Cisco 21st Century Schools Initiative: An Update

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Prepared by EDC | Center for Children & Technology

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Researched and written by:

Dr. Harouna Ba
Ms. Elizabeth Pierson
Ms. Laura Jeffers
Dr. Karen Shakman
Dr. Amanda Roy
Ms. Terri Meade
Mr. Quincy Chang
Ms. Loulou Bangura
Ms. Nicole Breslow

Education Development Center's Center for Children and Technology
96 Morton Street, 7th Floor
New York, NY 10014
212.807.4200
www.cct.edc.org/

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Introduction

After Hurricane Katrina damaged schools and displaced students in 2005, Cisco Systems, Inc. (Cisco) invested US$80 million in cash grants, product donations, and employee time to help eight school districts in Mississippi and Louisiana revamp their long-term priorities and improve student performance by introducing technology to classrooms. Cisco's four-year, 21st Century Schools Initiative (21S) was implemented in seven districts in Mississippi and one district in Louisiana. The 21S Initiative equipped schools with Internet connectivity and interactive tools, trained teachers to integrate those tools into classroom instruction for greater student engagement, and helped school leaders craft a long-term vision for preparing students for a global, technology-driven economy.

EDC's Center for Children and Technology (EDC | CCT) researchers conducted the evaluation of the 21S project between 2006 and 2009. The first three years of the evaluation were formative, and sought to document the development of the Initiative, to assess achievements and weaknesses, and to identify recommendations for program improvement. The last year was summative, and focused on measuring impacts across stakeholder groups at the district, school, and community levels (Ba et al., 2009). Undoubtedly, 21S has evolved during the four years since the evaluation was completed, and has changed in interesting ways that have not yet been documented.

Cisco is planning to visit some of the 21S districts and schools in the spring of 2013. To inform planning for this visit, Cisco requested that EDC | CCT provide an update report on the status of the 21S project in Mississippi and Louisiana and the ways in which the districts have changed—and remained the same—since the end of the initiative.

Research Approach

In the last three months, researchers at EDC | CCT used a rapid ethnography methodology—an accelerated process of data collection, presentation, and analysis (Holtzblatt & Jones, 1992; Hughes, King, Rodden, & Andersen, 1995; Millin, 2000; Strauss & Corbin, 1990)—to identify and systematically document factual information about each district regarding the status of the 21S project. The following question guided the research: How have the Cisco 21S districts changed, and stayed the same, since the evaluation was completed four years ago?

To identify information about each district in regards to the status of the 21S project, EDC | CCT researchers engaged in the following activities, described in detail below: (a) document searches and reviews, (b) district recruitment, (c) instrument development, (d) district interviews, (e) information organization and synthesis, and (f) data analysis and reporting.

Document search and review. In order to gather specific demographic data about the school districts and the surrounding regions and their test score data, researchers conducted a series of extensive Internet searches, using some of the following terms: "Mississippi Test Scores," "Mississippi Demographics," "Mississippi student data," Mississippi school information." The online resources reviewed included: Mississippi and Louisiana State Departments of Education; district-specific sites; school-specific sites; local newspaper sites; BetterSchools.net; Technology Counts; NCLB Report Cards; Children First Annual Report; Mississippi State Report Card; 2010 Census Data; City-Data.com; National Center for Education Statistics; GreatSchools.org; LocalSchoolDirectory.com; and Kids Count Data Center. Test score data was collected for eight years, from school year 2005–2006 through 2012–2013. The data was organized into spreadsheets to help track changes in these data from 2009 to 2012.

District recruitment and participation. Cisco staff initially reached out to the eight 21S districts to explain the purpose of this study and request their participation. Once a district agreed to participate, EDC | CCT researchers worked with them to secure consent to participate in the study and to schedule and prepare them for the interview. Districts also were requested to provide data that researchers were unable to locate online.

Instrument development. Using the 21S evaluation report and information collected from the document review, EDC | CCT researchers developed a research instrument to interview district leaders about how their district has changed since the end of the Cisco 21S Initiative in 2009. The interview protocol addressed district vision, leadership, technology, school and district climate, learning, and future plans. (See Appendix B.)

District interviews. EDC | CCT researchers interviewed a total of XX participants from the eight districts. Each interview lasted approximately 90 minutes, and was tape-recorded and transcribed. All participants read and signed a consent form before participating in the interview sessions. (See Appendix A).

Information organization. Researchers developed four spreadsheets to organize the quantitative and qualitative data collected through Internet searches, EDC's 2009 Summative Evaluation Report, and interviews with districts.

Data analysis. Once all the data was collected, researchers examined the qualitative and quantitative data to identify changes that have occurred over the past four years.

EDC | CCT researchers coded qualitative data and conducted a content analysis

organized around the six themes that guided interviews: district vision, leadership, technology, school and district climate, learning, and future plans. Quantitative data were examined to identify patterns of change or consistency during the past four years[1]. Researchers used analyses from the qualitative and quantitative data to create district profiles and summaries of key themes across districts.

This report presents the summary of key findings and profiles of each district. The results within these two sections are organized into five topics: vision and leadership, technology, school and district climate, learning, and next steps.

1 Because of changes that were made to the Mississippi standardized tests in 2007–2008, change was calculated only from this point on for the seven districts in that state.

Summary of Key Findings

Since Cisco left the region four years ago, the majority of the 21S Initiative districts have been able to successfully scale up and sustain Cisco's initial investment. Specifically, they have improved on key 21st-century education goals in the areas of vision, leadership, technology, school climate, and learning. As a result, most district leaders believe that they are currently well-positioned to satisfy the new Common Core requirements. A few of the districts faced serious roadblocks, and have struggled to transform their schools into the 21st-century education systems that Cisco had hoped for. The sections below provide a synopsis of the current state of education in the eight Cisco 21S Initiative districts.

Petal School District. The district has made steady progress in creating a 21st-century learning environment over the past four years. The pillars of the district's education reform include a vision focused on collaboration and Professional Learning Communities, as well as an integrated leadership and management system structured around a District Implementation Team and School Implementation Teams. The district has maintained a robust technology infrastructure and increased access to technology for teachers and students, while successfully integrating technology into the curriculum. In the classroom, there is an increased adoption of student-centered teaching and learning and a focus on ongoing formative assessment. Students in the district are outperforming their peers across the state in both math and language arts.

Lamar County School District. The district has successfully leveraged the Cisco 21S Initiative into all its schools dispersed across a large geographical area. With the support of a vibrant Education Foundation started under the Cisco 21S Initiative, the district is leveraging its web of communication technology to preserve valuable financial resources, while providing adequate technical support to its end-users. Teachers are integrating technology into the curriculum, and supporting each other through dynamic Professional Learning Communities. Student engagement and graduation rates have increased. In the last four years, student achievement has increased on nearly all standard assessments and across all measures, outperforming students across the state.

Harrison County School District. The district has maintained and scaled key components of the Cisco 21S Initiative and is building its capacity to offer a more personalized learning environment to its students. The district's education reform has centered

on the promotion of technology access and integration, an increased use of data to inform instructional decisions, a transition to a more student-centered pedagogy, an informal culture of collaboration and mutual support, and adoption of an in-house train-the-trainer model for teacher professional development. Harrison students' test scores have increased in math and language arts for most grade levels.

Hattiesburg Public School District. The district remains committed to the vision of the Cisco 21S Initiative by focusing on technology, technical support, data collection and use, technology integration, and positive school climate as levers for education reform. As technology has become an essential element of the district's educational mission, new district leadership has emphasized high academic expectations for all students, focusing on increased teacher training as well as improved communication across grade levels as additional means of student support. However, Hattiesburg students have had gains only in standardized language arts tests, and are trailing their peers across the state.

Jefferson Parish Public School System (JPPSS). In the past 18 months the school system's academic standing has improved despite the entire education system functioning in a state of flux, generating tension and fear among teachers and administrators. Most aspects of JPPSS, including staffing and reorganization of schools, have been reformed or are in the process of being transformed in order to align them with the new vision of creating a student-centered culture and becoming one of the best urban school districts in the nation. JPPSS officials have given more autonomy to school-based leaders with regard to instructional decisions, resources, and personnel. Building on the existing Cisco 21S Initiative technology infrastructure and tools, the school system is revamping its technology to align more closely with the educational vision of preparing high school students to be both college- and career-ready, while paying special attention to 3rd-grade students and an over-age middle-school population as a means to increase graduation rates in the future. JPPSS students have made significant gains on state tests across grade levels and across subject areas.

Forrest County School District. Current Forrest County School District administrators felt that the district did not fully capitalize on the affordances of the initial Cisco 21S Initiative technology investment. Moving forward, they have adopted a global education vision that challenges and inspires students and calls for the integration of technology. They are developing a new technology plan to support the evolving approach to 21st-century education reform and are promoting the use of student-centered approaches to instruction. The district has built a robust technology infrastructure, expanded technology access across the district, increased the use of data to inform instruction and professional development, established Professional Learning Communities, increased teacher collaboration, and made office procedures more efficient by reducing paper consumption,. Test scores are up in most grades on math and language arts, and in two of the four SATP subjects. Sixth graders outperformed students across the state in both math and language arts in 2011–2012.

Moss Point School District. The district has had limited success in leveraging the

momentum of the Cisco 21S Initiative in the past four years, due to state regulatory challenges and changes in leadership. With guidance from its school board and a new instructional leader, the district has shifted its focus to supporting the whole child by increasing accountability, building technological infrastructure and promoting technology integration, and becoming more data-driven and more sophisticated in understanding how to link data sources and use data to inform decisions. Students across the state outperformed Moss Point students across all measures in 2011–2012. Although they have a long way to go in providing a quality supportive learning environment to all students, the district has enjoyed increased graduation rates and improved test scores in certain grades and subjects in 2011–2012.

Forrest County Agricultural High School (FCAHS). The school is at a crossroads in reforming itself into its new role as the state's sole agriculture high school. FCAHS is working on stabilizing its system after frequent leadership changes, high turnover in technology staff, and high level of teacher retirements. Despite these changes and its aging technology tools, the system has continued to maintain its technology infrastructure, increase technology usage, offer a full range of academic and agriculture-related courses, and provide access to a family-friendly environment. FCAHS students' test scores have gone down in most subjects over the past four years, although students outperformed their peers across the state in both algebra I and history in 2011–2012.

District Profiles

Petal

Lamar

Harrison

Hattiesburg

JPPSS

Forrest County

Moss Point

FCAHS

Petal School District

Petal School District has made steady progress over the last four years, promoting instructional leadership, collaboration, and data-driven decision-making. The district is well-regarded throughout Mississippi, and Petal students are outperforming their peers across the state in both math and language arts.

Petal is a city located in Forrest County, Mississippi. It is part of the Hattiesburg, Mississippi, Metropolitan Statistical Area, which encompasses Forrest, Lamar, and Perry counties. The city of Petal experienced a gain in population of approximately 3.8% following hurricanes in the region in August 2005. In 2011, the population of Petal was 10,587, of which 81% was White and 15% African-American. Hispanics made up approximately 3%, while Native Americans and Asians made up the remaining percentage point. The median income that year ($36,646) was lower than that of both the State of Mississippi ($38,718) and the United States ($52,762). Petal's poverty rate of 40% was significantly higher than that of the state of Mississippi (21.6%) and of the country as a whole (14.3%), while the unemployment rate (8.6%) was slightly lower than that of the state (10%) and the country (8.7%).

District Background Highlights

- Petal School District (PSD) is a small district composed of five schools. In the 2008–2009 school year, the number of schools in PSD increased from four to five. The five schools that currently make up the district include a primary, an elementary, an upper elementary, a middle, and a high school.
- The PSD student population has grown in the eight years since the 21S initiative was first implemented. Student enrollment in the district has increased steadily from 3,781 in 2005–2006 to 4,024 in 2011–2012. As of 2011–2012, 79% of the total student population was White, 15% were African-American, and 3% were Hispanic. Native Americans and Asians made up the remaining percentage. The majority of students (70.66%) was eligible for free and reduced-price lunch.
- The number of teachers employed by the district decreased from 298 in 2005–2006 to 268 in 2010–2011.

Vision and Leadership

Key Findings

- Vision is focused on collaboration and Professional Learning Communities.
- The district has an integrated leadership and management system structured around a District Implementation Team and School Implementation Teams.

The district continues to embrace the vision of empowering all students with the attitudes, knowledge, and life-long learning skills essential to thrive as responsible citizens in an ever-changing global society, which was the focus during the 21S Initiative.

However, in recent years the district has put a greater emphasis on collaboration, largely through Professional Learning Communities (PLCs), which were first implemented during the 21S Initiative, and on data-driven decision-making.

There have been leadership changes at the district and school levels, as well as changes in the configuration of schools, as the number of schools has remained the same. The former superintendent who was involved with the implementation of the 21S retired in 2009. The district has had a new superintendent and four new principals in the last four years.

A District Implementation Team (DIT) meets weekly to review data from a variety of sources, including school walk-throughs, PLC meetings, and classroom observations, and to discuss how to better support school staff. The Petal District Administration has conducted over 3000 building walk-throughs. The district leadership knows almost immediately if there are problems in any school in any grade level." In addition, each school has a School Implementation Team (SIT) made up of the principal, assistant principals, and a member of the Central Office, which also meets weekly to discuss management and instructional issues.

While the district does not have an innovation management team, it has appointed the technology director to play this role through new partnerships with local technology companies—including Tech Links and Business Communications, Inc.—that provide technical support and hardware.

Technology

Key Findings

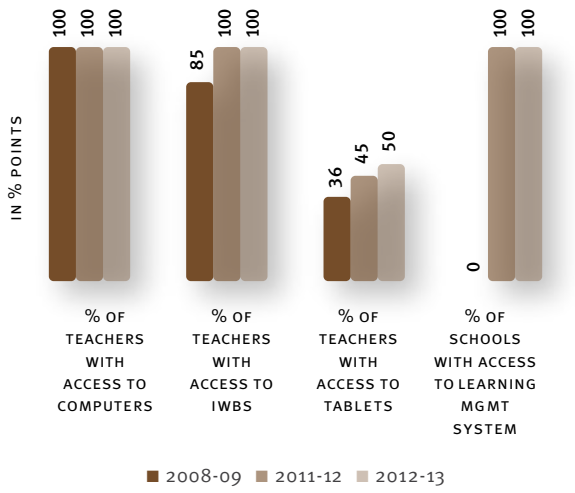
- The district has been able to maintain a robust technology infrastructure.
- Access for teachers and students is high.
- Integration into the curriculum is progressing.
- Digital assessment tools contribute to improved teaching and learning.

Technology infrastructure and access. According to administrators, the main technology infrastructure has been "holding up wonderfully" since the Cisco Initiative ended in 2009. The wireless service and the security systems are functioning well, and the district is able to keep its equipment up-to-date by replacing aging components such as laptops, IP phones, and various switches. Administrators attribute much of their ability to maintain and update the equipment to the initial training they received from Cisco. Further, partnerships with regional technology service providers, mentioned above, have helped maintain hardware and software resources.

Technology is widespread throughout district; every teacher has a laptop that enables her or him to stay connected while at home or at a conference, and interactive whiteboards (IWBs) are in 100% of academic classrooms and 98–99% of other

types of classrooms. The number of computers in classrooms and for use by teachers and administrators climbed from 1,277 in 2009 to 1,380 in 2013. Similarly, the number of tablets in the district has gone from zero in 2009 to 85 units today. There is 100% wireless coverage in all schools, with 300–500 devices connected on any given day. Table XX shows some of the changes in technology access over the last four years.

PETAL
Figure X1



Use and integration. Across the board, stakeholders from administrators to teachers to students to parents are using more technology for teaching, learning, communication, and feedback. According to administrators, "Overall, teachers are doing a very good job integrating technology, though there is still a handful of teachers that use IWB as an overhead projector." Administrators say that technology has made teachers' jobs easier and that they believe that technology is 90% of the reason for improved test scores in the district. In particular, tools for diagnostic testing and formative assessment have enabled teachers to gather more information about how their students learn.

All administrators use iPads to conduct building walk-throughs using an observation tool developed by an outside company with indicators adapted to suit their specific needs. Administrators say that the technology allows them to provide teachers with immediate feedback, and is largely the reason why they have been able to complete so many school building walk-throughs. They use the iPads to conduct classroom observations as well, and Google Docs to document and share their notes.

Additionally, the Active Parent system allows parents to review their children's homework, daily grades, semester grades, and test scores. In the 2011–2012 school year, there were 2,975 Active Parent accounts.

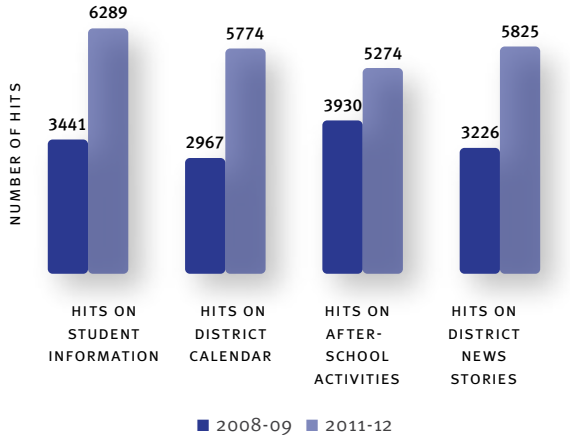
General activity on the district's website increased markedly between 2009 and 2011 as well, as illustrated in Figure XX, below.

Technical support. Technical support in the district consists of one technology director and four technicians Petal no longer partners with Digital Opportunity Trust[1] because both administrators and teachers felt that the interns were under-utilized.

1 Digital Opportunity Trust (DOT) USA's Teach Up! Program recruits and trains tech-savvy individuals from within the communities it serves, and places them in public schools in Mississippi and Louisiana. The program's interns help teachers acquire technology knowledge and project-based learning strategies.

The district sends a few teachers to the Mississippi Educational Computing Association conference each year, but the annual Technology Summit, which was initiated under 21S, is the principle vehicle for technology-related teacher professional development at Petal. Teachers and administrators from across the district attend the Summit to explore new technology in a hands-on learning environment and to share best practices with colleagues from different schools, grade levels, and subject areas. In past years, teachers from other districts were recruited to lead sessions; however, the event's size, scope, and budget have been scaled down since Cisco's departure, and Petal teachers have led 90% of the sessions in the last few years.

PETAL
Figure X2



Climate

Key Findings

- Student-centered teaching and learning, administrator presence in the schools, and technology in classrooms contribute a positive climate across the district.
- The district has a positive reputation in the community and across the state.
- Students participate in extra-curricular activities at a high rate.

According to district administrators, Petal students are proud of their schools and the community is supportive of the district. The average daily attendance has remained at around 95% for the past three years, while the graduation rate increased from 68.4% in 2008–2009 to 72% in 2011–2012 and the dropout rate declined from 19% to 12%. While discipline referrals in the district have fluctuated from year to year, they decreased overall during the last four years. District leaders attribute the reduction in referrals to the district's efforts to provide access to technology in classrooms, create relevant learning activities, and invite administration staff into the classrooms daily.

The district is involved in the community and has a positive reputation across the state. According to one administrator, "Many families move to the area because of the schools. … The perception of the school is very good. … We are the number one industry in town." The district organizes luncheons with community groups, and district leadership recently met with the congregations of two churches to address how parents could support their children and their schools. Further, the district's Parenting Center reaches out to parents daily about early childhood issues, and the district reports over 1,400 parent visits to schools so far this year.

With a good deal of support from the community, student participation in extra-curricular activities is high. For example, 70% of Petal High School students are involved in some type of activity, such as athletics, show, choir, and band.

Learning

Key Findings

- The district's focus has shifted from teaching to learning.
- Instructional leadership is key to promoting student learning.
- Ongoing formative assessment contributes to positive student outcomes.

Petal district is migrating towards the Common Core Curriculum. Administrators say they have "fully embraced" the Common Core, which they see as aligned to their education vision as well as to the vision laid out in the Cisco Initiative. Administrators believe that 21st-century teaching is happening in Petal, from kindergarten through 12th grade, and that instruction is definitely more student-centered. The percentage of highly qualified teachers has remained at 99% over the past three years; meanwhile, the educational environment in the Petal School District has shifted dramatically from a focus on teaching to a focus on learning. Teachers believe it is their job to ensure that learning takes place for every child, whatever that child's educational needs may be. Technology-supported formative assessment has allowed for ongoing progress monitoring and early interventions to support struggling and accelerated students alike.

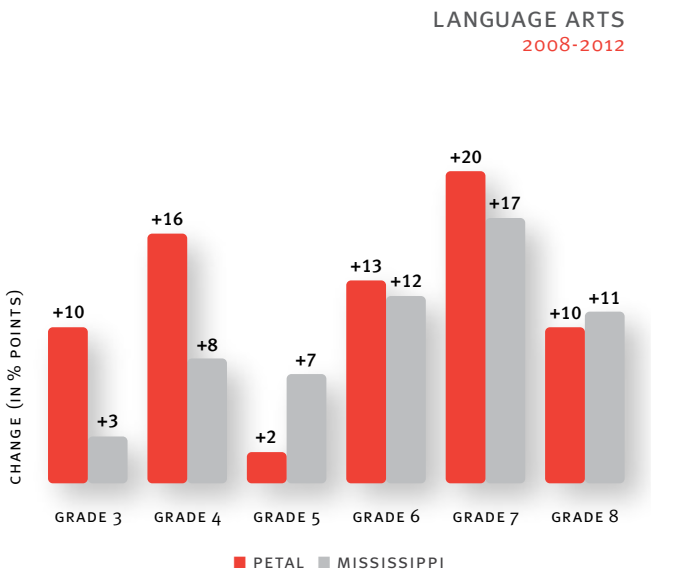
Instructional leadership is one of the cornerstones of the district philosophy. A member of the Central Office team visits each school each week to discuss the PLCs and observations from the previous week. This administrative presence supports teachers as they implement new curricula, take risks with instructional approaches, and try new strategies with technology, and it ensures more consistent support for student-centered instruction and ongoing formative assessment.

PLCs are at the heart of Petal's educational approach, guided by four essential questions. (1) What does the student need to know? (2) How will teachers know if that student knows it? (3) What will teachers do if the student doesn't know it? (4) What are teachers going to do for the students who already know it? Teachers meet daily to discuss data and instructional practices, model lessons for one another, and critique lesson plans. Additional professional development is provided by Doug Reeves' Leadership and Learning Center and Rick Stiggins' Assessment Training Institute.

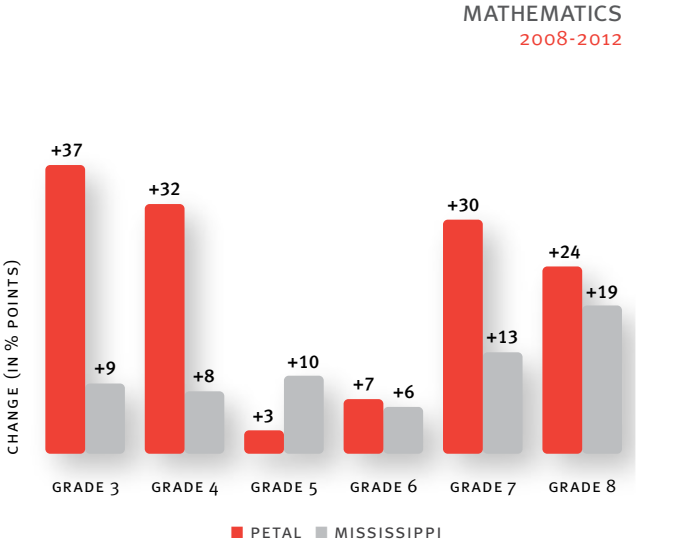
Petal administrators say that formative assessment is a "state of mind." Teachers no longer rely solely on summative assessment; rather, they assess students continually. As a result, they can reframe and reevaluate how students are learning as they go. The digital tools have facilitated this shift to ongoing formative assessments.

Test scores[2]. Student test scores were examined for both Petal District and the state to identify changes over time. Test scores throughout the district have increased, though to varying degrees across grade levels and subjects. Administrators attribute the impressive gains to the district's shift from a focus on teaching to a focus on learning and to the work of the PLCs.

Language Arts MCT2[3]**.** There have been impressive increases in the percentage of Petal County students scoring proficient or above on the Language Arts MCT2. Between 2007–2008 and 2011–2012, there were increases in the percentage of students scoring proficient for all grades tested. The largest increase was for 7th-grade Petal students, where the percentage of students scoring proficient or above increased by 20 points. In 2011–2012, Petal County students outperformed students across the state in all grades.



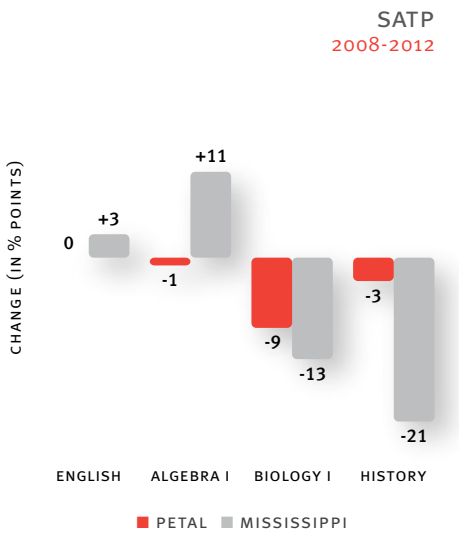
Mathematics MCT2. Between 2007–2008 and 2011–2012, there also were increases in the percentage of Petal students scoring proficient or above on the Mathematics MCT2 in all of the grades tested. The largest increase was for 3rd graders, where the percentage of students scoring proficient or above increased by 37 points. Petal County students outperformed students across the state in all grades in 2011–2012. Petal 3rd graders moved from 90th in the state in 2008 to 7th in the state in 2012. Similarly, 4th graders moved from 81st to 9th in the state over that same time span.



2 The Mississippi Curriculum Test (MCT) and Subject Area Testing Program (SATP) were updated in 2007–2008. These changes make it difficult to compare scores across 2006–2007 and 2007–2008. Therefore, in our analysis, we focus on patterns of change between 2007–2008 and 2011–2012.

3 The MCT was based on the Mississippi state standards and was used to test student proficiency in three subject areas: reading, English, and math. The test was administered to students in grades 2–8. In 2007, the test was updated to align with the revised 2006 language arts and 2007 mathematics frameworks. It is now called the MCT2 and is administered to students in grades 3–8. The areas of language arts and math are tested. Results from both tests are grouped into four achievement levels: minimal, basic, proficient, and advanced.

SATP: Petal County students saw declines in three of the four SATP subject tests, Algebra I, Biology I, and History, between 2007–2008 and 2011–2012. In the remaining subject, English, there was no change across the same time period. While there were decreases in Petal County scores, the declines in Biology I and History were smaller than those experienced across the state during the same period. Moreover, Petal County students outperformed students across the state in all four subjects in 2011–2012.



ACT: Petal County students experienced an increase in average ACT scores between 2005–2006 and 2010–2011, going up by 0.6 points. In 2010–2011, Petal County students outperformed students across the state by 2.4 points.

Next Steps

Despite the significant advances the district has accomplished in reforming into a 21st-century education system, and its increased student academic achievements in the last four years, district leaders are concerned about various challenges. They have identified the following steps to reach their goals.

- Devise strategies to sustain the PLC program and technology advances
- Acquire more laptop computers, iPads, and other end-user devices, and experiment with Bring Your Own Device initiatives
- Expand wireless capacity (not coverage) to support additional equipment and meet the access needs of teachers and students
- Use technology to ensure greater school safety in the coming years
- Form a district-wide data team to support teaching and learning
- Expose its high school seniors to online learning to help prepare them for college (where taking online courses has become a trend)
- Ensure long term sustainability of education program and technology

Lamar County School District

Lamar County School District (LCSD) is dispersed across a large geographical area, making communication a critical priority for district leaders. The district has fully embraced the Common Core and is preparing for the related changes in curriculum and assessment. Professional Learning Communities continue to play a key role in supporting teachers as they move toward a more student-centered pedagogy. LCSD has leveraged the technology provided by the Cisco 21S Initiative and is planning to transition to a one-to-one computing model, but the infrastructure is at maximum capacity and will have to be upgraded to support the additional equipment.

Community Background

Purvis is a small city located in Lamar County, Mississippi. It is part of the Hattiesburg, Mississippi, Metropolitan Statistical Area (MSA), which encompasses Forrest, Lamar, and Perry counties. The city of Purvis experienced a gain in population of approximately 9.4% following hurricanes in the region in August 2005. Lamar County also experienced a growth in population of 11.2%. As of 2010, the population of Purvis was 2,175 and the racial/ethnic makeup was 70% white, 28% African-American and 2% Hispanic, while Asians and Native Americans make up the remaining percentage. In comparison, the Lamar County population was 55,658. Of this population, 71% are white, 23% African-American, 2% Hispanic, and the remaining percentage Asian and Native American. While the median income in Purvis ($33,313) was on par with the median income of the State of Mississippi ($38,718), the median income in Lamar County ($48,048), as a whole, was significantly higher than the state's. Both the city and county median incomes were lower than that of the United States ($52,762); the county median income was only slightly lower. Purvis and Lamar County's poverty rates of 16.7% and 15.2%, respectively, were lower than that of the state of Mississippi (21.6%) but higher than the country as a whole (14.3%). The unemployment rates in both Purvis (3.2%) and Lamar County (8%) were lower than that of the state (10%) and the country (8.7%).

Lamar County School District Highlights

- The small city of Purvis is where the Lamar County School District office is seated. In addition to Purvis, schools in this district are found in Sumrall, Oak Grove, and Baxterville, all located in Lamar County.
- LCSD consists of 15 schools. These include elementary, middle-, and high-school levels, specifically, five primary and elementary schools, four middle schools, and three high schools. Also included in the district are a career technical school serving grades 10–12, an attendance center serving grades K–8, and an alternative school serving high-school grades. The number of schools in LCSD increased by three five years ago.
- The LCSD student population has grown over the past eight years since the 21S

initiative was first implemented. Student enrollment in the district has increased steadily from 7,517 in 2005–2006 to 9,251 in 2011–2012. As of 2011–2012, of the total student population, 71% were white, 23% were African-American, and 2% Hispanic. Native Americans and Asians made up the remaining percentage. The free and reduced-price lunch population, as of 2010–2011, was 49.8%.

There also have been shifts in the number of teachers employed by the district, with the number increasing from 554 in 2005–2006 to about 750 in 2012–2013.

Vision

Key findings

- Communication is a priority in a geographically dispersed district.
- The district is deeply committed to the Professional Learning Communities model.
- The Lamar County Education Foundation raises resources to support the public schools.

The district's vision is to be a state and national leader in education reform, as demonstrated by high level of student academic achievements, implementation of multiple pathways for graduation, access to quality technology tools, and parental involvement. In addition, district leaders will allow high school students to graduate in two years if they demonstrate college and career readiness or take courses at local colleges while they are still in high school.

The district leadership team, which meets monthly, is made up of school leaders, including principals and department heads. A Superintendent Advisory Council, which includes teachers of the year and carefully selected students and parents, meets quarterly to work on policy issues, discuss improvements around the district, and provide feedback to the district's leadership team. The district is spread across a 40-mile area, and administrators believe that it is critical to keep all stakeholders informed in order to avoid isolation and spread of misinformation.

The district is deeply committed to Professional Learning Communities (PLCs) as a professional development model. The PLCs, which have been in operation in the schools for several years and are led by central office staff, often review common assessments, provide feedback about where students are, and help with teachers' weaknesses on reaching certain instructional objectives.

Although the district uses data to inform decisions and instruction, teachers do not find the data management system to be user-friendly.

Much of the administrative work in the district is done online, which increases efficiency and reduces paper consumption. For example, school forms, school board meeting agendas, and student registration are available online. Further, district administrators are using the Cisco TelePresence system and videophone equip-

ment to conduct meetings across the district to save time and financial resources. According to a district leader, "The TelePresence … has been the biggest help. If we wanted to get all the teachers in one place, we can just connect around the district in a matter of minutes … ."

The Lamar County Education Foundation, which raises funding for the public schools, has helped to scale up and sustain the technology across the district and to develop new partnerships. According to the superintendent, "Partnerships have played a vital role in meeting [the district's] vision. … Some business chipped in and paid for whole classrooms." The district leadership continues to seek new technology partners.

Technology

Infrastructure and access

- District leaders credit the Cisco 21S Initiative with establishing the technology infrastructure that enables robust access throughout the district.
- Technology is widely integrated across the district.
- LCSD is transitioning to a one-to-one model, motivated in part by the Common Core Standards assessment requirements.
- There are three instructional technologists and five technicians in the district, and administrators agree that more staff will be required to support new initiatives.

When the Cisco Initiative ended in 2009, 120 teachers in the district had interactive whiteboards in their classrooms. By using a variety of funding sources, LCSD has since provided the devices to all of the 750 teachers in the district, and also upgraded the network bandwidth from 100MB to 1GB.

In most of LCSD's elementary and middle-school classrooms, there are student computers—two or three in each middle-school class and three to five in elementary rooms—a teacher laptop, at least one iPad, and an interactive whiteboard with a projector. Most middle schools also have at least one laptop or netbook cart. All middle schools and elementary schools also are equipped with computer labs—at least two in the middle schools, where all 7th- and 8th-grade students take an information and communication technology (ICT) course.

LCSD is transitioning to a one-to-one model in the high schools in anticipation of the Common Core's assessment requirements. The district plans to purchase iPads for middle- and elementary school students, and is negotiating an agreement with Apple to provide 2700 MacBook Air Laptops for high-school students. The high school's older laptops will be put on a cart for use in middle-school classrooms.

LCSD administrators attribute much of the district's technology infrastructure growth to the Cisco 21S Initiative. "To say that Cisco started something in our school district that caught on doesn't even scratch the surface because we would not have dreamed

about being able to do something like that on that big of a scale had we not been started with Cisco's help."

Use and integration. Administrators say that technology is used by all stakeholders at all levels of the district. In schools, they estimate that close to 90% of teachers are using technology on a daily basis. Teachers are expected to build technology into their lesson planning, and they are evaluated on their use of technology. Despite the clear expectations, administrators admit that, as with any initiative in a school system, some teachers are integrating technology better than others. As the high school moves towards a one-to-one model, the leadership expects that some teachers will be resistant. According to a recent internal survey about technology, however, 92% of teachers believe that a one-to-one program would benefit student learning.

As mentioned previously, the Cisco TelePresence system has been transformative for administrators. The video feature on the IP phones is also used regularly for shorter meetings with fewer people.

Finally, parents are able to view their children's homework, grades, and test scores through the Active Parent learning management system.

Technical support. Since the Cisco Initiative ended, LCSD has hired three instructional technologists (all of whom are former teachers who participated in the original Cisco project) to work with teachers on integrating technology into day-to-day instruction. According to district leaders, the instructional technologists are "very involved in forging that path of technology innovation in the classroom." They are available for just-in-time training and to help teachers imbed technology in their lessons in innovative ways, they act as mentors, and conduct one-on-on trainings and bi-monthly group sessions that are open to all the teachers on a given campus.

There are also six computer technicians, each responsible for troubleshooting at three or four schools. In the recent internal survey, about 70% of the staff who responded said they had adequate technical help. Finally, during the summer, LCSD offers a two-day technology summit at no cost to the teachers.

Administrators agree that three instructional technologists cannot meet the needs of teachers across the district. Due to budget cuts, they have not been able to expand the technology staff despite the district's growing population, but believe they will have to hire more people to support the district's ambitious technology agenda.

LCSD is no longer working with the DOT intern program.

Climate

Key findings

- LCSD is a large and geographically dispersed school district, which leads to some challenges with regard to communication and perceptions of equity across the four distinct communities served by the district. The leadership is aware of this challenge and uses technology as a vehicle to promote communication and collaboration across the district.
- Family outreach and engagement is both an area of strength and a place for growth for this district. While families are generally supportive, and the website is utilized by parents, formal avenues for engagement are limited.
- Professional Learning Communities are central to the district culture; for several years, all schools have had PLCs, which are led by central office staff and, in some cases, linked through technology to one another.
- Data indicate that the district has made advances in student engagement: The district has had a steady 96% daily attendance rate over the last three years, an increase in the four-year graduation rate, and a decrease in suspensions since 2008–09.
- The district has been proactive with regard to student safety: They use surveillance cameras and school resources officers in all schools. School bus safety is also a district priority.

Lamar County School District is a large district with four separate attendance areas, and thus there are challenges related to communication and overall cohesion. The leadership explained that, while they work hard to ensure equity across the district and use technology to connect and collaborate, it is also the case that some members of the district community perceive inequities in access to resources. The Superintendent's Quarterly Advisory Council serves as "key communicators" for the rest of the district community. Parental support is high and, while LCSD has recently revitalized the district and school websites and created a structure for all teachers to have their own websites, the leadership also acknowledges the need for more formal avenues to promote parental engagement.

As mentioned above, the district has had Professional Learning Communities in every school for several years. While PLCs are school-based, they also are linked in some cases to comparable PLCs in other schools. This has been a commitment of the district for several years, and the leadership is interested in "stepping up to the next level" with their PLCs.

According to district administrators, while Mississippi is far behind other states with regard to student achievement, LCSD is "way out in front" within Mississippi. Daily attendance at the school has held steady at 96% for the past three years. The four-year graduation rate has gone up from nearly 80% in 2009 and 2010 to 82.8% in 2012. The dropout rate was 14% in 2008–2009 and was down to 11% in 2011–2012. The

number of suspensions was 962 in 2008–09 and dropped to 830 in 2011–12. The district leadership has been working hard to increase attendance and graduation rates and to reduce the number of dropouts, and credits the Positive Behavior Intervention Support model with helping to make this possible. Initially implemented in a few of the schools, in 2012–13 LCSD implemented the model across the system.

Student safety is another priority area for the district. Surveillance cameras are installed in all the schools and the superintendent has access to the cameras in real time on his iPad so he can review what's happening across the district as it's occurring. In addition, the district has full-time school resource officers on all campuses. LCSD also is committed to school-bus safety, and has installed digital cameras on all school buses in the district. The superintendent sits on the state school-bus safety task force committee, and the district aspires to be a leader in this area.

LCSD is working to support individual students and families through mentoring and food programs, as well. During the current superintendent's tenure, the district began a mentoring program for kindergarten–2nd-grade students in collaboration with faith-based organizations. The objective is to keep the students and mentors together throughout the children's schooling. In addition, with the support of the Mississippi Food Network, the district sends food home with 167 children at the end of each school week so they will have food through the weekend when they are not receiving the school meals.

Learning

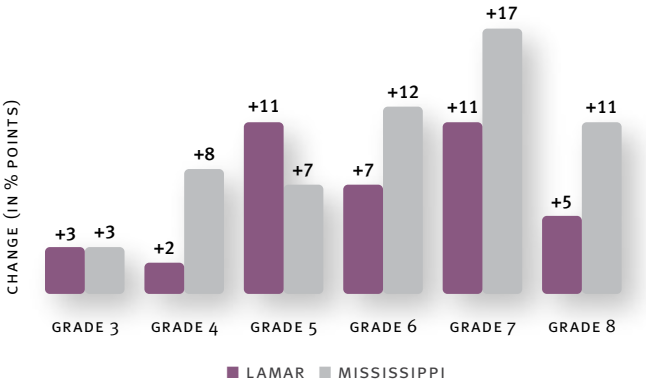
Key findings

- LCDS has fully embraced the Common Core, and they are working on several fronts to prepare for the changes in curriculum and assessment mandated by the Common Core.
- The district is moving more toward student-centered approaches, but is still "half-and-half" in terms of instruction.
- LCDS students' achievement scores have increased between 2007–08 and 2011–12 on nearly all standard assessments and, across all measures, they have outperformed students across the state.

The Lamar County School District has focused considerable attention on preparing for the transition to the Common Core. This has included hiring a consulting firm to work with approximately 90 teachers on developing lessons around the Common Core; teachers then take these lessons back to their schools to share with their colleagues. As noted previously, LCSD has had Professional Learning Communities in place for all teachers for several years and is attempting to enhance this work. The district also has moved toward common assessments and, while this has been challenging, the leadership believes they are "on the verge of getting that done." In addition to these efforts, LCSD has developed short videos about the Common Core to educate parents about the curricular changes that are anticipated. These videos are now being used across the state.

According to the district leadership, classroom instruction is still about "half-and-half" student-centered, but is moving more in the direction of student-centered approaches. In part as a result of the move to the Common Core, there has been an increase in project-based and collaborative learning across the district. In the elementary and middle schools, classrooms employ student response technology to promote greater interaction and formative assessment on a weekly or daily basis. The district also has begun a pilot of six iClass classrooms at the middle school and one at the upper elementary level, with a classroom set of iPads "to encourage and move more toward student-centered, highly engaging work for the students." Finally, three LCSD schools will be among the 40 in the country implementing the ACT quality core curriculum, which will allow for multiple pathways to graduation—for some students, after the first two years of high school.

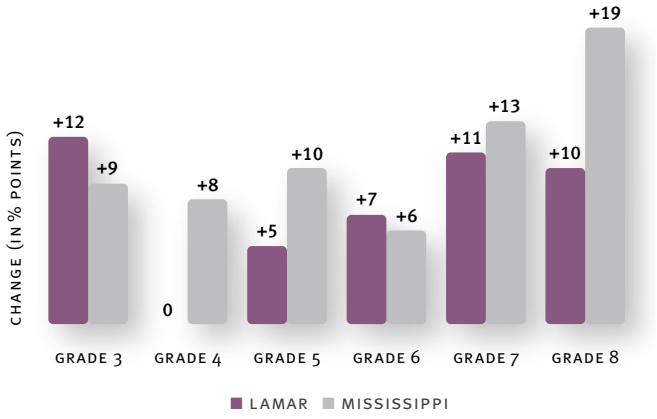
LANGUAGE ARTS
2008-2012



Test scores.[1] We examined scores for both the Lamar County School District and the state to identify changes over time. The change in test-score outcomes varies by subject area and grade level.

Language Arts MCT2.[2] There have been increases in the percentage of LCSD students scoring proficient or above on the Language Arts MCT2. Between 2007–2008 and 2011–2012, there were increases in the percentage of students scoring proficient or above in all of the six grades tested. The largest increases were for 5th- and 7th-grade students, where the percentage of students scoring proficient or above increased by 11 points. LCSD students in all grades outperformed students across the state in 2011–2012.

MATHEMATICS
2008-2012



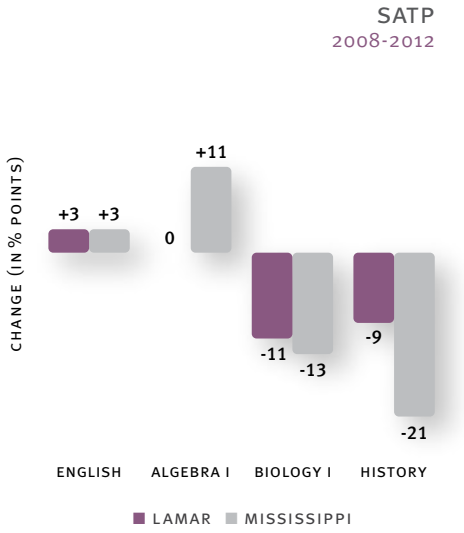
Mathematics MCT2. Between 2007–2008 and 2011–2012, the percentage of LCSD students scoring proficient or above on the Mathematics MCT2 also increased in five of the six grades tested. The largest

1 The Mississippi Curriculum Test (MCT) and Subject Area Testing Program (SATP) were updated in 2007–2008. These changes make it difficult to compare scores across 2006–2007 and 2007–2008. Therefore, in our analysis, we focus on patterns of change between 2007–2008 and 2011–2012.

2 The MCT was based on the Mississippi state standards and was used to test student proficiency in three subject areas: reading, English, and math. The test was administered to students in grades 2–8. In 2007, the test was updated to align with the revised 2006 language arts and 2007 mathematics frameworks. It is now called the MCT2 and is administered to students in grades 3–8. The areas of language arts and math are tested. Results from both tests are grouped into four achievement levels: minimal, basic, proficient, and advanced.

increase was for 3rd graders, where the percentage of students scoring proficient or above increased by 12 points (Table 1). In the remaining grade, 4th, there was no change. LCSD students in all grades outperformed students across the state in 2011–2012.

SATP. Lamar County School District students made gains in one of the four SATP subject tests, English, between 2007–2008 and 2011–2012. There was a 3-point gain in the percentage of students receiving a passing score in English. There was no change in Algebra I. While there were decreases in LCSD County scores in Biology I and History between 2007–2008 and 2011–2012, these changes were smaller than those experienced across the state during the same period. LCSD students also outperformed students across the state in all four subjects in 2011–2012.



ACT. LCSD students experienced an increase in average ACT scores between 2005–2006 and 2010–2011, going up by 0.4 points. In 2010–2011, LCSD County students outperformed students across the state by 2.1 points.

Next Steps

To continue to carry their 21st-century education vision forward and address the Common Core, the Lamar County School District plans to engage in the following activities:

Accommodate district growth. LCSD is the second-fastest–growing school district in the state and has a number of older facilities that have to be renovated and upgraded. To address this challenge, LCSD plans to open one new elementary school in the fall.

Upgrade the wireless infrastructure to support one-to-one computing. While LCSD is investing in the devices needed for a one-to-one environment, district leaders acknowledge that their current technology infrastructure, especially the wireless network, will not be able to handle the demands of the one-to-one conversion. As one district administrator concludes, "So we are trying to seek funds and figure out ways to upgrade our infrastructure for that process."

Ensure successful implementation of the Common Core. Although LCSD has begun preparing to implement the Common Core, as discussed earlier, district administrators believe that they have a long way yet to go in their efforts, and are not sure that they will be able to achieve this goal within two years.

Harrison County School District

The Harrison County School District (HCSD) has leveraged the resources provided by the Cisco 21S Initiative to promote technology integration across the district. Technology is a critical tool in the district's efforts to implement formative assessments and other data-based decision-making as teachers transition to a more student-centered approach. Though teachers do not participate in formal Professional Learning Communities, there is an informal culture of collaboration and mutual support, with much teacher professional development occurring in-house through a train-the-trainer model.

Community Background

The Harrison County School District includes Gulfport and Biloxi, the two principal cities of the Gulfport-Biloxi, Mississippi, Metropolitan Statistical Area (MSA), which encompasses Harrison as well as Hancock and Stone counties. Harrison County experienced approximately 5% population loss following Hurricane Katrina in August 2005. Out of an estimated population of 187,842, Harrison County is 68% white and 22% African-American. Hispanics make up approximately 4% of the population, while Native Americans and Asians make up the remaining percentage. According to American Community Survey (ACS) 2007–2011 estimates, the median income in Harrison County as a whole ($50,281) was higher than the median income of the State of Mississippi ($38,718) but lower than that of the United States ($52,762). The poverty rate in Harrison County (15.3%) is lower than that of the State of Mississippi (21.6%) but higher than that of the United States (14%). The unemployment rate in greater Harrison County (8.5%) was lower than that of the state but slightly higher than that of the country. Gulfport, the second largest city in Mississippi and the seat of Harrison County School District experienced approximately a 4.5% decline in population as a result of hurricanes in August 2005. The city has a current population of 67,793 according to 2010 US Census estimates; 59% is white and 38% African-American. Hispanics make up approximately 5% of the city, while Native Americans and Asians make up the remaining percentage. The poverty rate in Gulfport is 20.1% and is lower than that of the State of Mississippi (21.6%) but is significantly higher than that of the United States (14%).

District Background Highlights

- HCSD serves students from the cities of D' Iberville, Saucier, Biloxi, Pass Christian, and Gulfport, Mississippi.
- The district consists of 23 schools. These include 12 elementary schools, 5 middle schools, 3 high schools, and 3 specialized schools (Harrison County Child Development Center, addressing special needs students; Harrison County Alternative School, addressing the needs of students with disciplinary issues; and Harrison County Technology Center).

- The HCSD student population has steadily increased over the past eight years since the Cisco 21S Initiative was first implemented, from 12,217 in 2005–2006 to 13,861 in 2011–2012. Sixty-seven percent of students are eligible for free or reduced-price lunch. White students make up 63% of the student population, African-Americans 30%, Hispanic and Latino students 3%, and Asian-Americans 3%. The number of teachers in the district fell from 1,131 in 2008–2009 to 830 in 2011–2012.

Vision and Leadership

Key findings

- The district is increasing the focus on student-centered teaching and learning.
- Using data is an important tool in this effort.

In the last four years, the district has continued to uphold the 21st-century education vision begun with the Cisco 21S Initiative. The district's vision is to implement a fully developed competency-based education system in the next five years. The system will focus on addressing students' individual educational needs through personalized learning and technology. District leaders envision students taking online courses and assessments in the near future to support and accelerate their learning.

The district uses data quarterly for teacher evaluation and monitoring students' progress, which informs instruction and professional development. Student data is collected with online assessments. According to one district administrator, "So I can look from my desk at any student in the school district. … It gives you … very valuable information as it relates to a student's growth. We're finding all kinds of things that we didn't realize. … So, we made it simple for the teacher, the assistant principal and the principal, counselors, superintendent, curriculum people to look at students in a classroom as a group or as an individual or as a grade or by the complete school." The district has brought in a statistician to manage and analyze the data.

The district does not have philanthropic partners supporting their current education and technology reform efforts. However, the superintendent indicated that they would like to have access to such partners.

Technology

Key findings

- District leaders say that the Cisco 21S Initiative helped accelerate existing plans for acquiring and implementing technology.
- The district's technology holdings have increased since the end of the Cisco 21S Initiative.
- Technology is in constant use.

Technology vision. HCSD is considered one of the top technology districts in the state of Mississippi, and district leaders say they are "moving forward as fast as finances are available to move." District leadership credits a large part of the district's success to the Cisco 21S Initiative, which "provided the school district with a gateway for what we wanted to build up to. It was the foundation and it was the reason for a lot of decisions that were made. With the products grant, we were able to put some things in place that allowed us to have a good networking foundation and from there we've expanded it."

Infrastructure and access. Since 2009, there has been an influx of technology throughout the schools, including the installation of IP phones and interactive whiteboards in every classroom. One hundred percent of schools have access to the Internet and a learning management system, and all teachers have a personal laptop. All the schools are networked through an internal Ethernet connection. The two schools equipped through the Cisco 21S Initiative—a middle school and a high school—have computer labs and wireless capabilities, and the district is working on bringing wireless to other schools. Plans are underway to build a new elementary school, which will also be equipped with the latest technology. The district purchased iPads for all principals and school board members, who now use them to run meetings.

The district's technology is constantly in use—there are no back-up laptops or projectors for teachers to use if something breaks, though the network bandwidth can handle additional devices. Administrators say that when they purchase Compass Learning software next year they would like to have laptops available to loan out to students who can work at a faster pace or who cannot get to school due to illness or other challenges.

Use and integration.Teachers at all grade levels are using technology on a daily basis, most notably the interactive whiteboards that are now ubiquitous in all classrooms. There are a teacher workstation and at least four computers in every elementary school classroom, where students use the computers throughout the day. High school classes have one or two computers for student use. Some teachers use a wireless slate, which enables them to walk around the classroom and monitor student work while teaching; others use a student response system (e.g., "clickers") to get a quick snapshot of student progress. Principals use iPads to conduct classroom observations and to take pictures of activity around their schools.

HCSD is transitioning from an in-house–designed learning management system called Gradebook to software called iNOW to keep parents up to date about homework, grades, and test scores. The current system receives about 10,000 hits a day. The district will launch the new system within the next month.

Technical support. The technology support team consists of the director, a system administrator, five technicians, and two software developers. The group manages and makes recommendations for technology procurement and installation. They also are responsible for innovation management. The suite of hardware installed

during the Cisco 21S Initiative has allowed the technology team to "remotely do all kinds of things throughout the district that they never would have been able to do before,"according to one district leader.

Harrison County School District maintains the partnership with the DOT intern program first established under the Cisco 21S Initiative. This year nine interns work in the district, and next year there will be seven. The interns provide day-to-day assistance to teachers, including software trainings, technical assistance, and just-in-time guidance. Texas Instruments also provides training and other resources to the schools. Administrators acknowledge that the district does not have a staff person to help teachers integrate technology in their classrooms, but if a teacher identifies a specific need, the district will find a way to send them to a workshop or a training. There also are a number of teachers who are considered advanced technology users who provide hardware training for their colleagues when necessary.

Climate

- The district leadership describes a strong culture of data use to drive efforts to improve student achievement and to strategize for addressing student needs
- Teaching faculty and curriculum directors collaborate to develop curricula and pacing guides for all disciplines and to make adjustments as appropriate.
- Although the district has parenting centers at all the schools, the leadership believes they could improve their parental outreach and involvement.
- Student safety is a major issue; the district uses cameras in all the schools and currently employs 15 school resource officers, though leadership would like to fund more positions.

Four-year graduation rose from 69.1% in 2010 to 75.9% in 2012. Between 2008–2009 and 2011–2012, suspensions went up from 356 to 681, though classroom behavior incidents fell from 1,856 to 1,603 during that time.

The superintendent also cited the district's commitment to social action and community involvement. The school raised $10,000 for Hurricane Sandy victims and also raises considerable funds annually for United Way.

Almost every school in the district has a parent center, and the district has seen parents actively utilizing the old in-house online learning management system they had in place. The system was experiencing 10,000 hits a day when it was operational, and since the system went down in October 2012, parents have been clamoring for it. The district anticipates having the system back up and running soon with new software packages. The district leadership also sees room for growth in terms of engaging parents more actively and substantively.

School safety is a major issue for the district. There are cameras in all the schools, in the hallways, and outside the buildings. In one school, cameras are located in every

classroom. Harrison High School had 681 suspensions of varying lengths in 2011–2012,. The superintendent describes this as "pretty low," and credits the district's 15 school resource officers for helping to address issues before they lead to suspensions. According to the district leadership, the officers have good relationships with students, and they would like to have the funds for five additional positions.

Learning

Key findings

- Teachers use formative assessments to personalize and differentiate instruction.
- The district primarily uses a train-the-trainer model and informal professional learning communities for in-house teacher professional development.
- HCSD students' test scores have increased in math and language arts for most grade levels.

Curriculum and instruction. Access to technology and use of frequent formative assessment have allowed HCSD to more effectively address the needs of individual children in their district. The district is working to determine the best ways to support both under- and over-achievers; administrators envision that in five years students will be able to advance their learning at their own speed through online courses and assessments.

HCSD's curriculum is dictated by the state Department of Education, and teachers have the option to add to it. According to district leaders, much of the teaching in classrooms is still textbook-based, but the Common Core Standards are pushing everyone toward a more student-centered and active approach. The textbooks, which are written specifically for the Mississippi curriculum, are updated every two to three years, and come with a CD that students can take home. Administrators described the curriculum as "cutting edge" when compared to what is used in other parts of the country.

The district offers seven AP courses in four main academic areas, which is more than they offered in 2009. A district leader explains, "We have multiple in each one (academic area]. In English we have two, history we have three, math we have one, science we have one."

Assessment. As stated above, to improve instruction and student learning, the district uses data to inform professional development activities, monitor student progress, and make decisions related to student achievement. Assessment data has helped the HCSD teachers and administrators pinpoint areas for improvement by subject area and grade level. For example, the district examined their approximately 76% graduation rate to determine that students entering 7th–9th grades below grade level by one to three years are the most at risk of dropping out. HCSD students from grades 2 through 10 are being monitored through standardize assessments given three times a year. The scores enable teachers to gauge individual student learning and to com-

pare progress to that of 4 million other students around the country whose schools are also part of the Northwest Evaluation Association Consortium. Teachers use this data to personalize and differentiate instruction. Administrators use the data to design professional development and district-wide interventions. Principals are being trained to use iPads to conduct teacher evaluations. Next year the district plans on purchasing the Compass Learning software that automatically tells students what skills to work on next, based on their scores from the Northwest test.

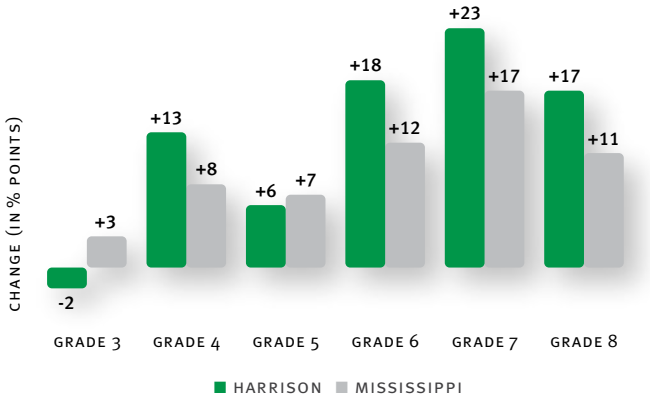
Professional development. Much of the school-level professional development is provided by "lead teachers" – individuals who no longer teach students but who receive weekly training from the Curriculum Coordinator and then train other teachers. The lead teacher briefs the principal and brings the teachers together by grade or subject matter to address whatever topic the district is targeting that week. The person in this positions acts as a conduit, working to ensure that the needs of the school, principal, teachers, and district are met.

At one of the high schools, teachers are collaborating within departments to plan curricula together, and develop common pacing guides and common assessments for math, English, science and history. In addition, each school in the district has a lead teacher, who is not assigned to classes, and who receives training from the district's curriculum coordinators to help support teachers in their discipline.

Test scores.[1] Scores were analyzed for both Harrison County School District and the state in order to consider changes over time as well as district scores relative to the state scores. HCSD scores are above the national average.

Language Arts MCT2.[2] Overall there have been increases in the percentage of HCSD students scoring proficient or above on the Language Arts MCT2. Between 2007–2008 and 2011–2012, there were increases in the percentage of students scoring proficient or above in five of the six grades tested. The largest increase was for 7th-grade students, where the percentage of students scoring proficient or above increased by 23 points. There were also increases for all other grades except 3rd-

LANGUAGE ARTS
2008-2012



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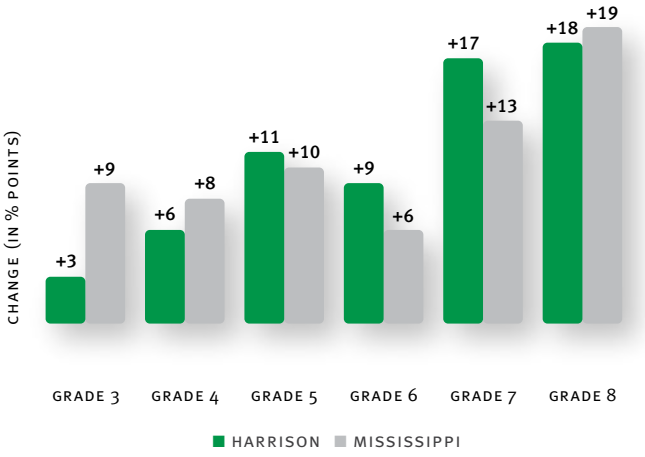
grade students, where there was a slight decrease. Moreover, Harrison County School District students outperformed students across the state in 2011–2012.

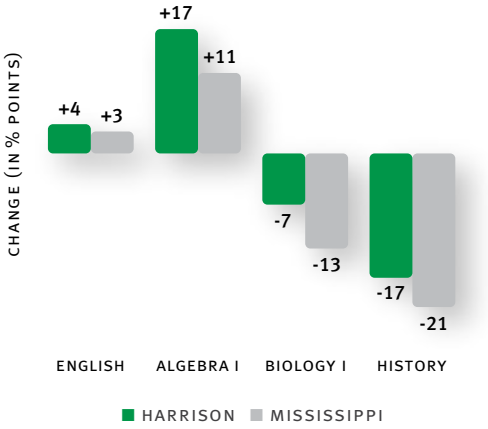
Mathematics MCT2. Between 2007–2008 and 2011–2012, there were also increases in the percentage of students scoring proficient or above on the mathematics MCT2 in all of the six grades tested. The largest increase was for 8th-grade students, where the percentage of students scoring proficient or above increased by 18 points. Again, HCSD students outperformed students across the state in 2011–2012.

MATHEMATICS
2008-2012



SATP. Harrison County School District students made gains in two of the four SATP subject tests, English and algebra I, between 2007–2008 and 2011–2012. There was a 4-point gain in the percentage of students receiving a passing score in English and a 17-point gain in the percentage of students receiving a passing score in algebra I. Moreover, in 2011–2012, HCSD outperformed Mississippi state in all four subjects. While there were decreases in HCSD scores in biology I and history between 2007–2008 and 2011–2012, these changes were smaller than those experienced across the state.

SATP
2008-2012



ACT. Harrison County School District experienced a small decrease in average ACT scores between 2005–2006 and 2010–2011, going down by 0.2 points. In 2010–2011, HCSD students outperformed students across the state by 0.5 points.

Next Steps

Over the next two to three years, the district plans to extend capacity to address the following challenges:

- Address individual academic needs of its students, through the use of personalized learning and technology
- Integrate their online tools (e.g., Accomplice Learning Center, Northwestern), which are supposed to assist in determining students' achievement levels aligned with the Common Core, identifying the skills that students need to improve, and suggesting actual lessons for students
- Increase access to end-user tools (e.g., laptops) for students, especially for those who do not have access to technology at home, are ahead of or behind their peers, or are missing classes because they are hospitalized

Hattiesburg School District

Over the past four years. the Hattiesburg School District has continued to build on the foundation established during the Cisco 21S Initiative. As student population increased, more teachers were hired and a tenth school was added to the district. The technology infrastructure is robust, and technical support has improved. New district leadership has maintained the emphasis on high expectations for all students; parental involvement is up, and disciplinary referrals are down. Technology has become an essential element of the district's educational mission.

Community Background

Hattiesburg is a city located in Forrest and Lamar counties. It is the principal city of the Hattiesburg, Mississippi, Metropolitan Statistical Area, which encompasses Forrest, Lamar, and Perry counties. The population of the city of Hattiesburg, post-Katrina, surpassed that of Biloxi to become Mississippi's third-largest city. As of 2010, the population of Hattiesburg was 46,013 and the racial/ethnic makeup was 41% white and 53% African-American. Hispanics make up approximately 4%, while Asian-Americans and Native Americans make up the remaining percentage. According to American Community Survey 2007–2011 estimates, the median household income in Hattiesburg ($31,548) was lower than that of both the state of Mississippi ($38,718) and the United States ($52,762). Hattiesburg's poverty rate of 37.4% is higher than that of the State of Mississippi (21.6%) and the country as a whole (14.3%). The unemployment rate in Hattiesburg (11.8%) is also higher than that of the state (10%) and the country (8.7%).

District Background Highlights

- Hattiesburg School District (HSD) consists of ten schools; six elementary schools, one middle school, one high school, an Alternative Education Center, and a Family Education Center. In the 2009–2010 school year, the number of schools in HSD increased from nine to ten.
- The HSD student population has shifted since the Cisco 21S initiative was first implemented in 2005, declining from 4,540 in 2005–2006 to a low of 4,438 in 2007–2008. However, the student population has since grown to 4,605 in 2011–2012. The number of teachers employed by the district rose from 375 in 2008–2009 to 412 in 2011–2012.
- Among HSD's 4,605 students, 91% are eligible for free or reduced-price lunch. The majority of students (91%) are African-American, with 4% white and 3% Hispanic.

Vision and Leadership

Key findings

- The education vision remains focused on preparing students for success in the 21st century.

- Data-driven decision-making is a common practice across the district.
- Technology has improved administrative efficiency.

Hattiesburg's education vision has changed little since the Cisco 21S Initiative; it is still focused on preparing all students to become active citizens and workers in the 21st century. As stated by a district leader, "Our district vision, set by our school board, is that Hattiesburg School District is a model teaching and learning community that graduates productive and caring citizens who are prepared to succeed." Core educational beliefs include high expectations for all children, an absolute focus on physical and psychological development of children, and strong leadership. Among the district's specific goals are increasing academic achievement, creating safe and orderly learning environments, employing effective accountability systems, and increasing parental and community involvement.

The district leadership has changed in the last four years. The current superintendent has been at the district for two years and has adopted a new management approach, relying on an executive director of schools, two leadership teams, and Professional Learning Communities (PLCs) to ensure aligned communication flow and support.

The practice of data use is ingrained in the district. Data is used to monitor the fidelity of implementation of new educational programs, to analyze student progress on assessments, to compare Hattiesburg PSD with the state, and to make decisions. According to one administrator, "We use data for everything. We shy away from programs that do not produce data. … We use data to inform ALL of our decisions."

District and school staff often collaborate to implement new educational programs and to monitor program implementation and outcomes.

District administration has become more efficient in the last four years, in part through the use of technology to improve communication and presentations and to decrease paper consumption. According to one district administrator, "In the past five years, technology has totally changed the way we do business."

Technology

Key findings

- The district's technology infrastructure is robust.
- Classroom technology has increased dramatically.
- Technology integration is in place across the district.
- Technical support has improved.

Hattiesburg has maintained a high-capacity, reliable technology backbone through diligent infrastructure updates, thoughtful software procurement, and careful budget-

ing. Technology has become so integral to teaching and learning in the district that the technology vision has been incorporated into the education vision. Administrators credit the Cisco 21S Initiative for helping move the district more quickly down a path it was already on, and some refer to Cisco's role as akin to "throwing gasoline on a fire." "We were already burning," says the district technology director. "We weren't getting to where we needed to go, but Cisco gave us what we needed to make it go a lot faster. So we were able to get things in place a lot faster than what we normally would have."

Technology infrastructure and access. According to the district, the technology infrastructure is holding up very well. The percentage of schools with access to the Internet has increased from 91% in 2009 to 100% today. The wired infrastructure is running well, though the system needs to be updated to support more mobile devices—initially considered a "convenience technology," the wireless network has become a "capacity technology." By committing resources to maintaining the technology infrastructure, Hattiesburg has been able to upgrade software, hardware, and communications systems, including the IP phones that were acquired during the Cisco 21S Initiative. They also updated the LAN infrastructure between school buildings, increasing communication speed between school sites.

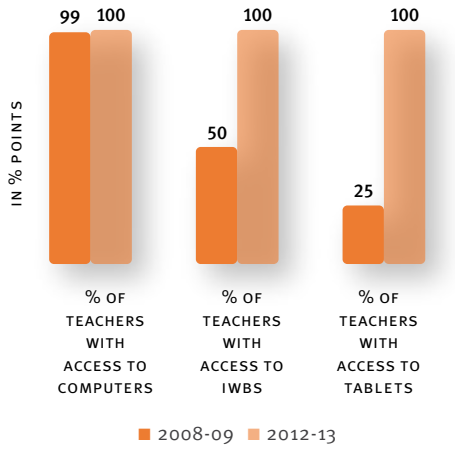
In addition to maintaining and upgrading the infrastructure, the amount of technology in classrooms increased dramatically over the past three years. The district installed interactive whiteboards in rooms that previously had no technology at all, and currently every classroom in the district has an IWB system. At the elementary level, there is a minimum of three computers in every classroom. Every school building has at least one computer lab—some boast multiple labs—and there are iPad carts throughout the district.

This technology saturation has led to what administrators see as a "paradigm shift" among teachers who are now much more comfortable incorporating technology into their lesson plans. District leaders say that technology, coupled with teacher collaboration, has enabled them to build a stronger foundation for helping students "master the things that they need to master," while increasing engagement and dramatically decreasing the number of referrals for discipline.

Figure XX, below, shows how teachers' access to technology has changed over time, with access to tablets and interactive whiteboards increasing most dramatically.

Parents' use of technology has increased, as well: The number of parents with Active Parent accounts doubled from 756 in

HATTIESBURG
Figure XX



2009 to 1,563 in 2012. Similarly, the number of overall hits on the district website has increased 25-fold, from 20,225 in 2008–2009 to 523,816 in 2011–2012.

Technology use and integration. District leaders say they have made an unwavering commitment to integrating technology into the curriculum, and emphasize that they no longer need to discuss the subject because, in the words of the technology director, "It's how we do business." Administrators say that students are using technology every day, creating things and working on projects, and have moved from merely absorbing information to building and designing things. The increase in classroom technology has enabled teachers to use a "flipped classroom" model, where students view or listen to lectures at home and practice in the classroom; this has resulted in more hands-on learning in the classroom. Students also can attend virtual classes, access an online credit recovery program, and complete ACT training online.

The district's most recent technology initiative is a Bring Your Own Device program at the high school, in which students bring their cell phones or personal laptops into the school to aid with projects and research. Administrators say this approach has helped students better understand how to use the devices responsibly.

Technical support. Hattiesburg is no longer working with the DOT intern program, but administrators say unanimously that technical support has improved across the district. They admit that, early on, the district tried to implement too much technology too quickly, without providing appropriate training, and that many teachers were overwhelmed. The technology team now ensures that trainings are planned out before new equipment even arrives. The district also hired a full-time instructional technology specialist and revised the technical support model so that each of the five technicians partners with one or two sites. Previously, all the technicians served all the schools, but under the new model each school has a relationship with one specific technician. Further, technicians attend boot camp-style training several times a year to learn about different systems and about innovative ways to use technology in the classroom.

In addition to better technical support, teachers also have more access to technical trainings—the percentage of teachers trained in technology has increased from 67% in 2009 to 100% today. The instructional technology specialist does one-on-one sessions with teachers as well as group and all-staff trainings, and the district partners with Apple and other technology providers for device-specific trainings. Moreover, technology has increased the range of professional development opportunities for staff. Teachers use online training modules such as PD 360 to learn about pedagogy, lesson planning, and classroom management. Through Atomic Learning, another online training site, teachers can view professional development videos online. Even training for the district's bus drivers takes place online.

Climate

Key findings

- The Positive Behavioral Interventions and Supports program has had an impact on the number of disciplinary referrals.
- Parents are active participants in the district.

District leaders believe that a safe and supportive climate ultimately drives success in students' academic achievements. Their focus is on the children. "We want to make sure that the children are in a position where they can be successful."

At the school level, the district adopted the Positive Behavioral Interventions and Supports[1] system to manage disciplinary issues, and guidance counselors work with students who struggle with social, emotional, and psychological issues. As a result, the number of classroom behavior incidents has decreased across the district in the last three years, from 8,657 in 2008–2009 to 751 in 2011–2012. Moreover, the number of suspension fell by almost half in the same time period, from 3028 to 1624, and average daily attendance rose slightly, from 95% to 96%.

The district promotes parent involvement throughout the system. Every school has an active Parent Teacher Association (PTA) connected to the national PTA organization. District leaders meet regularly with PTA members and presidents. In addition, they use email, surveys, Twitter, Facebook, and the district website to collect parents' feedback, and use the information to develop strategies to keep parents engaged in their children's education. For example, the district solicited parents' input to help frame the design and implementation of a new sex education program. Further, parents have access to their children's information online.

Learning

Key findings

- Teacher collaboration continues to be a strong component in Hattiesburg, and has led to increased student collaboration.
- Hattiesburg students have had the greatest gains in standardized language arts tests, though they still lag behind their peers across the state.

Frequent teacher collaboration has been a defining characteristic of the Hattiesburg School District since the implementation of the Cisco 21S Initiative. At the end of the Initiative, in 2009, it was one of the areas that teachers and administrators agreed had been most positively affected as a result of the Cisco project. District and school leaders continue to promote PLCs for collaborative lesson planning, thoughtful reflection, and the continual sharing of feedback. Yearly professional development days bring

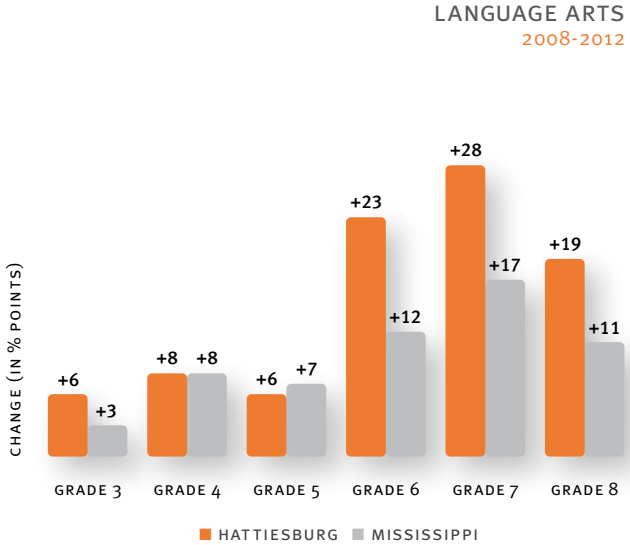
1 The TA Center on Positive Behavioral Interventions and Supports has been established by the Office of Special Education Programs, US Department of Education, to give schools capacity-building information and technical assistance for identifying, adapting, and sustaining effective school-wide disciplinary practices.

teachers together across grade levels, subject areas, and schools to discuss issues that affect all grade levels and to explore strategies for improving learning. Teachers at the elementary level work across grades to ensure that students are prepared to move on to middle school. The continued partnership with the Schlechty Center, along with the district-wide use of the Webex platform, has facilitated these conversations. Additionally, the percentage of "highly qualified" teachers has increased from 85% in 2009 to 98% in 2013.

As teachers collaborate more outside their classrooms, students are working more collaboratively in the classroom. Teachers are using more performance-based projects and virtual science experiments to engage students and provide opportunities for hands-on learning. With the help of the technology, teachers are communicating (via Skype) with colleagues and other classrooms throughout the country and around the globe, engaging their students in real-world conversations and dynamic exchanges. The district has maintained a focus on science that has been fueled by a partnership with the University of Southern Mississippi. As a result, Hattiesburg students are winning competitions in science, engineering, and health. Moreover, the number of students receiving diplomas increased between 2009 and 2012, and promotion rates rose from 96.89% to 97.93%. The number of students taking AP courses increased almost 150% from 121 in the 2008–2009 school year to 299 in the current 2012–2013 year.

Test scores[2]*:* Scores were examined for both Hattiesburg School District and the state to identify changes over time. The change in test scores outcomes varies by subject area and grade level.

Language Arts MCT2[3]**:** Between 2007–2008 and 2011–2012, there were significant increases in the percentage of students scoring proficient or above on the Language Arts MCT2 in all of the six grades tested. The largest increase was for 7th-grade students, where the percentage of students scoring proficient or above increased by 28 points. For the most part, students across the state outperformed Hattiesburg students in 2011–2012, though Hattiesburg 6th graders outperformed students at the state level in 2011–2012.

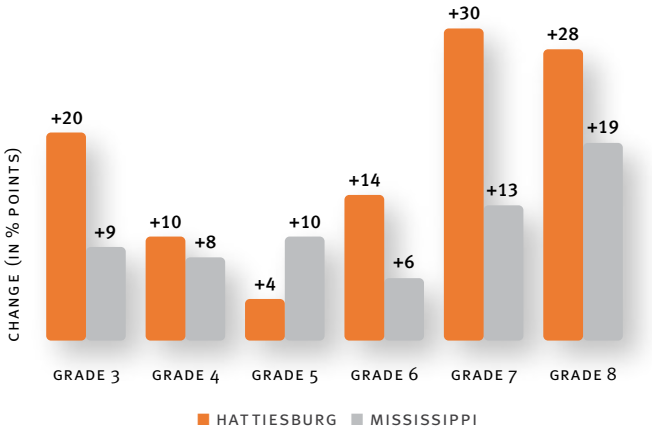


2 The Mississippi Curriculum Test (MCT) and Subject Area Testing Program (SATP) were updated in 2007–2008. These changes make it difficult to compare scores across 2006–2007 and 2007–2008. Therefore, in our analysis, we focus on patterns of change between 2007–2008 and 2011–2012.

3 The MCT was based on the Mississippi state standards and used to test student proficiency in three subject areas: reading, English, and math. The test was administered to students in grades 2–8. In 2007, the test was updated to align with the revised 2006 language arts and 2007 mathematics frameworks. It is now called the MCT2 and is administered to students in grades 3–8. The areas of language arts and math are tested. Results from both tests are grouped into four achievement levels: minimal, basic, proficient, and advanced.

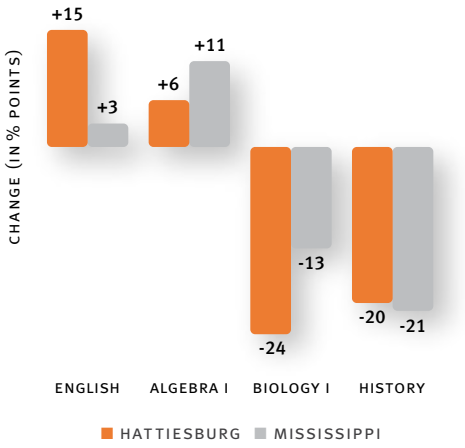
Mathematics MCT2: Between 2007–2008 and 2011–2012, there also were increases in the percentage of Hattiesburg students scoring proficient or above on the Mathematics MCT2 in all of the six grades tested. Again, the largest increase was for 7th graders, where the percentage of students scoring proficient or above increased by 30 points. While 3rd-, 4th-, 5th-, and 6th-grade students across the state outperformed Hattiesburg County students, Hattiesburg 7th- and 8th-grade students outperformed students across the state in 2011–2012.

MATHEMATICS
2008-2012



SATP: Between 2007–2008 and 2011–2012, Hattiesburg County students saw gains in two of the four SATP subject tests, English and Algebra I. There was a 15-point gain in the percentage of students receiving a passing score in English and a 6-point gain in the percentage of students receiving a passing score in Algebra I. Further, Hattiesburg students slightly outperformed students across the state in Algebra I in 2011–2012. While there were decreases in Hattiesburg County scores in Biology I and History between 2007–2008 and 2011–2012, these changes were smaller than those experienced across the state.

SATP
2008-2012



ACT: Hattiesburg County students experienced a decrease in average ACT scores between 2005–2006 and 2010–2011, going down by 1.1 points. In 2010–2011, students across the state outperformed Hattiesburg County student by 1.5 points.

Next Steps

While sustaining the technology infrastructure and renewing service contracts is a challenge, the district leadership is committed to maintaining a budget for technology and is working on several new technology initiatives to expand learning. One district administrator explains their goal in the coming years: "We want to create an

environment where learning does NOT end at the end of school day, 24/7 learning that involves parents, where students can revisit a class session to help get parents involved in learning." In line with this goal, the district plans to engage in the following activities.

Create a one-to-one computing program. District-wide adoption of one-to-one computing is the large-scale technology initiative for the next five years, driven in large part by the Common Core Assessment requirements. The district is currently working with state legislators to secure funds to pilot-test the one-to-one computing program. The decision to fund this pilot program is pending.

Expand wireless internet capacity and services. District technology staff are concerned that current wireless capacity will not be able to handle the demands of the district-wide one-to-one computing program. They plan to assess schools' wireless capacity in the next months.

Adopt electronic textbooks. As part of the one-to-one computing program, the district is preparing to have all their curricular materials and textbooks online. District leaders expect the adoption of electronic textbooks to save them money in the future.

Implement a large-scale video conferencing technology system. Several local K–12 districts, including Hattiesburg and the University of Southern Mississippi (USM), are recipients of a grant from the US Department of Agriculture, titled "REACH-Rural Education for Achievement & Connections and Health." The goal of the project is to create a large-scale video conferencing technology system. This project will allow participating K–12 institutions to interact with USM using high-definition video conferencing, with USM acting as the hub.

Increase technology-based security system. As parental and community safety concerns increase, the district will expand its video surveillance system and online visitors' check-in and check-out system (Lobby Guard) throughout its entire campus.

Introduce a learning management system (LMS). The district currently uses Active Parent to keep their parents informed, but the LMS would provide a space for online learning, help students control the pace of their own learning, and move the high school and the middle school toward a more blended approach to learning.

Help teachers make better use of email. Administrators see teachers' use of email as a gap in their productivity and communication efficiency. The superintendent is preparing to reach out to help teachers with those protocols.

Jefferson Parish Public School System

Over the past 18 months, the Jefferson Parish Public School System (JPPSS) has improved its academic standing across grade levels and subject areas as its leaders have reorganized schools, reformed staffing, and transformed their educational vision, with a goal of creating a student-centered culture and becoming one of the best urban school systems in the country. JPPSS has given more autonomy to school-based leaders with regard to instructional decisions, resources, and personnel. Building on the existing Cisco 21S Initiative technology infrastructure and tools, JPPSS also is revamping its technology vision in order to focus on preparing high school students to be both college- and career-ready, while paying special attention to 3rd-grade students and an overage middle-school population as a means to increase graduation rates in the future.

Community Background

Jefferson Parish is located in the heart of the Greater New Orleans metropolitan area in Louisiana and has one of the largest school districts in the state. As Greater New Orleans continues its recovery from hurricanes in the region in August 2005, the Jefferson Parish population has remained relatively stable. The 2010 US Census estimated the population of Jefferson Parish to be 432,640 people. Jefferson Parish is a predominantly white, middle-class suburb, made up of a population that is 60% white and 26% African-American. Hispanics make up approximately 9% of the population, and Native Americans and Asians make up the remaining 5%. The median income in Jefferson Parish in 2010, according to the US Census, was $46,428, which is higher than the Louisiana state median income ($44,086) but lower than the median income of the United States ($52,762). The median income for the City of New Orleans, across the Mississippi River from Jefferson Parish, was $37,325 in 2010. The unemployment rate in Jefferson Parish, 6.9%, is lower than that of the state (8%) and the country as a whole (8.7%). Accordingly, the poverty rate of 14.2%—which is comparable to that of the country (14.3%)—is 4.2 percentage points lower than the state average. Just across the river, in the City of New Orleans, more than a quarter of the residents (25.7%) live in poverty.

Jefferson Parish Public School System Background Highlights

- Over the eight years since the Cisco 21S Initiative was first implemented, the Jefferson Parish Public School System (JPPSS) has experienced shifts in the student population.
    - The student population increased from 41,671 in 2005–2006 to 46,555 in 2012–2013.
    - The 80 schools in JPPSS represent the full array of grade configurations. There are 49 elementary schools, 15 middle schools, 3 combined junior and senior high schools, 12 high schools, and 1 K–12 school.

- JPPSS is creating new types of schools designed specifically to address the educational and health needs of general and special education students. These new schools include advanced-study academies, accelerated academies, one-to-one laptop schools, a science and technology academy, and alternative schools.
- In 2011–2012, the student body was 29.9% white, 46.7% African-American, and 15.8% Hispanic. Although the majority of the population in Jefferson Parish is white (60%), these children are underrepresented in the public school system because many attend private schools.
- In 2008–2009, 74% of the student population was eligible for free and reduced-price lunch. That number rose to 76% in 2010–2011.

- There have been shifts in the number of teachers employed by the school system, with the number decreasing from 3,210 in 2008–2009 to 2,947 in 2012–2013.

Vision and Leadership

Key findings

- Operations have been decentralized, reducing central office staff and giving more autonomy to school-based leaders with regard to instructional decisions, resources, and personnel.
- JPPSS is working to create a more student-centered school system.
- The school system is prioritizing "talent management" by focusing on hiring new teachers, partnering with Teach for America, and creating its own principal development program.
- The school system is partnering with a number of local businesses and national foundations to bring more innovation into the Parish.

The current vision of JPPSS is focused squarely on providing quality education to its entire student population and preparing students for both college and future careers. JPPSS leaders are working to ensure "everything is designed to support the needs of students." To realize this vision, they are rethinking the set-up of the central office and its key priorities, decentralizing decision making, and holding stakeholders accountable for students' academic progress. The goal is to eliminate all failing schools and not have any students in a less-than-satisfactory school by 2016. According to the school system administration, "We have calculated this out for four years to become a B district, moving from a C to a B, or one of the higher-performing districts in Louisiana and one of the higher-performing urban districts in America." To meet that goal, JPPSS leaders have engaged in a number of major shifts, including:

- Releasing approximately one-third of principals for poor academic achievement at their schools
- Reducing the number of assistant superintendents from 14 to 6
- Shrinking the number of people working outside schools

- Offering individualized learning to low-performing students
- Focusing on 3rd-grade students to prevent future low graduation rates
- Addressing the 30% over-aged student population in middle schools
- Training and hiring high-quality general and bilingual teachers
- Creating strong alternative neighborhood schools, and reorganizing elementary and middle-school structures to a K–8 model
- Revamping the technology plan and realigning it with the current education vision
- Enhancing communication with parents and community

Since the new superintendent came on 18 months ago, he has instituted significant changes to the system's organizational structure. When he was hired, there were 14 assistant superintendents and the system was criticized for having "too many chiefs." The new superintendent reduced the number of assistant superintendent positions to six and is now supported by a leadership team composed of: the chief of human capital and support services (e.g., special education, health, athletics); chief of network services; chief of business affairs; chief financial officer; chief of strategic initiatives (to help with strategic plan for the School Board); and chief of staff (oversees all the chiefs). The school system's new management approach is focused on developing human capital and decentralizing decision-making in order to bring as many resources as possible directly to the classroom. According to one JPPSS leader, "We have redesigned the district from inside out … . Last year the board did not renew the collective bargaining agreement, now principals are able to hire all of their own personnel. Principals need the ability to hire the best staff to fit their needs." Aligned with the school system's commitment to empower principals and teachers, there was an organizational decision to adopt a network model headed by six network executive directors to provide differentiated support for the approximately 14 schools within their respective networks.

This shift in leadership to more autonomy and accountability at the school level also requires changes to the kind of training and preparation provided to school-based leadership. In order to expand the pool of talented teachers and leaders within the system, the leadership has prioritized "talent management" and is working with Teach for America, recruiting bilingual teachers, and conducting leadership academies for aspiring principals. With the support of outside funding, JPPSS is in the midst of developing a new aspiring principals program modeled after the Charlotte-Mecklenberg Wallace Foundation work.

JPPSS uses data to inform and guide teaching, and to develop responsive professional development activities. Most fundamentally, data is being used to identify student needs and to adjust teaching to meet those needs. However, due to the new decentralized model of management, the quality of data use strategies varies by school.

JPPSS reports that they have increased communication with the community and agrees that they are doing a better job at engaging stakeholders at all levels. Because of the increase in the number of charter schools, school system leadership feels that families currently have more educational choices than they did in 2008. They claim that these additional choices have produced strong neighborhood schools aligned with children's needs. Perhaps it is not surprising that the annual number of hits on the JPPSS website nearly doubled between 2009 and 2012, from 4,774,838 to 7,502,663.

While the Education Foundation started during the Cisco 21S Initiative is still in place, it has not accomplished much for the school system. As a result, the current leadership is focusing on building new partnerships in order to bring in funding and other supports. JPPSS enjoys strong support from the local business community and has built new partnerships with the Broad Foundation, Bill & Melinda Gates Foundation, local banks and hospitals, the Louisiana State Department of Education, and local higher education institutions. These partners are supporting the school system's education reform by informing the management of its resource reallocation project (Bill & Melinda Gates Foundation), creating and incubating alternative school choices (Broad Foundation, Louisiana State Department of Education), and funding leadership academies for aspiring principals (local banks). JPPSS is also looking to work with the local hospital (the biggest employer in the area) and a nearby community college to bring more students into the field of health care.

Technology

Key findings

- JPPSS is revamping its technology vision to align more closely with its educational vision.
- Responsibilities for technology procurement, installation, and repairs are being decentralized and handed off to individual schools.
- Access to technology has increased across the school system, with more laptops, interactive whiteboards, computer labs, and Internet connections.
- The capacity of the school system to provide technical support and guidance has decreased.

Technology vision. JPPSS leaders' overall assessment of technology in the school system is that the Cisco 21S Initiative investment was crucial, but that it has not been scaled strategically in order to decrease the number of low-performing schools or increase academic scores, which are the new priorities of JPPSS. To address these issues, they believe the JPPSS technology plan must be updated and aligned with their decentralized approach to education reform. The JPPSS leadership believe that the education challenges of the school system (e.g., low-performing schools, high rate of teacher turnover) should drive the approach to technology. They believe strongly that the acquisition of technology should be based on students. The JPPSS leaders and technology team report that in the last four years, vendors have been driving the

school system's technology selections; this has inhibited more strategic growth and expansion of the technology infrastructure. Leaders are working to align technology acquisition and installation with their current education vision. According to one JPPSS leader, "I don't think we can separate technology and instruction. I think it becomes a shared vision where technology has to be integral to our instructional mission and what do we really need for technology to help us achieve our academic success." As the need for technologies increases because of the school system's own educational needs and Common Core assessment requirements, the JPPSS is also interested in adopting a blended learning model.

Technology infrastructure and access. JPPSS's technology team attributes the stability of the infrastructure to the Cisco 21-S Initiative. They report, "Our infrastructure, in terms of wiring, is probably as good as anyone's, and that's thanks to Cisco." From that solid baseline, the IT team has made great strides in scaling up the Cisco technology infrastructure (e.g., wireless network) and tools (e.g., interactive white boards, computers) from the original 16 schools. All the schools have Internet access and all classrooms are wired, according to the technology team. JPPSS has expanded its technology labs. There are currently 14,664 computers and approximately 2,200 interactive white boards in the school system. In order to better maintain some of the computers, and to provide a central location for network administration and security, the technology team indicated that they are moving toward using Active Directory.

To move forward, JPPSS leaders have a vision for the technology infrastructure in the school system. They would like to integrate the hardware, software, facilities, and professional development, but recognize that the updating process will be based on individual school academic needs and technology resources. They plan to eliminate the technology labs and move most of the technologies into classrooms as they adopt a blended learning classroom model. The aim is for teachers and students to have access to technology at all times. In addition, as they prepare for the Common Core assessments, JPPSS estimates that they will need $42 million to get the online assessments in place. Louisiana Governor Bobby Jindal has indicated that the districts will have to raise the money to support this initiative.

Technical support. The capacity of JPPSS to provide technical support and guidance to integrate technology into the new district vision is limited. The technology leadership team is composed of a director of operations, an instructional program manager, a technology integration program manager, a telecommunications support specialist, an email technical support specialist, a telecommunication clerk, and an administrative assistant. In 2011, the chief technology officer who spearheaded the implementation of the Cisco 21S Initiative resigned from her position. The number of technology staff has decreased from 65 in 2009 to 21 in 2013. Currently, JPPSS does not have a chief technology officer to lead the challenging goal of decentralizing technology and using resources effectively to support low-performing schools.

Climate

- Changes in personnel at all levels, from the school board to the classrooms, have increased tension and anxiety throughout JPPSS.
- The school system leadership is transforming the culture from an adult-centered to a student-centered culture.
- JPPSS is struggling to combat the overall climate of the community, which is poor and crime-ridden, by providing students with a safe, healthy, positive learning environment.

The changes in leadership and management have caused increased tension in the school system. Classroom teachers, principals, and central office staff have seen their positions cut or filled with new hires. School have been closed or consolidated. Incumbent school board members have not been re-elected, and have been replaced by individuals with a new vision for JPPSS.

The majority of the nine-person school board changed in January 2011, replacing five of the elected members. This upset a once-stable school board that had been in place for many years and that oversaw the implementation of the Cisco 21S Initiative. The five new members have come in as "change agents," and are working to undo many of the old systems that they perceive as ineffective and outdated.

The central office staff has been downsized and streamlined. According to a JPPSS leader, "Everybody was basically fired or they were asked to resign and they were re-hired or not. Many longtime employees lost jobs. And there was a big reshuffling." Many of the positions that remained were filled with individuals who support the superintendent's new vision.

Principals who were not able to meet their growth targets for three years have been fired. Not everyone in the school system agreed that this is the right approach, particularly for principals working in schools under extenuating and difficult circumstances. One informant said, "Sometimes [the district is] data-driven to the loss of the human factors. If you have a principal in a school that has done a great job with overwhelming circumstances, and just still isn't meeting the digits, they're still out. So it's data-driven to a fault."

In keeping with the focus on increased autonomy for school leaders, in 2012 the school board did not approve the collective bargaining agreement. According to the JPPSS leadership, the school system culture has been one of "seniority and loyalty, rather than talent", and the new administration is trying to change this. According to a JPPSS leader, "It used to be that longevity in the district was prized. It is no longer. [Teachers] knew what the rules were, and they knew what they had to do to keep their job, and now they feel like the rules have completely changed. The teachers are ill-at-ease because they just feel their job is in jeopardy." Teachers are now working without a contract, and principals are able to hire their own personnel and make decisions about scheduling, without being bound to a teaching contract. The leader-

ship acknowledges that the teaching faculty is operating with increased anxiety, in part due to the new educator evaluation system as well as the Common Core implementation on the horizon. Thirty-five percent of teachers are 55 years or older, and many of the changes are challenging for veteran teachers.

Despite the tension between the adults in the school system, administrators report that indicators of school-level climate, such as expulsions and suspensions, are going down. Leaders referenced high levels of poverty and crime in the JPPSS communities that contribute to the overall climate in the district. The JPPSS is working on providing food services every day, along with safe transportation options and positive behavior support for all of its 46,000 students.

The leadership noted that the anxiety is not negative if it helps to produce the student learning outcomes that the school system is focused on achieving. JPPSS is also trying to increase teacher moral by pushing for teacher pay raises this year while increasing salary and benefits in retirement. According to JPPSS leaders, "The climate of autonomy and having the principal, having the flexibility and the authority to make decisions and empowering teachers to join that principal, along with families, is a positive culture, [though it's unclear] if everyone will be happy about it."

Learning

Key findings

- JPPSS leadership is creating a more autonomous teaching and learning environment, empowering principals and teachers to make decisions that are best for their students.
- JPPSS is focusing on 3rd-grade students and the overage middle-school population to prevent low graduation rates in the future.
- At the high-school level, the focus is on preparing students to be both college- and career-ready.
- JPPSS is training and hiring high-quality general and bilingual teachers.
- JPPSS is creating strong alternative neighborhood schools and is reorganizing elementary and middle-school structures to a K–8 model.
- In 2011–12, JPPSS's district ranking in the state improved from 51st (in 2010–2011) to 42nd, all through academic gains.
- JPPSS students made significant gains on state tests across grade levels and across subject areas.

According to one school system administrator, the state superintendent said that there is an education renaissance in Jefferson Parish. JPPSS had 30,000 students in D-rated schools in 2011. It eliminated approximately one-third of those schools in 2012, and moved from 51st to 42nd in the state's district ranking, based on test scores. Between 2009 and 2012, the number of students receiving diplomas increased from 2,142 to 2,457, and the percentage of promotion rates rose from 89% to 90.7%.

> *"An academic headline that we're proud of, certainly, is the positive momentum for academic gains for our students. … We are happy to move from being a D district to a C district, acknowledging, of course, that we have a long way to go, but feeling good about that initial momentum."*[1]

Curriculum and instruction. It is critical to recognize that JPPSS leadership is engaged in a major reorganization of its school system and an articulation of how the business of teaching and learning must be conducted with the support of technology. The focus of the new leadership is on the types of learning that lead to students' graduation and readiness for college and career. As a result, most of the school system resources have been shifted and rallied to support classroom instruction and students.

> *"We're shifting, wherever possible, decision-making to our schools, and we're holding school leaders and their teams accountable for making results with kids. … It is our position as a central team … that [teaching] decisions are best made at the school level by people who are working most closely with kids, and having those decisions made as close to the classroom level as possible. For example, many districts regularly pull together teachers for different professional development… . That is not how we're operating as a district. That's a significant shift from how our district used to operate."*

Under these circumstances, in collaboration with their school network teams, staff at the school levels are empowered to determine the individual educational needs of their students at the lower grades and to figure out instructional strategies to support each child, especially for poor African-American students, non-English-speaking students, and special education students. JPPSS leaders understand the importance of having all their students being able to read at the 3rd-grade level.

JPPSS is paying special attention to its 40% of over-age students in middle school. They are in the process of systematically identifying these students' academic challenges and accelerating their learning. JPPSS is also raising these students' awareness of careers and jobs through an integration of blended learning as well as an extended day. The goal is to move them into the next grade level. Addressing their middle-school challenges is so critical to the entire school system's education reform effort that one JPPSS leader said, "I don't think we'll reach our ultimate goal, and that is for all children to be prepared for college or career readiness."

At the high-school level, the focus is to add a career-readiness path to help students who do not choose to go to college. In collaboration with local hospitals and higher education institutions, JPPSS is emphasizing career and technical education. The goal is to attend to the need for high school graduates who are interested in the field of healthcare. "We have a renaissance and growth of the medical field in New Orleans. There is gong to be quite a bit of a demand for medical support services," according to one district administrator. School system leaders also are focusing on the need to increase their graduation rate, which currently stands at about 70%. The number of

1 State school-performance score: A—Excellent, B—Above average, C—Average, D—Below average, and F—Failing.

those taking Advanced Placement courses decreased from 2,647 in 2008 to 1,802 in 2012.

JPPSS plans to reorganize and upgrade classroom physical layouts to improve old buildings and accommodate blended learning. They will dismantle current technology labs and move the technology into the classroom to support teaching and learning.

Professional development. JPPSS is providing professional development to aspiring principals through an academy funded by the Bill & Melinda Gates Foundation. Currently, they select people within the school system who are academically qualified, and now have a cohort of aspiring principal candidates. An administrator noted, "We will have a cohort of highly [prepared] individuals to assume any vacancy that takes place at the end of next year." In addition, JPPSS administrators are actively conducting targeted recruitment of quality teachers, including ELL teachers, who are graduating from local higher education institutions. They plan to start hiring them in April.

Test scores.[2] Making strides in student achievement is a central goal for JPPSS in the next four years. The leadership also is aware of the challenges associated with the student population, and have identified three groups that require particular attention. First, the low-income African-American student population is not achieving on par with their peers in other parts of the state; second, JPPSS will have close to 20% Hispanic students in 2013, of which 8% are non-English speakers; and third, the special education population is one that also requires additional attention to address their needs and appropriate requirements. Only 50% of students in the school system are reading on time and on level by 3rd grade. This has a ripple effect in that these students then get held back; many students are over-age for their grade (40% of JPPSS middle-school students are over-age), and more are at risk of dropping out of school. The graduation rate is approximately 70%, and JPPSS is hoping to increase this number with changes to their approach to both early skills (i.e., the 3rd-grade reading level) and changes to the middle schools. JPPSS is making some strides in raising achievement, as indicated above—their state ranking moved up 9 places in just one year, from 51st to 42nd. The state uses a grading system to rate schools on their student achievement, and the JPPSS goal is to have no F-rated schools by 2014, and no D-rated schools by 2016.

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2 The Louisiana Educational Assessment Program (LEAP) and the Graduation Exit Examination (GEE) are part of Louisiana's criterion-referenced testing program. LEAP and GEE are high-stakes tests. They measure how well a student has mastered the state content standards. LEAP is administered at grades 4 and 8, and the GEE at grades 10 and 11. Scores are grouped into five achievement levels: *unsatisfactory, approaching basic, basic, mastery, and advanced*.

To advance into the 5th and 9th grades, students must score at least basic in either of two LEAP tests—English/language arts or math—and at least *approaching basic* in the other.

To graduate from high school, students take the GEE and must score *approaching basic* or better in both English/language arts and math, and *approaching basic* or better in either science or social studies.

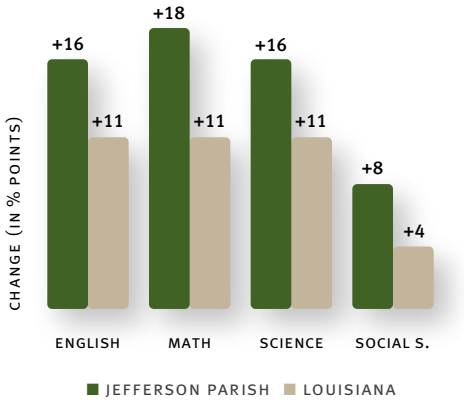
Test scores were examined for both JPPSS and the state of Louisiana to identify changes over time. The change in test score outcomes varies by subject area and grade level.

Grade 4 LEAP scores. There have been increases in the percentage of JPPSS students scoring *basic* or better on the Grade 4 LEAP tests across all subjects. There was a 16-percentage-points increase for English, an 18-percentage-points increase for math, a 16-percentage-points increase in science, and an 8-percentage-points increase in social studies. In 2011–2012, students across the state slightly outperformed JPPSS students in all subjects (Figure X).

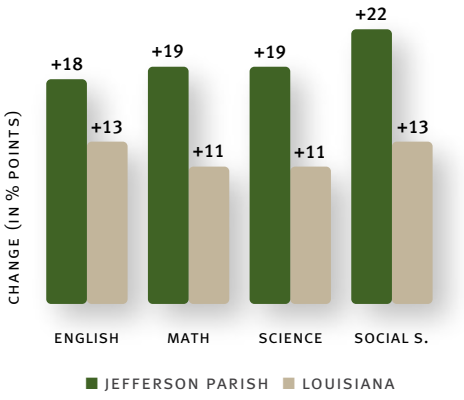
Grade 8 LEAP scores. Between 2007–2008 and 2011–2012, there also were increases in the percentage of JPPSS students scoring *basic* or better on the Grade 8 LEAP tests across all subjects. There was an 18-percentage-points increase for English, a 19-percentage-points increase for math, a 19-percentage-points increase in science, and a 22-percentage-points increase in social studies. Students across the state slightly outperformed JPPSS students in three subjects, English, math, and science, in 2011–2012. JPPSS students outperformed students across the state in social studies (Figure X).

Grades 10 and 11 GEE. Between 2005–2006 and 2011–2012, JPPSS students made gains in three of the four subject tests—mathematics, science, and social studies. The largest of these gains was in mathematics, with a 15-percentage-points increase. There was a slight 2-percentage-point decrease in English. Students across the state outperformed JPPSS students in all four subjects in 2010–2011 and 2011–2012 (Figure X).

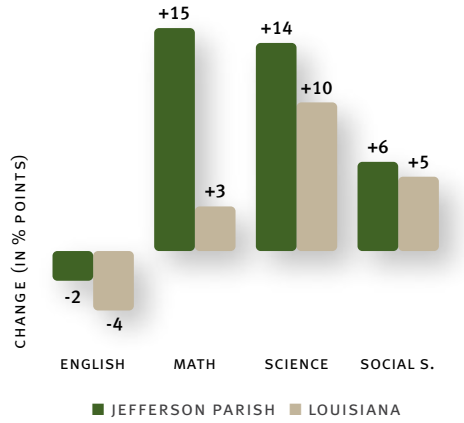
4 LEAP
2008-2012



8 LEAP
2008-2012



10 & 11 GEE
2008-2012



ACT. JPPSS students experienced an increase in average ACT scores between 2005–2006 and 2010–2011, going up by .5 points. In 2010–2011, students across the state outperformed JPPSS students by 1.3 points.

Next Steps

JPPSS has gone through an intense reform effort at the leadership (school board and superintendent), administrative, and instructional levels in the past 18 months. To build on this momentum and manage successfully the human and technical challenges inherent in any large-scale school system reform initiatives, JPPSS is planning a comprehensive approach focused on the following activities.

- Develop a strategic and systematic plan to provide a clear vision and roadmap to all stakeholders about where JPPSS should be in five years,
- Continue to shift the culture from adult-centered to child-centered, and require that adults become more sensitive to the needs of children (e.g., low academic readiness, poverty).
- Focus more on academic outcomes and what is best for students.
- Look at focusing most professional development activities on Common Core implementation.
- Redefine the new roles of principals, and support them in building capacity, hiring new staff, and managing school budgets. As one district leader explains, "We will continue to allow our principals to hire who may be best to serve children at the school site."
- Advance their emerging work in technology and health careers and in job placement for high school students.
- Strengthen and boost JPPSS leadership and the teaching talent pool. JPPSS requires access to higher levels of talented staff, and plans to be aggressive and systematic on recruitment.
- Revamp the school system's Foundation initiated under the Cisco 21S Initiative into a dynamic organization supporting the JPPSS reform initiatives.

Forrest County School District (FCSD)

Administrators at Forrest County School District (FCSD) felt that the district had not fully taken advantage of the initial Cisco 21S Initiative's technology investment. To support their vision of student-centered learning and 21st-century education reform, they have built a robust technology infrastructure, expanded technology access across the district, and increased the use of data to inform instruction and professional development. They also have established Professional Learning Communities and increased teacher collaboration. Scores for math and language arts have risen in most grades, and have gone up in two of the four SATP subjects. Sixth graders outperformed student across the state in math and language arts in 2011–2012.

Community Background

Hattiesburg is the county seat of Forrest County, but the city has grown in recent years to include a portion of eastern Lamar County. It is part of the Hattiesburg, Mississippi, Metropolitan Statistical Area (MSA), which encompasses Forrest, Lamar, and Perry counties. Forrest County experienced a gain in population of approximately 5% following hurricanes in the region in August 2005. Out of a population of 75,842, Forrest County is 61% white and 36% African-American. Hispanics make up approximately 4% of the population, while Native Americans and Asians make up the remaining percentage. According to American Community Survey (ACS) 2007–2011 estimates, the median household income in Forrest County ($34,448) was lower than both that of the state of Mississippi ($38,718) and the United States ($52,762). The poverty rate in Forrest County (20.8 %) is lower than that of the state (21.6%), but higher than that of the United States (14.3%). The unemployment rate in the greater Forrest County area (10 %) is the same as that of the state, but higher than that of the country as a whole (8.7%).

Forrest County School District Highlights

- The number of schools in the Forrest County School District has remained the same over the past seven years. The six schools that are a part of FCSD include three elementary schools (grades K–6), two K–8 schools, and one middle-to-high school that includes grades 7–12.
- Over the seven years since the Cisco 21S initiative was first implemented, the FCSD has experienced shifts in the student population, with a decline from 2,478 in 2005–2006 to a low of 2,370 in 2007–2008. However, the student population has grown since then, rising to 2,389 in 2011–2012.
- In 2011–2012, the student body was 55% white, 40% African-American, and 3% Hispanic, with 76% of students eligible for free or reduced-price lunch.

Vision

Key findings

- The district's revised education vision takes a global perspective, looks to challenge and inspire students, and includes technology integration.
- FCSD recently established Professional Learning Communities to provide professional development and support for teachers and to promote collaboration.
- Innovation is managed at the individual school level.
- The district uses technology to make office procedures more efficient and to reduce paper consumption.

Forrest County School District leaders feel that the education vision in place during the Cisco 21S Initiative did not account for the affordances of technology, and thus hampered the expansion of the project. One district leader said that the current vision is to embrace education and technology and to present students with challenging educational goals, support their growth, and inspire them to create and pursue their dreams. FCSD embraces an integrated approach to education and technology, and is making the transition from a local focus to a more global view of education. FCSD leadership wishes to support students in acquiring technology skills and concepts and in using them to address issues that they face on a daily basis.

> *"We are trying to expand and engage students through technology, to inspire them to get out of their comfort zone, to thrive in a global education environment."*

> *"Cisco gave us a great start, we would not be able to move forward and be where we are now without that initial investment."*

The superintendent who was involved in the implementation of the Cisco 21S Initiative retired in 2011, and the new superintendent has been in his position for a year. He is familiar with the Cisco 21S Initiative, however, as he was a school principal and assistant superintendent in the district during the project.

FCSD leadership favors a traditional top-down approach to management, moving to manage the system from the superintendent down onto the assistant superintendents, school principals, assistant principals, curriculum specialists, and teachers. They have added layers of support for teachers—including a professional development coordinator—to assist the district's lowest-performing schools. Schools recently began developing Professional Learning Communities (PLCs), which meet weekly. PLC topics (Common Core among them) vary, based on each school's emerging needs. School principals lead the PLC meetings and debrief with district staff about the successes and challenges they face in managing the PLCs.

The district uses data from computer-based common assessments to make decisions about instruction. As one administrator put it, "The importance of data is to change, adjust, and improve instruction, not only in the classroom, but for future PD for teachers."

The principal of each school manages innovation at his or her site. For example, one school is pilot-testing a new program for students with ADHD, and the principal manages the entire implementation process.

The district uses technology tools to streamline administrative procedures and reduce the use of paper—transportation tickets, workshop requests, job applications, and student registration forms are all online, and administrators use iPads to record all drop-ins and observations at schools and classrooms and to send instant feedback to teachers.

The district still maintains its Education Foundation, which was initially created under the Cisco 21S Initiative, and has been able to draw on the support of local groups and one national insurance company for funding, volunteer time, training, and in-kind services.

Technology

Key findings

- The Cisco 21S Initiative provided the foundation upon which Forrest County School District has built a robust technology infrastructure and expanded access across the district.
- The communications technologies have engendered cross-district collaborations.
- Teachers regularly integrate technology into instruction.
- Teachers select professional development opportunities from a menu of summer offerings provided by FCSD.

Technology vision. Forrest County School District leaders credit the Cisco 21S Initiative with giving the district a "great start" in creating a vision for technology and for helping the district take steps toward accomplishing that vision. Administrators agree. "We learned a lot of things through that process, and we would not be able to move forward to where we are now had it not been for that initial investment." Administrators want to inspire students to go beyond their comfort zone and use technology to address the issues that they face on a daily basis. The district is preparing to revisit its technology plan and establish goals for the next three years.

Infrastructure and access. FCSD has been able to maintain the systems originally provided by the Cisco 21S Initiative, and has increased the number of devices in schools and classrooms across the district. The communications network, including the original Cisco IP phones, has been refreshed and updated to the newest servers and soft-

ware. The district is updating the data connection between schools to one gigabyte, which will open up more opportunities for video between locations, and is expanding internet bandwidth from 21MB to 100MB.

Currently, all of the schools have at least one computer lab, and most have two; labs are being updated with more Apple products. Interactive whiteboards are in 90% of classrooms, and the district has been refreshing the projectors as needed. All classrooms have four or five computers for students, as well as a laptop for the teacher. Administrators estimate that 40–50% of teachers are using clickers in their classrooms. There are more tablets in FCSD than there were four years ago: The district purchased a number of iPads, which are most frequently used by the Special Education Department's occupational and physical therapists and by administrators for meetings, school walk-throughs, and classroom observations. The district uses SAM 7 student information system to track attendance, discipline, and grades, for administrative as well as parent needs.

Use and integration. According to administrators, more teachers are using technology in their classrooms and they are using it more frequently than they were four years ago. Notably, teachers who have been in the Forrest County School District since the 2007–2008 school year are more comfortable using the technology than are some of their more recently hired peers. Using a web filter log, the district IT team monitors web traffic and tracks which websites teachers are using. They report that teachers are visiting more educational video sites; an indicator of increasing Internet use is that teachers are submitting more requests to unblock filtered websites so that they can be viewed in their classrooms.

Administrators estimate that teachers use their interactive whiteboards and projectors for about 50% of the instructional day, and that all FCSD textbooks have a technology component and online student activities so that teachers can supplement classroom instruction with digital resources. But they emphasize that there is still a portion of instruction that happens using pencil and paper—that the technology is just one tool in a teacher's repertoire. One administrator described a classroom in which activities moved seamlessly from the teacher presenting on the interactive whiteboard, to students working on writing in small groups, to student presentations on laptops, and back to the teacher working at the whiteboard.

As mentioned earlier, administrators use iPads for all of their drop-ins and observations. They can send instant feedback to the teacher and arrange a face-to-face meeting to discuss results later in the day.

Forrest County School District leaders also attribute the increase in cross-district collaboration to the Cisco 21S Initiative. Before 21S, technology directors seldom had opportunities to work closely together; post-21S, they are in frequent communication with their counterparts in Hattiesburg and Lamar Counties, collaborating over the phone and through email and text messages.

Technical support. FCSD currently has six support people in the technology department: one director, three technicians, one network administrator, and one student information system administrator. In addition to in-house support, FCSD partner Promethean Products provides an "engaging and dynamic" trainer to work with new teachers on the interactive whiteboards, voting systems, slates (for use with the interactive whiteboards), and other hardware and software. FCSD hopes to hire an instructional technologist next year, using Title I money, but this has not yet been confirmed.

Forrest County School District conducts formal technology training primarily over the summer, allowing teachers to choose from a wide range of topics. In 2012, trainings were scheduled two or three times a week throughout the summer, and teachers could review the offerings and sign up online. Administrators say that teachers enjoyed the flexibility and diversity of the trainings and appreciated that the district was investing in their growth and development.

Climate

Key findings

- Teachers collaborate within and across the district via weekly school-based Professional Learning Communities and monthly district-wide grade-level meetings.
- Teachers are excited by the learning opportunities available to them, and this positively affects students' enthusiasm for learning.
- FCSD uses data in instructional decisions for students and professional development for teachers.
- FCSD is working to increase their family engagement and build a sense of cohesion across the district.

Teachers across the Forrest County School District collaborate through district-wide grade level meetings, focusing on topics that the district identifies or the teachers request. Topics in 2012–2013 have included Common Core implementation and the state frameworks. The meetings bring teachers together across disciplines and grades to build community, and provide teachers an opportunity to examine data and explore how they might change instruction to respond to areas identified as weak. All of this has spurred more collaboration across the schools as well, and teachers have found other ways to collaborate—including group emails and online tools such as Google Docs—so they can continue their work and discussion beyond the meetings.

The FCSD leadership believes that teachers are excited by the options for training that the district provides, and this in turn has led to students being more enthusiastic about the new kinds of approaches the teachers are trying in the classroom.

According to FCSD leadership, they anticipate that the graduation rate is going to be close to 85% in coming years, which is "a vast improvement" over previous years—it

was 64% in 2010, and 68.5% in 2012. They attribute this anticipated success to new leadership in the high school who have taken the school from "a successful school to a high-performing school in the last two years." The entire Forrest County School District employs the Positive Behavior Intervention and Supports system; FCSD was one of the initial sites in Mississippi to implement the PBIS system. Teachers meet weekly to review behavior data and strategize to serve students' needs.

FCSD also has increased their communication strategies with families. The district has a webpage for each school, and the principals use social media such as Facebook and Twitter to inform families and promote positive images of the schools. In addition, every school has a parent liaison, who gathers information from parents and brings this to the district-wide parent liaison meetings.

Learning

Key findings

- Teachers regularly integrate technology into instruction, balancing digital and non-digital teaching strategies.
- FCSD promotes problem-based learning approaches.
- FCSD has implemented the Common Core Curriculum in the early grades. This task is more complicated at the high-school level, as some of the Common Core is not aligned with the state assessments required for graduation.
- Teachers use common, computer-based formative assessments frequently, and review the data to inform instruction.
- Scores are up in most grades on the MCT2 math and language arts tests, and in two of the four SATP subjects. ACT scores have declined slightly.

Curriculum and instruction. District leaders say that teaching is being fundamentally transformed in Forrest County School District. One of their primary goals is to "move away from teacher-centered classrooms to student-centered classrooms. It's all about what the students can do and what [teachers] can do to help facilitate that learning." Administrators understand that more technology in the classroom does not necessarily lead to a shift in the instructional approach. Along with additional technology, administrators provide resources to promote teachers' use of problem-based lessons, in which students develop solutions to issues that have real meaning in their lives. In this way, students take charge of their own learning as researchers and data collectors, and the teacher becomes the facilitator.

In addition to changing how they teach, teachers are also changing how they plan lessons. According to administrators, teachers are not only using supplementary materials that come with their textbooks, but are "branching out and looking worldwide on the Internet for strategies and activities and applications that will assist their students." They also are spending time after school searching for remediation and enrichment material to bring into their classrooms.

Like the other districts in Mississippi, Forrest County School District is working toward implementing the Common Core across grade levels. Curriculum coordinators at the central office level are responsible for helping teachers implement the curriculum in classrooms while providing implementation support across grade levels. FCSD has fully implemented the curriculum from kindergarten through 2nd grade. In the 3rd through 8th grades, they are implementing the Common Core simultaneously with the state frameworks. FCSD has been slower to implement the Common Core in the upper grades because the assessments that students must pass in order to graduate are closely tied to the state curriculum.

In the higher grades, the district is also working to increase the number of students taking Advanced Placement and accelerated classes.

Assessment. Administrators and teachers in Forrest County say they vigilantly collect and analyze student data through computer-based assessments, as well as with more informal classroom assessments such as active votes, exit cards, and written responses by students. The immediate feedback enables teachers to change, adjust, and improve instruction for students at all performance levels.

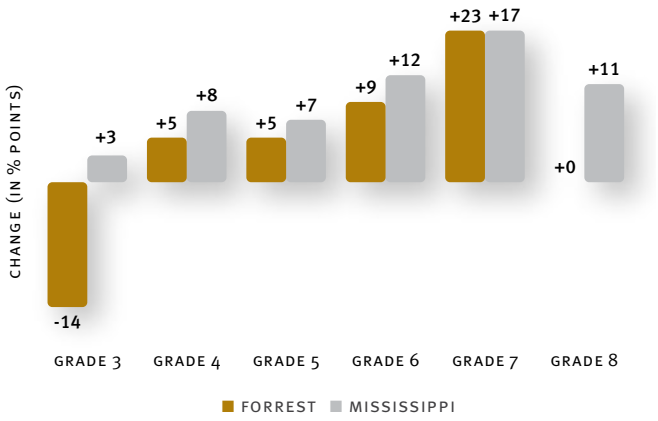
Professional development. Assessment data also informs much of the professional development that teachers receive from FCSD. Administrators use student data to determine where their teachers need additional help and guidance. FCSD has taken additional steps to help struggling schools and students. Through Title I funds, the district hired a development coordinator to work with the lowest-performing schools, developing guidelines for teachers and modeling best practices. There are assistant principals at four of the schools to help with various issues relating to teaching and learning.

Professional Learning Communities (PLCs) in Forrest County School District meet weekly at schools, and teachers attend monthly meetings with their grade-level colleagues across the district. After each district-wide session, the principals and district office staff hold a debriefing to discuss how things went in each group. This practice has increased collaboration among teachers as well as among schools. Teachers use group emails and Google Docs to share instructional activities and have conversations about how best to reach their students. Administrators report that the increased collaboration has helped to unify the district. "It has built a tremendous community district-wide for our teachers. There are no longer six separate schools, where we're going to get to work as one collaborative district."

Test scores.[1] Scores were analyzed for both Forrest County School District and the state in order to consider changes over time and district scores relative to the state.

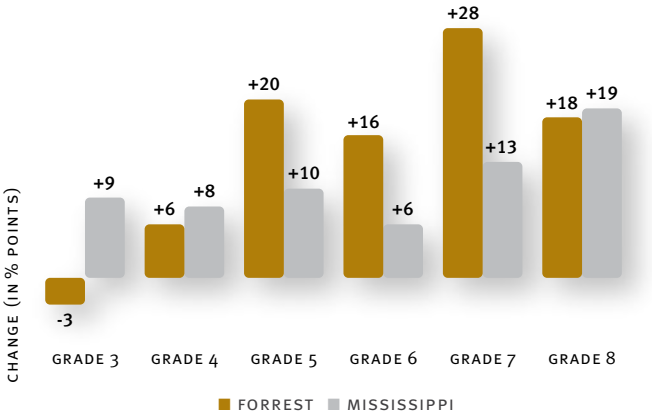
1 The Mississippi Curriculum Test (MCT) and Subject Area Testing Program (SATP) were updated in 2007–2008. These changes make it difficult to compare scores across 2006–2007 and 2007–2008. Therefore, in our analysis, we focus on patterns of change between 2007–2008 and 2011–2012.

LANGUAGE ARTS
2008-2012



Language Arts MCT2.[2] Between 2007–2008 and 2011–2012, there were increases in the percentage of students scoring proficient or above in five of the six grades tested. The largest increase was for 7th-grade students, where the percentage of students scoring proficient or above increased by 17 points. There also were increases for all other grades except 3rd grade, where there was a decrease, and 8th grade, where there was no change. Although, in general, students across the state outperformed Forrest County School District students in 2011–2012, FCSD 6th graders outperformed students at the state level.

MATHEMATICS
2008-2012



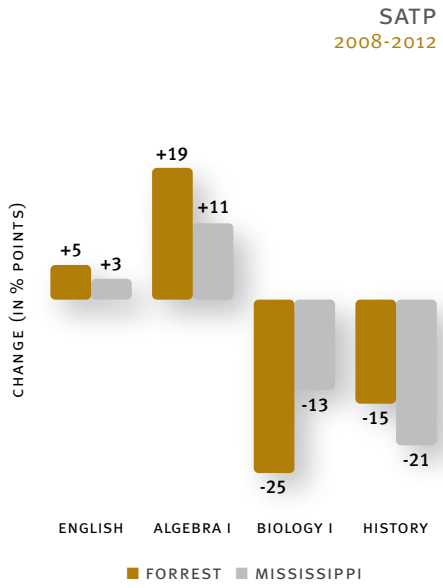
Mathematics MCT2. Between 2007–2008 and 2011–2012, there also were increases in the percentage of students scoring proficient or above on the mathematics MCT2 in five of the six grades tested. Again, the largest increase was for 7th-grade students, where the percentage of students scoring proficient or above increased by 28 points. There also were increases for all other grades except 3rd-grade students, where there was a slight decrease. Students across the state outperformed Forrest County School District students in 2011–2012. Again, FCSD 6th graders outperformed students across the state in 2011–2012.

SATP. Forrest County School District students made gains in two of the four SATP subject tests—English and Algebra I—between 2007–2008 and 2011–2012. There was a 5-point gain in the percentage of students receiving a passing score in English and a 19-point gain in the percentage of students receiving a passing score in Algebra

2 The MCT was based on the Mississippi state standards and used to test student proficiency in three subject areas: reading, English and math. The test was administered to students in grades 2–8. In 2007, the test was updated to align with the revised 2006 language arts and 2007 mathematics frameworks. It is now called the MCT2 and is administered to students in grades 3–8. The areas of language arts and math are tested. Results from both tests are grouped into four achievement levels: minimal, basic, proficient, and advanced.

I. Moreover, in 2011–2012, FCSD outperformed Mississippi state in English, Algebra I, and History. While there were decreases in FCSD scores in Biology I and History between 2007–2008 and 2011–2012, these changes were similar to those experienced across the state.

ACT: Forrest County School District experienced a decrease in average ACT scores between 2005–2006 and 2010–2011, going down by 1.8 points. In 2010–2011, students across the state outperformed Forrest County students by 1.6 points.



Next Steps

Forrest County School District leaders are developing a new technology plan to support their evolving approach to 21st-century education reform and to promote the use of student-centered approaches to instruction. The plan will address the district's needs as follows:

- Hire more instructional technologists
- Implement a one-to-one computing program
- Expand the wireless network so that the district will have the capacity to support the Common Core assessment requirements
- Promote and manage a Bring Your Own Devices to School program
- Integrate technology into instruction

FCSD leaders will form a committee composed of district administrators, teachers, parents, and community members to articulate the technology goals and roadmap for the next three to four years. One district leader states that. "… once we get [the technology plan] … down on paper and we see the drive we're going to have, we're going to gear all our assets of the district to move in that direction. … I want it to actually mean something, and to have a growing document to give us guidance as we move forward."

Moss Point School District

Over the last four years, state regulatory challenges and changes in leadership have hampered the efforts of Moss Point School District (MPSD) to leverage the momentum of the 21S Initiative. The district has nonetheless made progress in such areas as graduation rates and dropout reduction, as well as test scores in certain grades and subjects. Under new leadership, and with the regulatory issues resolved, the district is pursuing ambitious goals for providing a rigorous 21st-century education in an environment designed to serve the whole child.

Community Background

Moss Point is a small city located in Jackson County, Mississippi. It is part of the Pascagoula, Mississippi, Metropolitan Statistical Area (MSA), which encompasses the neighboring counties of Jackson and George. As of the 2000 census, the MSA population was 150,564. According to 2011 US Census estimates, Moss Point's current population is 13,704, which is a slight decrease from the 2000 estimate (13,951). As of 2010, the district was predominantly African American (73.3%) and white (23.1%). Hispanics made up approximately 1.9%, while Native Americans and Asian Americans made up the remaining percentages. The median income in Jackson County was $36,741, which is lower than both the Mississippi state median income of $38,718 and the median income of the United States at $52,762. The poverty rate in Jackson County (17%) was lower than that of the State of Mississippi (21.6%), but higher than that of the United States (14%). As of 2012, the unemployment rate in Moss Point (8.3%) was lower than that of both the state (10%) and the United States (8.4%). Finally, as of 2011, the Moss Point City-Data crime index (319.9) was lower than that of the United States (614).

District Background Highlights

- For the most part, the number of schools in the Moss Point School District has remained the same since 2005. Though the number of schools has remained relatively consistent, a steady decline in Moss Point's student population matches the population decline experienced by the city. The student population has been steadily declining, from 3,774 in 2005–2006 to 2,480 in 2011–2012. As of 2011–2012, the student body was 22% white, 74% African American, and 2% Hispanic.
- The percentage of children who qualify for free or reduced lunch rose from about 81% in 2008 to 91% in 2012.
- The student dropout rate in the district decreased from almost 19% in the 2008–09 school year to 12% in the 2011–12 school year.
- The 2011–2012 student-suspension rate was ten times that of 2008–2009, and yearly absences rose from 1,504 to 12,623 during that same time period, with 4,842 reported absences as of April 2013.
- The percentage of teachers who were highly qualified in the MPSD increased

from 79% in the 2008–2009 school year to 99.97% in the 2012–2013 school year, with 100% of core subject area teachers rated highly qualified.

- The district has experienced shifts in the number of teachers they employ—decreasing from 241 in 2005–2006 to 218 in 2011–2012.

The district elected to put all their 21S resources into Moss Point High School. Since 2009, the district has been working to provide their remaining schools with similar technology resources and educational vision.

Vision and Leadership

Key findings.

- Vision is focused on supporting the whole child and increasing accountability.
- The district aims at maintaining a stable leadership team.

In 2009, the visions of the district and Cisco 21S were aligned and focused on promoting 21st-century teaching and learning, driven by technology integration and professional development. The district leaders had an opportunity to transform their schools to better prepare their students to become "empowered world-class citizens." The vision has shifted since the conclusion of the 21S initiative: Administrators refer to the district as a "service-oriented society," where the students are the customers, and educators identify students' needs and provide appropriate resources and support.

The current vision comprises five outcome-based goals: (1) creating a challenging, supportive educational environment that results in an increase of 5% in students achieving on or above grade level, as documented on state assessments; (2) increasing the graduation rate by 5% and reducing the dropout rate by 5%; (3) increasing district average daily attendance (ADA) to a consistent range of 93% to 96%; (4) creating within the community a sense of ownership through communication and relevant contact; (5) holding all employees accountable for student growth; and (6) providing staff support through professional development and positive reinforcement.

In recent years, Moss Point has struggled with and overcome regulatory challenges. In 2011, auditors for the Mississippi Department of Education found multiple violations in the administration of state assessments at the high-school level and irregularities in the use of special education funding. The state downgraded MPSD's accreditation status from "Accredited" to "Probation" in June 2011, and required the district to submit an improvement plan. The plan was approved and, in April 2012, the Commission of School Accreditation voted to upgrade Moss Point School District's accreditation status. The State Board of Education upgraded the district's status from "Probation" to "Accredited" in September 2012.

The district also has experienced a lack of steady leadership since the end of the 21S Initiative. Three superintendents have led the district in the last three years. The district regained its accreditation status under the leadership of an interim superintendent

and a new school board. Hired in the summer of 2012, the current superintendent is implementing a turnaround plan that calls for the creation of shared leadership and structures within and outside the school district. These include leadership teams and Professional Learning Communities (PLCs), and the adoption of rigorous accountability practices.

Technology

Key Findings

- Technology is a critical part of the district's five-point plan, and the new leadership is committed to building technological infrastructure and promoting technology integration.
- The district is becoming more data-driven and more sophisticated in understanding how to link data sources and use data to inform decisions
- In 2008–2009, 60% of schools had access to a learning management system. In 2011–2012, the district changed to a new system. In 2012–2013, 100% of the district schools have access to a learning management system.
- It is an ongoing challenge to support teachers to integrate technology as a way to increase student engagement in their daily instruction.
- Access to resources to support expanding infrastructure and more sophisticated systems is a challenge.

Moss Point leaders see technology as a key to student engagement, and believe the district is well on the way to integrating technology into the curriculum. This is in keeping with the district's goal of "graduating world-empowered students" who are prepared to compete in the global economy, as well as with district efforts to adopt the Common Core, which emphasizes technology integration. The district's new strategic plan, and a three-year technology plan to be released in February 2013, highlight the central role of technology in the Moss Point curriculum.

A particular success of the 21S Initiative was the installation of interactive whiteboards in classrooms. As reported in EDC's 2009 Summative Evaluation Report for the district, "74% of students reported using the interactive whiteboards on a daily basis, while 57% said they used the Internet daily, and 50% indicated they used computers every day in school." The district reports that, "today everyone's active board is on. Some [teachers] are using it as a white board and some are using it as active tool. How much they're leveraging to their advantage varies by teacher."

All the schools in the district currently have access to the Internet and to interactive white boards, though the number of computers has decreased over the last four years (from 2,000 in 2008–2009 to 1,800 in 2012–2013), as has the number of technology personnel (from 16 to 8 in the same time period). All the schools have had websites during this time, and all parents have access to a learning management system to monitor their children's progress. Compared to previous years, a higher percentage of the computers at Moss Point High School are being used on a daily basis.

The district's technology goals include the following.

Infrastructure enhancements, such as raising the level of technology across the district. Because it was the focus of the 21S grant, the high school has much more sophisticated technology resources than do the other schools in the district and, as a result, high school teachers use technology in their instruction more actively than do their colleagues in lower grades. The district has been able to leverage lessons learned at the high school to implement technology across the district—the director of technology cites the DOT program and the practice of rotating equipment as two key legacies of the 21S initiative. The district plans to provide all entering 9th-graders with a tablet, begining with the 2014–2015 school year. However, aging equipment is a challenge across the district, and the six-year-old wireless network requires upgrading to allow for widespread student use.

Data-driven decision making, supported by a more sophisticated data management system. The new superintendent is committed to using data as a tool for district, school, and classroom decisions. A new learning management system, HAIKU, was installed in 2011–2012 and is considered a positive development for the district, though it does not yet link applications to one another.

Continue to promote integration of technology for all teachers. Many Moss Point teachers are active technology users, due in large part to the implementation of Professional Learning Communities and to the support of DOT interns. The district considers the DOT internship program to be a great success and one that they credit for helping the district to move forward on technology goals. There is a DOT intern in each school, who works with teachers to set up webpages and help make data-related decisions. According to district administrators, approximately 50% of teachers hesitated to use technology in 2005; in 2013 the estimate is closer to 10%. They frequently use the interactive whiteboards that are in every classroom, albeit to varying degrees. Nonetheless, the challenge remains that, while teachers are eager to put the equipment in their students' hands, many do not have the proper instructional training.

Implementing an online registration system, which will reduce administrative paperwork and simplify the process for parents.

Utilize technology and social media to reach families. The district is redesigning its website, with a focus on soliciting input and feedback from the community. There are also plans to use social media tools, such as Facebook and Twitter, to share information.

Using technology to support a safe campus environment. The district leadership indicated that another area for development is the use of a more sophisticated security and monitoring system for the school buildings. This was noted as a "tremendous issue."

The district has a clear set of priorities for moving toward greater technology integration and sophistication. However, supporting and expanding technology integration across the district has been a struggle. While the work in the high school provided a vision of what technology integration could be, the resources to implement the vision in the other schools have been hard to come by. In addition, while the number of teachers who may resist new technologies has significantly diminished, it remains a challenge to adequately prepare all educators for the use of new technologies and support their ongoing integration.

Climate

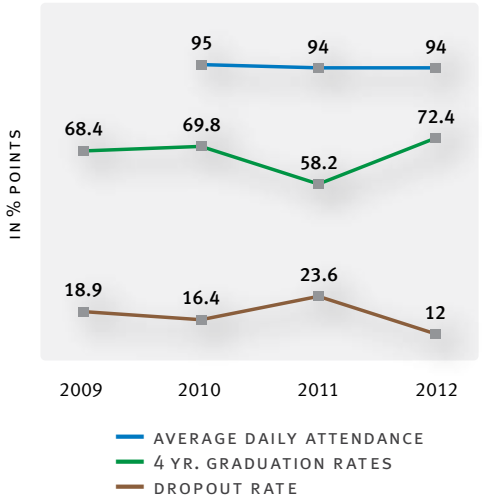
Key Findings

- The district has made progress on increasing graduation rates and decreasing dropout rates.
- The district feels that they have a long way to go in providing a quality supportive learning environment to all students.

Moss Point has made significant strides in student engagement and retention (see Figure X, below). From 2009 to 2012, graduation rates increased and dropout rates decreased.

However, district leaders say the learning environment is still "slightly dysfunctional." As one put it: "We haven't been as focused on providing support. … In a situation where you have to crawl before you walk, and walk before you run, we are crawling now." Evidence of this dysfunction can be found in skyrocketing suspensions and classroom behavior incidents. The 2012 suspension rate was ten times what it was in 2009, and the yearly number of absences rose from 1,504 to 12,623 during that same time period.

MOSS POINT
Student Engagement Data



The district is addressing these issues on several fronts. In an effort to create a challenging and supportive environment for teachers and students and to promote more positive perception of the school district, leaders have implemented the P.A.W.S. (Prepared, Accountable, Well-Behaved, and Safe) Initiative, articulating high expectations for teachers, students, and administrators, and a Positive Behavior Intervention

Support (PBIS) system to address students' disciplinary issues. Dropout rates and student and teacher attendance are also carefully monitored.

Stakeholder input is actively solicited through multiple venues, including student advisory groups, and online surveys for parents and teachers. To further increase parental and community involvement and demonstrate district commitment to the community, the district provides free breakfast to students, car-seat checks to all community members, and monthly visits to community organizations. The district's carpentry department will build the Moss Point city haunted house in the fall. Further, the district is restructuring its Family Education Center to better serve as a resource for families and community members. The Family Education Center will help parents obtain skills necessary to better support their children with their academic and socio-emotional development.

The district has partnered with the Moss Point police department and the local community to ensure students' safety during and after school hours, and district resource officers participate in trainings with state and Moss Point City law-enforcement officers.

Learning

Key Findings

- District administrators report success meeting student-centered learning targets in the lower grades.
- Test scores in mathematics have increased across grade levels from elementary through high school.
- Language Arts has improved in certain grades.
- Student-centered learning is still a challenge at the high school, where a significant number of teachers continue to prefer lecture as a teaching method.

Moss Point aims to provide support for the whole child. According to district administrators, when Cisco was present in the district the general focus was on changing instruction to help teachers become facilitators. Since the Cisco Initiative ended, the focus has shifted to emphasize supporting the whole child—physically, emotionally, and academically—and creating a more personalized learning environment. Across grade levels, the district is developing individualized prescriptive programs to address the needs of all children—those who are struggling, as well as the high achievers. Some schools are rearranging their daily schedule in order to implement extended-day and afterschool programs.

Moss Point has had mixed success meeting the new learning goals: revamping instructional models, engaging students, and improving learning outcomes are among the challenges cited by district leadership.

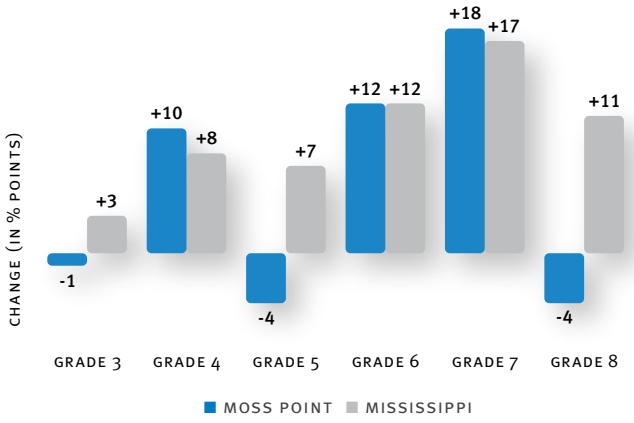
District leaders say they have "surpassed their goals of creating hands-on curriculum"

in the elementary schools, where children are working with manipulatives in more student-centered classrooms. At the high school, however, there are still more lecture-oriented activities where the "more seasoned" teachers have had a hard time embracing the student-centered teaching approach.

***Test Scores*[1]:** We examined scores for both Moss Point County and the state to identify changes over time. The change in test scores outcomes varies by subject area and grade level.

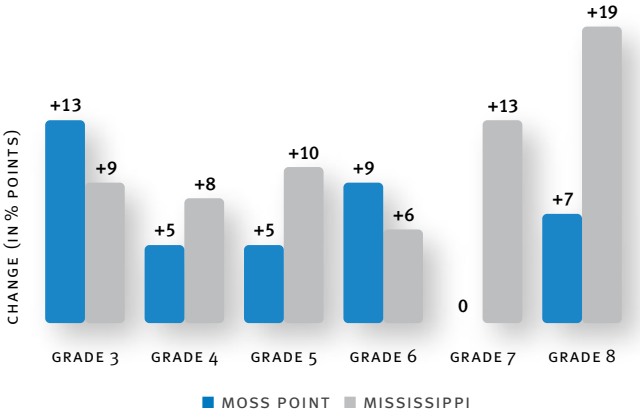
***Language Arts MCT2*[2]:** Moss Point scores have risen on average 5% across grade levels on the Language Arts MCT2 since 2009. Between 2007–2008 and 2011–2012, the largest increase was for 7th-grade students, where the percentage of students scoring proficient or above increased by 18 points (Figure X). In 2011–2012, students across the state outperformed Moss Point students in all grades.

LANGUAGE ARTS
2008-2012



Mathematics MCT2: Moss Point scores have risen on average 6.5% across grade levels on the Mathematics MCT2 since 2009. Between 2007–2008 and 2011–2012, the largest increase was for third graders, where the percentage of students scoring proficient or above increased by 13 points (Figure X). Students across the state in all grades outperformed Moss Point students in 2011–2012.

MATHEMATICS
2008-2012

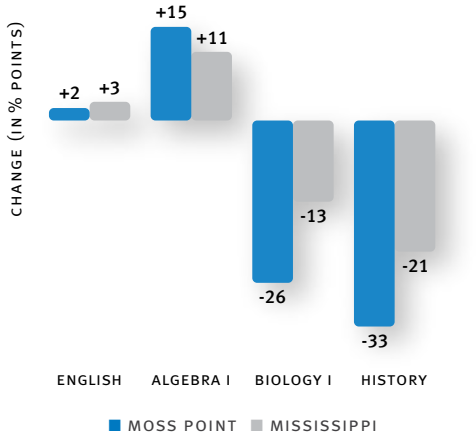


1 The Mississippi Curriculum Test (MCT) and Subject Area Testing Program (SATP) were updated in 2007–2008. These changes make it difficult to compare scores across 2006–2007 and 2007–2008. Therefore, in our analysis, we focus on patterns of change between 2007–2008 and 2011–2012.

2 The MCT was based on the Mississippi state standards and was used to test student proficiency in three subject areas: reading, English, and math. The test was administered to students in grades 2–8. In 2007, the test was updated to align with the revised 2006 language arts and 2007 mathematics frameworks. It is now called the MCT2 and is administered to students in grades 3–8. The areas of language arts and math are tested. Results from both tests are grouped into four achievement levels: minimal, basic, proficient, and advanced.

SATP[3]

A higher percentage of high school students are passing their English and Algebra SATP, though more are struggling in Biology and History, and the number of students taking AP classes has dropped by more than half from 37 in 2009 to 16 in 2012. There was a 15-point increase in the percentage of students receiving a passing score in Algebra I (Figure X). Students across the state outperformed Moss Point County students in all four subjects in 2011–2012.



ACT[4]

Moss Point County students experienced a slight decrease in average ACT scores between 2005–2006 and 2010–2011, going down by 0.5 points. In 2010–2011, students across the state outperformed Moss Point students by 2.8 points.

Next Steps

The district will continue to pursue the goals of creating a challenging, supportive educational environment; increasing graduation rates; increasing district average daily attendance; increasing parental and community involvement; promoting employee accountability for student growth; and providing staff support through professional development. In the near future, the district also plans to complete the following activities.

Replace Projectors. The district is planning to purchase new projectors for their interactive whiteboards. Its current projectors are five-to-six years old.

Open New School. The district will be opening their new Magnolia Elementary School in July 2013. It is equipped with new technology infrastructure and tools. This is the first new school in 40 years.

Create a Parent Center in Every School Building In addition, the district is making sure that each individual building has a small area, designated as a parent center, where parents can come and pick up information pertaining to them, homework help information, etc.

3 High school students participate in the SATP, which tests proficiency in the areas of English, Algebra I, Biology I, and US History. The test measures how well students are meeting the state's grade-level expectations. Students must pass the SATP to graduate from high school. SATP results are scored between 0 and 500, with 300 and above considered to be a passing score.

4 Maximum score on the ACT is 36.

Forrest County Agricultural High School (FCAHS)

NOTE: *Due to scheduling conflicts, neither the superintendent nor the principal of the Forrest County Agricultural High School was available for an interview; as a result, this update is based on discussion with other members of the school's leadership team.*

Forrest County Agricultural High School is a district in and of itself. Progress since the end of the Cisco 21S initiative has been slow, due to frequent leadership changes, teacher retirements, and an aging technology infrastructure.

Community Background

Forrest County Agricultural High School (FCAHS) is located in Brooklyn, a small rural town in southern Mississippi. It is located within Forrest County School District and is also part of the Hattiesburg, Mississippi, Metropolitan Statistical Area (MSA), which encompasses Forrest, Lamar, and Perry counties. However, FCAHS itself functions as a fully autonomous school and district unit. Out of a population of 75,842, Forrest County is 61% white and 36% African-American. Hispanics make up approximately 4% of the population, while Native Americans and Asians make up the remaining percentage. The median household income in Forrest County ($34,448) is lower than that of both the state of Mississippi ($38,718) and the United States ($52,762). In addition, Forrest County's unemployment rate (10%) is the same as that of the state (10%) and higher than that of the United States (8.7%) as a whole. The poverty rate in Forrest County (20.8%) is slightly higher than that of Mississippi State (21.6 %), and significantly higher than that of the United States (14.3%).

FCAHS Background Highlights

- FCAHS functions as a fully autonomous school and district unit. It is one of three agricultural high schools in the state.
- A pending Mississippi State Legislature decision will close one of the three agricultural schools, consolidate another, and authorize the third to serve students statewide. Because it has a larger enrollment and is achieving greater academic success than the other two—it received a B rating from the state department of education in DATE?—FCAHS will become the sole, statewide agricultural high school.
- FCAHS has experienced some shifts in student population over the past seven years since the Cisco 21S initiative was first implemented. Although the number of students dropped from 602 in 2005–2006 to 555 students in 2008–2009, the population steadily grew in the following years to a total of 604 students in 2011–2012. White students make up 68% and African-Americans 30% of the student population.
- In 2010–2011, 65% of students were eligible for free or reduced-price lunch.

Vision and Leadership

Key findings

- FCAHS has seen significant turnover in several leadership positions, and welcomed a new superintendent in 2012–2013.
- Establishing partnerships with outside organizations is a priority.

The district's vision is to be on the cutting edge of integrated education and technology and to prepare students to become productive members of community, state, and nation. As the school will soon be the only agricultural high school in the state, district leaders' goals are to equip the school with the latest technologies and to forge new partnerships.

The school/district leadership has experienced change in recent years. The new superintendent came on in July 2012, replacing a superintendent who served for four years. The district has had significant turnover in other leadership positions as well—two principals and four IT coordinators have come and gone since the end of the Cisco 21S Initiative. However, according to a respondent from the district, while they "… have gone through some tumultuous times over the past few years with turnover and changes in administration, I believe our current leadership team is the best that we have had in the past four years, by far."

The superintendent relies on a leadership team, composed of the principal, assistant principal, athletic director, IT coordinator, business manager, and resource officer, who meet weekly to address pressing issues and review upcoming events. They are currently working on the master schedules for next year, and will soon embark on a strategic planning process to clarify the vision and goals and ensure that the school stays on the right track.

Although it is not clear how the leadership uses data to inform district-wide decisions, the superintendent and principal use test scores to monitor individual students' academic achievements and challenges. In addition, the new technology team has been providing data to the district leaders to inform their decisions about the technology system.

According to an FCAHS administrator, "Part of our goal is to grow and develop new partnerships," and, in fact, the superintendent has initiated a number of new partnerships in the last year with organizations such as Mississippi State University, Mississippi Farm Bureau Insurance, and Camp Shelby Joint Forces Training Center, as well as a number of local businesses.

Technology

Key findings

- Teachers and students use technology every day.
- The technology infrastructure is sound, but aging.
- Hardware and software maintenance and upgrades have been a significant challenge, exacerbated by a high turnover in technology staff.

While the technology infrastructure is essentially sound, according to district administrators, FCAHS has struggled to maintain much of the hardware and software acquired during the Cisco 21S Initiative. The leadership foresees even greater challenges in preparing the infrastructure to support the equipment they'll need to meet the technology requirements of the Common Core.

Infrastructure and access. Through the Cisco 21S grant, all of the school's technology infrastructure was upgraded after Hurricane Katrina. Those connections, which make up the backbone of the FCAHS technology infrastructure, continue to function at high levels of capacity and reliability. The school also received a substantial sum in FEMA aid to purchase student laptops. However, once Cisco 21S funding ended, the school's budget was no longer sufficient to maintain all of the equipment they had procured. As a result, teachers and students are still using those same laptops. Little of what they purchased is covered by maintenance agreements, so the school must bear the full cost of upgrading and replacing hardware and software. This situation will become still more challenging as the district moves to adopt the Common Core Curriculum, which requires a certain level of technology for testing and assessment purposes.

Further, each new technology director has struggled to learn the complex system set up by the preceding director. According to the district, several directors have simply turned off the technology they did not understand.

Currently, FCAHS uses the communication and wireless systems daily, but both are considered "aged and failing" and in need of extensive upgrades. Most technology components have been taken offline because of the challenges associated with maintaining it, though there is still an interactive whiteboard in every classroom.

The school is also working to catch up with recent advances in agricultural science. Many more of the processes have become computer-based, including feeding animals, measuring chemical levels in the soil, and running farm equipment. The high school has not been able to keep pace with all of these advances, so in order to bring more of these necessary technologies into the school, FCAHS is working to form partnerships with the Mississippi State University, Mississippi State Department of Agriculture, and the Farm Bureau.

Use and integration. Despite the challenges since the end of the Cisco 21S Initiative, administrators report that the technology has "changed the way teachers think … about teaching, and their pedagogy in the classroom, and how they interact with students. It is changed to the level where it is not thought of as a change any more. It is just a natural part of doing business."

Though the equipment may be outdated, teachers nonetheless integrate technology into their lesson plans on a daily basis. Administrators say that, "It is rare to walk into a classroom where they are not using their interactive whiteboard, or they have got a website pulled up or they are doing training through it. It is rare that you walk in where they are not doing something along those lines and integrating technology."

In addition to laptops and interactive white boards, FCAHS uses Plato Courseware for online credit recovery to support its struggling students. Further, the FCAHS website has been updated to make it easier for parents to navigate and is updated more frequently than it was a few years ago.

Technical Support. FCAHS has two full-time IT staff who provide technical support and training to teachers. The technology team doesn't hesitate, however, to utilize teachers who have experience with a specific piece of equipment, particularly those who participated in the Cisco 21S Initiative and were trained on the hardware and software and on integrating technology into the curriculum. Further, using an informal Professional Learning Community model, teachers meet weekly by department to share resources and tips on technology integration among themselves. Turnover is high among the newer teachers, so the core teachers who have had extensive training mentor the newest arrivals.

Additionally, the IT coordinator is looking to partner with a nearby school district that has an education technologist to help get more training on how to integrate technology into teaching. FCAHS wants to develop its own integration plan.

Climate

Key findings

- FCAH is a family-friendly environment.
- There is a culture of informal collaboration and mentorship among the teachers at FCAHS.

In general, the climate is a positive one for students and families. According to one respondent, "Families went to school here, they graduated here and … the climate is a positive climate." The recent website redesign is as an example of the school's efforts to accommodate students' families.

FCAHS is losing some teachers to retirement, including those who are opting to retire rather than embark on implementation of the new state mandates related to the

Common Core. However, school leadership is committed to hiring new teachers who are receptive to the changes. Further, many of the school's current teachers participated in the Cisco 21S Initiative and have had extensive training in technology integration. These teachers have taken on an informal role as mentors for other teachers, supporting them to use technology in their instruction, and this type of mentoring is a part of the professional climate of the school.

Learning

Key findings

- FCAHS provides a full range of academic and agriculture-related classes.
- The school takes advantage of external professional development opportunities for teachers.
- Test scores have remained fairly flat over the past four years, though FCAHS students outperform their peers across the state in some subjects.

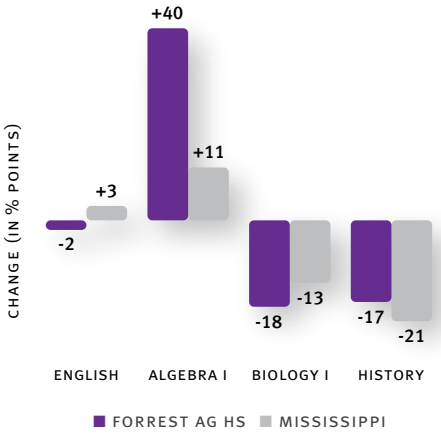
Agriculture-related learning activities are often hands-on by nature, but FCAHS administrators report that teachers are using more hands-on activities across subject areas. The school provides traditional academic opportunities and AP courses, as well; while many students will go on to further study of agriculture in college or will move directly into careers in agriculture, a number of FCAHS students do not intend to do either. FCAHS also offers a variety of extracurricular activities, such as choir, band, and art.

The school partners with other organizations to provide external professional development to its teachers. The Gulf Coast Consortium and the Southern Regional Education Board both offer a variety of pedagogy and teaching-methods courses—which often have an online learning component—as well as technology-integration trainings. FCAHS also brings trainers into the school to conduct departmental and individual trainings; the school has already completed several Common Core trainings this year.

Test scores. Scores were analyzed for both FCAHS and the state in order to consider changes over time and FCAHS scores relative to the state.

SATP[1]: FCAHS students made gains in one of the four subject tests between 2007–2008 and 2011–2012, with a 40-point increase in the percentage of students

SATP
2008-2012



1 The Subject Area Testing Program (SATP) was updated in 2007–2008. These changes make it difficult to compare scores across 2006–2007 and 2007–2008. Therefore, in our analysis, we focus on patterns of change between 2007–2008 and 2011–2012.

receiving a passing score in Algebra I. Decreases in FCAHS scores in English, Biology I, and History between 2007–2008 and 2011–2012 were similar to those experienced across the state; however, in 2011–2012, FCAHS outperformed Mississippi students in both Algebra I and History.

ACT: FCAHS experienced a slight increase of .1 point in average ACT scores between 2005–2006 and 2010–2011; in 2010–2011, FCAHS students outperformed students across the state by .6 points on the ACT.

Next Steps

In preparation for the new role as the sole statewide agriculture high school, leaders are planning improvements that include the following.

Developing a new strategic plan. As mentioned earlier in this report, FCAHS expects to finalize a new strategic plan in the next five months. The process will involve key stakeholders in the community, including parents and community members.

Increasing student performance. The primary goal of the school is to increase student performance and increase students' access to education and career opportunities.

Creating mutually beneficial partnerships. School/district leaders say they are not interested in one-way relationships, and emphasize that they want to know what they can contribute to a partnership.

Upgrading the wireless network. This will be critical to supporting the influx of new computers and tablets that the district is going to procure in order to comply with the Common Core standards.

Modernizing agriculture-related technologies. Updating the controllers and the hardware that they received from Cisco is the first priority, and replacing equipment will be next.

Improving facilities. The school/district is in the process of completing two construction projects—an auditorium and a football stadium—and plans to bid out a new cafeteria project in the near future.

References

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Appendices

APPENDIX A:
Cisco 21S Follow-Up Interview Protocol

Introduction

After Hurricane Katrina damaged schools and displaced students in 2005, Cisco invested cash grants, products, and employee time to help eight school districts in Mississippi and Louisiana revamp their long-term priorities and improve student performance by introducing technology to classrooms. The four-year Cisco 21st Century Schools Initiative (21S) equipped schools with Internet connectivity and interactive tools; trained teachers to integrate those tools into classroom instruction for greater student engagement; and helped school leaders craft a long-term vision to prepare students for a global, technology-driven economy. Education Development Center (EDC) conducted the 21S program evaluation, culminating in a Final Evaluation Report for each district in 2009, when the Cisco investment concluded.

We assume that much has changed over the last four years in many interesting ways. Cisco has asked EDC to provide an update that will help Cisco to understand the current state of participating districts in five key areas addressed by 21S. These are:

- Vision
- Governance
- Technology
- School/District Climate
- Learning

Your interview will help us construct an accurate, up-to-date picture of these areas in your district. In preparation for the interview, we've provided below the questions we will be asking, along with some information drawn from the final evaluation report for

your district. We know that these are very broad topic areas, and we hope that this information will help you focus on those elements that are most relevant to 21S.

Your participation in this interview is voluntary and all information you provide is confidential, to be shared only with Cisco.

Background

When did the district's involvement with Cisco come to a close? When did the Cisco investment conclude?

Vision

How would you describe the district's current vision? Has the vision changed since 2008-2009?

2008-09	Now

Governance

What is the current status of each of school and district governance elements listed below? What has been most successful and why, and what has been most challenging and why?

Topics	2008-09	Now
System management		
Data-driven accountability		
Data-driven decision making		
Innovation management		
Focus on experimentation		
Administrative efficiencies		
Partnerships		

Technology

Considering the technology elements that are essential to building a 21st century school (which are briefly noted in the table below), please comment on the status of the district with regard to these elements. What is the status of the district in terms

of these key technology investments? What has been most successful and why, and what has been most challenging and why?

Topics	2008-09	Now
Infrastructure		
Tools		
Technical Support		
Training		
Use and Integration		
Administrative efficiencies		
Partnerships		

District/School Climate

There are several characteristics of a productive and healthy district and school climate. Please comment on the district and school climate now. What would you describe as the strengths and challenges for the district with regard to climate, and what contributes to them?

Topics	2008-09	Now
System leaders (district, school, teacher)		
Academic expectations		
Collaboration between teachers-administrators		
Safety and Support		
Respect		
Innovation/risk taking		
Inclusion of families		

Learning

Considering the range of ways that a school or district may focus on 21st century learning and assessment, how has the district/school approached 21st century, student-centered, and personalized learning since the Cisco investment concluded? What has the district/school been successful in doing with regard to student and adult learning? What has been a challenge, and why?

Topics	2008-09	Now
21st century curriculum		

Topics	2008-09	Now
Student centered pedagogy & personalized learning		
Interactive classrooms and collaboration		
Assessment for learning		
Students' use of technology tools		
Students' perceptions of educational technology		
Students' academic achievement		
Ongoing learning for educators		

Closing

What are your goals for the next 3-5 years?

Is there anything else you want to share with us that you think would be beneficial for Cisco to know about the impact of the 21S Initiative in your district since 2009?

APPENDIX B: Interviewee Consent Form

EDC Learning transforms lives.

Interviewee Consent Form—*Cisco 21S* Update

Cisco has contracted with Education Development Center, Inc.'s Center for Children and Technology (EDC|CCT), a nonprofit research and development organization dedicated to improving the quality of education, to update the status of the *Cisco 21S* Initiative in Mississippi and Louisiana. The goal of the study is to document the ways in which 21S districts have evolved in the last four years (2009–2012).

We invite you to take part in this project by participating in a telephone interview with members of the EDC|CCT staff. The interview will last 60–90 minutes. With your permission, the interview will be recorded for purposes of maintaining the integrity of our data, but the recording will be used only to support our notes and will be erased at the end of the data collection activities. All information obtained in this evaluation will remain confidential. Your interview statements may be quoted in the final evaluation report, either anonymously or with a pseudonym. You will not be identified by name or described in such a way that you can be identified.

The results of the study, and therefore excerpts of interviews, may be presented at scientific meetings and in published reports, with consent from Cisco, for educational, policy, and scientific purposes. We foresee no risks involved with participating in this study. Your participation is entirely voluntary. You will receive no remuneration for participation, and there should be no cost to you beyond the time it takes to complete the interview.

Your signature indicates that you have read the information provided above and agree to participate in the follow-up evaluation of the *21S* Initiative. Your signature also indicates that you have agreed to be audio-recorded for the purpose of this study.

Should you choose to discontinue your participation in the study, you can withdraw without prejudice after signing this form. However, any information that you have provided to that point will remain part of the study and may be used in later analysis and reports. You also may decide not to answer any questions asked during your interview, without prejudice.

If you have any questions or concerns regarding this study, please feel free to call Dr. Harouna Ba at (212) 807-4226 (or email at hba@edc.org). If you have any questions regarding your rights as a participant in this study, you can contact Dr. Alan Stockdale, EDC's Human Protections Administrator, at 617-969-7100 x2731 (HumanProtections@edc.org). Thank you very much for your cooperation.

_____
Name (please print or type)

_____ _____
Signature Date

EDC|CCT 96 Morton St., 7th floor, New York, NY 10014 212.807.4214 cct.edc.org