Non-instructional Services (3900 excludes capitalized equipment)
- Scholarship Awards (3950 excludes capitalized equipment)
- Subsidies to other local education agencies (3975 excludes capitalized equipment)

The use of the same expenditure coding should create uniformity among districts. However, these expenditures are self-reported, which may create variation of function and object code assignment between districts. The pie charts outline spending by operational area and should offer a point of comparison between districts; however, the potential errors associated with self-reporting limit the reliability of such comparisons.

#### **Cost Measures Relative to State Averages**

This table provides efficiency measures for administration, plant operations, food service, and transportation. These are major areas of non-classroom spending. The data is presented for the district and compared to the state average.

The state average was calculated by adding categories of expenditures and then dividing that sum by the 134 districts included in PEER's selection process. The districts excluded from the average are listed on pages 8 through 9 of the report.

The profile presents two efficiency measures for administration: cost per student and cost per administrator. The expenditure codes identified on page 112 were used to identify total administrative expenditures for each district. These expenditures were then divided by the ADM of the district in order to identify the cost per student.

ADM was also divided by total number of administrative positions within the district. MDE provided data on the full time equivalent (FTE) positions for every district in the state. However, MDE does not assign job positions by operational area.

Using a list of full-time equivalent positions in each district, PEER determined that the following job positions could qualify as administrators when calculating students per administrators:

- SUPERINTENDENT- CONSOLIDATED SEPARATE DISTRICT
- SUPERINTENDENT- COUNTY
- SUPERINTENDENT- ASSISTANT (DEPUTY)
- DIRECTOR/COORDINATOR- FEDERAL PROGRAMS
- ASSISTANT DIRECTOR- FEDERAL PROGRAMS
- SCHOOL BUSINESS OFFICER/ADMINISTRATOR
- DIRECTOR- PERSONNEL
- ASSISTANT DIRECTOR PERSONNEL
- PROFESSIONAL DEVELOPMENT COORDINATOR
- WAREHOUSE/SUPPLY/DELIVERY PERSON
- OTHER BUSINESS OFFICE STAFF
- ATTORNEY
- AUDITOR

- PURCHASING AGENT
- SECRETARY/CLERICAL
- MSIS PERSONNEL COORDINATOR
- ACCOUNTANT/BOOKKEEPER
- PUBLIC RELATIONS/INFORMATION SUPERVISOR- TITLE I
- COMMUNICATIONS
- GRAPHIC ARTS
- MIGRANT RECRUITER- TITLE I
- DIRECTOR- VOCATIONAL PROGRAMS
- ASSISTANT DIRECTOR- VOCATIONAL PROGRAMS
- DIRECTOR/SUPERVISOR/COORDINATOR-CURRICULUM/INSTRUCTION
- DIRECTOR- STUDENT ASSESSMENT (TESTING)
- COORDINATOR- STAFF DEVELOPMENT
- SUPERVISOR/CURRICULUM COORDINATOR (ELEMENTARY)
- ASSISTANT SUPERVISOR/CURRICULUM COORDINATOR
   (ELEMENTARY)
- SUPERVISOR/CURRICULUM COORDINATOR (SECONDARY)
- ASSISTANT SUPERVISOR/CURRICULUM COORDINATOR (SECONDARY)
- PRINCIPAL
- PRINCIPAL-ASSISTANT
- ALTERNATIVE PROGRAM DIRECTOR/ADMINISTRATOR
- SCHOOL WEB PAGE MANAGER
- TECHNOLOGY SPECIALIST
- COMPUTER OPERATOR
- COMPUTER TECHNICIAN
- DATA PROCESSING PROGRAMMER/ANALYST
- DIRECTOR- DATA PROCESSING

Districts self-report FTE positions. Using the same FTE positions should create uniformity among districts, but self-reporting may create inaccuracy in these figures.

The profiles present two efficiency measures for plant operations: cost per square foot and the number of square feet per student.

Plant operations generally include the expenditure codes on page 112. In order to reflect more accurately the cost per square foot of plant operations, PEER excluded Vehicle Operation and Maintenance Services - Other Than Student Transportation Vehicles (2650) from the calculation of plant operation costs. These expenditures were excluded because vehicles do not directly correlate to expenditures for maintaining the square footage of school buildings.

Cost per square foot represents the division of plant expenditures by the total number of square feet in the district. The number of square feet per student measures the capacity of district facilities.

The profiles present cost per meal equivalent as a measure of the efficiency of food service. Cost per meal is calculated by dividing total food service expenditures by the total number of meals served during the 2012-2013 school year. Data on each district was not readily accessible. PEER only received data on the fourteen selected districts and state averages calculated by MDE.

The profiles present two efficiency measures for transportation: cost per mile and cost per rider. Transportation costs were calculated using the expenditure codes identified on page 113.

PEER requested total annual mileage from MDE. MDE provided total miles traveled while transporting students on regular routes. This number excludes the miles buses traveled without transporting students, special education mileage, and activity trip mileage. Excluding these numbers could inflate the cost per mile and potentially create inaccuracy in the data presented. Because PEER could not obtain the actual total annual mileage from districts, the profiles contain the data originally provided by MDE.

MDE provided the total number of students who use the district's transportation system. Dividing transportation expenditures by the number of students using the system created cost per rider.

#### Per Student Spending by Operational Area

ADM was used to calculate per student by operational area. The expenditure codes used in each operational area are listed on pages 112 and 113. PEER divided the total expenditures in each area (less capitalized expenditures where noted above) by ADM. Cost per student calculations are necessary to compare districts of varying sizes.

The state average was calculated by adding districts' cost per student expenditures and then dividing that sum by 134 (the number of districts included in PEER's selection process). The districts excluded from the average are listed on pages 8 through 9 of the report.

#### Academic Performance

The academic performance section of each district's profile provides data on the district letter grades and school letter grades assigned by MDE, student performance on state assessment tests, and student and teacher performance measures.

#### **District and School Letter Grades**

This section contains a chart providing the district letter grade assigned by MDE as part of the state accountability standards. It also contains the number of schools within the district that received each of these letter grades assigned by MDE.

Performance classification of a school or district is determined by (1) the percentage of students who are performing at criterion levels of minimum, basic, proficient, and advanced and (2) the degree to which student performance has improved over time. This is based on expected growth value for the school called the Quality of Distribution Index (QDI). The results from the Achievement Model and the Growth Model are combined to assign classifications as:

- A: Star School
- **B:** High Performing
- C: Successful
- D: Academic Watch
- F: Low Performing
- F: At-Risk of Failing
- F: Failing.

#### Student Performance on State Assessment Tests

This section contains bar charts representing the percentage of students performing proficient and above on state standardized tests for math, English language arts, science, and the subject area tests required for graduation. The green bars in the charts represent the district's percentages of proficient and above scores. The blue bars represent the state's average percentages of proficient and above scores.

#### **District Profile Information**

This section contains a table detailing a variety of measures of student and teacher performance. This data is presented for the district and by state averages.

MDE provided data on student attendance rate, graduation rate, and the number of students per teacher. The number of students per teacher is different from the numbers presented in the Superintendent's Annual Report.

The ratio reported in the Superintendent's Report does not accurately reflect the average student to teacher ratio for most classes in a district because special courses such as special education and gifted classes skew the ratio. Therefore, PEER requested MDE to recalculate the average student teacher ratio for regular classes. It should be noted that because MDE does not normally report this ratio in the format PEER requested, no state average was readily available for comparison. In order to calculate the number of students per teacher for regular classes, MDE divided all courses taught in the district into special courses and non-special courses. Special courses include those identified as special fund programs such as Title I, Title II, Title II, CTE, special education, and gifted. Nonspecial courses are funded by regular funds. MDE used these divisions to calculate a student/teacher ratio for regular classes.

The department also provided average teacher salary, average number of years of teacher experience, and percentage of teachers in their first three years of teaching.

The poverty rate was obtained from the 2012 United States Census.

SOURCE: PEER analysis of information provided by the Mississippi Department of Education and U. S. Census Bureau.

# PEER Committee Staff

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