Final Report on the Mississippi Project CLEAR Voice Teacher Working Conditions Survey

Submitted to Superintendent of Schools Hank Bounds and the Mississippi Department of Education

By
Barnett Berry and Ed Fuller
with Alice Williams

CTQ CENTER FOR TEACHING QUALITY
where teachers are central to improving schools

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The Center for Teaching Quality improves student learning through developing teacher leadership, conducting practical research and engaging various communities. To accomplish this mission, the Center for Teaching Quality strives to shape policies that ensure:

- **Students**, no matter what their background or where they go to school, are ready to learn; with
- **Teachers** who are caring, qualified, and competent with vast content knowledge and the ability, through quality preparation and ongoing development and support, to ensure that all children can learn; in
- **Classrooms** that have adequate resources and provide environments conducive to student learning; in
- **Schools** that are designed to provide teachers with sufficient time to learn and work together in collaboration with a principal who respects and understands teaching; in
- **Districts** that have policies and programs that support the recruitment, retention and development of high quality teachers in every school; in
- **States** that have well-funded systems that include rigorous preparation and licensing with evaluation tools that ensure performance based standards are met; in a
- **Region** that works collaboratively, using common teaching quality definitions, sharing data, and working across state lines to recruit, retain and support high quality teachers; in a
- **Nation** that views teaching as a true profession and values teachers as one of its most important resources.

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Executive Summary

Over the last two decades, researchers have presented convincing evidence that teachers are an important key to school improvement and to closing the student achievement gap. However, ensuring that all students are taught by quality teachers—those with the right talent, skills, and experience—is not enough. Teachers—even the best of them—must have the right resources, tools, and supports in place in order for them to be effective over time.

In 2007, under the leadership of Superintendent of Schools Hank Bounds, the Mississippi Department of Education (MDE), and partners, the state conducted a web-based survey of all school-based licensed educators in which they were asked to share their perceptions of the state of teacher working conditions in Mississippi. The Mississippi Teacher Working Conditions Survey, aptly named *Project CLEAR Voice—Cultivate Learning Environments to Accelerate Recruitment and Retention,* is an important component of an initiative on the part of visionary state education leaders to ensure that Mississippi educators have the tools and work environments they need in order to effectively impact student achievement. Over 25,000 educators (about 67 percent of eligible respondents) completed the survey. The Center for Teaching Quality, a non-profit research-based advocacy organization, has worked closely with the MDE's Mississippi Teacher Center to assemble the results and to conduct statistical analyses of the relationships between teacher working conditions and teacher and student outcomes.

This report outlines many important connections revealed by our analyses, provides considerable information upon which policymakers and educators can act, and offers suggestions for more refined future analyses. The findings also provide a powerful lens through which to view the recommendations of 200 of the state's National Board Certified teachers, who assembled in August 2007 at the invitation of the MDE and the Mississippi Association of Educators (MAE) for the purpose of generating new ideas about how to support and staff high-needs schools in Mississippi.

General Findings

Our analyses of the 2007 Mississippi Teacher Working Conditions Survey reveal several important findings:

- Mississippi teachers believe that their schools are good places to work and learn.
- Administrators believe that teachers are central to decision-making and that they are empowered on many fronts, but teachers disagree. In fact, the gap between administrator and teacher perceptions of *all* working conditions is very large.

- Mississippi educators appear to be more involved in classroom-level decisions than in school-level ones.

- Elementary school educators, compared to their secondary school counterparts, are more positive about their teacher working conditions. Middle school teachers are least likely to be positive about their working conditions.

- School setting also appears to play a role in perceptions, as rural elementary and high school teachers are more likely than their more urban counterparts to be positive about their working conditions.

What We Know About Teachers' Career Intentions and the Role of Mentoring in Teacher Retention

Teacher responses to survey questions were disaggregated and analyzed based on each teacher's declared career intentions (*i.e.*, to stay in her or his current school, move to another school or district, or leave teaching entirely). They also were disaggregated and analyzed based on each teacher's declared participation in a mentoring program, whether as a mentor or as a teacher who received mentoring in her or his early career. Key results include the following:

- School leadership and teacher empowerment are critical to retaining teachers.

- Many early-career teachers are not mentored at all, but those who are mentored are more likely to remain in the classroom.

- Facilities & resources and leadership exert the greatest influences on early-career leavers.

What We Know About Working Conditions Across Student Poverty Levels

On the whole, there are few major differences between the perceptions of educators at schools with high numbers of economically disadvantaged students and educators at schools with fewer economically disadvantaged students. When there *are* major differences, however, educators at schools with fewer economically disadvantaged students tend to have more positive perceptions. What may be surprising to some readers is that these perception gaps are *not* widest between the schools with the fewest and the greatest numbers of economically disadvantaged students; more often than not, the gaps are widest between schools with the fewest and the *second-greatest* numbers of economically disadvantaged students. The greatest gaps in positive perceptions across all school poverty levels are typically in the area of empowerment and facilities and resources.

Domain-Specific Findings

Several relevant patterns also emerged in analyses of the five teaching and learning conditions domains:

- *Leadership*—Mississippi educators believe that all faculty are committed to helping every student learn and that teachers are held to high professional standards, but they are concerned about the process by which teachers are able to raise concerns and about the degree

to which school leadership responds to those concerns. Novice teachers in particular are also very concerned about how school leaders handle their evaluations.

- *Facilities & Resources*—Facilities and resources is one area in which Mississippi is beginning to achieve across-the-board satisfactory working conditions, with educators expressing positive impressions of every aspect of their facilities and resources.

- *Empowerment*—Educators generally rate favorably the degree to which problem-solving strategies are in place in their school and to which instructional decisions and the ability to craft teaching techniques are placed in the hands of teachers. However, educators are less positive about other areas of empowerment—such as the presence of teacher influence in school budgeting and hiring decisions.

- *Time*—Time may be the working conditions area of greatest concern to Mississippi educators, and the area in which the most work needs to be done. Educators are somewhat positive about the time they have to work with all students and their sense of protection from classroom interruptions, but they also note an abundance of paperwork, a lack of non-instructional time, and other related concerns.

- *Professional Development*—Educators in general and teachers in particular are enthusiastic about not only the quality but also the practical utility of the professional development available to them.

Analyses of Teacher Working Conditions Impacts on Teacher Attrition and Student Achievement

Statistical regression analyses revealed important relationships between several teaching and learning conditions, teacher career intentions, and student achievement gains:

- Teacher perceptions of many aspects of school leadership are directly related to their intent to stay at their current schools.

- Results of analyses of the relationships between elementary, middle, and high school teacher perceptions of their working conditions and single-year gains in student achievement are mixed and suggest a need for multiple-year gains analyses to better understand several possible connections.

- Designation as a Mississippi Critical Teacher Shortage Act district appears to have had little to no positive impact on either teacher retention or student achievement in 2007 *relative to non-CTSA schools in Mississippi*, but without more comprehensive longitudinal data, it is not possible to determine whether conditions have *improved relative to initial conditions in these schools* since the passage of the Act.

Looking Ahead

CTQ research findings suggest the following recommendations (which are discussed in more detail in the conclusion to the full report):

- State policymakers should consider sponsoring follow-up case studies to investigate in more depth why educators at certain schools have less positive impressions of their working conditions than do educators at other schools. A special focus on schools in the second quintile in terms of proportion of economically disadvantaged students is particularly warranted.

- Administrators should experiment with new school schedules with the intention of providing more non-instructional time for teachers.

- The state should conduct a thorough review or audit of mentoring efforts statewide.

- The state should encourage and help its administrators to assess their leadership and empowerment practices, along with their interactions with teachers, in order to move toward improvement in these areas and toward establishing stable and committed faculty communities.

- The state should develop more robust teacher, student, and administrator data systems that can track teacher and administrator responses to teacher working conditions surveys longitudinally and link these data with actual teacher turnover figures and robust measures of student achievement.

- State policymakers should consider implementing a follow-up telephone survey to investigate what made it possible for some schools to achieve high response rates, as well as what roadblocks prevented other schools from doing likewise.

State education leaders should be commended for their efforts to improve teacher working conditions statewide. They have started down a path that will ensure that Mississippi's teachers are not only well-qualified but also well-supported and equipped with the resources they need to serve all children. Closing the achievement gap will require no less.

Introduction

Over the last two decades, researchers have presented convincing evidence that teachers are an important key to school improvement and to closing the student achievement gap. However, ensuring that all students are taught by quality teachers—those with the right talent, skills, and experience—is not enough. Teachers—even the best of them—must have the right resources, tools, and supports in place in order for them to be effective over time.

Indications from research continue to build the case that teacher working conditions can impact student learning, both directly through their impact on instructional practice and indirectly through their contribution to teacher attrition. For example, Eric Hanushek and Steven Rivkin have noted that "variations in salaries and working conditions can contribute to unequal school quality."[1] In addition, Susannah Loeb and Linda Darling-Hammond have found that teachers' self-reports of their working conditions can predict teacher attrition,[2] and Richard Ingersoll has shown that many teachers leave their schools because of conditions such as low salaries, lack of support from the school administration, student discipline problems, and lack of teacher influence over decision-making.[3] Teachers also indicate that a positive, collaborative school climate and support from colleagues and administrators are among the most important factors influencing whether they stay in a school.[4]

The importance of working conditions is familiar to many educators and policymakers in Mississippi. In the Spring of 2007, under the leadership of State Superintendent of Schools Hank Bounds, the Mississippi Department of Education (MDE) and its Teacher Center, and additional partners, the Center for Teaching Quality conducted a web-based population study of all Mississippi school-based licensed educators that asked them to respond to a range of questions about time, professional development, leadership, empowerment, and facilities and resources in their schools. The purpose was embodied in the title of the survey: to *Cultivate Learning Environments to Accelerate Recruitment and Retention* (*CLEAR*). As Superintendent Bounds notes in his message on the *Project CLEAR Voice* homepage, "We must know and understand the needs of our teachers so that we can provide them with the tools and resources they need to help our students succeed."[5]

Data suggest that the state's universities are producing fewer teachers, which has led to a growing reliance on alternative-route teachers (who enter teaching with less preparation). However, Superintendent Bounds's statement reflects a growing awareness that merely increasing the number of teachers is not enough, and the results of the 2007 survey can help to explain why. Based on the number and scope of important policies and programs enacted over the past several years with the purpose of improving teaching quality across the state, there is little doubt about the state's long-term commitment to recruiting and redistributing teachers. Perhaps the best example is the Mississippi Critical Teacher Shortage Act of 1998 and its ensuing amendments, which have provided scholarships for teacher recruits who commit to teaching in

participating districts, as well as for current teachers who commit to teaching in high-needs schools upon earning a master's degree. The Act also offsets moving and housing expenses for teachers who relocate to these districts. In 2004, the Act was expanded to cover alternative certification candidates as well. But the success of the Act, like similar efforts in Mississippi and other states, has been mixed. Recent reports reveal that Act components such as the Mississippi Teacher Fellowship Program and the Housing Assistance for Teachers have experienced increased participation in recent years, but others (*e.g.*, the William F. Winter Scholar Loan Program, the Critical Needs Teacher Scholarship Program, and the moving expense reimbursement program) have experienced some drop-off.[6] More evidence needs to be assembled as to why certain incentives are working and others are not, and the survey results presented herein may offer some clues. In addition, the survey may be able to help the state to understand more fully why some teachers remain in teaching while others do not. It is one thing to entice teachers to teach—it is another to prepare them adequately, to keep them in the classroom, and to support them in ways that can increase their effectiveness.

By hearing directly from school-based educators who intimately experience and understand working conditions issues, policymakers have the opportunity to make data-driven policies that will make Mississippi schools better places to work and learn. The findings also provide a powerful lens through which to view the recommendations of 200 of the state's National Board Certified Teachers, who assembled in August 2007 at the invitation of the MDE and the Mississippi Association of Educators (MAE) for the purpose of generating new ideas about how to support and staff high-needs schools.

About the 2007 Survey

Educators in over 150 participating Mississippi school districts across the state spoke out on working conditions in their schools by participating in the web-based survey. Thanks to the efforts of the Mississippi Teacher Center, more than 25,000 educators (67 percent) from across the state participated in Project CLEAR Voice.

Working directly with Mississippi Teacher Center officials, the Center for Teaching Quality assembled individual school and district response reports, which were released for review only if at least 40 percent of a school faculty's or district's school-based licensed educators responded. These reports are now available online for faculty and staff[7] for almost 900 schools (85 percent) and 136 districts (89 percent), providing critical information for making local and state-level decisions about policies and practices that affect teaching and learning conditions in Mississippi.

Response Bias

All surveys are subject to some degree of response bias, and the 2007 Mississippi Teacher Working Conditions Survey is no exception. Some of the biases reported herein are neither surprising nor necessarily disconcerting, but there are certain segments of the Mississippi educator population whose voices may be underrepresented in the survey data as a result of relatively low survey response rates in certain geographic regions or in certain school types. The presence of such biases does not invalidate the usefulness of survey data analyses, but it does contextualize the degree to which those analyses are able to represent faithfully teacher working conditions across the state. We discuss overall response rates here and take up the issue of differences in response rates across different categories of schools in several of the findings sections below.

Just over two-thirds (67 percent) of all eligible teachers responded to the statewide 2007 Project CLEAR Voice survey, a very good rate relative to other large-scale surveys, which sometimes suffer from response rates that are half as strong or even weaker. For example, the Project CLEAR Voice overall response rate is higher than the response rates for any other state or district in which the Center for Teaching Quality conducted surveys this past Spring (Arizona's response rate was 53 percent; Clark County, Nevada's was 48 percent; and Ohio's was only 44 percent). However, the overall rate does mask a tremendous *range* of response rates across school districts. Several districts—including many large districts—experienced almost unheard-of response rates of 100 percent, but there were also ten districts with response rates under 30 percent (and two with no respondents at all). This dramatic range of response rates leads to the first caution when interpreting the findings in this report: the opinions of teachers in some districts are more heavily represented than are those of others. While most (approximately 89 percent) of the state's school districts reached a baseline 40 percent response rate threshold and are therefore at least somewhat well-represented in our analyses, nearly one out of every eight (about 12 percent) districts did not and are consequently much less faithfully represented in these analyses. **Appendix A** includes a complete breakdown of response rates by school district.

In addition, because not every school in participating Mississippi districts met the school-level response rate threshold of 40 percent,[8] it is important to bear in mind the degree to which the respondents reflect the diversity of the entire population of Mississippi educators before making statements about how survey responses inform our understanding of teaching and learning conditions across the state. While there are some areas in which the survey respondents as a group appear to be somewhat different from the full complement of Mississippi educators, in many respects the survey response group is reflective of Mississippi educators as a whole.[9] For example:

- About 82 percent of Mississippi's educators are females and about 18 percent are males; about 84 percent of the survey respondents are females and about 16 percent are males.

- One quarter of Mississippi's educators are African-American; a little under one quarter (24 percent) of the survey respondents are African-American.

- Unlike in every other survey analyzed by the Center for Teaching Quality this year, the distribution of experience levels among survey respondents very closely reflects the experience level distribution of all Mississippi educators. From educators in their first year of teaching (6 percent in Mississippi as a whole; 7 percent of survey respondents) to early-, mid-, and late-career educators (40 percent, 24 percent, and 30 percent, respectively, in Mississippi as a whole, compared to 40 percent, 25 percent, and 29 percent, respectively, of survey respondents), the survey respondents represent well all Mississippi educators in terms of years of experience.

- Finally, the distribution of responses by position also mirrors statewide numbers. About 89 percent of the survey respondents are teachers, compared to about 91 percent of all educators in Mississippi, and the proportions of respondents who hold administrative and other positions also closely reflect statewide proportions.

Nevertheless, there is one area in which the survey respondents are not reflective of statewide educator numbers as a whole: educational background.

- About 77 percent of all Mississippi educators hold a Class A license, which indicates Bachelor's-level preparation, and about 21 percent hold Class AA, or Master's-level, licenses. However, the highest degree held by about 43 percent of survey respondents is a Master's degree, and only about 50 percent of survey respondents hold no more than a Bachelor's degree.

Thus, survey respondents tend to have completed more advanced degree programs than has the overall population of Mississippi teachers. Consequently, though survey respondents appear to be representative of the entire population of state educators in many respects, readers of this report are encouraged to exercise some caution when attributing the results presented herein to the entire population of Mississippi educators.

About the Report

This report is the final of two reports to be released that contain analyses of trends and patterns in the responses of Mississippi educators in 2007. The first report presented an overview of initial findings based on a preliminary scan of survey responses. This second report supplements these findings (reiterated in an updated form here) with an overview of educator responses in each of the five aforementioned teacher working conditions domains. Additional sections included here for the first time are a summary of survey response patterns based on a disaggregation of the data by teacher participation in mentoring programs and by school poverty levels, as well as analyses of teacher working conditions impacts on teacher attrition and student achievement. The 2007 student achievement analyses presented here examine the relationships between working conditions factors and *changes* in school-level Mississippi Achievement Level Index ratings since 2006. Some of the patterns revealed are intriguing and suggest directions for further analyses in subsequent years.

Definitions Used in this Report

Educator

Most questions on the survey were answered by every respondent, regardless of her or his position in a school. Survey respondents identified themselves as either being teachers, principals, assistant principals, or other education professionals, such as school counselors or social workers. In this document, when we refer to *educators*, we are talking about people in all four of these categories.

Teacher

In some cases, we draw distinctions between what classroom teachers report and what principals or other groupings of non-teacher educators report. The bulk of the survey respondents (nearly 90 percent) were teachers, so in many cases, teacher responses and responses for all educators (responses from teachers and from all others surveyed) will be very similar, but they are not exactly the same; in some cases, they are quite different.

Teacher Career Intentions

An important goal for this report is to begin to understand some of the reasons why teachers leave schools. Only classroom teacher respondents were asked about their future employment intentions, and based on their responses they are categorized as being:

- **Stayers**, or teachers who intend to continue working at their current schools;
- **Movers**, or teachers who intend to continue teaching but who plan to move to other schools within their districts or to other school districts altogether; or
- **Leavers**, or teachers who plan to leave teaching entirely.

Domain

Items in the survey instrument primarily are organized into *domains*, a term we use throughout this report to designate a specific aspect of teacher working conditions. The domains addressed in the Mississippi CLEAR Voice Teacher Working Conditions Survey include time, facilities and resources, empowerment, school leadership, and professional development. We define these major concepts in the following ways:

- **Time** refers to the opportunities teachers have to meet the needs of their students given school schedules, non-instructional duties, paperwork, and availability (or inaccessibility) of structured venues to collaborate with colleagues.
- **Facilities and Resources** refers to teachers' access to the people, materials, and tools they need to teach effectively, as well as to the extent to which their school is safe and well-maintained.
- **Empowerment** refers to opportunities for teachers to develop as professionals, receive recognition as instructional experts, and utilize their unique skills to solve educational problems. This concept is not about developing teacher power at the expense of administrative authority, but about professionalizing teaching and effectively using teachers' expertise.
- **School Leadership** refers to how administrators and other school leaders shape a shared vision for success, enhance school climate, enforce norms, and recognize good teaching.
- **Professional Development** refers to the quality and quantity of teachers' formal opportunities to learn what they need to know and do in order to be effective with the students they teach.

Survey Results

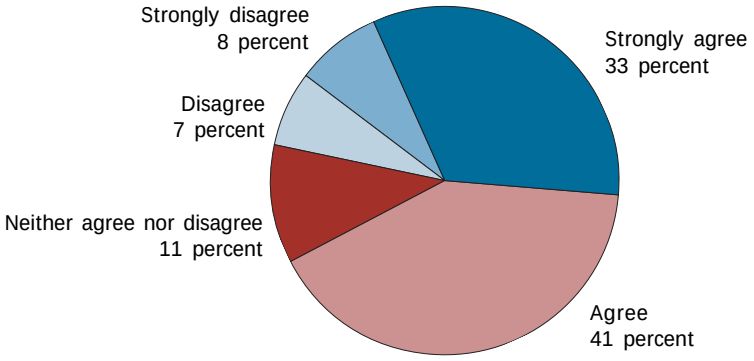
The following findings are updated from the 2007 Interim Report on the Mississippi Teacher Working Conditions Survey (released in July 2007), and they also now include references to issues influenced by the state's specific teacher supply and demand dynamics. We begin with general findings, followed by findings specific to teachers' different career intentions, including how Mississippi teachers with different mentoring and induction experiences view their teaching and learning conditions. These analyses are followed by an investigation of differences in perceptions of teacher working conditions across schools with different levels of student poverty, and in the last section, we present brief analyses of the domain-specific responses that inform these findings.

General Findings

1. Mississippi Teachers Believe that Their Schools Are Good Places to Work and Learn

The survey results contain good news for the state's education leaders. Almost three-quarters (74 percent) of Mississippi educators agree that their schools are good places to work and learn, and one-third of educators "strongly" agree with that statement (Figure 1).

Figure 1. **"Overall, My School Is a Good Place to Work and Learn"**



There are also positive signs in each of the domains covered in the survey (Table 1). Eighty-three percent of educators report that faculty are committed to helping every student learn and that teachers are held to high professional standards. Also, at least one-half of all educators have positive impressions of every aspect of leadership behavior, and more than 55 percent of educators have positive impressions of all aspects of professional development addressed in the survey.

Most encouragingly, responses to questions about the quality of facilities and resources are uniformly strong, with at least 60 percent of Mississippi educators expressing positive impressions of every item, led by a very large proportion (79 percent) of educators who agree that their school environment is safe.

Table 1. **Survey Responses Indicating Greatest Levels of Educator Agreement in Each Domain**

	Percent Agreeing: *Agree*	*Strongly Agree*	Both Agree/ Strongly Agree*
Domain: Use of Time			
Teachers are allowed to focus on educating students with minimal interruption.	45%	12%	57%
Teachers have reasonable class sizes, affording them time to meet the educational needs of all students.	41%	13%	54%
Domain: Facilities and Resources			
Teachers and staff work in a school environment that is safe.	51%	28%	79%
Teachers have access to appropriate instructional materials and resources.	53%	20%	73%
Domain: Teacher Empowerment			
In this school we take steps to solve problems.	49%	17%	66%
Teachers are trusted to make sound professional decisions about instruction.	50%	14%	64%
Domain: Leadership			
The faculty are committed to helping every student learn.	52%	32%	83%
Teachers are held to high professional standards for delivering instruction.	52%	31%	83%
Domain: Professional Development			
Sufficient resources are available to allow teachers to take advantage of professional development activities.	49%	15%	64%
Professional development provides teachers with the knowledge and skills most needed to teach effectively.	48%	15%	62%

* Some totals are different than the sum of the two numbers due to rounding

On the other hand, there are several areas in which Mississippi educators are not as positive about their teaching and learning conditions. Overall, educators are least likely to note the presence of positive teaching and learning conditions in the areas of time and empowerment. For instance, less than half of all educators express positive opinions on two critical questions about time usage (efforts to limit paperwork and to provide adequate non-instructional time), and fewer than 25 percent of educators believe that teachers play a large or primary role in half-a-dozen areas of school-level decision-making, with teacher presence nearly non-existent in school-level decisions involving budgeting and hiring (Table 2).

***Table 2*. Survey Responses Indicating Lowest Levels of Educator Agreement for Selected Domains**

	Percent Agreeing: *Agree*	*Strongly Agree*	Both Agree/ Strongly Agree*
Domain: Use of Time			
Efforts are made to minimize the amount of routine administrative paperwork educators are required to do.	33%	7%	40%
The non-instructional time provided for teachers in my school is sufficient.	38%	10%	48%
Domain: Teacher Empowerment			
Teachers play a large or primary role in deciding how the school budget will be spent.	4%	1%	4%
Teachers play a large or primary role in the selection of teachers new to this school.	4%	1%	5%

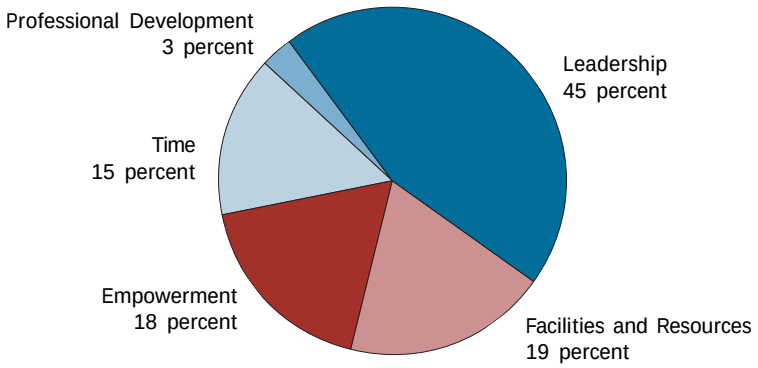
* Some totals are different than the sum of the two numbers due to rounding

Relevant Domain Analyses: Leadership (p. 28), Facilities and Resources (p. 30), Empowerment (p. 31), Time (p. 33), Professional Development (p. 34)

2. Administrators Believe that Teachers Are Central to Decision-Making and that they Are Empowered on Many Fronts, but Teachers Disagree.

The disparity in perceptions of teacher working conditions between administrators and non-administrative educators is sometimes very large in Mississippi, particularly between principals and classroom teachers (see **Appendix B** for a complete table of teacher and principal responses to survey items). A substantially greater proportion of the 937 administrators than of the 24,300 teachers and other education professionals who responded to the survey[10] believe that positive teacher working conditions are in place in many domain areas and that leadership is making efforts to improve them. The differences in teacher and principal perceptions of key working conditions issues range from 35 to 55 percentage points. The gaps in perception between the two groups appear to be greatest in the areas of leadership and empowerment, which are also two of the three teacher working conditions domains that teachers identify as being most important to them in deciding their future employment plans (Figure 2; see **Findings from Analyses of Responses of Teacher Stayers, Movers, and Leavers**, below, and **Appendix C** for additional information about survey responses from teachers with different career intentions). We analyze two key aspects of the disparity here.

***Figure 2*. Relative Impact of Teacher Working Conditions Domains on Teachers' Willingness to Stay at Their Current School**



Principals are more likely than teachers to believe that teachers are a part of an effective process for making collaborative decisions.

The statements that resulted in the greatest gaps in perception between administrators and non-administrative educators involve teacher participation in decision-making. While only a little more than one-third (37 percent) of teachers believe that they are centrally involved in decision-making on educational issues, more than eight out of ten principals (84 percent) believe that teachers are involved. Furthermore, principals are almost twice as likely as teachers to agree that there is an effective school-wide process for making group decisions and solving problems, while teachers are much more likely than are principals to believe that they are excluded from decision-making in areas such as school improvement planning and use of Educational Enhancement Funds. Major gaps in teacher and principal perceptions that are related to decision-making are also evident in several leadership areas, including perceptions of the presence of an atmosphere of respect and trust, the degree to which teachers feel comfortable raising issues and concerns, and leadership's consistent enforcement of student conduct rules (Table 3).

Table 3. **Teachers' and Principals' Perceptions of Selected Empowerment and Leadership Issues**

Survey Item:	Percent Agreeing: *Teachers*	*Principals*	Difference in Percentage Points Between Teachers and Principals
Empowerment			
Teachers play a large or primary role in decision-making about use of Education Enhancement Funds.	22%	77%	55
Teachers play a large or primary role in decision-making about school improvement planning.	16%	63%	47
Teachers are centrally involved in decision-making about educational issues.	37%	84%	47
The faculty has an effective process for making group decisions and solving problems.	48%	88%	40
Leadership			
The school leadership consistently enforces rules for student conduct.	56%	98%	42
Teachers feel comfortable raising issues and concerns that are important to them.	54%	95%	41
There is an atmosphere of trust and mutual respect within the school.	59%	94%	35

Principals also are much more likely to believe that school leadership—a concept that is not limited entirely to the role of the principal—makes sustained efforts to address teacher concerns.

To fully appreciate the significance of this finding, it may help to recall that teachers believe that the quality of leadership in their schools is the most critical influence on their future career plans (Figure 2, above). Add to that the previous finding that the greatest gaps between principal and teacher perceptions are in the areas of leadership and empowerment, and then consider the substantial differences in opinion between principals and teachers with respect to the degree to which principals make sustained efforts to address teacher concerns, especially in the areas of leadership and empowerment (43 percentage point gaps; Table 4). The sum of these findings suggests an important relationship between addressing these two working conditions domains and teacher career plans.

Table 4. **Teachers' and Principals' Perception of School Leadership Efforts to Address Working Conditions**

School leadership makes a sustained effort to address teacher concerns about:	Percent Agreeing: *Teachers*	*Principals*	Difference in Percentage Points Between Teachers and Principals
Leadership issues	49%	92%	43
Empowering teachers	53%	96%	43
The use of time in my school	59%	96%	37
Classroom management of today's students	62%	98%	36
Facilities and resources	62%	96%	34
Professional development	60%	93%	33

Though they are the two areas with the most disagreement, leadership and empowerment are not the only areas in which there are sizeable disparities in administrator and non-administrator perceptions. For example, about one-third of all principals (33 percent) believe that teachers have access to at least five hours of non-instructional time during the school day in an average week, while only about one-fifth (20 percent) of all teachers agree. These differences in perceptions of the non-instructional time available to teachers may also explain why only 20 percent of principals estimate that teachers spent five hours or more, on average, per week working on school related activities outside of the school day, even though nearly half of all teachers (44 percent) report that this was the case. Other potentially critical differences in administrator and non-administrator perceptions are examined in the **Domain-Specific Findings** section, below.

Relevant Domain Analyses: Leadership (p. 28), Empowerment (p. 31), Time (p. 33); see also a complete table of teacher and principal responses in **Appendix B.**

3. Mississippi Educators Appear to Be More Involved in Classroom-level Decisions than in School-level Ones

Not only is there a difference in perceptions among educators with respect to the degree of teacher involvement in decision-making in general, but there is also a wide gap in the degree to which educators believe that they are involved in various *types* of decision-making—namely, between decisions that impact the entire school and decisions that are primarily focused on an individual classroom only. A majority of Mississippi teachers believe that they are respected as professionals (57 percent) and that they are trusted to make sound professional decisions about instruction (63 percent), and a majority or large minority of Mississippi teachers report playing a large or primary role in decisions about *classroom-level* issues such as devising teaching techniques (60 percent), setting grading and student assessment practices (48 percent), and selecting instructional materials (45 percent). However, teachers are far less likely to report that they or their colleagues play a large or primary role in *school-level* decisions such as budgeting (4 percent), hiring (5 percent), determining the content of professional development (15 percent), school improvement planning (16 percent), and setting student discipline policies (18 percent; Table 5).

In some of the cases reported above, teachers believe they play at least a moderate role in the decision-making process, but in many other school-level decision-making arenas, there are sometimes substantial numbers of teachers who report playing either only a small role or *no role at all*. For example, more than one-quarter (27 percent) of all teachers report playing no role in the selection of the professional development opportunities available to them, and more than half (58 percent) say they play no more than a small role. Additionally, teachers are not engaged in school improvement planning (60 percent play no more than a small role) or in determining how Education Enhancement Funds will be spent (over 40 percent report playing no role at all; Table 5). Research suggests that participation in decision-making of this kind is often associated with keeping teachers in the profession,[11] yet teachers in Mississippi appear to have limited involvement in many of these decision-making arenas. Indeed, many teachers want to play a role in school decisions to ensure that they can be effective with their students, but it appears that a large number of teachers in Mississippi are not playing a significant role in many decisions that ultimately impact their schools.

Table 5. **Teachers' Perceptions of their Roles in Decision-Making**

Please indicate how large a role teachers have at your school in each of the following areas:	Role Mississippi Teachers Play: *No role at all*	*Small role*	*Moderate role*	*Large role*	*Primary role*
Classroom-Level					
Devising teaching techniques	5%	11%	24%	39%	21%
Setting grading and student assessment practices	9%	16%	26%	35%	13%
Selecting instructional materials and resources	6%	18%	30%	32%	13%
School-Level					
Education Enhancement Funds	41%	19%	18%	13%	8%
Establishing and implementing policies for student discipline	30%	28%	24%	16%	3%
School improvement planning	31%	29%	24%	14%	2%
Determining the content of in-service professional development	27%	30%	27%	13%	2%
The selection of teachers new to this school	69%	18%	9%	4%	1%
Deciding how the school budget will be spent	67%	20%	9%	3%	1%

Relevant Domain Analysis: Empowerment (p. 31)

4. Elementary School Educators, Compared to Their Secondary School Counterparts, Are More Positive About Their Teacher Working Conditions

Responses to survey items indicate that elementary educators in Mississippi are more positive about their working conditions than are their peers in secondary school settings. For example, they feel safer in their school environments (83 percent versus 73 percent of middle school educators and 74 percent of high school educators), and they are more likely to believe that their schools are good places to work and learn (76 percent versus 70 and 71 percent, respectively). In

fact, on most survey items, elementary educators are more positive than are either middle or high school educators, and sometimes dramatically so. With the exception of responses in the domain of leadership, where middle school educators are almost always more positive than are high school educators (though often only marginally so), the responses of middle and high school educators are otherwise relatively balanced, so for this analysis, we will consider contrasts in elementary and secondary educator data, rather than in data from all three levels separately.† Readers may first wish to peruse the accompanying text box on potential biases associated with differences in response rates across school levels before proceeding further.

Response Rates by School Level and by Student Demographic Representation

It has not been uncommon to find different response rates across school levels in other Center for Teaching Quality working conditions studies, and Mississippi is no exception. School-level response rates in Mississippi range from a high of 76 percent at the elementary level to a low of only 64 percent at the high school level, again indicating that survey responses may not reflect precisely statewide educator opinions of working conditions, biasing results slightly toward elementary teacher impressions of their working conditions (Table TB1).

Table TB1. **Response Rates by School Level**

Average Response Rate for all Elementary Schools	76%	451
Average Response Rate for all Middle Schools	20%	141
Average Response Rate for all High Schools	64%	201

Note: Overall state response rate = 67%

In addition, response rates are often different within school levels when student ethnicity is taken into consideration. At the elementary level, response rates from schools with varying sizes of minority student populations are very steady and suggest that the opinions of teachers in these schools are relatively equitably represented in the survey data, but the same cannot be said of response rates across middle and high schools.

At the high school level, schools with a student body comprised of either fewer than 22 percent or between 40 percent and 72 percent minority students (about two-fifths of all high schools) were less likely than other high schools to have a high survey response rate. High schools with very high (between 72 percent and 98 percent) or moderate but below-median (between 22 percent and 40 percent) proportions of minority students experienced the highest response rates. The greatest discrepancies, however, were for middle schools, where response rates for subsets of schools ranged from a healthy 78 percent (for schools whose student bodies are comprised almost entirely of minority students) to a low of 60 percent. Contrary to what might be expected, the lowest response rates did not come from schools at either end of the minority student representation spectrum; they were instead from schools with average numbers of minority students (between 49 percent and 74 percent of the student body). Middle schools with the largest minority student populations had the highest response rates (Table TB2).

† We do not include data from mixed-level schools in the tables in this section as these schools are not directly comparable to other types of schools, nor are such schools homogeneous enough to compare to each other within a mixed-grade level grouping. Readers should bear in mind that such schools include a high number of special-category schools (such as alternative schools), which are not present in these analyses.

***Table TB2.* Response Rates by School Demographics**

Elementary Schools

Minority Students as Proportion of Student Body	Average Response Rate	Number of Schools
100%-98%	78%	89
98%-80%	77%	91
80%-47%	73%	91
47%-24%	75%	90
under 24%	75%	90
Average Response Rate for all Elementary Schools	76%	451

Range of Response Rates: 73%-77%

Middle Schools

Minority Students as Proportion of Student Body	Average Response Rate	Number of Schools
100%-98%	78%	30
98%-74%	72%	27
74%-49%	60%	30
49%-27%	71%	28
under 27%	71%	28
Average Response Rate for all Middle Schools	76%	143

Range of Response Rates: 60%-78%

High Schools

Minority Students as Proportion of Student Body	Average Response Rate	Number of Schools
100%-98%	63%	41
98%-72%	67%	39
72%-40%	61%	41
40%-22%	69%	40
under 22%	60%	40
Average Response Rate for all High Schools	76%	201

Range of Response Rates: 60%-69%

Note: Overall state response rate = 67%

Despite the relatively equitable distribution of educator responses across elementary schools with varying levels of minority student representation, differences in response rates across similar divisions of middle and high schools suggest that survey responses are likely to over-represent schools with either a relatively high or low proportion of minority students. Readers are advised to bear these discrepancies in mind when interpreting the analyses presented below.

Analyses of Survey Data by School Level

In general, and as noted above, when there is a difference, elementary educators are more likely to note the presence of important teacher working conditions in their schools than are middle and high school teachers. First, elementary educators are more positive about the group decision-making processes in their schools (55 percent versus 47 percent of middle school educators and 44 percent of high school educators). They also are more likely to believe that the professional development available to them enhances their skills as instructional leaders (66 percent versus 59 percent and 51 percent, respectively; Table 6). Also, though the differences in elementary and secondary educator perceptions of leadership issues are only marginal at times, it is worth noting that elementary educators are more positive about all aspects of leadership in their schools than are secondary educators. The greatest differences are in the areas of opportunities for the community to contribute to the school's success, school leadership's consistency with regard to enforcing rules, the presence of a shared vision, and the degree to which teachers are held to high standards (Table 6).

On the other hand, time is one area in which secondary educators appear to have more positive impressions than do their elementary colleagues. They are more likely to believe that their non-instructional time is sufficient (51 percent of middle school educators and 53 percent of high school educators express positive perceptions, versus 43 percent of elementary educators; in addition, 24 percent of middle school teachers and 28 percent of high school teachers indicate that they have at least one hour of non-instructional time available a day, compared to only 14 percent of elementary teachers). Somewhat counterbalancing the impact of these differences, however, is the fact that elementary educators' non-instructional time appears to be less bur-

dened with student supervision duties, with only 6 percent indicating that they spend more than an hour a day with students on school activities outside of regular work hours, compared to 16 percent of middle school teachers and 25 percent of high school teachers (Table 6).

Table 6. **Perceptions of Selected Teacher Working Conditions, by School Level**

Survey Item:	Elementary	Middle	High	Difference in Percentage Points (Elem-High)
Empowerment				
Professional development activities enhance teachers' skills as instructional leaders.	66%	60%	51%	15
The faculty has an effective process for making group decisions and solving problems.	55%	48%	44%	11
Leadership				
Opportunities are available for members of the community to contribute actively to this school's success.	77%	66%	64%	13
The school leadership consistently enforces rules for student conduct.	64%	52%	52%	12
The faculty and staff have a shared vision.	70%	62%	59%	11
Teachers are held to high professional standards for delivering instruction.	87%	83%	76%	11
Professional Development				
Professional development provides teachers with the knowledge and skills most needed to teach effectively.	68%	61%	55%	13
Teachers have multiple opportunities to learn from one another	62%	57%	51%	11
Time				
Teachers: You spend more than five hours a week outside of school hours on activities involving student interaction.	6%	16%	25%	19
The non-instructional time provided for teachers in my school is sufficient.	43%	51%	53%	-10
Teachers: You have more than five hours a week of non-instructional time available to you.	14%	24%	28%	-14

Relevant Domain Analyses: Time (p. 33), Empowerment (p. 31), Leadership (p. 28), Professional Development (p. 34)

Findings from Analyses of Responses of Teacher Stayers, Movers, and Leavers

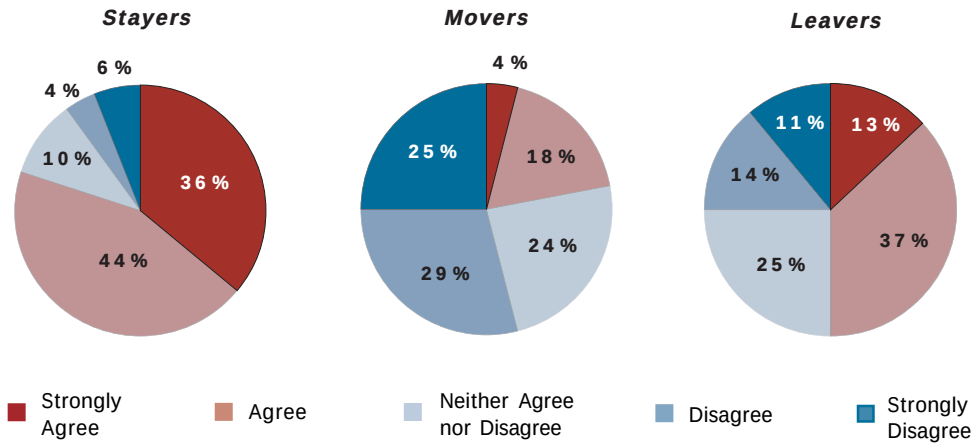
As is true in many other states, one of the greatest challenges Mississippi faces is stemming the tide of teacher attrition, especially in hard-to-staff schools. A recent study that analyzed turnover in diverse school districts from across the nation found that it costs as much as $18,000 to replace a teacher who leaves a classroom.[12] In addition to the monetary costs of attrition, data from the New Teacher Center reveal that well-designed novice teacher induction programs not only contribute to higher teacher retention rates but also can dramatically increase student achievement.[13] With so much at stake—both in terms of the quality of the induction of new teachers and the cost associated with replacing them—policymakers would be well served by considering the factors that impact retention rates.

As noted above and elsewhere in this report, many Mississippi teachers are satisfied with several aspects of their current working conditions, and these positive feelings are reflected in the fact that more than four out of five (85 percent) of the respondents to the 2007 Mississippi Teacher Working Conditions Survey indicated that they intended to stay in their current schools at the end of the school year ("stayers"). Among non-stayers, similar numbers of respondents indicated that they would either move to another school or district ("movers," 9 percent) or leave teaching entirely ("leavers," 6 percent).[14] Contrary to what might be expected, these breakdowns are relatively consistent across gender lines (with 84 percent of all male teachers and 86 percent of all female teachers reporting that they would stay), racial lines (with 87 percent of all white teachers and 83 percent of all African-American teachers reporting that they would stay), and even certification routes (with 86 percent of traditionally licensed teachers and 82 percent of alternate-licensure teachers indicating a willingness to stay), offering evidence that the decisions of Mississippi teachers to move or leave may be primarily related to factors other than social or cultural factors that are typically outside of school control.

Instead, survey results suggest that teachers who want to continue to teach in their current schools generally have more positive perceptions about their working conditions than do movers and leavers (see **Appendix C** for a table of all teacher responses disaggregated by career intent). Also, school movers tend to have poorer perceptions of their schools than do leavers, but this discrepancy is due at least in part to the fact that not all leavers leave as a result of dissatisfaction with the work environment.[15] This section of the report begins the process of understanding differences in perceptions of teacher working conditions across all three groups, with an eye toward helping policymakers and school leaders address issues that could help to reduce teacher attrition. Not surprisingly, differences in opinion about teacher working conditions exist across these three groups, but what is most important is to examine the areas in which those differences are largest.

Perhaps the most dramatic perception gap across the entire 2007 Mississippi Teacher Working Conditions Survey is between stayers and movers on the issue of whether or not their schools are good places to work and learn. The presence of a gap in perception is not surprising, but the *size* of the gap is. While a healthy 80 percent of all stayers believe that their schools are good places to work and learn, only 21 percent of teacher movers—only one in five—share the same impression. With few exceptions, it appears that movers are moving at least in part because of a general dissatisfaction with school working conditions. Leavers also are less positive than stayers about overall conditions, but at not nearly so strong a level (half believe that their schools are good places to work and learn; Figure 3), and the bulk of their dissatisfaction can be found among early-career leavers and not retirement-age leavers (discussed below).

Figure 3. **"My school is a good place to work and learn," by Career Intention**



Finally, regardless of their career intentions, teachers appear to be influenced by the same working conditions when considering career options. Stayers, movers, and leavers alike report that support from school leadership plays a key role in their decisions, as does the degree to which they feel effective with the students they teach. We will explore specific facets of these findings in the sections below.

5. School Leadership and Teacher Empowerment Are Critical to Retaining Teachers

Leadership

The domain in which a large separation in the perceptions of stayers and non-stayers is most evident is leadership. Nearly half of all teachers cite leadership as the aspect of their working environments that most impacts their career decisions, more than twice as many as cite the next-closest aspect (facilities and resources; see Figure 2, above), and the separation between stayers and non-stayers on many survey items in the leadership domain clearly supports that finding. Indeed, when asked about *specific* factors that impact their career decisions, a substantial majority of teachers, regardless of their career intentions, report that support from school leadership is an important influence, well outpacing factors more commonly assumed to matter, like financial considerations such as salary (cited by 64 percent of all stayers, 56 percent of all leavers, and only half of all movers) and cost of living (cited by only 47 percent, 36 percent, and 34 percent, respectively; Table 7).†

† Many teachers also note the importance of their feelings of effectiveness with the students they teach with respect to their future career decisions, an issue we will address briefly in our conclusions.

Table 7. **Conditions Impacting Teachers' Future Career Decisions**

Condition:	Percent Agreeing Condition is Very or Extremely Important: *Stayers*	*Movers*	*Leavers*
Adequate support from school leadership	81%	87%	66%
Effectiveness with the student I teach	80%	77%	64%
Student behavior	72%	70%	75%
Personal reasons	70%	56%	58%
Teaching assignment	69%	60%	53%
Collegial atmosphere amongst the staff	68%	70%	49%
Empowerment to make decisions	67%	72%	60%
Salary	64%	50%	56%
Retirement options	61%	45%	57%
Adequate facilities/resources	60%	54%	41%
Time during the work day	59%	56%	54%
The community environment where I live	58%	52%	43%
Degree of testing and accountability	56%	53%	55%
Cost of living	47%	34%	36%

Clearly, leadership is important to all teachers with respect to career decisions, but do all teachers have the same impressions of the *quality* of the leadership under which they work? Simply put, no. On nearly every survey item about leadership, the separation in positive impressions between stayers and movers is 35 percentage points or more, with some of the largest gaps coming in ratings of the support teachers perceive they get from school leadership (69 percent of stayers feel supported, versus 46 percent of leavers and only 25 percent of movers) and of the overall quality of school leadership (65 percent versus 41 percent and a mere 19 percent, respectively). In addition, stayers are over three times as likely as movers to agree that there is an atmosphere of trust in their schools (Table 8).

Table 8. **Differences in the Perceptions of Stayers and Movers with Respect to Leadership Issues**

Leadership item:	Percent of Teachers Agreeing: *Stayers*	*Movers*	*Leavers*	Difference Between Stayers and Movers
Overall, my school leadership is effective	65%	19%	41%	46
There is an atmosphere of trust and mutual respect within the school	64%	18%	38%	46
In this school we take steps to solve problems	69%	25%	43%	44
The leadership consistently supports teachers when needed	69%	25%	46%	44
Teachers feel comfortable raising issues and concerns that are important to them	59%	18%	35%	41
The school leadership communicates clear expectations to students and parents	72%	31%	51%	41

Finally, the disparities between the perceptions of stayers and non-stayers with respect to leadership also include the degree to which each group believes that school leadership makes efforts to *improve* working conditions. Teachers who want to stay in their schools are far more likely to believe leadership is working to improve teaching and learning conditions than are those who want to move to another school. For example, about two-thirds of those who want to stay at their current schools believe leadership supports concerns about classroom management, while only about one-quarter (27 percent) of movers agree. In addition, more than half of all stayers believe that leadership makes a sustained effort to address teacher concerns about empowerment (58 percent) and leadership issues (53 percent), but less than one-fifth of movers concur (18 percent and 17 percent, respectively; Table 9).

Table 9. **Differences in the Perceptions Between Stayers and Movers about School Leadership Efforts to Address Working Conditions**

School leadership makes a sustained effort to address teacher concerns about:	Percent of Teachers Agreeing: *Stayers*	*Movers*	*Leavers*	Difference Between Stayers and Movers
Classroom management of today's students	67%	27%	40%	40
Empowering teachers	58%	18%	32%	40
The use of time in the school	63%	26%	39%	37
Facilities and resources	67%	30%	41%	37
Leadership issues	53%	17%	30%	36
Professional development	64%	30%	45%	34

Empowerment

Gaps in perceptions regarding empowerment among teachers with differing career intentions are at times nearly as large as the gaps found across leadership issues. Though there are few differences on some items (for instance, a vast majority of teachers, regardless of their career intentions, do not believe that they are involved in budget decisions, Education Enhancement Fund decision, or hiring decisions), on four items the perception gaps between stayers and non-stayers are telling. These differences might best be characterized as differences in perceptions of the degree to which teachers are treated as professionals and to which teachers believe that they are part of a thoughtful and comprehensive decision-making process. In the first of these two areas, stayers are much more likely than are leavers or movers to believe that they are respected as professionals (63 percent versus 30 percent and 22 percent, respectively), and that they are entrusted to make sound professional decisions about instruction (67 percent versus 42 percent and 28 percent, respectively); they are also more likely to believe that they are centrally involved in decision-making about educational issues, though not to quite as strong a degree (41 percent versus 19 percent and 12 percent, respectively). In the second area, it is clear that leavers and movers are less convinced of the presence of a coordinated problem-solving process. Movers and leavers are much less likely than are stayers to sense that their schools take steps to solve problems (24 percent and 43 percent, respectively, versus 69 percent) or that there is even a solid process available for doing so in the first place (17 percent and 28 percent, respectively, versus 53 percent; Table 10).

Table 10. **Differences in the Perceptions of Stayers, Movers, and Leavers with Respect to Empowerment Issues**

Empowerment Issue:	Percent of Teachers Agreeing: *Stayers*	*Movers*	*Leavers*	Difference Between Stayers and Movers
Treating Teachers as Professionals				
Teachers are respected as professionals.	63%	22%	30%	41
Teachers are trusted to make sound professional decisions about instruction.	67%	28%	42%	39
Teachers are centrally involved in decision making about educational issues.	41%	12%	19%	29
Presence of a Decision-Making Process				
In this school we take steps to solve problems.	69%	24%	43%	45
The faculty has an effective process for making group decision and solving problems.	53%	17%	28%	36

Differences across other domains are not nearly as sharp or consistent, but a few bear mentioning here. Movers and leavers are much less likely to sense that interruptions to the school day are minimized (26 percent and 35 percent, respectively, versus 59 percent of stayers), and they are also much less convinced that their schools are safe places in which to work (47 percent and 62 percent, respectively, versus 82 percent).

Findings from Analyses of Responses of Early-Career Teachers

In addition to the factors associated with teacher retention discussed in the previous section, another critical component of the teacher retention puzzle is the quality of the induction experience of new teachers. The importance of addressing this issue in Mississippi is suggested by the apparent imbalance in the mentoring available to all new Mississippi teachers, as well as by the impressions of the state's small but critical group of early-career leavers.

It is perhaps tempting to review the numbers above and decide that dissatisfaction is stronger across the board for movers than it is for all leavers, but readers are reminded to bear in mind that, compared to movers and stayers, the population of leavers is a very diverse and mixed group, due to the multiple and varied reasons behind their career intentions. When survey responses for leavers are disaggregated by years of teaching experience, a few important differences are revealed between the responses of those who leave the profession before reaching their fourth year in the classroom ("early-career leavers," who make up about one-sixth of the nearly 1,300 Mississippi teachers surveyed who indicated that they did not plan to return to teaching), those who leave at around retirement age ("retirement-age leavers"), and the general population of movers.

Before taking a closer look at the teachers in this critical sub-group, it is important to note here that financial considerations do *not* appear to be more important for early-career leavers than they are for other leavers. In most other states in which CTQ has administered and analyzed Teacher Working Conditions surveys, there has been a notable difference between early-career and retirement-age leavers in this area.

6. Many Early-Career Teachers Are not Mentored at all, but Those Who Are Mentored Are More Likely to Remain in the Classroom

Early-career teachers are slightly less likely than are their more experienced peers to intend to stay at their current schools (82 percent versus 86 percent), and mentoring may play an important role in this difference in retention. The first and perhaps most critical survey finding to note here is that no category of early-career teachers—whether stayers, movers, or leavers—consistently reports the presence of a mentoring program that covers their first three years of teaching. Only 51 percent of early-career stayers report having been assigned a mentor for all of their early-career years, but an even smaller proportion of leavers (50 percent) and movers (45 percent) report the same. Though these differences alone are not large, it is important to note that no early-career teachers appear to be guaranteed a mentoring experience, and that those who eventually choose to move or leave are less likely than are their stayer peers to have been assigned one.

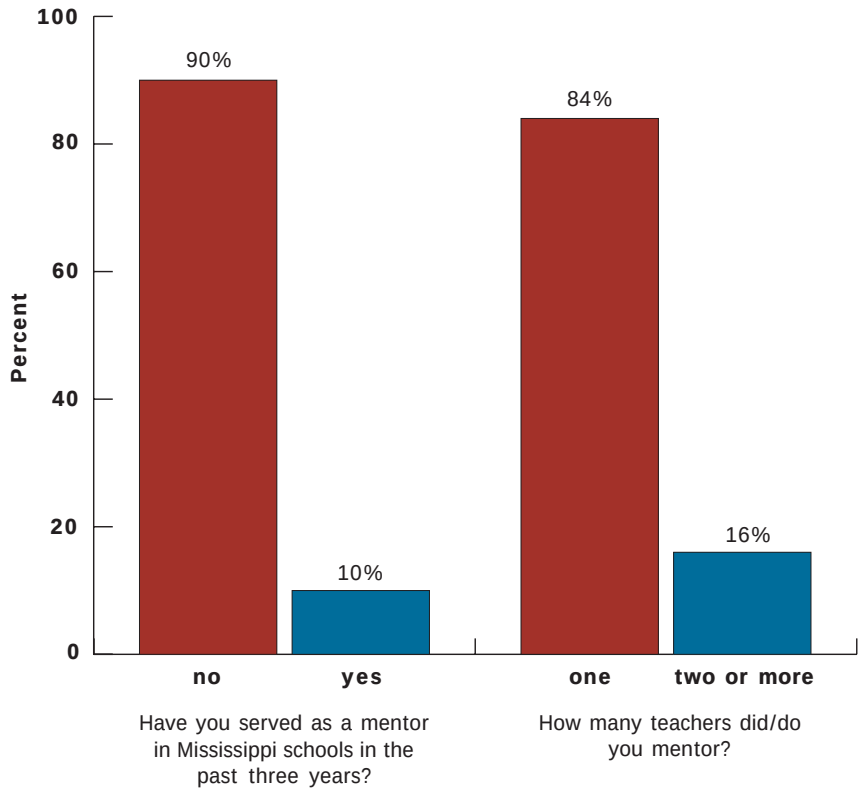
Two other findings of note with respect to mentoring and retention bear mentioning here as well. First, African-American teachers are marginally less likely than are their white colleagues to intend to stay at their current schools (about 83 percent indicate that they intend to stay, versus about 87 percent of white teachers), and, while they are about as likely as their white peers to report having been assigned a mentor, their mentoring experience appears to be quite different. Their mentors are less likely to have been at the same school, in the same grade, or even teaching the same content (Table 11).

Table 11. **Differences in Mentoring Experiences, by Ethnicity**

Mentoring Item:	African-American	White	Difference in Percentage Points
Were you formally assigned a mentor for each of your first years of teaching in Mississippi?	52%	48%	-4
Were you and your mentor:			
At the same school?	79%	88%	9
Teaching the same content?	62%	70%	8
At the same school level?	62%	72%	10

Second, though their numbers are small, there are several early-career teachers who have been asked to serve as mentors themselves (397 out of 4,020 surveyed, or about 10 percent), and a few of those have been asked to serve as mentors for more than one other teacher (about 16 percent; Figure 4). Granted, these numbers are not large, but the fact that there is any evidence at all of early-career teachers mentoring other early-career teachers is worth further investigation.

Figure 4. **Novice Teachers and Mentoring**



7. Facilities & Resources and Leadership Exert the Greatest Influences on Early-Career Leavers

Early-career leavers and their retirement-age peers in Mississippi express similar opinions about many survey items, but one critical statement on which their levels of agreement substantially diverge is that their schools are good places to work and learn: while nearly three out of five retirement-age leavers think this statement is true, only about one in three early-career leavers agrees. Indeed, in many ways, early-career leavers look a lot more like movers than they do like their more experienced leaver peers. They are uniformly less positive about working conditions across all domains than are retirement-age leavers, but the biggest differences are in the domains of facilities and resources and leadership.

Early-career leavers are much less likely than are their retirement-age leaver peers to believe that their schools have adequate office equipment, instructional materials, and instructional technology. Such discrepancies may have less to do with actual deficiencies in any of these areas and more to do with younger teachers' greater comfort with and dependence upon technology, for instance, in comparison to their more mature peers, but it is a consideration to bear in mind as the state works to retain these young teachers. These discrepancies are explored in more detail in the **Domain-Specific Findings** section, below.

Leadership issues of much greater concern to early-career leavers than to retirement-age leavers have to do with performance evaluations, which they are less likely to believe are either handled well (52 percent versus 70 percent) or are consistently administered (46 percent versus 64 percent). Both of these issues may be related to the general lack of comprehensive mentoring, as discussed above. If present in greater quantities, mentoring might help younger teachers to navigate the emotions evoked by their first teaching evaluations with more equanimity.

Findings from Analyses of Responses Across Student Poverty Levels

The purpose of this section is to investigate differences in educators' perceptions of teacher working conditions across schools clustered based on the size of their populations of economically disadvantaged students. Before turning their attention to the analyses themselves, readers may first wish to consider the findings in the accompanying text box regarding differences in response rates across schools that might bias the interpretation of the analyses and findings.

Response Rates by Student Economic Characteristics

Perhaps of greater concern than any of the instances of over- and under-representation on the Mississippi Teacher Working Conditions Survey discussed earlier would be indications that schools with different proportions of economically disadvantaged students are not represented equitably by survey responses. It turns out, however, that when schools are compared based on the proportion of their student bodies identified as being economically disadvantaged, with some regularity and also across all three school levels, the lowest response rates are from schools with the *lowest* numbers of economically disadvantaged students. As was the case when data are disaggregated by the proportion of minority students in a school, the widest range of response rates is again at the middle school level (15 percentage points), but a broad range exists at all three levels (Table TB3).

Table TB3. **Response Rates by School Economic Indicators, 2007 Mississippi Project CLEAR Voice Survey**

Elementary Schools			*Middle Schools*			*High Schools*		
Economically Disadvantaged Students as Proportion of Student Body	Average Response Rate	Number of Schools	Economically Disadvantaged Students as Proportion of Student Body	Average Response Rate	Number of Schools	Economically Disadvantaged Students as Proportion of Student Body	Average Response Rate	Number of Schools
0%-48%	67%	89	0%-45%	62%	27	0%-37%	59%	39
48%-69%	75%	88	45%-62%	63%	27	37%-51%	62%	40
69%-85%	79%	90	62%-75%	75%	28	51%-68%	65%	39
85%-94%	81%	89	75%-89%	73%	28	68%-84%	68%	40
over 94%	76%	89	over 89%	77%	27	over 84%	66%	39
Average Response Rate for all Elementary Schools	76%	445	Average Response Rate for all Middle Schools	70%	137	Average Response Rate for all High Schools	76%	197
Range of Response Rates: 67%-81%			*Range of Response Rates: 62%-77%*			*Range of Response Rates: 59%-68%*		

Note: Overall state response rate = 67%
School totals for demographic and economic analyses within school types are not equal because economic data were not available for all schools.

If anything, then, the viewpoints of educators in schools with larger bodies of economically disadvantaged students might be slightly *over*-represented, an important aspect of these survey results for readers to bear in mind.[16]

Results of the Comparisons

On the whole, when all schools for which economic data were available are taken together without regard to school level, there are few major differences (differences of ten or more percentage points) between the perceptions of educators at schools with high numbers of economically disadvantaged students and educators at schools with fewer economically disadvantaged students. When there *are* major differences, however, educators at schools with fewer economically disadvantaged students tend to have more positive perceptions. The greatest gaps in positive perceptions across all school levels (including mixed-level schools) are typically in the area of facilities and resources and empowerment, as well as mentoring experiences (Table 12).[17]

At the elementary, middle, and high school levels, when mixed-level schools are not included, there also appear to be large differences in opinion about many areas of leadership (**Appendix D**).

What may be surprising to some readers is that these perception gaps are *not* widest between the schools with the fewest and the greatest numbers of economically disadvantaged students. In fact, more often than not, the gaps are widest between schools with the fewest and the *second-greatest* numbers of economically disadvantaged students (schools in the second of our five quintiles). In other words, while gaps in the positive perceptions of educators at schools in the first and fifth quintiles are sometimes notable, the gaps between educators at schools in the second and fifth quintiles are often *larger*. In some cases, perceptions among educators in the first quintile (the schools with the highest proportion of economically disadvantaged students) are *equally as positive* as those of educators in the higher quintiles.

Table 12. **Educator Perceptions by School Poverty Level**

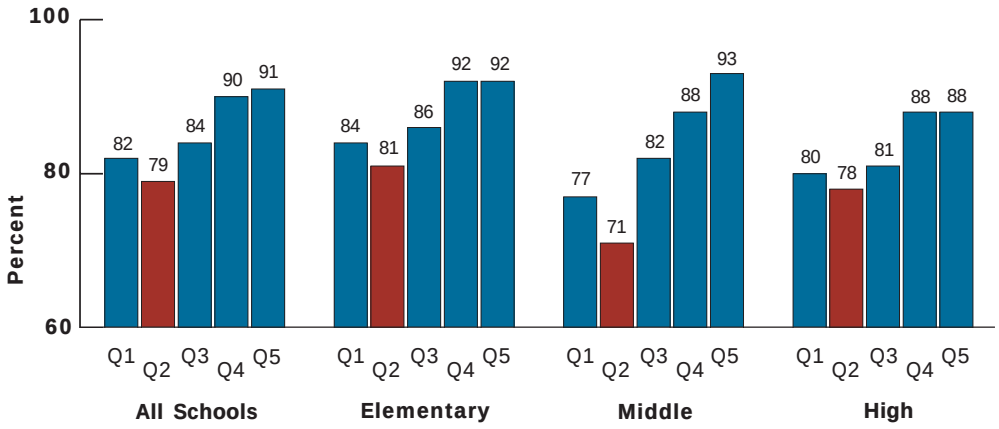
Proportion of economically disadvantaged students at school		>90.7	90.7-78.1	78.0-61.6	61.5-44.6	<44.6	Gap*
		Percent agreeing:					
Overall, my school is a good place to work and learn.		67%	66%	72%	78%	81%	15 †
Domain Survey Item:	**Domain**						
Teachers and staff work in a school environment that is safe.	F&R	73%	72%	76%	83%	85%	13 †
Teachers play a large or primary role in devising teaching techniques.	E	56%	54%	57%	64%	67%	13 †
There is an atmosphere of trust and mutual respect within my school.	L	53%	54%	57%	63%	66%	13 †
Teachers are trusted to make sound professional decisions about instruction.	E	59%	59%	61%	66%	69%	11 †
Teachers have sufficient access to office equipment and supplies.	F&R	61%	59%	64%	69%	69%	10
Mentoring Survey Item:							
I have been formally assigned a mentor for all of the years I have been a novice teacher in MS.	M	48%	49%	51%	51%	47%	4
My mentor and I taught at the same grade level.	M	65%	58%	70%	75%	76%	17 †
My mentor and I taught in the same building/school.	M	89%	78%	82%	90%	86%	12 †
My mentor and I taught in the same content area.	M	68%	62%	69%	73%	73%	11 †
I received release time to observe my mentee(s).	M	32%	31%	27%	22%	23%	10 †
My mentee and I taught the same grade level.	M	46%	47%	54%	57%	61%	15 †
My mentee and I taught in the same content area.	M	53%	52%	61%	63%	66%	14

Key:
Blue = Highest approval rating for the question; Red = Lowest approval rating for the question; T = Time;
F&R = Facilities & Resources; E = Empowerment; L = Leadership; PD = Professional Development; M = Mentoring.
* Due to rounding, gap may appear to be slightly larger or smaller than the gap implied by numbers in the table.
† The gap for this question is at least 10 percentage points at all three school levels

The greatest number of and the largest major perception gaps are to be found among educators at the middle school level (**Appendix D**). Middle school also is often the level at which educators in high-poverty schools express the lowest opinions of their working conditions. Coupled with the fact that middle school educators are the least likely to indicate that they will stay at their current schools (83 percent, versus 84 percent of high school teachers and 87 percent of elementary school teachers), it may be prudent for Mississippi to focus any investigations of reasons for these disparities initially on middle schools.

When we look at teacher career intent figures across quintiles, we see that the importance of this difference may be more than just a matter of splitting hairs: while the proportion of teachers who intend to stay decreases as the proportion of economically disadvantaged students increases, we again see that the rate of teacher retention is lowest for schools in the *second* and not the first quintile. This pattern holds true across all three levels of school when the data are disaggregated by school level (Figure 5).

Figure 5. **Stayers by School Level and Poverty Level**



What these findings are able to suggest is limited at best, primarily because they are culled from only one set of data without the benefit of other contextual data. Nevertheless, it is compelling to consider why the greatest positive perception gaps involve schools in the second quintile. One possibility is that, while Mississippi has made tremendous strides in evening the playing field among its poorest and its wealthiest schools, schools with slightly smaller populations of economically disadvantaged students may not have been receiving the same amount of attention. It is well beyond the limits of the Mississippi Teacher Working Conditions Survey data to make conclusions along these lines, but the data discussed herein may provide critical jumping-off points for future, more in-depth studies of differences in teacher working conditions across schools with different proportions of economically disadvantaged students.

Domain-Specific Findings

The findings for this report were generated after careful consideration of educator responses to questions about the five different teaching and learning condition domains addressed in the survey. Presented here—in their order of importance to teachers with respect to their future career decisions (Figure 2, above)—are more detailed assessments of the stories the data in these domains tell. In this section, we also continue the process of unpacking how different educators —defined by their positions (*e.g.*, teachers and principals) and by other characteristics (*e.g.*, experience, ethnicity, etc.)—view specific teacher working conditions.

Of particular interest are the differences between administrator and non-administrator perceptions of working conditions, as well as between elementary and secondary educators, both of which are discussed in some detail in earlier sections. As noted above in the **General Findings** section, in every domain and on every topic within a domain, the impressions of teachers and of other non-administrative education professionals are less positive than are administrator impressions, and sometimes dramatically so. In fact, though Mississippi non-administrator perceptions of various working conditions range from very positive to very negative, depending upon the issue, administrators express favorable views of *almost every aspect of teacher working conditions.*[18] **Appendix B**, an extension of Tables 3 and 4 (above), contains a complete table of responses by teachers and principals to all of the major survey questions, and that table is referred to throughout this section. At the least, Mississippi should consider taking steps to better understand the reasons behind this clear and sometimes pronounced disconnect.

Also as noted earlier, though differences between elementary and secondary educators are not always as dramatic, there is a relatively consistent pattern, with elementary educators expressing positive impressions of their working conditions much more often than do their middle and high school colleagues. In some instances, differences in the proportion of educators with positive perceptions of a given teaching and learning condition are as great as ten percentage points or more. Particularly notable differences have all been highlighted in the **General Findings** section and are not repeated here.

Finally, while there are quite a few disconcerting differences in the mentoring experiences of educators depending upon their ethnicity (described above), there are few pronounced differences in the responses of educators of different ethnicities to each of the primary domain questions. Where there are significant differences (differences of at least ten percentage points or greater), African-American educators tend to have more positive perceptions than do their white colleagues, and these differences are highlighted below. Since the bulk of all educators in Mississippi are either African-American (24 percent) or white (73 percent), analyses in this section are limited to responses from those two groups.

Leadership

As has been emphasized often throughout this report, no domain is as critical to the career decisions of teachers as leadership (Figure 2, above), and for that reason alone, the generally positive patterns in the survey data with respect to this domain should be just cause for optimism. There is still work to be done, but educator impressions of leadership are universally positive (even if only marginally so at times), a finding that stands in stark contrast to survey data from other states in which CTQ conducted surveys in 2007. Indeed, even for the survey item that generated the least positive responses (impressions of leadership's willingness to com-

mit a sustained effort to address teacher concerns about leadership issues), the overall proportion of positive responses was still above 50 percent. Leading the way are educator beliefs that all faculty are committed to helping every student learn and that teachers are held to high professional standards (each boasting positive impressions of 83 percent), with several more items registering high positive responses (Table 13).

As intimated above, the leadership area most in need of attention appears to be the process by which teachers raise concerns and school leadership responds to those concerns. Only 56 percent of all educators indicate that teachers feel comfortable raising concerns that are important to them, and fewer than 64 percent believe that leadership makes a sustained effort to address these concerns (Table 13).

Table 13. **Educator Impressions of Leadership**

Leadership Item:	Percent Agreeing
The faculty is committed to helping every student learn.	83%
Teachers are held to high professional standards for delivering instruction.	83%
Teacher performance evaluations are handled in an appropriate manner.	75%
The procedures for teacher performance evaluations are consistent.	72%
Opportunities are available for members of the community to contribute actively to this school's success.	71%
Teachers receive feedback that can help them improve instruction.	70%
The school leadership communicates clear expectations to students and parents.	69%
Staff members are recognized for accomplishments.	66%
The school leadership consistently supports teachers when needed.	66%
The faculty and staff have a shared vision.	65%
There is an atmosphere of trust and mutual respect within the school.	60%
The school leadership consistently enforces rules for student conduct.	58%
Teachers feel comfortable raising issues and concerns that are important to them.	56%
The school leadership makes a sustained effort to address teacher concerns about:	
Classroom management of today's students	64%
Facilities and resources	64%
Professional development	62%
The use of time in my school	61%
Empowering teachers	55%
Leadership issues	51%

Differences in teacher and principal perceptions of school leadership are generally very wide on most of the survey questions, but the gap is widest in this area as well. While almost every principal (95 percent) believes that teachers feel comfortable raising issues and concerns, only a little more than half of all teachers (54 percent) agree. Tellingly, teacher perceptions of the degree to which leaders respond to these concerns are also quite different from those of their principals, especially when those concerns are about empowerment (43-percentage-point gap) and leadership itself (44-percentage-point gap; Table 4, above).

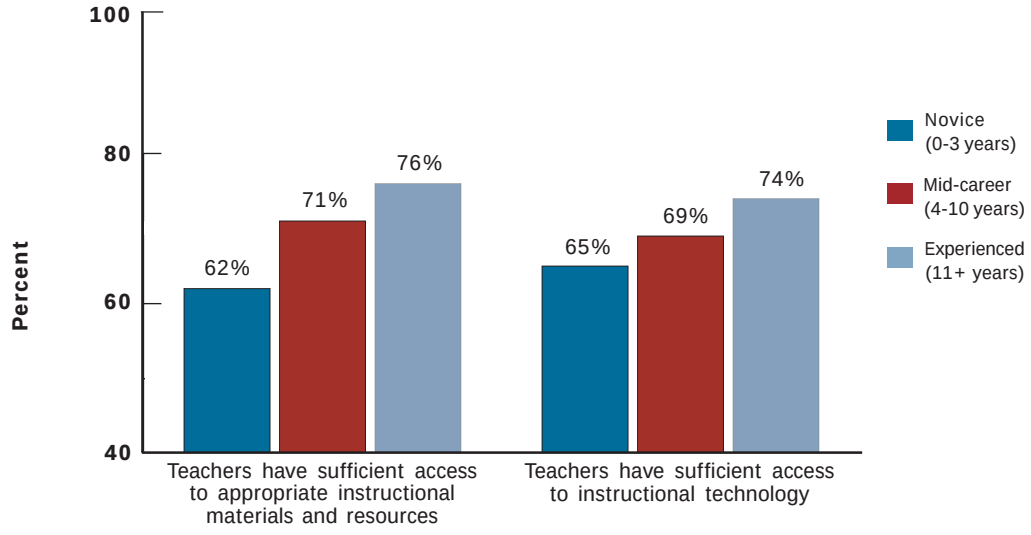
Teacher perceptions of school climate are also disconcertingly different from the perceptions of their principals. Teachers are much less likely than are principals to perceive the presence of an atmosphere of trust and mutual respect in their schools (59 percent versus 94 percent), a feeling of support from their administrators (64 percent versus 99 percent), and indications of consistent enforcement of rules on the part of school leaders (56 percent versus 98 percent), all of which indicate a difference in teacher and principal perceptions of overall school climate (Table 3, above).

Facilities and Resources

In no other domain are the general impressions of all educators as positive across the board in Mississippi as they are for facilities and resources. With at least three-fifths of all educators expressing positive impressions of each surveyed area in this domain (the low mark of 62 percent coming in regard to educators' perceptions of the availability of sufficient training to support their use of instructional technology), and with nearly 80 percent indicating that they believe they work in a safe school environment, it would appear that facilities and resources is one area in which Mississippi is beginning to achieve satisfactory working conditions in all areas.

There are, however, a few important differences in this domain between the perceptions of novice and experienced teachers, and, as noted earlier, they have to do with perceptions of the availability of supplies and equipment. Experienced teachers are more likely than novice teachers to believe that they have sufficient access to instructional materials and resources (76 percent versus 62 percent), as well as to instructional technology (74 percent versus 65 percent; Figure 6)

Figure 6. **Impressions of Availability of Supplies and Equipment, by Experience Level**



We suggested earlier that one reason for these differences might be related to differences in the degree to which teachers of different ages tend to rely on such resources. These differences also may reflect the fact that many beginners are not as savvy as their experienced colleagues at knowing how to access materials, supplies, and other resources. A number of studies have documented that beginning teachers often simply do not have the know-how to utilize resources efficiently, even when they are readily available to them. In addition, the same research found that access to materials and resources impacts student achievement.[19] Coupled with the other findings above on the importance of mentoring for early-career teachers, these results from the 2007 Mississippi Teacher Working Conditions Survey suggest that mentors and other personnel who are involved in new-teacher induction need to ensure that beginning teachers not only have access to all available resources, but also understand the process for acquiring these materials and services themselves.

Empowerment

There is both cause for commendation and cause for concern with respect to the state of teacher empowerment in Mississippi. On the one hand, educators rate favorably the degree to which problem-solving strategies are in place in each school (66 percent of all educators believe such strategies are in place) and to which instructional decisions and the ability to craft teaching techniques are placed in the hands of teachers (64 percent and 61 percent, respectively, believe teachers are so empowered). On the other hand, teacher presence appears to be almost nonexistent in other areas of empowerment. Less than half of all educators (40 percent) believe that teachers are involved in decision-making about educational issues, and a large majority do not believe that teachers play large or significant roles in many areas of school-level decision-making, such as in the development of discipline policies (19 percent), school improvement planning (18 percent), and the determination of professional development content (17 percent). In fact, fewer than one in twenty believes that teachers play a large or significant role in hiring or budgeting, and nearly two-thirds (66 percent and 65 percent, respectively) believe that teachers play absolutely no role at all in these two areas (Table 14).

Table 14. **Educator Impressions of Empowerment Issues**

Empowerment Item:		Percent Agreeing
In this school we take steps to solve problems.		66%
Teachers are trusted to make sound professional decisions about instruction.		64%
Professional development activities enhance teachers' skills as instructional leaders.		60%
Teachers are respected as professionals.		59%
The faculty has an effective process for making group decisions and solving problems.		50%
Opportunities for advancement within the teaching profession are available to me.		41%
Teachers are centrally involved in decision making about educational issues.		40%
What role do teachers at your school play in:	**No role**	**Large / primary role**
Devising teaching techniques	4%	61%
Setting grading and student assessment practices	9%	48%
Selecting instructional materials and resources	6%	47%
[Use of] Education Enhancement Funds	39%	24%
Establishing and implementing policies and student discipline	28%	19%
School improvement planning	29%	18%
Determining the content of in-service prof. devel. programs	26%	17%
The selection of teachers new to this school	66%	5%
Deciding how the school budget will be spent	65%	4%

The gulf between principal and teacher perceptions is again wide on all survey items, but it is the differences in the *sizes* of those gaps that is most telling. In some of the areas of school-level empowerment mentioned above (such as hiring practices and budgeting), it is not surprising to find principals and teachers alike agreeing that teachers play only a small role, but in many other areas of school-level decision-making, teacher and principal perception of teacher involvement is startlingly different. Also, and more so than in other states surveyed in 2007, teacher and principal perceptions of the roles teachers play in primarily classroom-level decision-making are quite divergent. For example, 82 percent of principals believe that teachers have a large or primary role in selecting instructional materials and resources, but less than half of the teachers surveyed (45 percent) agree. These discrepancies are discussed in greater detail in the **General Findings** section above, and complete data on differences in teacher and principal perceptions is available in **Appendix B**.

The empowerment domain is one of the few domains in which there are marked differences on any survey item among educators across ethnicities. While educator impressions of most em-

powerment items are relatively similar across ethnicities, it may be important to note that African-American educators have a much stronger sense of opportunities for advancement than do their white peers (49 percent to 39 percent). Also, African-American educators are much more likely to believe that there are available professional development opportunities that enhance their skills as instructional leaders.

Time

Though at least 40 percent of all educators respond positively to every general question about time availability, it is the only domain in which there are no *overwhelmingly* positive responses (none for which over 60 percent of all educators respond positively). The most promising impressions are in the areas of reasonable class size and protection from classroom interruptions, but with overall positive perceptions of these working conditions at only 54 percent and 57 percent, respectively, it appears that time may be the domain in which the most work will need to be done (Table 15).

Table 15. **Educator Impressions of Time Issues**

Time Item:	Percent Agreeing
Teachers are allowed to focus on educating students with minimal interruptions.	57%
Teachers have reasonable class sizes, affording them time to meet the educational needs of all students.	54%
Teachers have time available to collaborate with their colleagues.	50%
Teachers are protected from duties that interfere with their essential role of educating students.	50%
The non-instructional time provided for teachers in my school is sufficient.	48%
Efforts are made to minimize the amount of routine administrative paperwork I am required to do.	40%

Even so, there are some suggestions that most teachers understand the difficulty of improving the availability of this precious commodity; only about 15 percent of them listed it as the domain that most affects their willingness to continue working in their current schools.

Despite the overall low ratings of items in this domain, there are still substantial discrepancies in principal and teacher perceptions on nearly every item, as noted earlier. However, there are a few areas in which principals appear to be at least somewhat more sensitive to the perceptions of their teachers with respect to time availability. Nearly a quarter of all principals do not agree that class sizes are reasonable (22 percent) or that teachers' non-instructional time is sufficient (23 percent). These percentages may not seem overly large, but compared to the much more enthusiastic impressions of principals on other time domain items (and most other items throughout the survey), they are worth noting. Similarly, though it is by no means a majority, some principals appear to be at least partially aware of the number of hours that teachers report working beyond the stipulations of their contracts, as well as the limited availability of non-instructional time (Table 16). There is still much work to be done to bring teachers and principals closer in their shared perceptions of these working conditions, but on some aspects of time availability, at least, the gap appears to be closing.

Table 16. **Principals' Awareness of Teacher Time Pressures**

Time Item:	Percent of Principals *not* Agreeing
Teachers have reasonable class sizes for meeting the educational needs of all students.	22%
Teachers have time available to collaborate with their colleagues.	18%
The non-instructional time provided for teachers in my school is sufficient.	23%
Teachers are protected from duties that interfere with educating students.	14%
Teachers are allowed to focus on educating students with minimal interruptions.	11%

	Percent agreeing: *Teachers*	*Principals*
In an average week of teaching, teachers have five or more hours non-instructional time available.	4%	61%
In an average week of teaching, teachers spend five or more hours on school-related activities outside the regular school work day.	9%	48%

Professional Development

Educator responses to facilities and resources survey items may have been the most consistently *positive*, but educator responses to some of the professional development survey items are clearly and consistently the *highest* of any across all domains. With the exception of a lukewarm perception of the availability of opportunities for learning from each other (with only 57 percent indicating that those opportunities are present), educators in general and teachers in particular are enthusiastic about not only the quality of their professional development but also the practical utility of that professional development. In fact, *in every area of professional development surveyed*, more than 80 percent of teachers who received at least 10 clock hours of training believe not only that the training they received provided them with strategies that they could use, but also that those strategies were useful in making a difference with their students.

There are a few issues to be concerned about, however, with respect to the content of the training that is provided. Based on teacher responses, it does not appear that the *types* of professional training they believe they most need in order to be successful in the classroom are always readily available to them. For example, 50 percent express a need for professional development to help them with their special needs populations, but only 26 percent indicate that they have received at least 10 hours of such training in the past two years. On the other hand, only 25 percent express a need for training in methods of teaching, but well over 40 percent report receiving a significant amount of such training. Furthermore, it appears that administrators are not in synch with their teachers with respect to professional development needs; while they agree with their teachers that there is a pressing need for special needs training and for instruction on how to close the achievement gap, they are much more certain than are their teachers of a need for things like classroom management training and training in methods of teaching (Table 17).

***Table 17*. Perceived Professional Development Needs and Availability, Teachers versus Administrators and Other Educational Professionals**

Support Item:	Percent indicating a need: *Teachers*	*Admins./ Others*	Percent of teachers receiving 10+ clock hours, past two years
Special Education (Students with Disabilities)	50%	69%	26%
Closing the Achievement Gap	43%	55%	18%
Reading	39%	54%	34%
Classroom Management	34%	69%	35%
Methods of Teaching	25%	46%	42%
Student Assessment	21%	34%	33%
Special Education (Academically Gifted Students)	20%	29%	6%
Content-Area Professional Development	16%	24%	39%
Limited English Proficiency (LEP)	8%	19%	3%

Differences among educators across ethnicities similar to those noted above in the section on **Empowerment** are also apparent on several items addressing specific professional development issues. African-American educators are much more likely than are their white colleagues to believe that the professional development available to them provides teachers with the knowledge and skills most needed to teach effectively (73 percent versus 59 percent) and that there are multiple opportunities for learning from one another (66 percent versus 55 percent). Since it is unlikely that these differences in perception are the result of actual differences in the provision of professional development across ethnicities, it may be in the state's interest to examine further the ways in which educators of different ethnic backgrounds think about and utilize their professional development.

Analyses of Teaching and Learning Conditions Impacts on Teacher Attrition and Student Achievement

As the data suggest, working conditions can and do matter to teachers, and they also appear to contribute to their career decisions. In this section of the report, we carry our analyses one step further by constructing statistical models that unpack these effects more precisely. The first set of models helps to draw clearer connections between teacher working conditions and teacher career decisions, factoring in several additional variables not included in the Teacher Working Conditions Survey itself, such as district support from the Critical Teacher Shortage Act and student body characteristics. The second set of models begins the longer and more difficult task of connecting the impact of teacher working conditions to student learning in the form of annual achievement test gains. Due to data limitations and the short length of the timeframe under scrutiny (one academic year), this second set of models cannot fully estimate the impact of teacher working conditions on student learning, but it does lay the groundwork for future in-depth studies of this vital connection.

Teacher Working Conditions and Teacher Attrition

The first set of analyses for this final part of the study is based on a statistical procedure that is designed to help uncover the degree to which several potential influences on a teacher's decision to stay at a school actually impact that decision. Because the outcome that the procedure attempts to explain is binary (*i.e.*, the outcome for any given teacher is one of two choices: stay at the current school versus move to another school or leave teaching entirely), the specific procedure used is a logistic regression model. Logistic regressions help to examine the apparent relative impact of multiple factors on a binary outcome. The regression procedure was applied to three different groups of teacher respondents—elementary school teachers, middle school teachers, and high school teachers. A full explanation for this procedure, along with all of the numerical results, can be found in **Appendix E: Methodology**.

Results

Impact of Teacher Perceptions of Teacher Working Conditions

Teacher perceptions of many teacher working conditions appear to have an impact—and sometimes powerfully so—on career intentions. Teacher responses to representative survey questions from each domain were included in our analyses, and at every school level, several of them were significantly associated with career intent. Results discussed below are summarized in Table 18 at the end of this section.

As has been suggested by many of the other findings in this report, our analyses continue to demonstrate the importance of quality school leadership for the retention of teachers. In particular, the atmosphere created by school leadership appears to contribute in a number of ways to teacher career decisions. For instance, at every school level, teacher perceptions of the ways in which school leaders handle teacher evaluations are directly and positively related to career intent: teachers who believe that these evaluations are handled in an appropriate manner are between 22 percent (high school) and 32 percent (elementary school) more likely to stay than are their peers who have less positive perceptions of this critical leadership responsibility. Readers may recall our earlier observation that early-career leavers are much more likely than are more experienced leavers to express concerns about this same leadership component, further demonstrating the importance of the care with which school leaders approach this task. Similarly, teachers who sense that they are respected as professionals are more likely to stay, especially at the middle school level, where agreement with this statement is associated with an increase in the likelihood of wanting to stay of 70 percent. Given the fact that middle school teachers tend to be more likely than their peers at other school levels to report a desire to leave in the first place (17 percent indicate that they will leave, compared to 16 percent of high school teachers and only 13 percent of elementary school teachers), this finding should be of particular interest to middle school administrators.

Also related to school leaders' creation of a positive school environment is the degree to which teachers believe that leaders make sustained efforts to address teacher concerns, most particularly in the area of classroom management and discipline. Teachers who believe that their school leaders respond to their concerns about classroom management and discipline are between 33 percent (high school) and 61 percent (elementary school) more likely to stay than are teachers who do not sense that their school leaders respond to such concerns.

Finally, and perhaps most critically, teachers who perceive an atmosphere of trust and mutual respect at their schools are much more likely to want to remain at their schools than are their peers who do not hold the same impression. These teachers are between 44 percent (high school) and 67 percent (elementary school) more likely to stay—the largest across-school-levels impact of any item analyzed in our models. Not surprisingly, teacher feelings of safety also impact future career intentions, especially at the high school level, where teachers who feel safe are a sizeable 72 percent more likely to stay than are other teachers.

There are also several other aspects of teacher working conditions that appear to have an impact on teacher career intentions at specific school levels. For instance, efforts to minimize paperwork and opportunities for teachers to have more input in devising teaching techniques are associated with an intent to stay among elementary and middle school teachers, and perceptions of the presence of a shared vision among all faculty and staff are also associated with an intent to stay among elementary and high school teachers. Interestingly, the only aspect of teacher working conditions in our analyses that did not appear to be related to teacher career intentions at the elementary school level—the belief that teachers are trusted to make sound professional decisions about instruction—was significantly associated with an intent to stay among both middle and high school teachers, who are between 47 percent (middle school) and 62 percent (high school) more likely to intend to stay if they sense that they are so trusted.

Impact of Other Teacher and School Characteristics

The main focus of this section of the report is the impact of teacher working conditions on teacher attrition, but several outcomes associated with some of the non-working conditions variables are also worth noting here. Most of the results in this section are also summarized in Table 18.

The two most important findings have to do with location and experience. First, it is interesting to note the apparent pull that living in a small town has on some Mississippi teachers. For elementary and high school teachers, teaching in these communities is associated with a greater likelihood that a teacher will want to stay (compared to teachers in schools in urban fringes), and for high school teachers, the allure persists across *all* rural settings, with high school teachers between 33 percent more likely (in rural areas within a metropolitan region) and 55 percent more likely (in rural and remote areas) to stay than their peers in urban-fringe districts. However, the rural setting appears to have the opposite effect on middle school teachers; they are only 67 percent as likely as middle school teachers in urban fringes to want to stay. Middle school teachers are even more averse to staying in Mississippi's most urban settings, with their likelihood of staying a mere 60 percent of that of middle school teachers in urban fringes. These vast differences across school levels in teacher willingness to stay with respect to location may indicate the need for Mississippi education officials to investigate further the differences in teacher working conditions across school levels in different regions and settings.

The second and perhaps more critical finding related to non-teacher working conditions factors has to do with teacher experience, and it should come as no surprise, based on some of the findings presented earlier in this report: teachers with little to no teaching experience are much less likely than are their mid-career peers to want to stay in their current schools. The data are particularly disconcerting at the high school level, where inexperienced teachers are only about half as likely (52 percent as likely) as their more experienced peers to want to stay, again perhaps pointing to the importance of better and more comprehensive induction and mentoring for early-career teachers. Late-career teachers are also more likely to want to leave than are mid-career teachers, but this discrepancy is most likely due to the fact that they are reaching retirement age and not due to any particular differences in their perceptions of teacher working conditions or of other school factors.

Though they are not statistically significant at all levels, two final implications do bear mentioning here. First, female teachers appear to be more likely to intend to stay in their current schools than are their male counterparts, all else being equal, and this finding is statistically significant at the high school level (where female teachers are about 27 percent more likely to stay than are their male peers). This pattern is consistent with research that suggests that male teachers are more likely to pursue and be awarded non-teaching administrative promotions, [20] or even to leave the profession altogether to seek greater remuneration in other fields or administrative positions. Though evidence of this kind is merely suggestive at best, it may behoove the state to investigate the degree to which all teachers are supported in their efforts to pursue advancement in the field of education, regardless of gender. While only 15 percent of the classroom teachers in Mississippi who responded to the survey are male, fully 45 percent of all principals and 47 percent of all assistant principals who responded to the survey are male, and female educators are somewhat less likely than are their male peers (41 percent versus 45 percent) to perceive that other non-administrative opportunities for advancement within the teaching profession are available to them.

The second implication of particular interest to Mississippi educators and policy-makers is the degree to which the Critical Teacher Shortage Act appears to be impacting teacher retention. Though the results are statistically significant at only one school level (the elementary level), at all three levels, the relationship between being in a CTSA district and teacher retention is negative; at the elementary level, teachers in CTSA districts are only 72 percent as likely to stay as are teachers in non-CTSA districts. It is difficult to draw meaningful conclusions from these data, primarily because we are unable to determine whether the rate of retention in CTSA districts, while still being less than the rate of retention in non-CTSA districts, has *improved* since the implementation of the Act in 1998. To be sure, retention remains a problem in CTSA districts, but longitudinal data of a type not available for this report are required to answer the key question of whether conditions with respect to teacher retention are nevertheless *improving* in these key districts.

A Note on Likelihoods and Probabilities

All of the results above are reported in terms of the change in the *likelihood*—or the change in the *odds*—that a teacher intends to stay, given a change in a certain condition or characteristic. Changes in likelihood can be quite large, but the reader is cautioned to note that a change in likelihood is not the same as a change in *probability* (see **Appendix E** for more explanation of the difference). All changes in likelihood discussed above are converted into changes in probability in Table 18.

Table 18. **Changes in Likelihood of Staying and in Probability of Staying**

	Increase or decrease in likelihood of staying, controlling for other variables			Probability of staying, controlling for other variables		
	Elementary	*Middle*	*High*	*Elementary*	*Middle*	*High*
Overall Probability of Staying →				**87%**	**83%**	**84%**
Factor or Characteristic:						
Teacher Characteristics						
Female	1.261	1.090	1.272 *	90%	84%	87%
Less than 4 years of experience	0.720 *	0.757 *	0.523 *	**83%**	**78%**	**73%**
More than 20 years of experience	0.821 *	0.908	0.724 *	85%	81%	79%
African-American	1.154	1.304 *	0.892	89%	86%	82%
Student Characteristics						
School met minimum response rate threshold	0.815	0.604 *	0.989	85%	74%	84%
Percent African-American students	0.900	0.801	0.762 *	86%	79%	80%
School size	1.001 *	1.000	1.000	87%	83%	84%
2007 Mississippi ALI Index Rating	1.001 *	1.002 *	1.000	87%	83%	84%
School is in CTSA District	0.719 *	0.764	0.779	83%	78%	80%
Urbanicity (compared to schools in urban fringes)						
Mid-size City	0.780	0.597 *	1.269	84%	74%	87%
Rural (inside MSA)	1.295	0.817	1.333 *	90%	79%	87%
Rural (outside MSA)	1.451 *	1.170	1.552 *	91%	85%	89%
Small Town	1.604 *	0.667 *	1.534 *	**92%**	**76%**	**89%**
Teaching and Learning Conditions (Positive vs. Negative Impression)						
Teachers/staff work in safe school	1.236 *	1.425 *	1.721 *	**90%**	**87%**	**90%**
Teachers have reasonable class sizes	1.147 *	0.943	1.132	89%	82%	86%
Non-instructional time is sufficient	1.240 *	1.006	1.065	90%	83%	85%
Efforts made to minimize administrative paperwork	1.383 *	1.619 *	1.196	91%	88%	86%
Teachers are respected as professionals	1.381 *	1.700 *	1.478 *	**91%**	**89%**	**89%**
Teachers trusted to make good decisions about instruction	1.071	1.468 *	1.618 *	88%	87%	89%
Teachers play large role in devising teaching techniques	1.366 *	1.220 *	0.920	90%	85%	83%
Professional development enhances instructional leadership skills	1.342 *	1.373 *	1.267 *	**90%**	**87%**	**87%**
Teacher performance evaluations handled appropriately	1.243 *	1.320 *	1.223 *	**90%**	**86%**	**87%**
Leaders address classroom management concerns	1.374 *	1.605 *	1.330 *	**90%**	**88%**	**87%**
School atmosphere of trust/respect	1.673 *	1.532 *	1.444 *	**92%**	**88%**	**88%**
Faculty and staff have a shared vision	1.206 *	1.109	1.334 *	89%	84%	87%
Staff members recognized for accomplishments	1.237 *	1.135	0.994	90%	84%	84%
Leadership supports teachers when needed	1.457 *	1.101	1.200	91%	84%	86%

* = result is statistically significant
Bold = characteristics or conditions indicate statistical significance across all three school levels

Teacher Working Conditions and Student Achievement

The second set of analyses for this final part of the study is designed to identify some of the links between multiple school factors—including teacher working conditions—and student achievement. It is relatively common to encounter studies of this kind in which student achievement is represented by a single achievement score for the year of interest; however, such studies often confuse a strong *relationship* between such scores and various explanatory factors with some degree of *causal explanation for* those scores.

Consequently, when studying the relationship between teacher assessment of their working conditions and the achievement scores of the students in their schools, it is not at all surprising to find a strong positive relationship between high working conditions ratings and high student scores. Such a relationship does not mean, however, that one factor (good teacher working conditions) *causes* the other (high student scores). It is equally as plausible, for example, that teachers who work with higher-achieving students tend to rate their working conditions more favorably than do teachers who work with lower-achieving students, which would imply that the achievement scores might be causing the working conditions ratings, instead of the other way around.

To counter this potential misinterpretation, the analyses below examine the relationship between student achievement *gains*, teacher working conditions, and other factors. In other words, the analyses attempt to make links between the degrees of change in overall student achievement from year to year and several factors that might make those gains more likely, including working conditions. The analyses are based on a statistical procedure that is designed to help uncover whether a factor is clearly related to the variable of interest (in this case, to gains in student achievement). Unlike the analyses employed for examining a binary choice of staying or leaving, the outcomes these analyses attempt to explain are continuous (*i.e.*, the outcome for any given school is any point along a range of possible negative or positive gains in scores from one year to the next), and the specific procedure used is called a multiple regression. This regression procedure was applied to the Mississippi Achievement Level Index (ALI) values for each school at three different school levels — elementary schools, middle schools, and high schools. A full explanation of this procedure, along with all of the numerical results, can be found in **Appendix E: Methodology**.

Summary of Results

Several aspects of teacher working conditions appear to be significantly related to 2007 student achievement gains, but there is no clear pattern across all school levels, and the associations are sometimes negative. For instance, at the elementary level, faculty commitment and the overall quality of facilities and resources appear to be positively associated with student gains, while the association between protection of teachers from extra duties and student achievement is weakly negative. At the high school level, protection from duties is positively related to student achievement, but none of the other representative working conditions areas appears to be positively and significantly related. In fact, professional development in support of instructional leadership is *negatively* associated with student achievement. At the middle school level, none of the representative working conditions appears to have a statistically significant impact on student achievement.

One possible reason for these mixed findings may be that, while teacher responses to questions about their working conditions are very good indicators of individual perceptions of school

working conditions, these same individual teacher perceptions can be somewhat subjective and in some cases may not aggregate well into strong objective indicators of school-wide working conditions. Therefore, in an attempt to address this potential weakness in the analysis and to make more sense of the mixed results above, we also included in our models an additional proxy for teacher working conditions: the proportion of teachers in a school who indicate that they will return to their schools the following year. Because it distinguishes between an individual complaint or concern and a more general feeling of comfort at a school, this variable captures well a sense of the overall teacher satisfaction with working conditions at a school.[21] As with our other measures of teacher working conditions, however, the results continue to be mixed. At the middle school level, the apparent impact of teacher retention on student achievement is positive; however, this impact is not strong enough to be considered statistically significant. At the elementary and high school levels, the degree of teacher retention does appear to have a statistically significant impact, but that impact is negative, implying that the greater the number of teachers who want to stay in their schools, the lower the gains in achievement. Similarly, whether a school is located in a CTSA district appears to have a significant impact on student gains only at the high school level, and even then, as was the case in the teacher retention analyses above, the impact appears to be slightly negative.

What can we make of these mixed and at time disconcerting results? Fortunately, we can start to find some answers by examining the effects of some of the other factors included in our model. We know from our earlier analyses that positive teacher working conditions are associated with positive teacher retention. In schools where working conditions lag, teacher retention is more likely to suffer, and schools are more likely to have to rely on inexperienced teachers to fill vacancies. As it turns out, at the elementary and high school levels, one factor that is clearly negatively associated with student achievement gains is the proportion of teachers at a school who are in the early stages of their teaching careers. A similar factor to consider is the potential differences in the relative *quality* of the teachers at each school. Just because a school has a high teacher retention rate does not mean that the school is retaining *the best* teachers. We do not have any direct measures of teacher quality in our model,† but we do have one *indirect* measure —teacher preparation. Though significant only at the elementary school level, the proportion of a school's traditionally-prepared master's-level teachers appears to be positively related to gains in student achievement.

One lesson we are beginning to learn from analyses of this type in Mississippi and in other states is that, while making direct connections between teacher working conditions and teacher retention is a relatively straightforward task, establishing the same links to student achievement is not nearly as simple. Our preceding analyses and analyses conducted for other research projects all suggest that teacher working conditions can indeed have a positive impact on student achievement, but such an impact is not likely to be detectable in a single-year, snapshot study such as this one, especially when the overall number of schools in two of the three samples (middle and high school) is so low (in both cases, under 170 schools). A more sophis-

† Though a question about one potential measure of teacher quality—National Board Certification—was included in the 2007 survey, we did not include these data in our analyses. Over 3,200 survey respondents (with all survey respondents making up only about two-thirds of the entire population of Mississippi educators) identified themselves as National Board Certified, but data from the National Board of Professional Teaching Standards (http://www.nbpts.org/) indicate that only about 2,700 of all Mississippi teachers are Board Certified. Relative unfamiliarity with the certification may have led many teachers to incorrectly indicate that they have this certification. We excluded the data from our analyses because of the unreliability of survey responses to this question.

ticated, longitudinal study that accounts for gradual changes in school working conditions over time, that factors in other time-sensitive variables (such as administrator turnover and relative changes in student demographics), and that includes a larger pool of schools is necessary to allow for the possibility of identifying these important but often indirect or gradual effects.[22]

A Note on Critical Teacher Shortage Act Districts

Since its passage in 1998, the Mississippi Critical Teacher Shortage Act (CTSA) has provided academic and financial support for teachers-in-training who commit to teaching in one of 47 school districts that has been historically difficult to staff, moving and housing assistance for teachers who relocate to one of those districts, and ongoing mentoring and professional development support for teachers in CTSA districts once they begin their careers. The wide-sweeping Act also provides paid sabbaticals for teachers who want to become administrators and who commit to returning to Mississippi schools. One of the goals of the program is to attract and retain talented and well-trained teachers, and this analysis of teacher working conditions across districts provides an excellent opportunity to investigate not only the degree to which that goal is being met but also the level of impact CTSA is having on student outcomes.

As noted in the previous analyses, while districts that benefit from the provisions of CTSA may have experienced improvement in both student achievement and teacher retention since 1998, they do not yet appear to be on par with other Mississippi districts. In this section, we explore some of the specific differences between these districts that might help to clarify from a teacher working conditions perspective why the gap persists as the Act enters its tenth year, and on what areas of teacher working conditions state education leaders still need to act in order to help bring student performance and teacher retention in line with other districts across the state.

Initial comparisons between survey responses of Critical Teacher Shortage Act educators and educators in other districts are not overly promising. In general, CTSA districts are characterized by a tendency to be perceived by the educators who work in them as less likely to possess a number of critical teacher working conditions. Overall, educators in these districts are less likely to think of their schools as good places to work and learn (64 percent versus 76 percent) or as being safe (71 percent versus 81 percent; Table 23). The domain with the most consistent discrepancies in perceptions among educators is facilities and resources, where CTSA educators rate their schools lower in every area than do educators in other districts. From a lack of supplies such as office equipment and instructional materials to a lack of support in the form of professional personnel such as school counselors and social workers, educators in these districts are much more likely to perceive multiple deficiencies in terms of their facilities and resources. Unlike in most other comparisons in this report, however, there do not appear to be too many substantial differences in the domains of leadership and empowerment, which is a good sign for the eventual success of CTSA. There is one critical difference, however, that could impact the Act directly: CTSA educators are less likely to report the presence of an atmosphere of trust and mutual respect within their schools than are other educators (52 percent versus 62 percent), a difference that could continue to weigh on these districts' already-limited abilities to retain new teachers (Table 19).

Table 19. **Comparison of Selected Survey Items, CTSA vs. Non-CTSA Schools**

Survey Item:	CTSA	Non-CTSA	Difference in Percentage Points
Overall Conditions			
My school is a good place to work and learn.	64%	76%	12
Facilities & Resources			
Teachers have sufficient access to office equipment and supplies such as copy machines, paper, pens, etc.	57%	68%	12
Teachers have sufficient access to a broad range of professional personnel.	58%	69%	11
Teachers and staff work in a school environment that is safe.	71%	81%	10
Teachers have sufficient access to appropriate instructional materials and resources.	65%	75%	10
Leadership			
There is an atmosphere of trust and mutual respect within the school.	52%	62%	10

In addition, when educators in CTSA districts do rate certain teacher working conditions higher than do their peers in other districts, the differences in the ratings are marginal at best. These results hold even when survey responses are disaggregated by school level.

In general, then, even though the statistical analyses summarized above do not reveal conclusive and across-the-board negative associations between Critical Teacher Shortage Act district designation, teacher attrition, and student achievement, there appears to be little in the way of positive news as of yet for these districts, at least in terms of teacher working conditions. These data may provide a richer context for interpreting the findings in the previous analyses, but they should also serve as one more reason for the state to consider undertaking additional studies that are informed by more detailed and more longitudinally expansive data.

Conclusions

Mississippi has done much to improve the quality of its teacher workforce, as evidenced by nearly a decade of sound policy implementation designed to address teacher shortages in critical need areas. Under the leadership of Superintendent Bounds, much has been learned from Mississippi's first statewide assessments of teacher working conditions that can help the state to continue this important work. An extremely high educator response rate (67 percent), coupled with responses that are as representative of educators of students of color and students of low economic means as they are of educators of students of privilege, has helped to bring to light a number of important findings.

On the positive side, large proportions of Mississippi educators believe that their schools are good places to work and learn and that they and their colleagues are committed to helping every student learn. In addition, approximately 85 percent of the respondents on the 2007 Mississippi Teacher Working Conditions Survey indicated that they intended to stay in their current schools at the end of the school year. Furthermore, Mississippi appears to be achieving across-the-board satisfactory working conditions in the area of facilities and resources, with educators expressing positive impressions of every surveyed aspect of this domain, and educators are also enthusiastic about the quality and usefulness of the professional development made available to them. Finally, certain sub-sets of educators who are often assumed to work under the least supportive conditions, such as many educators who work in rural communities or in schools with the greatest proportion of disadvantaged students, are often nearly as positive or sometimes even more positive about their working conditions and their willingness to remain in teaching as are their peers in other school settings.

However, survey results also reveal that much work remains to be done in Mississippi to improve teacher working conditions. To begin with, while educator perceptions of teacher working conditions in schools with the highest proportion of disadvantaged students often are nearly on par with those of their peers in schools with more privileged students — suggesting the effectiveness of efforts to raise standards for educators in these schools — perceptions in schools with only slightly fewer numbers of disadvantaged students are consistently low. This finding suggests that the state may need to cast a wider net in its efforts to meet the working conditions needs of its most challenging schools.

Perhaps even more pressing are disparities in perceptions that are evident in *all* schools, starting with disparities among educators across positions. Administrators and teachers consistently hold vastly different perceptions of working conditions, and teacher perceptions are always far more negative. The greatest perception gaps are found in the degree to which administrators and teachers believe that teachers are able to participate in many areas of school-level decision-making. These differences in perception are more than simply academic; the survey results also reveal that positive perceptions of school leadership and teacher empowerment are critical to

teacher retention. Using survey data to ensure that all faculty understand each others' perceptions of teacher working conditions—both positive and negative—is an essential first step in helping educators to move forward with school improvement planning, but bridging the gap will require more than just a perusal of survey data. One group of teacher leaders who recently studied issues related to staffing and supporting high-needs schools—Mississippi National Board Certified teachers—even called for "administrators and [other] school leaders to remain current by participating in classroom instruction and working directly with students."[23]

Of equal concern is the state of teacher mentoring across Mississippi. Our analyses revealed that many early-career teachers are not mentored at all, but that those who are mentored are more likely to remain in the classroom. In addition, though their numbers are small, there are several early-career teachers who have been asked to serve as mentors themselves. Finally, survey results indicate that a sense of their effectiveness with students has a lot to do with teachers' career intentions. Coupled with the increasing percentage of new teachers who enter the classroom without full preparation, these findings suggest the need for further investigation into how traditional and alternative preparation recruits are mentored, how they view their effectiveness with students, and the impact these variables have on retention. Indeed, one of the strongest recommendations from the National Board Certified teachers at the Mississippi policy summit was to "fund and implement the state's mandatory mentoring program for all novices and/or teachers in need, supported by highly skilled, trained mentors who are compensated and provided release time from their daily schedule to collaboratively plan, coach, and observe their mentees."[24]

In terms of overall working conditions, *time* is the domain about which Mississippi educators express the most consistent concerns, and it is quite possibly the area in which the most work needs to be done statewide. Only 20 percent of the state's teachers report that they have at least an hour a day of non-instructional time available to them, and only about half report that they have time available to collaborate with their colleagues. The problem of insufficient time for teachers to reflect on—much less do—their work is pervasive nationwide and certainly not indigenous to Mississippi. Many policy reports have been written on the subject, but not enough is being done, and the time may be ripe for Mississippi to take a leadership role in efforts to confront and solve this persistent challenge to schools everywhere. There are impressive examples scattered across the nation of how schools can alter their curricula and schedules to provide teachers with more time to think and learn from each other; investigating some of these examples may be a good first step for the state to take.

Finally, our statistical analyses attempted to hone in on the degree to which working conditions affect teacher retention and student achievement, especially in the state's critical needs school districts. We found that the relationship between being in a CTSA district and teacher retention remains uniformly negative across all school levels, and at the elementary level (where we have the most confidence in the strength of these findings), teachers in CTSA districts are only 72 percent as likely to stay as are teachers in non-CTSA districts. However, without longitudinal data, we are not willing to draw specific conclusions, primarily because we are unable to determine whether the rates of retention in CTSA districts, while still being less than the rates of retention in non-CTSA districts, have *improved* since the implementation of the Act in 1998. Similarly, in our efforts to uncover the specific relationships between overall working conditions and student achievement gains across Mississippi's schools, findings are mixed, but not definitively so. Teacher working conditions can indeed have a positive impact on student achievement and teacher retention, but without access to more and better data in the forms of higher survey response rates, survey responses from all schools, actual teacher turnover rates, and more de-

tailed student achievement data, the connections between teacher working conditions, student achievement, and teacher retention suggested by many of these analyses will remain less powerful than they can be.

Looking Ahead

CTQ research findings suggest the following recommendations:

- Survey data can reveal trends and impressions, but it is often limited in its ability to explain *why* those trends and impressions exist. State policymakers should consider sponsoring follow-up case studies to investigate in more depth why educators at certain schools have less positive impressions of their working conditions than do educators at other schools. The data from this survey indicate that a special focus on schools in the second quintile in terms of proportion of economically disadvantaged students—particularly at the middle school level—is warranted.

- Teaching quality can be improved at the level of the individual but also at the level of the teaching community as a whole, and time is one critical element for such systematic improvement. Administrators should experiment with new school schedules with the intention of providing more non-instructional time for teachers.

- The data suggest that mentoring impacts teacher retention, but both the quality and quantity of mentoring in Mississippi appears to vary widely. The state should conduct a thorough review or audit of mentoring efforts statewide. Given the enormous and constantly expanding mentoring needs of the states and the high cost of providing sound, on-the-ground mentoring, it may even be prudent for the state to consider some form of virtual mentoring.

- The wide disparities between the perceptions of administrators and teachers documented in Mississippi is not unusual; we have found similar disparities in our other state teacher working conditions studies as well. It is an important finding—a finding that calls for school-based, data-driven teacher working conditions conversations and professional development for administrators and teacher leaders alike. The state should encourage and help its administrators—through ongoing professional development as well as administrator preparation programs—to assess their leadership and empowerment practices, along with their interactions with teachers, in order to move toward improvement in these areas and toward establishing stable and committed faculty communities. Until all educators are able to understand each other's perceptions of teaching and learning conditions, sustained reforms to improve school climate will not be prioritized.

- The results of statistical analyses conducted for this report are encouraging and informative, but they suffer from a dearth of precise and detailed data. The state should develop more robust teacher, student, and administrator data systems that can track teacher and administrator responses to teacher working conditions surveys longitudinally and link these data with actual teacher turnover figures and robust measures of student achievement.

- Mississippi's survey response rate far exceeded those of other states and districts that conducted teacher working conditions surveys in 2007. Nevertheless, representation across districts and schools was unbalanced, hampering the degree to which the results truly reflect the state of working conditions in Mississippi. State policymakers should consider

implementing a follow-up telephone survey to investigate what made it possible for some schools to achieve high response rates, as well as what roadblocks prevented other schools from doing likewise.

Finally, as *Project CLEAR Voice* continues to help policy makers in their efforts to focus on improving teacher working conditions in Mississippi, it will become very important for district educators to begin to determine what constitutes "positive" results. In other words, when 64 percent of the state's teachers agree that they are trusted to make sound professional decisions about instruction, is this a "good" or "positive" outcome, or not? Sixty-four percent agree, but 36 percent do not, and *only about 14 percent* of the state's teachers strongly agree with this statement. If is this is a positive survey result, what would a negative one look like?

In conclusion, state education leaders should be commended for their efforts to improve teacher working conditions statewide. They have started down a path that will ensure that Mississippi's teachers are not only well-qualified but also well-supported and equipped with the resources they need to serve all children. Closing the achievement gap will require no less.

Appendix A. District Response Rates

Districts In Alphabetical Order	Total Number of Respondents	Estimated District Response Rate
Aberdeen	59	42.8%
Alcorn	146	43.5%
Amite County	80	73.4%
Amory	143	100.0%
Attala County	39	32.2%
Baldwyn	19	22.9%
Bay St. Louis	142	92.8%
Benoit	18	62.1%
Benton County	94	94.0%
Biloxi	399	90.9%
Booneville	83	87.4%
Brookhaven	27	11.0%
Calhoun County	190	100.0%
Canton	133	54.7%
Carroll County	75	87.2%
Chickasaw County	46	93.9%
Choctaw County	157	97.5%
Claiborne County	109	80.2%
Clarksdale	241	94.5%
Clay County	18	81.8%
Cleveland	157	53.4%
Clinton Public	0	0.0%
Coahoma AHS	23	71.9%
Coahoma County	90	62.1%
Coffeeville	34	60.7%
Columbia	65	47.5%
Columbus	333	86.1%
Copiah County	97	49.2%
Corinth	103	64.4%
Covington County	81	30.1%
DeSoto County	902	52.1%
Drew	50	96.2%
Durant	26	59.1%
East Jasper	70	72.9%
East Tallahatchie	93	76.2%
Enterprise	44	62.9%
Forest City	114	96.6%
Forrest AHS	35	68.6%
Forrest County	138	61.3%
Franklin County	17	11.9%
George County	253	85.5%
Greene County	139	88.0%
Greenville	379	69.4%
Greenwood	45	15.5%
Grenada	280	87.2%
Gulfport	439	93.2%
Hancock County	190	61.3%
Harrison County	720	86.4%
Hattiesburg	391	97.0%
Hazlehurst City	80	72.7%

Districts In Order of Estimated Response Rate, Highest to Lowest	Total Number of Respondents	Estimated District Response Rate
Amory	143	100.0%
Calhoun County	190	100.0%
Lawrence Co.	202	100.0%
Math & Science Acad	28	100.0%
MS for the Blind	33	100.0%
Natchez-Adams	333	100.0%
Pass Christian	122	100.0%
Quitman	174	100.0%
Sch of the Arts	12	100.0%
Union County	202	100.0%
Western Line	151	100.0%
Winona	102	100.0%
Pearl River	200	98.0%
Choctaw County	157	97.5%
Hattiesburg	391	97.0%
South Pike	156	96.9%
Newton City	91	96.8%
Forest City	114	96.6%
Drew	50	96.2%
West Bolivar	86	95.6%
Jones County	591	95.2%
Philadelphia	94	95.0%
Clarksdale	241	94.5%
Benton County	94	94.0%
Chickasaw County	46	93.9%
Picayune	253	93.4%
Gulfport	439	93.2%
Marshall County	219	93.2%
Bay St. Louis	142	92.8%
Indianola	184	92.0%
Noxubee County	147	91.9%
Petal	256	91.8%
Lamar County	564	91.6%
Humphreys County	106	91.4%
Hollandale	70	90.9%
Biloxi	399	90.9%
Tishomingo Co.	235	90.7%
Moss Point	240	88.9%
Pascagoula	532	88.5%
Lumberton	61	88.4%
Greene County	139	88.0%
Simpson County	261	87.6%
Booneville	83	87.4%
Grenada	280	87.2%
Carroll County	75	87.2%
Holmes County	206	86.9%
Harrison County	720	86.4%
Oktibbeha Co.	81	86.2%
Columbus	333	86.1%
Starkville	290	85.8%

Appendix A. District Response Rates (continued)

Districts In Alphabetical Order	Total Number of Respondents	Estimated District Response Rate
Hinds AHS	14	60.9%
Hinds County	64	14.1%
Hollandale	70	90.9%
Holly Springs	72	48.0%
Holmes County	206	86.9%
Houston Separate	99	63.1%
Humphreys County	106	91.4%
Indianola	184	92.0%
Itawamba County	204	67.6%
Jackson County	432	69.8%
Jackson Public	1,910	80.0%
Jeff.Davis Co.	80	46.2%
Jefferson Co.	96	85.0%
Jones County	591	95.2%
Kemper County	65	60.2%
Kosciusko	1	0.6%
Lafayette Co.	144	72.4%
Lamar County	564	91.6%
Lauderdale Co.	199	40.0%
Laurel	210	80.5%
Lawrence Co.	202	100.0%
Leake County	184	77.0%
Lee County	204	39.8%
Leflore County	163	75.1%
Leland	54	55.1%
Lincoln County	109	52.7%
Long Beach	168	67.2%
Louisville	176	72.7%
Lowndes County	318	77.0%
Lumberton	61	88.4%
Madison	421	51.6%
Marion County	151	76.7%
Marshall County	219	93.2%
Math & Science Acad	28	100.0%
McComb	158	61.2%
Meridian	274	50.5%
Monroe County	166	79.1%
Montgomery Co.	35	76.1%
Moss Point	240	88.9%
Mound Bayou	30	54.6%
MS for the Blind	33	100.0%
MS for the Deaf	30	79.0%
Natchez-Adams	333	100.0%
Neshoba County	156	75.7%
Nettleton	83	77.6%
New Albany	115	65.7%
Newton City	91	96.8%
Newton County	125	85.6%
North Bolivar	45	60.8%
North Panola	119	74.4%

Districts In Order of Estimated Response Rate, Highest to Lowest	Total Number of Respondents	Estimated District Response Rate
Newton County	125	85.6%
George County	253	85.5%
Ocean Springs	326	85.3%
Jefferson Co.	96	85.0%
South Delta	82	82.8%
Clay County	18	81.8%
North Pike	104	81.3%
Wilkinson Co.	96	80.7%
Pontotoc City	132	80.5%
Laurel	210	80.5%
Claiborne County	109	80.2%
Jackson Public	1,910	80.0%
Perry County	97	79.5%
Monroe County	166	79.1%
MS for the Deaf	30	79.0%
South Panola	263	77.8%
Webster County	112	77.8%
Sunflower County	108	77.7%
Nettleton	83	77.6%
Poplarville	131	77.5%
Lowndes County	318	77.0%
Leake County	184	77.0%
Marion County	151	76.7%
East Tallahatchie	93	76.2%
Montgomery Co.	35	76.1%
Neshoba County	156	75.7%
Leflore County	163	75.1%
North Panola	119	74.4%
Tunica County	138	74.2%
West Tallahatchie	68	73.9%
Amite County	80	73.4%
East Jasper	70	72.9%
Hazlehurst City	80	72.7%
Louisville	176	72.7%
Lafayette Co.	144	72.4%
Coahoma AHS	23	71.9%
Jackson County	432	69.8%
Greenville	379	69.4%
Forrest AHS	35	68.6%
Pearl	183	68.5%
West Jasper	90	68.2%
Prentiss County	151	68.0%
Itawamba County	204	67.6%
Long Beach	168	67.2%
Senatobia	82	66.7%
New Albany	115	65.7%
Pontotoc County	158	65.0%
Corinth	103	64.4%
West Point	162	64.3%
Scott County	178	64.3%

Appendix A. District Response Rates (continued)

Districts In Alphabetical Order	Total Number of Respondents	Estimated District Response Rate
North Pike	104	81.3%
North Tippah	33	31.4%
Noxubee County	147	91.9%
Ocean Springs	326	85.3%
Okolona Separate	41	51.3%
Oktibbeha Co.	81	86.2%
Oxford	113	43.0%
Pascagoula	532	88.5%
Pass Christian	122	100.0%
Pearl	183	68.5%
Pearl River	200	98.0%
Perry County	97	79.5%
Petal	256	91.8%
Philadelphia	94	95.0%
Picayune	253	93.4%
Pontotoc City	132	80.5%
Pontotoc County	158	65.0%
Poplarville	131	77.5%
Prentiss County	151	68.0%
Quitman	174	100.0%
Quitman County	82	61.2%
Rankin County	627	49.3%
Richton	5	8.1%
Sch of the Arts	12	100.0%
Scott County	178	64.3%
Senatobia	82	66.7%
Shaw	18	31.6%
Simpson County	261	87.6%
Smith County	135	60.5%
South Delta	82	82.8%
South Panola	263	77.8%
South Pike	156	96.9%
South Tippah	131	62.4%
Starkville	290	85.8%
Stone County	115	57.5%
Sunflower County	108	77.7%
Tate County	74	33.9%
Tishomingo Co.	235	90.7%
Tunica County	138	74.2%
Tupelo Public	0	0.0%
Union City	34	54.0%
Union County	202	100.0%
Vicksburg-Warren	227	33.8%
Walthall Co.	64	31.8%
Water Valley	71	64.0%
Wayne County	93	32.0%
Webster County	112	77.8%
West Bolivar	86	95.6%
West Jasper	90	68.2%
West Point	162	64.3%
West Tallahatchie	68	73.9%
Western Line	151	100.0%
Wilkinson Co.	96	80.7%
Winona	102	100.0%
Yazoo City	32	15.8%
Yazoo County	90	61.6%
Total	25,408	67.1%

Districts In Order of Estimated Response Rate, Highest to Lowest	Total Number of Respondents	Estimated District Response Rate
Water Valley	71	64.0%
Houston Separate	99	63.1%
Enterprise	44	62.9%
South Tippah	131	62.4%
Benoit	18	62.1%
Coahoma County	90	62.1%
Yazoo County	90	61.6%
Forrest County	138	61.3%
Hancock County	190	61.3%
McComb	158	61.2%
Quitman County	82	61.2%
Hinds AHS	14	60.9%
North Bolivar	45	60.8%
Coffeeville	34	60.7%
Smith County	135	60.5%
Kemper County	65	60.2%
Durant	26	59.1%
Stone County	115	57.5%
Leland	54	55.1%
Canton	133	54.7%
Mound Bayou	30	54.6%
Union City	34	54.0%
Cleveland	157	53.4%
Lincoln County	109	52.7%
DeSoto County	902	52.1%
Madison	421	51.6%
Okolona Separate	41	51.3%
Meridian	274	50.5%
Rankin County	627	49.3%
Copiah County	97	49.2%
Holly Springs	72	48.0%
Columbia	65	47.5%
Jeff.Davis Co.	80	46.2%
Alcorn	146	43.5%
Oxford	113	43.0%
Aberdeen	59	42.8%
Lauderdale Co.	199	40.0%
Lee County	204	39.8%
Tate County	74	33.9%
Vicksburg-Warren	227	33.8%
Attala County	39	32.2%
Wayne County	93	32.0%
Walthall Co.	64	31.8%
Shaw	18	31.6%
North Tippah	33	31.4%
Covington County	81	30.1%
Baldwyn	19	22.9%
Yazoo City	32	15.8%
Greenwood	45	15.5%
Hinds County	64	14.1%
Franklin County	17	11.9%
Brookhaven	27	11.0%
Richton	5	8.1%
Kosciusko	1	0.6%
Clinton Public	0	0.0%
Tupelo Public	0	0.0%
Total	25,408	67.1%

Appendix B. Teacher Perceptions vs. Principal Perceptions of Teacher Working Conditions

	Percent Agreeing		Difference in Percentage Points (Principal-Teacher)
	Teacher	Principal	
Time:			
Teachers have reasonable class sizes, affording them time to meet the educational needs of all students.	53%	78%	25
Teachers have time available to collaborate with their colleagues.	48%	82%	34
The non-instructional time provided for teachers in my school is sufficient.	46%	77%	31
Teachers are protected from duties that interfere with their essential role of educating students.	48%	86%	38
Efforts are made to minimize the amount of routine administrative paperwork I am required to do.	39%	67%	28
Teachers are allowed to focus on educating students with minimal interruptions.	55%	89%	34
Facilities and Resources:			
Teachers have sufficient access to appropriate instructional materials and resources.	72%	93%	21
Teachers have sufficient access to instructional technology.	71%	85%	14
Teachers have sufficient training and support to fully utilize the available instructional technology.	61%	76%	15
Teachers have sufficient access to communications technology, including phones, faxes, and e-mail.	71%	89%	18
Teachers have sufficient access to office equipment and supplies such as copy machines, paper, pens, etc.	64%	95%	31
Teachers have sufficient access to a broad range of professional personnel.	65%	83%	18
Teachers have adequate professional space to work productively.	67%	86%	19
Teachers and staff work in a school environment that is safe.	78%	97%	19

Appendix B. Teacher Perceptions vs. Principal Perceptions of Teacher Working Conditions (continued)

	Percent Agreeing		Difference in Percentage Points (Principal-Teacher)
	Teacher	Principal	
Empowerment:			
Teachers are respected as professionals.	57%	89%	32
Opportunities for advancement within the teaching profession (other than administration) are available to me.	40%	57%	17
Teachers are centrally involved in decision making about educational issues.	37%	84%	47
Teachers are trusted to make sound professional decisions about instruction.	63%	95%	32
In this school we take steps to solve problems.	64%	96%	32
The faculty has an effective process for making group decisions and solving problems.	48%	88%	40
Professional development activities enhance teachers' skills as instructional leaders.	59%	88%	29
Please indicate how large a role teachers have at your school in each of the following areas:			
Selecting instructional materials and resources	45%	82%	37
Devising teaching techniques	60%	89%	29
Setting grading and student assessment practices	48%	71%	23
Determining the content of in-service professional development programs	15%	45%	30
The selection of teachers new to this school	4%	17%	13
Establishing and implementing policies and student discipline	18%	45%	27
Deciding how the school budget will be spent	4%	20%	16
School improvement planning	16%	63%	47
[Use of] Education Enhancement Funds	22%	77%	55

Appendix B. Teacher Perceptions vs. Principal Perceptions of Teacher Working Conditions (continued)

	Percent Agreeing		Difference in Percentage Points (Principal-Teacher)
Leadership:	**Teacher**	**Principal**	
There is an atmosphere of trust and mutual respect within the school.	59%	94%	35
The school leadership communicates clear expectations to students and parents.	67%	97%	30
The faculty is committed to helping every student learn.	83%	95%	12
Teachers feel comfortable raising issues and concerns that are important to them.	54%	95%	41
The school leadership consistently enforces rules for student conduct.	56%	98%	42
The school leadership consistently supports teachers when needed.	64%	99%	35
The faculty and staff have a shared vision.	64%	92%	28
Opportunities are available for members of the community to contribute actively to this school's success.	70%	90%	20
Teachers are held to high professional standards for delivering instruction.	82%	98%	16
Teacher performance evaluations are handled in an appropriate manner.	75%	96%	21
The procedures for teacher performance evaluations are consistent.	71%	94%	23
Teachers receive feedback that can help them improve instruction.	69%	94%	25
Staff members are recognized for accomplishments.	64%	93%	29
The school leadership makes a sustained effort to address teacher concerns about:			
Leadership issues	49%	92%	43
Facilities and resources	62%	96%	34
The use of time in my school	59%	96%	37
Professional development	60%	93%	33
Empowering teachers	53%	96%	43
Classroom management of today's students	62%	98%	36
Overall, the school leadership in my school is effective.	60%	87%	27

Appendix B. Teacher Perceptions vs. Principal Perceptions of Teacher Working Conditions (continued)

	Percent Agreeing		Difference in Percentage Points (Principal-Teacher)
Professional Development:	**Teacher**	**Principal**	
Sufficient resources are available to allow teachers to take advantage of professional development activities.	63%	88%	25
Professional development provides teachers with the knowledge and skills most needed to teach effectively.	61%	90%	29
Teachers have multiple opportunities to learn from one another.	56%	89%	33

Appendix C. Teacher Perceptions of Teaching and Learning Conditions, by Career Intent

	Percent Agreeing			Range of Percentage Points
	Stayers	Movers	Leavers	
Time:				
Teachers have reasonable class sizes, affording them time to meet the educational needs of all students.	56%	38%	41%	18
Teachers have time available to collaborate with their colleagues.	51%	32%	36%	19
The non-instructional time provided for teachers in my school is sufficient.	49%	26%	35%	23
Teachers are protected from duties that interfere with their essential role of educating students.	52%	24%	32%	28
Efforts are made to minimize the amount of routine administrative paperwork I am required to do.	43%	17%	21%	26
Teachers are allowed to focus on educating students with minimal interruptions.	59%	26%	35%	33
Facilities and Resources:				
Teachers have sufficient access to appropriate instructional materials and resources.	75%	48%	62%	27
Teachers have sufficient access to instructional technology.	73%	53%	62%	20
Teachers have sufficient training and support to fully utilize the available instructional technology.	64%	42%	53%	22
Teachers have sufficient access to communications technology, including phones, faxes, and email.	74%	51%	60%	23
Teachers have sufficient access to office equipment and supplies such as copy machines, paper, pens, etc.	67%	41%	54%	26
Teachers have sufficient access to a broad range of professional personnel.	68%	41%	52%	27
Teachers have adequate professional space to work productively.	70%	47%	56%	23
Teachers and staff work in a school environment that is safe.	82%	47%	62%	35

Appendix C. Teacher Perceptions of Teaching and Learning Conditions, by Career Intent (continued)

	Percent Agreeing			Range of Percentage Points
	Stayers	Movers	Leavers	
Empowerment:				
Teachers are respected as professionals.	63%	22%	30%	41
Opportunities for advancement within the teaching profession (other than administration) are available to me.	43%	21%	24%	22
Teachers are centrally involved in decision making about educational issues.	41%	12%	19%	29
Teachers are trusted to make sound professional decisions about instruction.	67%	28%	42%	39
In this school we take steps to solve problems.	69%	24%	43%	45
The faculty has an effective process for making group decisions and solving problems.	53%	17%	28%	36
Professional development activities enhance teachers' skills as instructional leaders.	62%	34%	40%	28
Please indicate how large a role teachers have at your school in each of the following areas:				
Selecting instructional materials and resources	48%	25%	34%	23
Devising teaching techniques	64%	35%	46%	29
Setting grading and student assessment practices	50%	30%	37%	20
Determining the content of in-service professional development programs	17%	5%	10%	12
The selection of teachers new to this school	5%	2%	2%	3
Establishing and implementing policies and student discipline	20%	8%	10%	12
Deciding how the school budget will be spent	4%	1%	3%	3
School improvement planning	17%	5%	10%	12
[Use of] Education Enhancement Funds	23%	16%	18%	7

Appendix C. Teacher Perceptions of Teaching and Learning Conditions, by Career Intent (continued)

	Percent Agreeing			Range of Percentage Points
	Stayers	Movers	Leavers	
Leadership:				
There is an atmosphere of trust and mutual respect within the school.	64%	18%	38%	46
The school leadership communicates clear expectations to students and parents.	72%	31%	51%	41
The faculty is committed to helping every student learn.	85%	66%	76%	19
Teachers feel comfortable raising issues and concerns that are important to them.	59%	18%	35%	41
The school leadership consistently enforces rules for student conduct.	61%	22%	35%	39
The school leadership consistently supports teachers when needed.	69%	25%	46%	44
The faculty and staff have a shared vision.	69%	29%	46%	40
Opportunities are available for members of the community to contribute actively to this school's success.	73%	45%	57%	28
Teachers are held to high professional standards for delivering instruction.	85%	62%	70%	23
Teacher performance evaluations are handled in an appropriate manner.	79%	42%	64%	37
The procedures for teacher performance evaluations are consistent.	75%	39%	59%	36
Teachers receive feedback that can help them improve instruction.	73%	38%	55%	35
Staff members are recognized for accomplishments.	68%	34%	51%	34
The school leadership makes a sustained effort to address teacher concerns about:				
Leadership issues	53%	17%	30%	36
Facilities and resources	67%	30%	41%	37
The use of time in my school	63%	26%	39%	37
Professional development	64%	30%	45%	34
Empowering teachers	58%	18%	32%	40
Classroom management of today's students	67%	27%	40%	40
Overall, the school leadership in my school is effective.	65%	19%	41%	46

Appendix C. Teacher Perceptions of Teaching and Learning Conditions, by Career Intent (continued)

	Percent Agreeing			Range of Percentage Points
	Stayers	Movers	Leavers	
Professional Development:				
Sufficient resources are available to allow teachers to take advantage of professional development activities.	66%	37%	50%	29
Professional development provides teachers with the knowledge and skills most needed to teach effectively.	64%	39%	43%	25
Teachers have multiple opportunities to learn from one another.	59%	34%	40%	25

Appendix D. Selected Survey Responses Across Student Poverty Levels

These tables include survey response data disaggregated by school level and by student poverty level. Readers should take note that figures in this appendix are not adjusted for the number of responses per school. Thus, these figures may be biased slightly toward larger schools with higher response rates.

Proportion of Positive Responses Among Elementary Educators, by Proportion of Economically Disadvantaged Students

Proportion of economically disadvantaged students at school		>93.7	93.7-84.7	84.6-68.9	68.8-48.2	<48.2	Gap*
		Percent agreeing:					
Overall, my school is a good place to work and learn.		71%	68%	76%	80%	83%	15 †
Domain Survey Item:	**Domain**						
There is an atmosphere of trust and mutual respect within my school.	L	58%	57%	63%	65%	70%	14 †
Teachers and staff work in a school environment that is safe.	F&R	78%	75%	81%	87%	89%	14 †
Teachers play a large or primary role in devising teaching techniques.	E	58%	52%	53%	61%	64%	12 †
The school leadership consistently enforces rules for student conduct.	L	64%	59%	63%	62%	70%	12 †
Teachers are trusted to make sound professional decisions about instruction.	E	61%	58%	63%	66%	69%	11 †
The school leadership consistently supports teachers when needed.	L	67%	63%	69%	70%	73%	11
The faculty is committed to helping every student learn.	L	85%	82%	87%	88%	92%	10 †
In this school we take steps to solve problems.	E	68%	64%	70%	69%	74%	10
Teachers are respected as professionals.	E	61%	57%	60%	63%	67%	10 †
Teachers have multiple opportunities to learn from one another.	PD	64%	63%	62%	56%	65%	10
Mentoring Survey Item:							
I have been formally assigned a mentor for all of the years I have been a novice teacher in MS.	M	45%	51%	47%	55%	49%	10
My mentor and I taught at the same grade level.	M	64%	61%	71%	82%	86%	**25** †
My mentor and I taught in the same content area.	M	73%	60%	70%	80%	79%	**20** †
My mentor and I taught in the same building/school.	M	93%	76%	78%	91%	86%	17 †
I received release time to observe my mentee(s).	M	34%	35%	32%	22%	27%	13 †
My mentee and I taught the same grade level.	M	49%	49%	63%	71%	76%	**27** †
My mentee and I taught in the same content area.	M	58%	54%	68%	73%	72%	19

Key:
Blue = Highest approval rating for the question; Red = Lowest approval rating for the question; T = Time; F&R = Facilities & Resources; E = Empowerment; L = Leadership; PD = Professional Development; M = Mentoring.
* Due to rounding, gap may appear to be slightly larger or smaller than the gap implied by numbers in the table.
† The gap for this question is at least 10 percentage points at all three school levels

Appendix D. Selected Survey Responses Across Student Poverty Levels (continued)

Proportion of Positive Responses Among Middle School Educators, by Proportion of Economically Disadvantaged Students

Proportion of economically disadvantaged students at school		>89.1	89.1-75.5	75.4-62.0	61.9-45.5	<45.5	Gap*
		Percent agreeing:					
Overall, my school is a good place to work and learn.		64%	56%	70%	79%	81%	**26** †
Domain Survey Item:	**Domain**						
Teachers and staff work in a school environment that is safe.	F&R	69%	58%	74%	80%	85%	**27** †
There is an atmosphere of trust and mutual respect within my school.	L	47%	44%	55%	65%	67%	**23** †
Teachers are allowed to focus on educating students with minimal interruptions.	T	51%	42%	51%	59%	64%	**22**
Teachers play a large or primary role in devising teaching techniques.	E	55%	49%	58%	70%	66%	**22** †
Overall, the school leadership in my school is effective.	L	53%	47%	57%	65%	68%	**21**
The school leadership consistently supports teachers when needed.	L	57%	52%	61%	69%	71%	18
Teachers play a large or primary role in selecting instructional materials and resources.	E	43%	39%	44%	57%	49%	17
Teachers have sufficient access to office equipment and supplies.	F&R	59%	57%	64%	74%	74%	17
Efforts are made to minimize the amount of routine admin. paperwork I am required to do.	T	39%	31%	38%	44%	47%	17
The school leadership communicates clear expectations to students and parents.	L	62%	56%	65%	70%	73%	16
The school leadership consistently enforces rules for student conduct.	L	51%	42%	55%	53%	58%	16 †
Teachers have sufficient access to appropriate instructional materials and resources.	F&R	68%	63%	71%	79%	78%	16
Teachers feel comfortable raising issues and concerns that are important to them.	L	49%	46%	55%	61%	62%	16
Teachers are trusted to make sound professional decisions about instruction.	E	59%	53%	61%	69%	68%	16
Teachers are protected from duties that interfere with their essential role of educating students.	T	48%	40%	48%	48%	55%	15
In this school we take steps to solve problems.	E	58%	55%	65%	67%	69%	15
The faculty is committed to helping every student learn.	L	75%	78%	81%	85%	89%	14 †
Teachers are respected as professionals.	E	53%	47%	56%	60%	61%	14 †

Key:
Blue = Highest approval rating for the question; Red = Lowest approval rating for the question; T = Time; F&R = Facilities & Resources; E = Empowerment; L = Leadership; PD = Professional Development; M = Mentoring.
* Due to rounding, gap may appear to be slightly larger or smaller than the gap implied by numbers in the table.
† The gap for this question is at least 10 percentage points at all three school levels

Appendix D. Selected Survey Responses Across Student Poverty Levels (continued)

Proportion of Positive Responses Among Middle School Educators, by Proportion of Economically Disadvantaged Students (continued)

Proportion of economically disadvantaged students at school		>89.1	89.1-75.5	75.4-62.0	61.9-45.5	<45.5	
		Percent agreeing:					Gap*
Domain Survey Item	**Domain**						
The non-instructional time provided for teachers in my school is sufficient.	T	51%	42%	51%	55%	56%	14
Teachers have sufficient access to a broad range of professional personnel.	F&R	66%	57%	67%	71%	69%	14
Teachers play a large or primary role in setting grading and student assessment practices.	E	42%	44%	46%	55%	50%	13
Teacher performance evaluations are handled in an appropriate manner.	L	71%	65%	70%	78%	76%	13
Teachers have access to reliable communication technology, including phones, faxes, and e-mail.	F&R	68%	65%	71%	78%	78%	13
Teachers have adequate professional space to work productively.	F&R	70%	63%	67%	75%	70%	13
Teachers have reasonable class sizes, affording them time to meet education needs of all students.	T	59%	47%	52%	51%	53%	12
The procedures for teacher performance evaluations are consistent.	L	69%	61%	67%	73%	73%	12
The faculty and staff have a shared vision.	L	59%	57%	58%	69%	67%	12
Teachers receive feedback that can help them improve instruction.	L	69%	61%	67%	73%	68%	12
Staff members are recognized for accomplishments.	L	65%	60%	61%	69%	72%	11
School leadership makes sustained effort to address teacher concerns about leadership issues.	L	50%	43%	50%	54%	52%	11
Opportunities are available for community members to contribute actively to this school's success.	L	64%	61%	64%	72%	68%	11
The faculty has an effective process for making group decisions and solving problems.	E	46%	42%	48%	52%	50%	10
School leadership makes sustained effort to address teacher concerns about facilities & resources.	L	62%	56%	62%	66%	62%	10
Teachers have multiple opportunities to learn from one another.	T	56%	46%	54%	55%	51%	10

Key:
Blue = Highest approval rating for the question; Red = Lowest approval rating for the question; T = Time; F&R = Facilities & Resources; E = Empowerment; L = Leadership; PD = Professional Development; M = Mentoring.
* Due to rounding, gap may appear to be slightly larger or smaller than the gap implied by numbers in the table.
† The gap for this question is at least 10 percentage points at all three school levels

Appendix D. Selected Survey Responses Across Student Poverty Levels (continued)

Proportion of Positive Responses Among Middle School Educators, by Proportion of Economically Disadvantaged Students (continued)

Mentoring Survey Item:	Domain	Proportion of economically disadvantaged students at school: >89.1	89.1-75.5	75.4-62.0	61.9-45.5	<45.5	Gap*
		Percent agreeing:					
I have been formally assigned a mentor for all of the years I have been a novice teacher in MS.	M	48%	52%	45%	54%	54%	9
My mentor and I taught in the same building/school.	M	91%	77%	86%	95%	87%	18 †
My mentor and I taught at the same grade level.	M	64%	59%	66%	71%	76%	17 †
My mentor and I taught in the same content area.	M	65%	60%	75%	74%	59%	16 †
I received release time to observe my mentee(s).	M	28%	31%	23%	25%	15%	17 †
My mentee and I taught the same grade level.	M	45%	50%	46%	49%	61%	16 †

Key:
Blue = Highest approval rating for the question; Red = Lowest approval rating for the question; T = Time; F&R = Facilities & Resources; E = Empowerment; L = Leadership; PD = Professional Development; M = Mentoring.
* Due to rounding, gap may appear to be slightly larger or smaller than the gap implied by numbers in the table.
† The gap for this question is at least 10 percentage points at all three school levels

Appendix D. Selected Survey Responses Across Student Poverty Levels (continued)

Proportion of Positive Responses Among High School Educators, by Proportion of Economically Disadvantaged Students

Proportion of economically disadvantaged students at school		>83.8	83.8-67.7	67.6-51.1	51.0-37.2	<37.2	
		Percent agreeing:					Gap*
Overall, my school is a good place to work and learn.		60%	62%	66%	77%	78%	18 †
Domain Survey Item:	**Domain**						
Teachers and staff work in a school environment that is safe.	F&R	64%	66%	69%	80%	82%	18 †
There is an atmosphere of trust and mutual respect within my school.	L	47%	48%	52%	58%	62%	15 †
Teachers have sufficient access to instructional technology.	F&R	63%	60%	68%	75%	67%	15
Teachers have sufficient access to appropriate instructional materials and resources.	F&R	59%	58%	66%	72%	71%	14
Teachers have access to reliable communication technology, including phones, faxes, and e-mail.	F&R	63%	62%	69%	76%	70%	13
Teachers have sufficient access to office equipment and supplies.	F&R	57%	58%	70%	67%	68%	13
Teachers play a large or primary role in devising teaching techniques.	E	56%	60%	59%	69%	67%	13 †
Teachers have sufficient access to a broad range of professional personnel.	F&R	59%	53%	65%	66%	64%	12
Overall, the school leadership in my school is effective.	L	50%	51%	56%	59%	62%	11
Teachers are trusted to make sound professional decisions about instruction.	E	57%	57%	59%	67%	68%	11 †
Teachers feel comfortable raising issues and concerns that are important to them.	L	49%	45%	51%	54%	57%	11
Teachers are respected as professionals.	E	51%	48%	50%	57%	59%	11 †
Professional development activities enhance teachers' skills as instructional leaders.	E	54%	53%	49%	49%	44%	11
The faculty is committed to helping every student learn.	L	74%	73%	76%	79%	83%	10 †
The faculty and staff have a shared vision.	L	53%	52%	55%	60%	62%	10
Teacher performance evaluations are handled in an appropriate manner.	L	68%	67%	67%	77%	72%	10
Staff members are recognized for accomplishments.	L	59%	57%	65%	63%	66%	10
The school leadership consistently enforces rules for student conduct.	L	50%	46%	50%	48%	55%	10 †

Key:
Blue = Highest approval rating for the question; Red = Lowest approval rating for the question; T = Time; F&R = Facilities & Resources; E = Empowerment; L = Leadership; PD = Professional Development; M = Mentoring.
* Due to rounding, gap may appear to be slightly larger or smaller than the gap implied by numbers in the table.
† The gap for this question is at least 10 percentage points at all three school levels

Appendix D. Selected Survey Responses Across Student Poverty Levels (continued)

Proportion of Positive Responses Among High School Educators, by Proportion of Economically Disadvantaged Students (continued)

Proportion of economically disadvantaged students at school		>83.8	83.8-67.7	67.6-51.1	51.0-37.2	<37.2	Gap*
		Percent agreeing:					
Mentoring Survey Item:	**Domain**						
I have been formally assigned a mentor for all of the years I have been a novice teacher in MS.	M	51%	53%	49%	54%	47%	7
My mentor and I taught in the same building/school.	M	83%	78%	83%	87%	93%	15 †
My mentor and I taught at the same grade level.	M	56%	60%	68%	70%	70%	14 †
My mentor and I taught in the same content area.	M	68%	63%	63%	72%	76%	13 †
I received release time to observe my mentee(s).	M	28%	28%	18%	21%	23%	10 †
My mentee and I taught in the same content area.	M	46%	43%	57%	59%	65%	**22**
My mentee and I taught the same grade level.	M	35%	34%	43%	48%	50%	16 †
My mentee and I taught in the same building/school.	M	67%	71%	71%	73%	77%	10

Key:
Blue = Highest approval rating for the question; Red = Lowest approval rating for the question; T = Time; F&R = Facilities & Resources; E = Empowerment; L = Leadership; PD = Professional Development; M = Mentoring.
* Due to rounding, gap may appear to be slightly larger or smaller than the gap implied by numbers in the table.
† The gap for this question is at least 10 percentage points at all three school levels

Appendix E. Methodology

Teacher Working Conditions and Teacher Attrition

The logistic regression model for the teacher attrition component of this study was applied to three different groups of teacher respondents—elementary school teachers (n = 10,330), middle school teachers (n = 3,739), and high school teachers (n = 6,521)[25]—and is specified as follows. Let the conditional probability of a teacher's intention to stay at her or his current school be represented by P. The logistic regression model predicts the logarithm of the ratio of this probability and its reciprocal (the odds ratio)—which for this study is defined as $\ln(P/(1-P))$—as a function of independent variables. Thus, a generic equation for this model looks like:

$$\ln(P/(1-P)) = \alpha + \beta_1(T) + \beta_2(S) + \beta_3(UR) + \beta_4(TWC)$$

where P = the probability of staying, α = a constant, T = several teacher characteristics variables, S = several school characteristics variables, UR = urbanicity (or rurality) of the school, and TWC = perceptions of various teaching and learning conditions. In non-mathematical terms, this equation reads as:

> *A teacher's future career intentions are influenced by that teacher's personal characteristics, characteristics of her or his school, school locale, and that teacher's perceptions of teacher working conditions at her or his school.*

Because P represents the probability that a teacher intends to stay in her or his school, results are reported for each independent variable such that coefficients for each variable that are greater than 1 suggest a contribution to an intention to stay, while coefficients less than 1 suggest a contribution to an intention not to stay.

Data

All data for these analyses were obtained from two sources: the 2007 Mississippi Teacher Working Conditions Survey and a school-level data set comprised of demographic information about each school that was prepared specifically for this study from data available from the Mississippi Department of Education. Since this analysis focused on factors that impact an *individual* teacher's decision to stay at a school, teachers were included in the analysis, regardless of the overall survey response rate of the school that employed the teacher.[26] The independent variables included in the model are:

Individual Teacher Characteristics (obtained from survey responses):

- Ethnicity (African-American = 1; all other = 0)
- Gender (female = 1)
- Preparation route (traditional master's degree certification program = 1; traditional bachelor's degree and alternative certification programs = 0)
- Experience (novice [<4 years], experienced [>20 years]; mid-career [4-20 years] is excluded category)

School Characteristics (obtained from the Mississippi Department of Education):
- Adequate school response rate (40 percent or higher = 1)
- Percent of economically disadvantaged students at the school
- Percent of African-American students at the school (> 90 percent = 1; 90 percent and lower = 0)
- School size
- CTSA district (=1)
- Mississippi Achievement Level Index 2007 rating

Urbanicity (National Center for Education Statistics Locale Codes):
- School located in a large town (1/0)
- School located in a mid-size city (1/0)
- School located in a rural area inside of an Metropolitan Statistical Area (MSA) (1/0)
- School located in a rural area outside of an MSA (1/0)
- School located in a small town
- [Due to minimal representation in each of the remaining National Center for Education Statistics (NCES) locale classifications, the contrast urbanicity category is all other NCES locales: urban fringe of a midsize city and urban fringes of a large city; there are no schools in Mississippi that are classified as being in a large city]

Perceptions of Teacher Working Conditions (obtained from survey responses):
A teacher response of "agree" or "strongly agree" for each of the Mississippi Teacher Working Conditions Survey items below was coded as a 1; responses of "neither disagree nor agree," "disagree," and "strongly disagree" were coded as 0:
- "Teachers and staff work in a school environment that is safe."
- "Teachers have reasonable class sizes, affording them time to meet the educational needs of all students."
- "The non-instructional time provided for teachers in my school is sufficient."
- "Efforts are made to minimize the amount of routine administrative paperwork I am required to do."
- "Teachers are respected as education professionals."
- "Teachers are trusted to make sound professional decisions about instruction."
- "Teachers play a large or primary role in devising teaching techniques."
- "Professional development activities enhance teachers' skills as instructional leaders."
- "Teacher performance evaluations are handled in an appropriate manner."
- "School leadership addresses teacher concerns about classroom management of today's students."
- "There is an atmosphere of trust and mutual respect within the school."
- "The faculty and staff have a shared vision."
- "Staff members are recognized for accomplishments."
- "The school leadership consistently supports teachers when needed."

Variables—including survey prompts—were included in the model if they previously have been found to be related to teacher attrition in previous Center for Teaching Quality analyses of teacher working conditions across the country.

Output

In most educational research, a significance value of 0.05 or less indicates strong significance for the result, and a significance value of between 0.10 and 0.05 indicates less certain but still suggestive significance. For dichotomous variables (such as gender), the value *Exp(B)* indicates either the increase (if the value is greater than 1) or the decrease (if the value is less than 1) of the *odds* that a teacher will intend to stay if she or he is represented by that variable, relative to the other value for the variable. For example, in this study, a significant value of *Exp(B)* of 1.272 for the variable "Female" indicates that the odds of a female choosing to stay are 1.272 times greater than they are for a male with otherwise similar characteristics. For categorical variables (such as urbanicity), the value *Exp(B)* indicates the increase or decrease in the odds of staying for a teacher characterized by that categorical variable *as compared to the excluded variable*. For example, in this study, a significant value of *Exp(B)* of 1.451 for the variable "Rural—Outside of MSA" indicates that the odds that a teacher who teaches in a school located in a rural area outside of a Metropolitan Statistical Area are 1.451 times the odds of a teacher in a comparison district type (in this case, urban fringe districts). Interpretation of continuous variables, or variables that can take on any value, in logistic regression is not as straightforward, but in general the value *Exp(B)* indicates the increase or decrease in the odds for a teacher staying *for every unit change in the variable*. For example, in this study, a significant value of *Exp(B)* of 1.002 for the variable "2007 Achievement Level Index Rating" means that for every unit increase in the Achievement Level Index rating for a school, the *odds* of staying for an individual teacher increase by 0.2 percent.

Likelihoods versus Probabilities

In none of these cases, however, can an increase or decrease in likelihood be read as a similarly-sized increase or decrease in *probability*. One way to think about the difference is as follows: a person may be *twice as likely* to vote if she knows one of the candidates, but if she usually votes anyway (say, 75 percent of the time), the change in the corresponding *probability* that she will vote will not be as dramatic (because the new probability is limited to a range between her original probability of 75 percent up to 100 percent). Based on responses to the Mississippi Teacher Working Conditions Survey, the overall probability that a Mississippi teacher chosen at random is a "stayer" is already around 85 percent (more than 8 out of 10 report that they will stay); therefore, a positive change in the likelihood of staying only impacts the probability range between 85 and 100 percent. The regression equations provide a way for adjusting those probabilities, given certain individual teacher conditions or opinions. See Table 18, above, for conversion of some of the changes in odds reported in the tables below to changes in probability.

Elementary School (*n* = 10,330)

	B	S.E.	Wald	Sig.	Exp(B)	
Constant	-0.676	0.478	1.997	0.158	0.509	
Teacher Characteristics						
Female	0.232	0.173	1.796	0.180	1.261	
Less than 4 years of experience	-0.329	0.100	10.872	**0.001**	**0.720**	**
More than 20 years of experience	-0.197	0.091	4.721	**0.030**	**0.821**	**
Traditional master's-level preparation route	-0.011	0.095	0.013	0.909	0.989	
African-American	0.143	0.101	2.003	0.157	1.154	
School Characteristics						
School met minimum response rate threshold	-0.205	0.255	0.648	0.421	0.815	
Percent economically disadvantaged students	-0.259	0.241	1.155	0.282	0.772	
Percent African-American students	-0.106	0.113	0.873	0.350	0.900	
School size	0.001	0.000	14.106	**0.000**	**1.001**	**
2007 Mississippi ALI Index Rating	0.001	0.001	5.114	**0.024**	**1.001**	**
School is in CTSA District	-0.330	0.117	7.941	**0.005**	**0.719**	**
Urbanicity (Excl. Cat. = Urban fringes)						
Large Town	0.127	0.207	0.378	0.539	1.135	
Mid-size City	-0.249	0.165	2.265	0.132	0.780	
Rural (inside MSA)	0.259	0.161	2.574	0.109	1.295	
Rural (outside MSA)	0.372	0.150	6.195	**0.013**	**1.451**	**
Small Town	0.472	0.161	8.636	**0.003**	**1.604**	**
Teaching and Learning Conditions						
Teachers/staff work in safe school environment	0.212	0.087	5.979	**0.014**	**1.236**	**
Teachers have reasonable class sizes	0.137	0.080	2.926	**0.087**	**1.147**	*
Non-instructional time is sufficient	0.215	0.091	5.571	**0.018**	**1.240**	**
Efforts made to minimize administrative paperwork	0.324	0.102	10.171	**0.001**	**1.383**	**
Teachers respected as education professionals	0.323	0.095	11.521	**0.001**	**1.381**	**
Teachers trusted to make sound decisions about instr.	0.068	0.093	0.534	0.465	1.071	
Teachers play large role in devising tchng. techs.	0.312	0.085	13.546	**0.000**	**1.366**	**
Prof. devel. enhances tchr. skills as instr. leaders	0.294	0.082	12.777	**0.000**	**1.342**	**
Teacher perf. evals. handled appropriately	0.217	0.089	5.950	**0.015**	**1.243**	**
Leaders address tchr. concerns re: classroom mgmt.	0.317	0.095	11.160	**0.001**	**1.374**	**
Atmosphere of trust/mutual respect in school	0.515	0.100	26.387	**0.000**	**1.673**	**
Faculty and staff have a shared vision	0.187	0.093	4.058	**0.044**	**1.206**	**
Staff members recognized for accomplishments	0.213	0.088	5.892	**0.015**	**1.237**	**
School leadership supports teachers when needed	0.376	0.101	13.852	**0.000**	**1.457**	**

*p<0.10
**p<0.05

Middle School (*n* = 3,769)

	B	S.E.	Wald	Sig.	Exp(B)	
Constant	-0.080	0.767	0.011	0.917	0.924	
Teacher Characteristics						
Female	0.086	0.144	0.355	0.551	1.090	
Less than 4 years of experience	-0.279	0.132	4.453	**0.035**	**0.757**	**
More than 20 years of experience	-0.096	0.142	0.458	0.499	0.908	
Traditional master's-level preparation route	0.198	0.151	1.723	0.189	1.219	
African-American	0.266	0.145	3.350	**0.067**	**1.304**	*
School Characteristics						
School met minimum response rate threshold	-0.504	0.284	3.152	**0.076**	**0.604**	*
Percent economically disadvantaged students	-0.560	0.401	1.952	0.162	0.571	
Percent African-American students	-0.221	0.186	1.421	0.233	0.801	
School size	0.000	0.000	0.135	0.714	1.000	
2007 Mississippi ALI Index Rating	0.002	0.001	6.100	**0.014**	**1.002**	**
School is in CTSA District	-0.269	0.212	1.609	0.205	0.764	
Urbanicity (Excl. Cat. = Urban fringes)						
Large Town	-0.469	0.331	2.008	0.157	0.626	
Mid-size City	-0.515	0.251	4.200	**0.040**	**0.597**	**
Rural (inside MSA)	-0.202	0.232	0.761	0.383	0.817	
Rural (outside MSA)	0.157	0.232	0.460	0.497	1.170	
Small Town	-0.405	0.225	3.247	**0.072**	**0.667**	*
Teaching and Learning Conditions						
Teachers/staff work in safe school environment	0.354	0.121	8.542	**0.003**	**1.425**	**
Teachers have reasonable class sizes	-0.058	0.118	0.243	0.622	0.943	
Non-instructional time is sufficient	0.006	0.123	0.003	0.959	1.006	
Efforts made to minimize administrative paperwork	0.482	0.144	11.225	**0.001**	**1.619**	**
Teachers respected as education professionals	0.531	0.147	12.976	**0.000**	**1.700**	**
Teachers trusted to make sound decisions about instr.	0.384	0.133	8.331	**0.004**	**1.468**	**
Teachers play large role in devising tchng. techs.	0.199	0.117	2.868	**0.090**	**1.220**	*
Prof. devel. enhances tchr. skills as instr. leaders	0.317	0.120	6.970	**0.008**	**1.373**	**
Teacher perf. evals. handled appropriately	0.278	0.126	4.887	**0.027**	**1.320**	**
Leaders address tchr. concerns re: classroom mgmt.	0.473	0.134	12.431	**0.000**	**1.605**	**
Atmosphere of trust/mutual respect in school	0.427	0.148	8.333	**0.004**	**1.532**	**
Faculty and staff have a shared vision	0.103	0.131	0.622	0.430	1.109	
Staff members recognized for accomplishments	0.127	0.123	1.070	0.301	1.135	
School leadership supports teachers when needed	0.096	0.143	0.452	0.501	1.101	

*p<0.10
**p<0.05

High School (*n* = 6,521)

	B	S.E.	Wald	Sig.	Exp(B)	
Constant	-0.254	0.442	0.331	0.565	0.775	
Teacher Characteristics						
Female	0.240	0.092	6.784	**0.009**	**1.272**	**
Less than 4 years of experience	-0.649	0.111	34.113	**0.000**	**0.523**	**
More than 20 years of experience	-0.324	0.104	9.701	**0.002**	**0.724**	**
Traditional master's-level preparation route	0.125	0.112	1.253	0.263	1.133	
African-American	-0.114	0.122	0.874	0.350	0.892	
School Characteristics						
School met minimum response rate threshold	-0.011	0.176	0.004	0.951	0.989	
Percent economically disadvantaged students	0.064	0.270	0.057	0.812	1.066	
Percent African-American students	-0.272	0.156	3.061	**0.080**	**0.762**	*
School size	0.000	0.000	0.001	0.969	1.000	
2007 Mississippi ALI Index Rating	0.000	0.001	0.498	0.480	1.000	
School is in CTSA District	-0.250	0.161	2.392	0.122	0.779	
Urbanicity (Excl. Cat. = Urban fringes)						
Large Town	0.357	0.271	1.743	0.187	1.429	
Mid-size City	0.238	0.198	1.445	0.229	1.269	
Rural (inside MSA)	0.288	0.172	2.796	**0.095**	**1.333**	*
Rural (outside MSA)	0.439	0.166	6.979	**0.008**	**1.552**	**
Small Town	0.428	0.177	5.880	**0.015**	**1.534**	**
Teaching and Learning Conditions						
Teachers/staff work in safe school environment	0.543	0.100	29.619	**0.000**	**1.721**	**
Teachers have reasonable class sizes	0.124	0.093	1.763	0.184	1.132	
Non-instructional time is sufficient	0.063	0.099	0.400	0.527	1.065	
Efforts made to minimize administrative paperwork	0.179	0.110	2.647	0.104	1.196	
Teachers respected as education professionals	0.391	0.119	10.758	**0.001**	**1.478**	**
Teachers trusted to make sound decisions about instr.	0.481	0.110	19.280	**0.000**	**1.618**	**
Teachers play large role in devising tchng. techs.	-0.083	0.096	0.756	0.385	0.920	
Prof. devel. enhances tchr. skills as instr. leaders	0.237	0.105	5.038	**0.025**	**1.267**	**
Teacher perf. evals. handled appropriately	0.201	0.102	3.886	**0.049**	**1.223**	**
Leaders address tchr. concerns re: classroom mgmt.	0.285	0.113	6.390	**0.011**	**1.330**	**
Atmosphere of trust/mutual respect in school	0.367	0.123	8.995	**0.003**	**1.444**	**
Faculty and staff have a shared vision	0.288	0.112	6.686	**0.010**	**1.334**	**
Staff members recognized for accomplishments	-0.006	0.102	0.003	0.954	0.994	
School leadership supports teachers when needed	0.182	0.117	2.440	0.118	1.200	

*p<0.10
**p<0.05

Important Caveats

The dependent variable for these analyses is based on teacher responses to the following survey question:

What BEST DESCRIBES your future intentions for your professional career? (Select one.)

- Continue working at my current school as long as I am able
- Continue working at my current school until a better opportunity comes along
- Continue working in education, but leave this school as soon as I can
- Continue working in education, but leave this district as soon as I can
- Leave education altogether

As such, it is a measure of teacher *intentions* and not of actual teacher decisions (*i.e.*, a teacher could report on the survey that she or he intended to leave her or his school and teach somewhere else, while in actuality she or he ended up leaving teaching entirely or remaining at her or his current school), and that is potentially an important difference. For instance, in other states in which the Center for Teaching Quality has administered Teacher Working Conditions surveys and has also had access to actual teacher attrition data, teachers who indicated that they would move outnumbered teachers who indicated that they would leave the profession entirely by as much as 7 to 2, but the *actual* ratio ended up being an almost mirror opposite of 1 to 9. It is plausible that, in many states, teachers who intend to move rather than leave teaching entirely find that such a move is difficult to make and in the end opt to leave teaching rather than to stay at their current school (which would explain the difference between the intent and the reality ratios). Readers of these analyses are encouraged to keep these distinctions between intent and action in mind and to exercise caution when interpreting these results.

In addition, one key variable associated with teacher turnover—teacher academic ability—is not included because proxy variables for this characteristic were not available at the time of this analysis. It is important to note that research has shown that teachers with higher academic ability are more likely to leave the profession.

Teacher Working Conditions and Student Achievement

While it is reasonable to make direct links between a teacher's responses to survey questions and to her or his *individual* declared career intention—between personal perceptions of working conditions and subsequent personal career decisions—the same cannot be said for making direct links between individual teacher responses and school-wide student achievement. Hence, rather than trying to link school-wide achievement gains with individual teacher perceptions of working conditions only, our approach for this part of the analysis was to include along with representative survey responses an additional working conditions explanatory variable that best approximates the ultimate impact of those working conditions on students schoolwide—teacher turnover.

We use here as one of our independent variables the proportion of teachers who indicate that they will stay at their current school as our measure of teacher turnover. The measure is not a perfect proxy of teacher working conditions for several reasons, not the least of which may be the fact (as explained above) that the variable is teacher *intent* and not actual teacher *action* (or inaction). In addition, turnover is also reflective in part of the relative age and experience of the workforce at a given school (also explained above). On the other hand, the variable does help to

distinguish among school working conditions in a way that actual turnover figures cannot. The variable allows us to compare the general *desire* of teachers at schools, regardless of opportunities or likelihood of actually being able to act on those desires, whereas comparing their eventual actions may be more reflective of the availability of other options (working or otherwise) in their respective geographic areas, which could understate teacher perceptions of their working conditions, independent of other options.

Our dependent variable for all three models is each school's Mississippi Achievement Level Index (ALI) value, which was obtained from the Mississippi Department of Education's Assessment and Accountability Reporting System (MAARS) website.27 The ALI was chosen as our measure of school-level student achievement because it is constructed based on schoolwide student achievement scores. In other studies, we have used grade-level scaled achievement scores, but doing so runs the risk of confounding single-grade-level achievement with schoolwide teacher working conditions and other factors. The ALI is a normally distributed value that is derived from school-level performances on Mississippi Curriculum Tests and Subject Area Tests. The school ALI values produced using this process form a true ordinal scale where higher ALI values represent higher overall school performance for the given year.

In order to account for a school's prior achievement level, the dependent variable for our regressions is a *gain score estimate* generated by calculating the difference between a school's 2007 ALI and its 2006 ALI (see **Important Caveats and Limitations**, below). The ordinary least squares regression model for the student achievement component of this study was applied to ALI values for three different groups of schools—elementary schools (n = 372), middle schools (n = 119), and high schools (n = 163)—and is specified as follows. Let school-level ALI value gains between 2006 and 2007 be represented by Y. The regression model estimates the significance of the contribution of certain independent variables to these gains as a linear function of those variables. Thus, a generic equation for this model looks like:

$$Y_i = \alpha_0 + \alpha_1(S_i) + \alpha_2(SCH_i) + \alpha_3(T_i) + \alpha_4(STAY_i) + \alpha_5(TWC_i) + \alpha_6(Y_{i-1})\ e_i$$

where Y_i = the ALI gain score for school i, α_0 = a constant, S_i = student population characteristics variables for school i, SCH_i = school characteristics variables for school i, T_i = teacher population characteristics variables for school i, $STAY_i$ = the proportion of teachers who indicate that they intend to stay at school i, TWC_i = the proportion of teachers who agree with selected teacher working condition statements at school i, Y_{i-1} = the ALI score from the previous year (2006), and e is an error term. In non-mathematical terms, this equation reads as:

> *Gains in a school's ALI from one year to the next are influenced by characteristics of the students at the school, characteristics of the school, characteristics of teachers at the school, the level of teacher attrition at the school, overall teacher working conditions at the school, and the school's ALI from the previous year*.

Data

All data for these analyses were obtained from three sources: the 2007 Mississippi Teacher Working Conditions Survey; a school-level data set comprised of demographic information about each school that was culled from data available from the Mississippi Department of Education; and school-level ALI values that are publicly available at the Mississippi Department of Education

website.[28] Since this analysis focused on factors that impact *school-level* gain scores, only schools with a minimum response rate of 40 percent were included in the analysis.[29] The independent variables included in the model (all of which are continuous unless otherwise noted) are:

Student Population Characteristics (obtained from the Mississippi Department of Education):
- Percent of economically disadvantaged students at the school
- Percent of African American students at the school

School Characteristics (obtained from the National Center for Education Statistics' Common Core of Data and the Mississippi Department of Education):
- School locale (a measure of rurality or urbanicity; rural = 1)
- Whether the school is in a CTSA district (=1)

Teacher Population Characteristics (obtained from survey responses):
- Percent of female teachers
- Percent of teachers with less than 4 years of teaching experience
- Percent of teachers with more than 20 or more years of teaching experience
- Percent of teachers who obtained their certification through a traditional, master's-level certification program

Teacher Working Conditions Characteristics (obtained from survey responses):
- Percent of teachers at a school who indicate that they intend to return to that school the following year
- Percent of teachers who agreed or strongly agreed with the following Mississippi Teacher Working Conditions Survey items:
  - "Professional development activities enhance teachers' skills as instructional leaders" (Empowerment domain)
  - "The faculty and staff have a shared vision" (Leadership domain)
  - "Teachers receive feedback that can help them improve instruction" (Leadership domain)
  - "The faculty is committed to helping every student learn" (Leadership domain)
  - "Teachers are protected from duties that interfere with their essential role of educating students" (Time domain)
- A school-level average of all responses on survey items in the Facilities & Resources domain

ALI Values (obtained from the Mississippi Department of Education):
- 2006 ALI values

Dependent Variable —school-wide average ALI gain, derived by subtracting the 2006 ALI value from the 2007 ALI value

Output

Elementary

	B	Std. Error	Beta	t	Sig.	
(Constant)	28.557	57.347		0.498	0.619	
Percent teachers intending to stay	-57.435	25.365	-0.148	**-2.264**	**0.024**	**
"Prof. devel. activities enhance teachers' skills as an instr. ldrs."	18.741	17.315	0.068	1.082	0.280	
"The faculty and staff have a shared vision"	21.210	20.989	0.084	1.011	0.313	
"Teachers receive feedback that helps them improve instruction"	-20.629	18.382	-0.074	-1.122	0.263	
"The faculty is committed to helping every student learn"	73.010	28.448	0.179	**2.566**	**0.011**	**
"Teachers protected from duties that interfere with teaching"	-27.988	16.617	-0.097	**-1.684**	**0.093**	*
(Average of responses to facilities & resources survey items)	25.753	9.157	0.202	**2.813**	**0.005**	**
Percent female teachers	29.926	39.721	0.037	0.753	0.452	
Percent teachers with less than 4 years experience	-46.478	27.056	-0.102	**-1.718**	**0.087**	*
Percent teachers with more than 20 years experience	-37.772	21.041	-0.102	**-1.795**	**0.073**	*
Percent teachers with traditional, master's-level preparation	51.773	23.120	0.112	**2.239**	**0.026**	**
Percent economically disadvantaged students	-35.806	13.067	-0.171	**-2.740**	**0.006**	**
Percent African-American students	8.474	11.144	0.059	0.760	0.447	
School is in a rural setting	6.837	5.305	0.069	1.289	0.198	
School is in a CTSA district	-10.123	6.517	-0.088	-1.553	0.121	
2006 School ALI	-0.326	0.039	-0.521	**-8.287**	**0.000**	**

Dependent Variable: Change in school ALI value, 2006-2007

*p<0.10

**p<0.05

Middle School

	B	Std. Error	Beta	t	Sig.	
(Constant)	154.219	77.867		1.981	0.050	
Percent teachers intending to stay	1.505	39.370	0.005	0.038	0.970	
"Prof. devel. activities enhance teachers' skills as an instr. ldrs."	-29.595	26.894	-0.121	-1.100	0.274	
"The faculty and staff have a shared vision"	-49.854	32.503	-0.223	-1.534	0.128	
"Teachers receive feedback that helps them improve instruction"	25.763	28.897	0.112	0.892	0.375	
"The faculty is committed to helping every student learn"	42.750	48.268	0.108	0.886	0.378	
"Teachers protected from duties that interfere with teaching"	42.331	31.437	0.168	1.347	0.181	
(Average of responses to facilities & resources survey items)	19.515	15.307	0.180	1.275	0.205	
Percent female teachers	-50.093	40.498	-0.115	-1.237	0.219	
Percent teachers with less than 4 years experience	21.201	40.968	0.056	0.518	0.606	
Percent teachers with more than 20 years experience	-4.898	37.620	-0.013	-0.130	0.897	
Percent teachers with traditional, master's-level preparation	-0.361	41.224	-0.001	-0.009	0.993	
Percent economically disadvantaged students	-28.224	24.722	-0.151	-1.142	0.256	
Percent African-American students	-50.455	22.570	-0.410	**-2.235**	**0.028**	**
School is in a rural setting	-5.980	8.322	-0.071	-0.719	0.474	
School is in a CTSA district	-7.983	11.230	-0.080	-0.711	0.479	
2006 School ALI	-0.392	0.072	-0.904	**-5.421**	**0.000**	**

Dependent Variable: Change in school ALI value, 2006-2007

*p<0.10

**p<0.05

High School

	B	Std. Error	Beta	t	Sig.	
(Constant)	124.902	58.166		2.147	0.033	
Percent teachers intending to stay	-112.254	40.667	-0.312	**-2.760**	**0.007**	**
"Prof. devel. activities enhance teachers' skills as an instr. ldrs."	-55.254	29.104	-0.205	**-1.898**	**0.060**	**
"The faculty and staff have a shared vision"	-7.465	30.393	-0.032	-0.246	0.806	
"Teachers receive feedback that helps them improve instruction"	40.740	26.873	0.153	1.516	0.132	
"The faculty is committed to helping every student learn"	-15.556	36.191	-0.044	-0.430	0.668	
"Teachers protected from duties that interfere with teaching"	67.385	28.558	0.254	**2.360**	**0.020**	**
(Average of responses to facilities & resources survey items)	9.208	13.350	0.084	0.690	0.491	
Percent female teachers	68.063	30.364	0.167	**2.242**	**0.026**	**
Percent teachers with less than 4 years experience	-71.376	39.203	-0.163	**-1.821**	**0.071**	*
Percent teachers with more than 20 years experience	-0.979	36.576	-0.002	-0.027	0.979	
Percent teachers with traditional, master's-level preparation	-68.271	43.342	-0.128	-1.575	0.117	
Percent economically disadvantaged students	-26.567	23.432	-0.139	-1.134	0.259	
Percent African-American students	-18.882	21.334	-0.141	-0.885	0.378	
School is in a rural setting	-2.038	7.980	-0.021	-0.255	0.799	
School is in a CTSA district	-23.921	11.044	-0.229	**-2.166**	**0.032**	**
2006 School ALI	-0.204	0.062	-0.411	**-3.304**	**0.001**	**

Dependent Variable: Change in school ALI value, 2006-2007

*p<0.10
**p<0.05

Important Caveats and Limitations

There are several levels of imprecision with respect to our regression analysis that bear noting here. First, the reader should bear in mind that one option we did not choose when calculating our dependent variables was to use math scaled scores instead opting for the more comprehensive ALI values. In doing so, we gained some important features—namely, a school-level estimate of overall school achievement, which parallels our schoolwide measurements of teacher working conditions and school characteristics—but we also lose a little. One advantage of using math scaled scores exclusively is that they tend to be less "noisy" than reading scores (and thus, potentially less noisy than ALI values, which include reading scores). Reading scores are "noisier" in that they tend to reflect as much home impact as they do school impact, often because reading is taught at varying levels in different homes, while math is generally taught less frequently across most homes.[30] Neither option—ALI values or math scaled scores—is foolproof, but given the nature of our explanatory variables, it was decided that use of the schoolwide ALI values was a better fit for a model that included schoolwide explanatory variables.

Second, individual student scores were not available, which means that all regression estimates are based on ALI values derived from school-level averages. In some cases, these averages could hide significantly different variations in individual student scores within and across schools. Third, while it is *generally* likely that students in, say, 4th grade or 7th grade at one school are the same students in 5th and 8th grade at the same school on the following year, there is little guarantee that the proportion of test-takers at each school who took the pre-test at the same school is equivalent in any way; some schools experience more student mobility than others.

Finally, as some psychometricians have noted, when conducting gain-score analyses, "residual gain scores are more likely to be preferable [than raw or estimated 'true' gain scores] when the pre- and posttest score distributions can be expected to have equal variability,"[31] which is true of the Mississippi ALI values. Therefore, to check the robustness of the analyses presented in this report (which did not employ residual gain scores), two other regression analyses were conducted. The first used the gain score estimate generated by a linear regression in which 2007 ALI values (the "post-test") are the dependent variable and 2006 ALI values (the "pre-test") are the predictor variable a linear regression in which 2007 ALI values (the "post-test") are the dependent variable and 2006 ALI scores (the "pre-test") are the predictor variable. The results of these analyses were very similar to the results from the initial regression analyses. A third regression analysis was also conducted, in which 2006 and 2007 ALI values first were transformed into *z*-scores. The dependent variable was the difference between 2006 and 2007 ALI *z*-scores, and the independent variables remained the same, with the exception of the 2006 ALI value, which was replaced by the 2006 ALI *z*-score. The results of these regressions also were substantially the same as those of the original analyses.

Notes

Introduction

1. Hanushek, E. A., and Rivkin, S. G. (2007). "Pay, working conditions, and teacher quality." *The Future of Children*, 17(1): 69-76; 71.

2. Loeb, S. and Darling-Hammond, L. (2005). "How teaching conditions predict teacher turnover in California schools." *Peabody Journal of Education*, 80(3): 44–70.

3. Ingersoll, R. M. (2001). "Teacher turnover and teacher shortages: An organizational analysis." *American Educational Research Journal*, 38(3): 499–534.

4. Loeb, S. and Darling-Hammond, L., op. cit.

5. http://www.projectclearvoice.com/

6. Mississippi Board of Education. (January 17-18,2008). Summary of State Board of Education agenda items. Miss.: Author.

7. http://www.projectclearvoice.com/reports/

8. In keeping with analytical procedures followed in other Center for Teaching Quality Teacher Working Conditions reports, data from schools with a response rate of at least 40 percent were used in all formal statistical analyses, as detailed in Appendix E.

9. All figures for the entire population of educators in Mississippi are 2005-2006 figures, the most recent figures available. It is highly unlikely that these figures will be much different for the 2006-2007 school year.

Survey Results

10. There were 202 respondents who did not identify their job positions.

11. Ingersoll, R. M. (2003). *Who controls teachers' work? Power and accountability in America's schools*. Cambridge, Mass.: Harvard University Press.

12. Barnes, G., Crowe, E., and Schaefer, B. (2007). *The cost of teacher turnover in 5 school districts: A pilot study.* Washington, D.C.: National Commission on Teaching and America's Future.

13. Fletcher, S., Strong, M., and Villar, A. (2003). *An investigation of the effects of variations in mentor-based induction on the performance of students in California*. A paper presented at the Seventh National New Teacher Center Symposium.

14. In other 2006-2007 Teacher Working Conditions surveys conducted by the Center for Teaching Quality, the proportion of respondents who indicated that they would stay in their current schools ranged from a high of 90 percent in Ohio to a low of 71 percent in Clark County, Nev.; however, the reader is urged to bear in mind that, because of sometimes extreme differences in sample sizes, hiring practices, working conditions, and supply and demand across states, cross-state comparisons of teacher attrition are suspect at best.

15. For instance, recent analyses of data from the Schools and Staffing Survey indicate that, of the teachers who leave, only 15 percent do so because of dissatisfaction with teaching as a career, while another 25 percent leave in pursuit of a non-teaching career. Still others leave because they have reached retirement age, a possibility that is also reflected in the 2007 Mississippi Teacher Working Conditions Survey data (where over 43 percent of all leavers were teachers with 20 or more years of teaching experience). See Marvel, J., Lyter, D.M., Peltola, P., Strizek, G.A., and Morton, B.A. (2006). *Teacher attrition and mobility: Results from the 2004–05 teacher follow-up survey* (NCES 2007–307). U.S. Department of Education, National Center for Education Statistics. Washington, D.C.: U.S. Government Printing Office.

16. In addition, it should be noted that there are several DeSoto County schools for which no information with regard to economically disadvantaged students was available at the time of these analyses. Most of these schools opened for the 2005-2006 school year, the most recent year for which Mississippi provides data on economically disadvantaged students, which is likely the reason for the missing data. In addition, the Mississippi Department of Education does not provide on its accountability website, the Mississippi Assessment and Accountability Reporting System (http://orsap.mde.k12.ms.us:8080/MAARS/), data on economically disadvantaged students for any schools with state identification numbers above 89. These schools are represented in the 2007 Mississippi Teacher Working Conditions Survey data, but because of a lack of data, they are excluded from these analyses. Since the majority of these schools are a special population of attendance and alternative schools, their exclusion from these analyses of differences across schools with different proportions of economically disadvantaged students may be problematic. Readers should exercise caution when interpreting the results presented here.

17. Readers should take note that figures in this table are not adjusted for the number of responses per school. Thus, these figures may be biased slightly toward larger schools with higher response rates.

18. The most important exceptions were four aspects of teacher empowerment: teacher involvement in deciding the content of professional development (with only 45 percent of principals indicating that they believe that teachers are involved in this process), establishing and implementing student discipline policies (45 percent), deciding school budget issues (20 percent), and hiring new teachers (17 percent). See Appendix B.

19. *E.g.*, Grissmer, D., and Flanagan, A. (2001). "Searching for indirect evidence for the effects of statewide reforms." *Brookings Papers on Education Policy 2001*. D. Ravitch (Ed.). Washington, D.C.: Brookings Institution Press.

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20. See, for example, Cognard-Black, A. J. (2004). "Will they stay, or will they go? Sex-atypical work among token men who teach." *The Sociological Quarterly*, 45(1), 113-139.

21. A more complete rationale for the choice of this variable as a proxy for school-wide teacher working conditions is included in Appendix E.

22. Even though the direct impact of teacher working conditions on student achievement gains is difficult to detect in a single-year study such as this one, the impact of other teacher and school characteristics—some of which may be indirectly related to teacher working conditions—is clearer. For example, at all three school levels, the proportion of economically disadvantaged students in a school—a proxy for the level of academic engagement available to students outside of school hours, among other things—is negatively related to changes in scores; the larger the proportion, the smaller the gains for a school.

Conclusions

23. Center for Teaching Quality (forthcoming). Report on the Mississippi NBCT Summit. Hillsborough, N.C.: Author.

24. Center for Teaching Quality (forthcoming).Report on the Mississippi NBCT Summit. Hillsborough, N.C.: Author.

Appendices

25. The total numbers of teachers included in these analyses do not match the total number of teacher respondents because not all classroom teachers answered the question about career intent. Also, because of the nature of these analyses, they do not include teachers in mixed-level schools—2,032 teachers in all.

26. Teachers who were employed in schools that were designated as mixed grade level schools and could not be categorized as elementary, middle, or high schools were excluded from the analysis.

27. http://orsap.mde.k12.ms.us:8080/MAARS/

28. http://orsap.mde.k12.ms.us:8080/MAARS/

29. The 40 percent threshold is in keeping with other Center for Teaching Quality teacher working conditions studies and is not related to nor is it intended to validate or endorse Mississippi's decision to release survey results only for schools with response rates of 40 percent or higher. Schools designated as mixed grade level schools and cannot be categorized as elementary, middle, or high schools are excluded from the analysis.

30. Ballou, D. (2002). "Sizing up test scores." *Education Next*, 2(2), 10-15.

31. Rachor, R. E., and Cizek, G. J. (1996). "Reliability of raw gain, residual gain, and estimated true gain scores: A simulation study." Paper presented at the Annual Meeting of the American Educational Research Association (New York, April 8-12, 1996).